Al-MIZAN

A COVENANT FOR THE EARTH

بِسْمِ ٱللَّهِ ٱلرَّحْمَٰنِ ٱلرَّحِيمِ

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وَٱلسَّمَآءَ رَفَعَهَا وَوَضَعَ ٱلْمِيزَانَ

أَلَّا تَطْغَوْا۟ فِى ٱلْمِيزَانِ

وَأَقِيمُوا۟ ٱلْوَزْنَ بِٱلْقِسْطِ وَلَا تُخْسِرُوا۟ ٱلْمِيزَانَ

وَٱلْأَرْضَ وَضَعَهَا لِلْأَنَامِ

…He (God) set up the balance (al-mīzān) so that you may not exceed the balance. Weigh with justice and do not fall short in the balance. And the earth he has spread out for all living creatures (Qur'an 55:7-10)

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The Development of Al-Mizan

In 2019, the Eighth Islamic Conference of Environment Ministers (ICEM) approved a strategy to enhance the role of cultural and religious factors in protecting the environment and achieving sustainable development in the Islamic world. This reflects Islam's religious and civilizational duty to confront environmental challenges. In response, a group of leading Islamic organizations and scholars were convened through UNEP's Faith for Earth Coalition, which took the lead in facilitating the process from its inception. The Islamic World Educational, Scientific and Cultural Organization, the Islamic Foundation for Ecology and Environmental Sciences, Uskudar University in Istanbul, the Qur'anic Botanical Garden, and the College of Islamic Studies at Hamad Bin Khalifa University in Qatar formed the core team with the United Nations Environment Program to develop Al-Mizan as a global platform to link environmental issues with Islamic teachings and embrace Islamic views on nature.

This initiative, titled "Al-Mizan: A Covenant for the Earth," aims to demonstrate how Islam can be a driving force for sustainable development and environmental care. Al-Mizan also highlights the importance of culture and religion in driving behavioural change, along with scientific, technical and political solutions.

The first draft of Al-Mizan was shared with more than 300 Islamic institutions and international partners for feedback and consultation. The core team appreciates the efforts of the Muslim Council of Elders for their valuable revision of the Arabic version.

Al-Mizan is a historical document that represents the collective voice of the Islamic community on environmental issues. It calls on all Muslims to embrace sustainability in their daily lives and work together to protect our common home.

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Chapter 1

An Appraisal of the State of the Earth

Reflections

1.1 We begin with grateful praise of God, the Lord of all beings, to the number of stars in the sky, the grains of the sands, the waves of the waters, the drops of the rains, the leaves of the trees, and all things throughout the Heavens and the Earth.

The unutterably vast and glorious cosmos reflects the all-transcendent glory of God, the All-Sustaining Lord of the worlds of being that extend beyond our grasp. In its heart, this Earth with its evanescent community of life, of which we are a part, is exquisite beyond all telling, and more precious than mortal human beings can comprehend, for it too reflects the grace and mercy of the Lord of all. Each thing that God has created is a sign of His power, wisdom, and grace, and we seek insight, understanding, and guidance from these signs. He has unfolded all things in balance with one another, in need of one another, and all support and benefit one another. Nothing is created wantonly or in vain. All are created in Truth and for Right, and each has rights on us: that we care for it in reverential awe for its Lord, in compassion unwithheld, and in utmost beauty and good. To serve the Lord of all by working utmost good is the deepest purpose of our lives, for God "…***created death and life to try you, which of you work most good***…" (67:2)

The Human Legacy: What our Hands have Wrought

1.2 But the world we live in is now degraded, corrupted, and dangerously unstable. We have changed the face of the Earth, and we struggle to restore its equilibrium. Toxins, from insecticides to radiation, contaminate the air and water, the atmosphere is overloaded with greenhouse gasses from burning fossil fuels, soils are eroded and impoverished, oceans fill with plastic, alpine glaciers and polar icecaps melt, sea levels rise, coral reefs bleach and die, droughts, wildfires, hurricanes, and floods grow in frequency and violence. Exotic species proliferate in ecosystems to which they are alien, and native forms of life die off at rates never seen before by humankind. Warfare and violent internecine conflict continue unabated. All this brings death and grievous suffering to the most vulnerable – the impoverished, the dispossessed, the persecuted, refugees, children, women, the aged, and the disabled: those who are least to blame for corruption and devastation pay the highest price. The oppression of indigenous, racial, ethnic, and religious minorities persists, manifested in the obliteration of cultures and history of nations in the name of one ideology or the other and in the growing number of forcibly displaced people, estimated at more than 110 million as this Covenant goes to press.[1]

1.3 We humans may be distinguished by nationality, religion, race, culture, ethnic, tribal, and family ties, ideology, and politics, but in the beginning and the end we tread the same Earth, breathe the same air and drink the same water. We share one common home, the Earth, and it is the only home we have. In the course of our recent history, our technologies, commerce, and industries have made us realize that we are a "global village" and together we experience the

vagaries of climate change. The coronavirus pandemic has demonstrated how very interlinked our countries are, how global crises cannot be resolved without global collaboration. The overarching environmental debacle is of our own making, although some of us are to blame far more than others. In seeking to understand and address our overall predicament, we who have embarked on the drafting of this Covenant share the following thoughts.

1.4 Our home planet Earth is estimated to be around 4.54 billion years old. In its long history, it has hosted myriads of guests. Countless species of creatures emerged, adapted to the prevailing climate, and vanished as the conditions that nurtured them changed. Palaeontologists tell us that this burgeoning of complex life on Earth has been disrupted by five mass extinctions, when, with immense volcanic eruptions, deep ice ages, new mountain barriers thrust up by colliding continents, or meteorite impact, over 75 percent of all life forms vanished. But over time, after each mass extinction, a new configuration of life forms grew and flourished in abundance. We humans are among the most recent guests to appear. Measured against the Earth's timespan shown as the twelve hours inscribed on the face of a clock, the presence of humanity is counted in milliseconds. In that period, the last Ice Age receded about 12,000 years ago and this made it possible for our ancestors to establish settled communities and begin to build civilisations. Successive civilisations, emerging in different environments and continents, learned – or failed to learn – from one another and from the teachings of the prophets and sages of the past, and built upon one another's achievements. When they collapsed, in the nature of things, the forests grew over them or the sands covered their traces; the Earth recovered and from their ruins, life sprang forth anew.

1.5 A little over 500 years ago, the daring navigational feats of the Iberian mariners of yesteryear opened new worlds and – to their eyes – new civilisations for conquest. As that age of conquest and colonization gathered momentum, the movement now known as the Enlightenment took shape in Europe and ushered in a radical shift in humanity's relationship with God and the natural world. As humans cut adrift from the anchor of faith to rely upon their own abilities, nature came to be dominated as never before. In some cases, forms of faith were distorted to disrupt indigenous spiritual bonds with the natural world. From that moment on, the divine and the sacred were diminished in importance. The conviction that "man is the measure of all things" led modern man to subordinate the natural world to his insatiable appetites, compounded by increasingly sophisticated technology and unprecedented population growth.

1.6 We humans now find ourselves beguiled into a system, innocuously described as the global village, managed by corporations more powerful than most nations, wherein, as this Covenant goes to press, the Earth's richest 1 percent, those with more than $1 million, own more than 40 percent of global wealth and over half of the world's population hold just 1.4 percent.[2] Wherein the world's billionaires, who number a little over 2,000 individuals, have more wealth than the 4.6 billion people who make up 60 percent of the planet's population.[3] How have we allowed such gross injustice to arise, against the values of all our faiths and moral codes? Nearly all humankind are complicit and we are now collectively responsible for our predicament. Moreover, our impacts have magnified to the extent that we are now describing ourselves as a force of nature. The post glacial age, which geologists have called the Holocene, the wholly new epoch, is now, with gathering consensus, described as the Anthropocene, the epoch of the human.

1.7 Having changed the course of the natural world, we humans are compelled to consider the possibility that our current civilisation, supposedly the greatest ever, may also have run its course.

Having split the atom, discovered the double helix, mapped the human genome, flown to the moon and aimed at Mars, made new materials that refuse to degrade, created persistent organic and synthetic pollutants that invade our bodies and invented myriad conveniences to make our lives easy, we now face the collapse of ecosystems, which threatens our very existence. The starkest of these threats are anthropogenic climate change and the loss of biological diversity.

Global Climate Change

1.8 Climate change in itself is nothing new in the history of the Earth's evolution. In past eons, it was caused by variations in solar energy, in the tilt or orbit of the Earth around the Sun, changing oceanic circulation, volcanic eruptions, and the release of methane gas by melting permafrost.[4] As civilisations evolved, their increasing demand for energy was met by the use of animal and human brawn, and from renewable sources, such as windmills, waterwheels, gravity-fed hydro power to shift and move objects and to give heat and light. Human impact on the planet's climate was slight until only two and a half centuries ago, when coal was mined on a massive scale to fuel the Industrial Revolution.

1.9 Since then, our energy-hungry consumer civilisation has been damaging the Earth's ecosystems twice over: firstly, by gouging and pumping the fossil fuels, coal, oil, and gas, out of the bowels of the Earth where they were formed and locked in by geological processes over millions of years and secondly, by releasing carbon dioxide (CO_2), methane, and other greenhouse gasses into the atmosphere, mainly by burning these fuels. Only recently was it recognised that excess atmospheric CO_2 traps heat, causing global climate change.[5] Although this gas makes up only less than half of one percent of the Earth's atmosphere, it is crucial to life on Earth. By regulating its flow between the terrestrial, oceanic and atmospheric domains, the carbon cycle maintains the Earth's climatic equilibrium. Our behaviour has drastically interfered with the equilibrium, *mīzān* in the language of the Qur'an, of the Earth's interconnected systems.[6]

1.10 We – the authors of this Covenant – appreciate that responsible countries throughout the world have been making plans and taking action to mitigate the effects of climate change and prominent among them is the proposal to ban petrol and diesel fuelled cars in a shift towards greener alternatives. But does this green outlook go far enough? Will it meet the aim of the 2015 Paris Climate agreement to keep "holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels"?[7] Despite failure of successive COP processes to agree to loss and damage finance, we are pleased that a historic deal to help the world's poorest and vulnerable countries pay for the irreversible impacts of the climate crises was agreed on the first day of COP28 in Dubai. While we consider this to be a landmark and hard-fought agreement, we note that at the time of the announcement, millions have been pledged for the loss and damage fund when in fact it is billions that are required.[8] As the richer countries fail to offer adequate support, small island states face the prospect of being engulfed by the sea. We note deep underlying fault lines carrying into the future. A report[9] coordinated by the World Meteorological Organization shows "Increasing temperatures and sea levels, changing precipitation patterns and more extreme weather are threatening human health and safety, food and water security and socio-economic development in Africa."[10] The sub-Saharan and small island nation states are among the lowest emitters of CO_2,[11] yet they disproportionately suffer the effects of CO_2 generated by the advanced industrial countries. On August 9th, 2021, the Intergovernmental Panel on Climate Change (IPCC) released its sixth report, drafted by hundreds of scientists, based on

thousands of research studies, and compiled over eight years of work; it concludes with a single message: we have run out of time.

1.11 Until now, the efforts to hold back global climate change have focused on negotiating targets to regulate emissions, but not on phasing out production of the fuels that generate them. At COP28, whilst we applaud the first time inclusion of citing fossil fuels (the root cause of the climate crisis), we feel that the call for a 'transitioning away' from fossil fuels is a far cry from 'phasing out' fossil fuels. Scientists have warned that the failure to call for a phasing out of fossil fuels is devastating and dangerous given the urgent need for action to tackle the climate crisis.[12] Governments continue to approve and subsidise the prospecting, extraction, and production of oil, gas, and coal, producing far more fossil fuels than is consistent with the target of limiting the rise of global warming to 1.5°C. Hence, we have no option but to endorse the proposed Fossil Fuel Non-Proliferation Treaty, a framework that will enable countries to negotiate the phasing out of fossil fuel production in a way that is just, fair, and transparent, and to commit to an equitable transition for affected workers and climate-vulnerable communities.[13]

The Loss of Biological Diversity

1.12 As we change the face of the Earth and its climate, we destroy the habitats of those fellow creatures who share the Earth with us; to destroy their habitats destroys their lives, and we are rapidly losing the diversity of flora and fauna that are essential for our own survival. We do not have the power to destroy the Earth itself, nor are we able to erase all life from this planet.[14] But we are now in fact degrading that special web of diverse species among whom we have developed and to whom our destiny is inextricably linked. A consensus is emerging among scientists that the disruptions caused by human actions are likely to trigger a sixth mass extinction.[15] Each mass extinction in the history of the Earth led to a radical resetting of the assemblage of life forms on the planet; if we do indeed precipitate another mass extinction, it seems unlikely that we will be among the species that survive it.[16] And we are warned repeatedly in the Qur'an about previous civilisations that have exceeded the limits and decimated their own resources and the blessings of the natural world – and that God is able to replace us with a new creation.[17]

1.13 Biological diversity is the most complex feature of our planet and the most vital. It is the essential "natural resource" that comprises all communities of living beings and on which all living beings depend. Without the intricate interactions of the myriad life forms in the natural world there can be no future for humanity. These complex relationships support our lives by producing the air we breathe, the water we drink, and the food we eat.[18] All this is threatened by the manner in which we run the world today against the grain of nature.[19] Given enough time, many impacts of climate change could be mitigated if not reversed over the coming centuries, but when a species goes extinct, it is gone forever. All species have vitally important roles in maintaining the health of the biosphere; we do not know all the ways that any species contributes to the whole or which species are most essential in its functioning. We note with deep concern that the parties to the Convention on Biological Diversity have not fully achieved a single one of the 20 "Aichi Biodiversity Targets" which formed part of the United Nations 2011-2020 Decade on Biodiversity.[20] However, we are glad to note that the UN Convention on Biological Diversity (CBD) has adopted a new global biodiversity framework comprising four goals to be achieved by 2050 and 23 specific targets for signatory countries to meet by 2030. Among the aims of these targets are to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030. They also aim to ensure that at least 30 per cent of

terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative systems of protected areas, to ensure that any sustainable use in such areas is fully consistent with conservation outcomes, and to ensure that the rights of indigenous peoples and local communities, including over their traditional territories, are recognised and respected.[21]

Ecological and Social Justice

1.14 Our predicament is a direct consequence of the priority we are giving to economic growth over caring for the Earth and its communities of life. Our aspiration to be middle-class consumers is taking precedence over living in harmony with nature. The *Sustainable Development Goals* are well and nobly crafted to meet the needs of peoples whose lives are impoverished and blighted, without degrading the biosphere or precluding the wellbeing of future generations. We – the authors of this Covenant – endorse them wholeheartedly, but they will not cure the crisis. The richer nations will need to reduce their consumption patterns significantly to conserve the diversity of life.

1.15 It is perhaps not fully appreciated how profoundly the destruction of cultural diversity has been intertwined with the destruction of biodiversity.[22] These events have taken place in the narrow window of human history of the past 500 years. The civilisation we live in today is built on the graveyards of indigenous and traditional societies that did largely take care of the diversity of life in their own ways for millennia. The predominant global monoculture is governed by a paradigm that pays scant regard to diversity, whether biological or cultural. It has been imposed upon the peoples of the Earth without regard to whether it is suited to them or their local conditions.[23]

1.16 We have entered a dangerous and uncertain phase in the human story. It is evident that the civilisation in which we now live – seen as bringing unparalleled material benefits – is itself the root of this crisis.[24] In 1992, the manifesto *World Scientists' Warning to Humanity*[25] cautioned that, "a great change in our stewardship of the Earth and the life on it is required, if vast human misery is to be avoided" and declared that "Human beings and the natural world are on a collision course….If not checked, many of our current practices…may so alter the living world that we will be unable to sustain life in the manner that we know." An updated reissue of that warning was published 25 years later in 2017. It concluded that on most of the measures, humankind had failed to progress and warned that "time is running out."[26]

1.17 Although humanity's responses to the ecological crisis so far have been grossly inadequate and piecemeal, we applaud the valiant efforts of international agencies, specialist organisations, and individuals committed to protecting the Earth. Crises can present opportunities; Qur'anic verses describe thunderstorms as sources of both fear and hope. [27] Among the rays of hope that filter through the dark storm clouds of this crisis is the unprecedented coming together of faith communities, traditional societies and indigenous peoples. This is a growing alliance that represents more than 80% of the Earth's human population, with leaders at the very roots of society who have the potential to bring about rapid change; it is armed with the wisdom of the ages, for each faith community, each traditional society, each indigenous people embodies an ethos evolved over centuries or millennia of interaction with the Earth's ecosystems and their

diverse communities of life. This cultural diversity contains a wealth of values and wisdom that could be brought to bear on our response to the crisis.

1.18 Yet we need to strike a cautionary note. In looking for solutions, humanity has been tackling the symptoms more than the causes of the crisis. There are two fundamental issues so close to us that we take them almost entirely for granted. They need to be examined if we aim to restore Earth systems to some state of equilibrium. The first of these is our attitude to the natural world itself, which we have defined as a resource to be exploited. In our hurry to prosper, we have blindly followed a false paradigm that equates economic growth, and human development of the natural world, as a linear process of continuous, never-ending progress and improvement. But our presumption that we can defy the divinely decreed patterns of the natural world is proving to be our undoing.[28]

1.19 The second issue is not only very closely linked to the first but also feeds it. It is money. It has made it possible for humanity to trade, exchange goods and services and build civilisations over millennia. It would seem that we cannot live without it but in recent times we have conjured up a fundamental change in its nature. In the past, money was literally worth its weight, but it is now increasingly common to come across revealing appraisals of money from prominent economists, for example: "…money remains a naked symbol with no intrinsic value of its own and no direct linkage to anything specific".[29] In fact, money is like a virus that eats into the fabric of the natural world every time we use it. The economic growth model that drives the international system is based on this illusion and has given rise to nightmare visions of global economic collapse.

1.20 As a species, we have been modifying the environment to our advantage over millennia, but we are now far exceeding the limits of what natural ecosystems can heal within a timespan we can comprehend. We are warned in the Qur'an that to change the nature of God's creation is satanic (4:119).[30] Human actions have led to massive corruption and devastation in the Earth, *fasād fī'l-ard*, in the language of the Qur'an: through befoulment of the air and waters, global warming and climate change, overexploitation of the sources of life, destruction and fragmentation of the habitats of living beings, impoverishment of the soil, translocation of invasive alien species, introduction of genetically modified organisms, eradication of predators and species considered pests, and overpopulation by our own insatiable species, we have blighted the ecosystems on which our lives and the lives of our fellow creatures depend. We humans – created, according to the teachings of our faith, to be accountable *khalīfah*s on the Earth, entrusted to care for it and the communities of life it harbours – have not only filled it with corruption and bloodshed, but may already have initiated the sixth mass extinction of complex life in the history of the planet. It is hard to imagine a more grievous indictment or one more indefensible:

Corruption has appeared in the land and the sea
by what the hands of humankind have wrought,
that He may let them taste some consequences of their deeds,
so that they may turn back. (30:41)

Hopeful We Remain

1.21 In this Qur'anic verse, we find grounds for hope that it is not too late to change our course. And in hopes that we might turn back and set our course aright, we now proceed to consider how our faith instructs us to relate to the Earth we live on. Our approach is multi-faceted:

- As Muslims, we approach the Earth as a blessed creation of the Lord of all beings Who holds us to account for all we do in it. We seek to identify how, through abusing it, we have desacralised our understanding of it. That might help us rediscover the pricelessness of what we are losing.
- We strive to articulate an ontological and cosmological understanding of the relationship between the Creator and creation – as well as humankind's relationship with both, and our obligations to each – that would enable us to see with clarity how we might make right what we have wronged.
- We strive to clarify and articulate the essential ethical teachings and values of Islam, that they might motivate us to commit ourselves to the behavioural changes needed, in keeping with the prophetic tradition.
- We view the crisis afflicting life on Earth through the prism of political economy and seek to discover what elements in the Islamic heritage of equitably sharing the benefits of the sources of life on Earth – which economists call natural resources – might help us address the inequities and realise a more sustainable, indeed, a regenerative approach to living a good life without compromising the ability of future generations to meet their own needs.[31]
- We seek to identify the most essential aspects of our faith tradition with respect to legislation, regulations, conservation practices, policies, and activism, so that we might begin to take the actions needed to restore the dynamic equilibrium (*mīzān*) that we have violated.

Chapter 2

Signs of God in the Heavens and the Earth

One Creator, Lord of All

2.1 The Qur'an abounds in references to natural phenomena, but it does not contain the words 'environment', 'environmental', or 'environmentalism'.[32] In classical Arabic, the closest term to 'environment' is *muhīt*, meaning 'surrounding'; in Qur'anic usage, however, it is the divine presence and knowledge that is described as *muhīt*, encompassing all things, as in 2:115 and 4:126. Islamic teachings about the natural world centre around the creation (*al-khalq*) and in its various grammatical forms, this word occurs in over 250 Qur'anic verses.[33] Here, we present the cosmology of our faith and its theology of nature with respect to the relationships between God and creation, to which humankind belong.

2.2 ***Tawhīd*, the affirmation of God's oneness**, is the bedrock of the Islamic ethos. We Muslims hold that the oneness of God is the basis of our faith, its metaphysics, its ethics, its Law, and its spirituality. The Qur'ān opens with the praise of God as ***"Lord of the worlds"*** (***rabb al-'ālamīn***) (1:1). Each of our daily prescribed prayers begins with these words. The word *rabb* denotes, on the one hand, the Lord and Master Whom all beings serve and, on the other, the Sustainer Who brings each being into existence, then provides for it, Who nurtures, develops, and guides it until its destiny is fulfilled. Knowing that He is the Lord of all beings makes us aware that serving Him inescapably entails goodness toward all.[34]

2.3 All things in the created world, from sub-atomic particles to distant galaxies, are united as creations of God and are utterly dependent upon Him in all aspects of their being. ***"Say: He is God, the One, God the Self-Subsisting All-Sustaining***" (112:1-2). ***"He is God – the Creator, the Maker, the Giver of form…"*** (59:24). The natural world affirms the Divine. This central axiom is emphasised time and time again in the Qur'an (3:190, 30:17-27, 41:53, etc.) reminding us of God's omnipresence: ***"All that is in the Heavens and the Earth belongs to God. And God has ever encompassed all things***" (4:126); ***"To God belong the east and the west. Whichever way you turn, there is the Face of God; God is Vast, All-Knowing***" (2:115). He is the Provider, "***Is there any creator other than God providing you sustenance from the sky and the earth?"*** (35:3); He it is Who brings lifeless matter to life and cycles it between life and death, "***God it is that sprouts the seed and the fruit stone, brings forth the living from the dead and brings forth the dead from the living: That is your God – how are you turned away?***" (6:95).

2.4 Whereas God is absolute and infinite, all created things are ordained to be finite and limited. They are measured out precisely, and their limits are decreed by their Lord. The Qur'an tells us: "***...and He created each thing and ordained it in precise measure***" (25:2). We accept these limits in gratitude and joy; we work within them gladly and do not seek to exceed their bounds, for "***He has given you from all that you have asked of Him – and if you would count the***

favours of your Lord, you could not number them. Indeed, humankind are most unjust and ungrateful" (14:34).

Value Inherent in Creation

2.5 God – be He exalted – has not made any of His creatures worthless: the very fact that He has created a being gives it inherent worth and value. To exclude any created being from moral consideration violates the principle of *tawhīd*. Moreover, He has created each thing *bi 'l-haqq*, in truth and for right. All created beings have rights.[35] "***Not in jest have We created the Heavens and the Earth and all that is between them. We have not created them but for truth…"*** (44:38–39). We might think a gnat of little significance, but God does not disdain to set it forth as a parable (2:26) and the bee receives divine inspiration (16:68-69). Nothing created is without significance. None has been created in vain; all are created for right. We must therefore treat none wantonly, and we must take no life except by right. Indeed, the Lord of all beings has blessed the Earth: ***"He set upon it firm mountains and blessed it and measured therein its sustenance…"*** (41:10), and He has perfected the things that He created, filling them with utmost good and beauty[36]: ***"He Who has made most good each thing that He created…***" (32:7). "**And you see the mountains and perceive them as solid, yet they pass as the passing of clouds. Such is the doing of God, Who has perfected all things**" (27:88).

2.6 **God: The All-Merciful.** The Lord and Sustainer of all beings is All Merciful, All Compassionate.[37] The extent of His overwhelming mercy, grace, and compassion is greater than we can ever grasp[38] **"…*My mercy embraces all things…*"** (7:156). **"…God has ordained mercy upon Himself…"** (6:12). He has filled the universe with glory, with beauty, and given sentient beings all the varied senses by which they, and we, can perceive this glory and beauty. Because we live in a universe that bears mercy's imprint, harmony and beauty permeate all things: ***"Our Lord, You have embraced all things in mercy and knowledge…"*** (40:7).[39]

2.7 All beings attest to the transcendent glory of their Creator, Lord and Sustainer:

The seven Heavens and the Earth and all that dwell therein proclaim His all-transcendent glory: There is not a thing that does not celebrate His praise… (17:44).

Have you not seen that all that is in the Heavens and the Earth proclaims the glory of God?
And the birds as they soar with wings outspread?
Every creature knows its prayer and its glorification, and God knows what they do. (24:41)

All beings submit to their Creator, Lord and Sustainer, in willing obedience and devotion, all bow down to Him in worshipful service and prayer – all, that is, except for humankind, who, although they cannot avoid submitting to the natural laws by which their Lord sustains all things, are endowed with free will: they may opt to serve in willing devotion or to resist by refusing their Lord's commandments and thereby incur His wrath and retribution: [40]

Have you not seen that all in the Heavens and the Earth bow down to Him, and the sun, the moon, the stars, the mountains, trees and animals, and many of humankind, while many deserve chastisement?... (22:18)

…all that is in the Heavens and the Earth submits to Him, willingly or unwillingly, and to Him are they returned. (3:83)

From the submission of all things to their Lord and Sustainer comes the recognition of their being *Muslim* and making up a vast community of *islām*, which human beings may willingly embrace and become part of that community.[41]

2.8 **Signs of God.** Moreover, each created being is a wondrous sign that points beyond itself to its Maker, His wisdom, and His mercy; each is a portent filled with meaning and lessons to be learned. Like a mirror, the natural world reflects the power, glory, beauty, wisdom, and mercy of its Creator.

Verily in the creation of the Heavens and the Earth and the alternation of night and day are signs for people endowed with insight, who remember God standing, sitting, and lying on their sides, and who reflect on the creation of the Heavens and the Earth: Our Lord, Thou hast not made this in vain – Glory to Thee!... (3:190-191)

The word "*āyah*," meaning "sign," is the same word that is used for verses of the Qur'an. Muslim scholars have stressed the parallels between the revelations of the written texts revealed to humankind through the prophets, the messengers of God, known variously as *al-qur'ān at-tadwīnī*, the written qur'ān *or al-kitāb al-mastūr*, the inscribed book, and the revelations of God in the natural world, known as *al-qur'ān at-takwīnī*, the cosmic qur'ān or *al-kitāb al-manzūr*, the observed book.[42] Each are revelations composed of signs, *āyāt*, and they come from the same source. The signs of the divine in nature clarify the meanings of those in the texts and the written texts enable us to understand the creation.[43]

2.9 Beyond its inherent value, each thing has practical or instrumental value as a component of the ecosystems that support life on Earth. All components of God's creation interact together, complete each other, and support one another in accordance with the ways (*sunan*) of God.[44] As the 13th century jurist 'Izz ad-Dīn ibn 'Abd as-Salām observed: "Know that God has created His creatures and made them to depend upon each other, so that each group would support the welfare of the others."[45] All beings serve God by giving charity: the land, the plants, the animals, and the heavens all support one another; all obey God and do not withhold. Although some kinds consume others, their real but superficial discord is ultimately resolved, for all beings are inherently and universally in need of one another, and their giving of what they have to one another is charity.[46] Through its divinely ordained roles, each being thus contributes to the welfare of the whole. This leads to a cosmic symbiosis by which God sustains all living things. The prophet Muhammad, upon him be blessings and peace, is reported to have declared, "Created beings are the dependents of God, and the creatures dearest unto God are they who do most good to His dependents."[47]

The Cosmic Equilibrium

2.10. ***Al-Mīzān*: Balance and Reciprocity.** The Qur'an describes all beings as balanced and integrated in interconnected and interdependent equilibrium.

And the Earth, We have spread it out, and cast in it mountains standing firm, and grown in it all things in balance. And We have provided in it sustenance for you and for those whom you do not support. (15:19-20)

And the sky, He (God) raised it and He set up the balance
So that you may not exceed the balance
Weigh with justice and do not fall short in the balance
And the Earth He has spread out for all living creatures (55:7-10)

The cosmic balance or equilibrium is associated in the Qur'an with *al-qist*: equity, fairness, and justice. "***We sent our messengers with clear signs. And We sent down the Book and the Balance with them so that humankind might establish fairness…"*** (57:25).[48]

2.11 The Qur'an thus presents a rich and vivid portrayal of the Earth and the wider cosmos full of meaning, purpose, order, and beauty. The natural world did not come into being by accident, nor is it characterized by chaos, nor is it devoid of value. "Having a firm and well-knit structure with no gaps, no ruptures, and no dislocations,"[49] the natural creation is regarded by Muslims as showing the glorious works of the Almighty Creator and Sustainer. In the light of Qur'anic teaching, we are called upon to observe and discern its balanced, integrated patterns and the cycles of creation: the day turning into night, and night into day, lifeless matter transmuted into the flesh of living beings, living beings dying and returning to dust, the winds, the clouds, the rain, the starry heavens, and the planets swimming through the vastnesses of space. Its integrated wholeness, its bounty and beauty, its value and meaning impose on us the moral responsibility to cherish it.

2.12 ***Umam*: Communities.** The Qur'an describes the myriad living animals with whom we share the Earth as communities like ourselves:

There is no animal that moves on the Earth nor any bird that wings its flight, but is a community like yourselves... (6:38)

As they are sentient beings and communities like us, we are obliged to treat them with reverence and care (*taqwā*), compassion *(rahmah*), and striving to do the utmost good (*ihsān*). The ethical implications of the Qur'anic regard for these other-than-human communities have been recognised since the outset of Islamic scholarship.[50]

2.13 ***Al-Fitrah*: the primordial nature of humankind.** The Qur'an tells us that humankind are created within the primordial pattern (*fitrah*) of the natural creation and that, being of it, our nature (*fitrah*) is defined by that patterning:

So set your face firmly to religion in pure devotion, the innate disposition with which God endowed humankind. God's creation shall not be altered. That is true religion, but most people do not know. (30:30).

While this Qur'anic verse warns that our human nature should not be altered, it reflects the wider prohibition of altering God's creation. Let us consider the ecological context of our nature. We humans have been created within a specific community of species that are adapted to one another and to the various climatic conditions that have prevailed over the last ice age and since

the glaciers retreated almost 12,000 years ago. The mix of oceans, glaciers, rainforests, boreal forests, wetlands, steppes, and deserts make up the habitats in which we and our fellow creatures have unfurled and flourished. Thus, the word *fitrah* here might refer likewise to the primordial pattern within the bounds of which humankind and our fellow creatures are created. A warning is also implied in the statement that "God's creation shall not be altered," for elsewhere, the Qur'an informs us that "altering (in the sense of distorting or perverting) God's creation" is satanic – the epitome of evil, for Satan declares, "***I will command them so that they will alter God's creation***" (4:119).[51]

2.14 The universe and all things in it, not only the seas, the mountains, the plants, and the animals, but even the day, the night, the sun, the moon, and the stars are described in the Qur'an as being of service (*musakhkhar*) to humankind.[52] We can never number the favours of our Lord. But we should not walk arrogantly on the Earth: "***Do not strut exultantly on the Earth. You will never split the Earth apart nor will you rival the mountains in stature***" (17:37). "***Verily the creation of heaven and Earth is greater than the creation of humankind, but most people do not know it***." (40:57).[53] Nowhere has God indicated that other creatures are created only – or even primarily – to serve human beings.[54] It would be preposterous to imagine that these things were created merely for our enjoyment, and the height of arrogance to suppose that we have the right to stamp out any species in which we see no benefit! The 14th-century thinker Taqī ad-Dīn Ahmad ibn Taymīyah remarked with regard to those Qur'anic verses in which God declares that He created His creatures for the children of Adam, "It is well known that in these creatures God has exalted purposes other than the service of humankind, and greater than the service of humankind; [in these verses] He only shows the children of Adam what benefits they have in them and what bounty He has bestowed on humankind."[55]

2.15 Indispensable as other creatures are to our survival, their utilitarian value still cannot be the primary reason for conserving them. It is not possible for us to measure the utilitarian value of any creature because we do not even know what direct benefits to ourselves may be hidden within it, much less the ramifications of its ecological role in the biosphere, by which it contributes to the welfare of the whole. The primary legal basis, therefore, for conserving each and every species is its inherent value as a creation of God, a sign and wonder, and a unique and irreplaceable manifestation of His transcendent glory.[56] The prophet Muhammad, upon him be peace and the glory of God, told of a prophet who, having been stung by an ant, caused the entire anthill to be burned; God rebuked him, saying, *"*Because an ant stung you, you have destroyed an entire community (*ummah*) that proclaims My transcendent glory*."* [57]

2.16 As the Lord of all beings has *"…**has made most good each thing that He created…***" (32:7) and cautioned us against distorting the integrity of our own innate disposition or that of His creation, we are warned most forcefully not to wreak *fasād* – corruption, degradation, devastation and ruin – on the Earth, which He has ordered so perfectly:

> ***Do not spread corruption in the Earth after it has been so well ordered. And call on Him in fear and hope: surely, the mercy of God is near to those who do utmost good.*** (7:56)

Indeed, the dread of humankind wreaking *fasād* on the Earth and the catastrophes that such transgression unleashes loom large in the Qur'anic cosmology of justice. The creation of the world was not a frivolous or trivial act (38:27; cf. 3:191). The natural creation "is so coherently interconnected and integrated, and works with such regularity and order, that it is God's prime

miraculous wonder: if good is done to it or in it, good will return; if evil is wrought to it or in it, what accrues is sheer terror."[58] The Qur'an instructs us to behold what has happened in the end to the *mufsidūn fī 'l-ard*, those who wreak corruption, devastation, and ruin on the Earth (7:85-86): the peoples of Pharaoh, 'Ād, Thamūd, and Madyan were all powerful and wealthy but wrought corruption on the Earth and thus destroyed themselves. The *corrupters on the Earth* abuse the trust of *amānah* and are in clear contrast to those who are responsible on the Earth.[59] As Muslims, we ought to tremble in fear from the catastrophic consequences of corruption on the Earth: extinction of species, global warming. pollution, famines, and epidemics, for all of which we humans are accountable.[60]

2.17 The converse of rejecting our Lord and corruption on the Earth lie in faith (*īmān*) and beneficial works (*al-a'māl as-sālihah*, *as-sālihāt*): in them lies the redemption and ultimate prosperity of humankind.

Verily We created humankind in the best of forms; then do We reject them as the lowest of the low, except those who have faith and do good works, for theirs is a reward unfailing. (95:4-6)

By time! Humankind are indeed in loss! Except for those who have faith and do good works, and exhort one another to truth (haqq), and exhort one another to steadfastness. (103:1-3).

Just as the wreaking of corruption and devastation on the Earth leads to our perdition, the doing of good, right, wholesome, beneficial works is key to our survival and prosperity on the Earth, for God declares, *"**My servants, the right-doing, shall inherit the Earth**"* (21:105). Good work is so essential to the service of God and the fulfilment of human responsibility on the Earth that the term for benefits (*masālih*) in Islamic law derives from this word for good (*sālih)*, and the term for detriments (*mafāsid*) derives from corruption, (*fasād)*.[61]

Khilāfah fī 'l-Ard: Responsibility on the Earth

2.18 Inheriting the Earth through right-doing defines the human role, for the Qur'an describes humankind as *khalā'if fī 'l-ard*, agents held responsible for all they do on the Earth:

(God) it is Who has held you responsible on the Earth, and raised some of you by degrees above others, so that He might try you in that which He has bestowed upon you…. (6:165)

The prophet Muhammad, upon him be peace and the blessing of God, echoed this verse in his saying, "The world is beautiful and verdant; verily God has held you responsible in it, and He sees how you conduct yourselves."[62]

2.19 Human beings are to interact with all components of the environment without disrespecting God's norms or ways in His creation (*sunan Allāh fī khalqihī*) or infringing God's rulings in His law (*ahkām Allāh fī shar'ihī*). We are to take from the environment and to give to it, to uphold its rights or due (*haqq*), so that it may give us our due. Our interactions and all economic activities must be based on this primordial cosmic balance (*al-mīzān*) as it has been created and sustained by God. To practice *khilāfah* on the Earth by tending it, upholding right and justice; and

spreading good and utility on Earth, as shown in God's command to the prophet David ***"O David! We have made you a khalīfah on the Earth: judge, therefore, with justice between humankind, and do not follow passions that may divert you from the way of God…"*** (38:26). [63]

Here, it should be clear that, in fulfilling their responsibility to protect the Earth from corruption and devastation, human beings are to protect it from humankind: we are to protect it from ourselves. Our *khilāfah* on the Earth is realised by faith and beneficial works, by striving to bring about beauty, excellence and utmost good, and by avoiding and averting all that leads to corruption, devastation, and ruin (*fasād*) in it.

2.20 In the light of the core ethical values of our faith, let us reflect on the responsibility of human beings on the Earth as bearers of this trust. Is human *khilāfah* essentially a privilege? It is an honour, surely, for humans are created "in the best of forms," that is, with the greatest potential for good. But if we do not realise this potential, we are rejected as "lower than the low."[64] *Khilāfah* is not a privilege, but a trust, a responsibility, and a trial, for God has created death and life to try us, which of us work most good (67:2). Human *khilāfah* is in large part a natural corollary of our power to affect the well-being of the creation. Human beings have been given enormous ability to do both good and evil; with ability comes responsibility. A *khalīfah* is a shepherd and will be asked about his flock. Each human being is a shepherd over all the lives on Earth that he or she may touch for good or ill, and shall be held to account regarding every atom's weight of good that he or she has caused, and every atom's weight of harm.[65] Each day, this perilous trial is renewed; as the prophet Muhammad, upon him be peace and the blessing of God, declared, "With each day's dawning, people rise to bargain with their souls at stake, and either ransom them or ruin them." [66]

2.21 Although we are to exercise humility in understanding our role as *khalā'if fī 'l-ard*, the nobility of the *khilāfah* ethic is breathtaking: humankind / we humans bear a trust (*amānah*) that the heavens, the Earth and the mountains shrank from bearing:

> ***We offered the trust to the heavens, the Earth, and the mountains, but they refused to bear it and were afraid of it. Yet humans bore it. They have indeed proven unjust and ignorant*** (33:72).

The trust is understood as the assumption of moral accountability (*taklīf*) to God for one's beliefs, intentions, and actions and their repercussions – with the reward and punishment that this entails. It is closely intertwined with the responsibility of *khilāfah fī 'l*-ard, accountability on the Earth. In tending the Earth, as a species, we have proven ourselves thoroughly unjust and ignorant.[67] We cannot fulfil this trust unless the horizons of our care extend through space and time to embrace all the species, individuals, and generations of God's creatures from today until the Day of Resurrection. Then, and only then, will we truly be *khalīfah*s on the Earth.[68]

2.22 It might be supposed that this imposes an impossible burden on human beings: Who can possibly see all the ramifications and effects of one's deeds on all beings, even in the present, much less in the future? What does it mean to extend the horizons of our care into the unknown future? How do the time scales of global climate change and mass extinction impinge on our concepts of ethics? What are our ethical obligations to the indeterminate future generations of humankind and of the other-than-human community of life that may exist in future millennia? How can any individual possibly be responsible for all the outcomes of his or her deeds, when

none but God can comprehend them? We would answer that, in full awareness of the limits of our knowledge, strength, and abilities, our intentions and aspirations to serve the Infinite Lord of all beings must be boundless. Our obligation is to do our honest best, and ask the Lord of all for guidance, and for forgiveness in our falling short, as fall short we must. For God does not impose on anyone a burden greater than he or she can bear.[69]

Walk Gently on the Earth

2.23 We are told in the Qur'an to tread humbly, softly, gently on the Earth.[70] "***The servants of the All-Merciful are those who walk gently on the Earth…***" (25:63). The All-Merciful Lord of all beings has placed us together with the other communities of living creatures on this exquisite, beautiful planet to live out our lives in harmony with them and has charged us with its care. We conclude this section with the following Qur'anic passage, which calls humankind to observe the signs of God in His creation, to reflect on them, to understand and learn from them:

Transcendent glory be to God, both in your evenings and your mornings.
All praise is His in the Heavens and the Earth, at the setting of the sun and in the noon.

He brings forth the living from the dead, and He brings forth the dead from the living, and He revives the Earth after its death. Thus is it that you too shall be brought forth.

And of His signs is that He created you of dust and behold, you are humans, dispersing widely.

And of His signs is that He created for you mates from yourselves that you might find peace in them, and He set between you love and compassion. Indeed, in that are signs for people who reflect.

And of His signs is the creation of the Heavens and the Earth, and the variation of your tongues and colours. Indeed, in that are signs for people of knowledge.
And of His signs is your sleep by night and by day, and your seeking of His bounty. Indeed, in that are signs for people who hear.

And of His signs is that He shows you the lightning, causing fear and hope, and sends down water from the sky, thereby bringing life to the Earth after its death. Indeed, in that are signs for people who understand.

And of His signs is that the Heavens and the Earth stand firm by His command; then, when He summons you, from the earth you will come forth.
To Him belongs whosoever is in the Heavens and in the Earth. All are subservient unto Him.

He it is Who begins creation, then repeats it, and that is easier for Him. His is the most exalted likeness in the Heavens and in the Earth, for He is the August, the Wise. (30:17-27)

Chapter 3

The Ecological Ethos and Ethics of Islam

The Ethics of *Tawhīd*

3.1 **Ethical dimensions of God's Oneness: *Tawhīd.*** The most essential ethical implication of God's oneness is to serve the one God – the Lord of all beings – by doing the greatest good we can to ***all*** His creatures. If we recognise that God is the one and only Lord of every created being, then we must know that devotion to Him requires utmost goodness toward His entire creation – and that we must treat every single creature with *taqwā*, or reverence toward its Creator. God is the Lord of every species, every generation, and every individual created being. Hence, for the purposes of clarifying our ethical obligations, *rabb al-'ālamīn* is understood as "Lord of all beings," or "Lord of all being," all that have been and all that will ever be. All created beings have inherent worth and value by virtue of being created by God. To exclude any created being from moral consideration violates the principle of *tawhīd*.[71]

3.2 The implications of putting this principle into practice are immense. It means that one cannot ethically make one's ultimate aim the welfare of a part of God's creation without consciously and explicitly considering the welfare of the whole. Can we aim at the exclusive well-being of our own nation and presume that this will not hurt other nations? Can you aim at the well-being of men (or "man") and presume that this will not discount or degrade women? Can you aim at the well-being of the wealthy and presume that this will lead to the welfare of the poor? Can you aim at the well-being of the present generation and presume that this will not deprive the coming generations of their rightful inheritance? Can you aim at human well-being and presume that this will not devastate the myriad other species with which we share the Earth? Governments and economies are largely run by people who hold precisely these presumptions. But they are not compatible with the loving service of one All-Merciful *God*, Lord of all beings. Indeed, to make our ultimate aim less than the good of all beings is a travesty of our faith. It is unethical and immoral: it violates the principal ethical demand of *tawhīd*.[72]

Revering God in His Creatures

3.3 ***Taqwā*: The Attitude of Reverence, Care, and Carefulness.** God is the Lord of every thing, and He is Master of the Judgment Day, the Day of Reckoning: on that Day, He will try us with regard to all His creatures.

> ***On that day will humankind come forth in scattered bands to behold what they have done: Then whoever has done an atom's weight of good, shall see it, and whoever has done an atom's weight of evil, shall see it!*** (99:6-8)

The Arabic word *dharrah* in these verses, usually understood as "atom," "particle," or "mote," also means the smallest of ants, among the smallest forms of life that can be seen by human eyes. Both meanings imply that the Lord of all beings will try us and judge us in our treatment of the most minute created beings: Hence, we are to revere Him in our conduct toward every being, however insignificant it might seem. No being is without significance. God is the Lord of all things, and He will try us with regard to His creatures: so we are to revere Him in our conduct toward all things. We must revere Him in our treatment of every man, every woman, every child. We must revere Him in our treatment of every beast, every bird, every insect, every plant, every river, every rock... Each creature, no matter how insignificant it might appear to us, is a creature of Him who is Tremendous beyond all measure; a sign of Him who has created it. Each is a world that will never be repeated, and that reveals the transcendent glory of its Maker.[73] Nothing is created in vain; all are created for right. We must therefore treat none wantonly and take no life except for right.[74] From the encounter with the Lord of all beings, Who holds us accountable for our treatment of each and all, comes the attitude of *taqwa*: profound awareness and reverence toward the Lord of all beings, coupled with utmost care and carefulness in our treatment of His creation. This attitude is the essence of ethical nobility. " ***Most noble of you in the sight of God are they who are most reverent."*** (49:13)

Utmost Good toward All Creation

3.4 ***Ihsān*: Utmost Good.** The attitude of reverence in devotion to God finds its completion in works of utmost good and beauty: its highest manifestation in our deeds is to serve the Lord of all beings by doing *utmost good* to ***all*** His creatures. Good works are the very purpose of life and death:[75]

He Who created death and life to try you,
which of you work the most good... (67:2)

It is not enough to do good; we are required to do the *utmost good***,** as though we see the Lord of all beings before us, for surely the Lord of all sees us**.[76]** The prophet Muhammad, upon him be peace and the blessing of God, declared that "God has prescribed utmost goodness, beauty, and excellence (*ihsān)* with regard to all things".[77] The following verses of the Qur'ān suggest that the overriding criterion in choosing between alternative courses of good, beneficial work or between ostensibly legitimate rulings is that which is best, most beneficial, most beautiful, most excellent, most good (*ahsan*):

…so give glad tidings to My servants who hearken to the Word and follow what is best in it: it is they whom God has guided, and they who are endowed with insight. (39:17-18)

Show Compassion toward those on Earth

3.5 ***Rahmah*: Compassion.** The Lord and Sustainer of all beings is All Merciful, All Compassionate. The extent of His overwhelming mercy, grace, and compassion is greater than we can ever grasp.

…My mercy embraces everything… (7:156).[78]

God has filled the universe with glory, with beauty, and given living beings all the varied senses by which they, and we, can perceive this glory and beauty. How shall we respond? How shall we show our gratitude? Is not the best way to give thanks to serve Him? How shall we serve the All-Merciful, the All-Compassionate? The prophet Muhammad, upon him be blessings and peace, said, "The compassionate are shown compassion by the All-Compassionate. Show compassion to those on Earth, and He Who is in Heaven will show compassion to you." [79]

3.6 ***Shukr*: Gratitude.** Another response to the grace of the All-Merciful is to show gratitude and appreciation, to give thanks for His blessings.[80]

> ***A sign for them is the lifeless earth. We revive it and We bring forth from it grain of which they eat. And We have placed therein gardens of date palms and grapes, and caused springs of water to gush forth, that they may eat of its fruits and the work of their hands: will they not then give thanks?*** *(36:33-35)*

The Qur'an calls us to rejoice in the beauty in the universe, to nourish our emotions as shown in the Qur'anic verses that describe the beauty, adornment, and splendour in the creation and awaken us to savour and take delight in it. These verses call attention to the beauty and adornment in the heavens (15:16, 37:6, 67:5) and in the Earth: the growth of desert plants after rain, and blossoming date palms (29:60; 22:5; 50:10), groves and gardens, and domestic animals such as horses, mules, donkeys, and camels (16:5-6; 8). The Qur'an thus directs our feelings and our senses to grasp the beauty and perfection of the Creator beyond the creation (32:7; 27:88). If a poet sees beauty in all things through his or her artistic sensibility, a believer sees beauty in all things through his or her spiritual sensibility of faith, perceiving the beauty of the Maker in the perfection of what He has made.[81]

The Signs of the All-Merciful

3.7 **Responding to the Signs of the All-Merciful.** The Qur'an describes the signs in the creation as disclosing knowledge of God and His purposes to people who reflect, who are intelligent and who remember; considering these blessings obliges us to be grateful.[82] We are to interact with the creation with consideration and with gratitude (*shukr*). Like the praise of God, *shukr* is felt in the heart and expressed by the lips, but it needs also to be expressed by the limbs, in doing good works (*al-aʿmāl as-sālihah*, *as-sālihāt*) and in utmost good (*ihsān*) toward God's creatures. Gratitude for God's blessings is shown by using them according to the ends for which they are created, as well as by taking care of these blessings, maintaining, and increasing them.[83]

3.8 **Understanding the Signs of the All-Merciful.** Until we truly understand the signs of the All-Merciful Lord of all beings, it seems unlikely that we could successfully take care of the blessings showered upon us, much less tend the Earth. Such understanding requires knowledge, discernment, and wisdom. The prophet Muhammad, upon whom be blessings and peace, declared that seeking knowledge is a duty upon every individual Muslim,[84] for knowledge of the signs of scripture and creation leads to reverential care:

> ***Do you not see that God sent down water from the sky***
> ***and by it We bring forth fruit of various colours?***
> ***And in the mountains, there are streaks of white and red,***
> ***of varying shades, and rocks of deep jet black.***

And humankind and beasts and livestock are likewise of varying colours.
Only those among His servants who have knowledge
show careful reverence toward God … (35:27-28)

3.9 Clearly, however, not all learning inculcates reverential care; not all learning cultivates the quest for utmost good and beauty. Our current educational institutions and curricula are, in large part, what has equipped us to fail in tending the Earth as *khalīfah*s on it. They have given us the skills to initiate and perpetuate the ecological crisis that humankind and all life on the Earth are suffering today.[85] Despite the valiant efforts of countless educators to reform them, they still partake of the rash and reckless, dangerous dream of modern man to manage the Earth and its systems, without questioning whether the Earth and its life systems, in all their complexity, can ever be safely managed.[86] Let us set out instead to manage ourselves: our desires, economies, politics, and communities. We could reshape ourselves to fit a finite planet, rather than try to reshape the planet to fit our infinite wants.[87] To begin to heal the communities of life that we have so gravely wounded, to become caring, competent *khalīfah*s on the Earth, we need deep spiritual awareness of our relationship to the Creator on the one hand, and on the other, we need a broad knowledge and understanding of the creation and our place in it. For the first of these, we set out by cultivating the spiritual practices of our faith and for the second, we set out by cultivating our relationships with the creation.

3.10 **Experiential Understanding of the Creation.** Over recent decades, there has been worldwide concurrence on the need for the human population of the Earth to be aware of, and concerned about, the total environment and its associated problems, and to have "the knowledge, attitudes, skills, motivation, and commitment to work individually and collectively toward solution of current problems and the prevention of new ones." [88] Before people are confronted with grim environmental problems, they must have opportunities to be immersed in nature so as to experience the joy and beauty of the natural world.[89] But this is complicated by the fact that over half of the human population now lives in urban centres and moreover, by the grim quandary that, as human populations grow, and our appetite for consumer goods expands, untrammelled wildlands shrink, and are rapidly vanishing.[90] In Islamic cultures, there is a strong tradition of the wilderness representing spiritual truth: the prophets – Moses, Elijah, John (Yahyā), Jesus, Muhammad, and others, may the peace and blessings of God be upon them all – went into the wilderness to encounter the Face of the Lord of all beings, and came back with the wisdom and truth of divine revelation.[91] The spiritual truth inherent in wildlands is echoed in the poetry, literature, paintings, and other arts of Islamic civilisations.[92]

3.11 In contemporary Islamic societies, as in others, wildland experiences and values are eroding. The rural and nomadic communities of many Islamic countries are still attuned to the rhythms of the deserts, steppes, mountains, forests, wetlands, and seacoasts where they live, but their ties to the land are weakening.[93] Muslims have not forgotten entirely the theology of nature that is embodied in Islam, nor have they lost entirely their sacred view of the cosmos and the Earth.[94] However, we need authentic experiences in wild nature to grasp more fully the meaning of these teachings. We need to develop authentic relationships with wild places and wild creatures and to discover individually, personally, an experience of joy in the natural world. Ecological education is best learned not in classrooms, but in wildlands where the rhythms of nature predominate, and the community of life is not controlled by human beings. God willing, this helps us become better caretakers of the Earth, by having experiential understanding of the processes that have shaped it and the diversity of life these places harbour.

3.12 We urge educators in the Islamic countries and throughout the Earth to experience viscerally the joy of learning about the natural creation in the wild, and then to arrange visceral contact with wild nature in a way that compels participants to understand, respect, and care for it; to provide the richest, most thoughtful immersions in wildlands that they can devise, joining scientific knowledge with the arts, adventure, and above all, ethics and spiritual reflection, to prepare tomorrow's leaders and enable them to practice and communicate the broader ethics of responsibility on the Earth.

Spiritual Practices

3.13 The ritual practices of Islam provide a profound grounding in spiritual and ethical values, especially in that attitude of reverence, care, and carefulness that is *taqwā*:

> ***O humankind, worship your Lord Who created you and those before you, that you might learn reverential care.*** (2:21)

Seeing everywhere the creative act of God and being fully aware of the divine presence which surrounds and permeates both the world of nature and that of human culture, strengthens people's moral dimension and motivates them to act accordingly. If practiced consciously, with conscience, these practices can change the way we live our lives.

3.14 **The *Shahādah*: Bearing Witness.** When we embrace the faith of Islam, when we sound the call to prayer, when we pray, and at countless other times throughout our lives, we bear witness to the oneness of God, the Lord of all beings, Whom we must hold in reverential awe, and Whom we are obliged to serve by utmost goodness to all beings, and we bear witness to the prophethood and message of Muhammad, upon him be peace and the blessing of God, Who sent him as a mercy to all beings.

3.15 ***Salāh*: Prayer.** In the prescribed prayers, five times each day, we undergo a profound immersion in the values and ethics of our faith. We join all things in the heavens and the Earth in praying, and glorifying God, for each thing knows its prayer and glorification and God knows what they do (17:44; 22:18; 24:4). The times of prayer are known by the position of the sun or its effects on the night. We prepare ourselves for prayer with pure water, or if there is none, clean dust. We stand in a place of prayer; if it is outdoors, so much the better, for the prophet Muhammad said, upon him be blessings and peace, *The Earth has been made for me a place of prayer, pure and purifying, so wherever a person of my community may be when the time of a prayer is due, let him pray*.[95]

We stand facing toward the Ka'bah in Makkah, the original house of worship built for the Lord of all creation, and recite the invocation, "***I have turned my face to Him who created the heavens and the Earth …***" (6:79). We open our prayer with the opening verses of the Qur'an, *Sūrat al-Fātihah*, which serves to refresh and clarify our relationship with the Creator and the created five times each day. It begins with praise and gratitude to the Lord of all beings, Who is Merciful to all, Compassionate to each, and Who alone judges every deed. We declare our devotion to the Lord of all and beseech Him for help: the help we seek is guidance to the way of those whom the Lord of all has blessed – who, in reverential care and compassion toward all beings, do their utmost good toward all; not the way of those who, through corruption, destruction, cruelty, or injustice, incur

the wrath of the Lord of all, nor the way of those who, through misguidance or thoughtlessness, waste their lives in futility.[96]

3.16 ***Zakāh*: Charity.** Once each year, Muslims are required to give, above a certain minimum, so that the most needy are exempt, one-fortieth of their monetary savings and various proportions of their crops and livestock to the poor and the needy, to purify the remainder that is kept. Wealth is purified by sharing its surplus with those who are in need. Securing the right of the poor in the wealth of the rich through the obligatory alms-tax helps to combat poverty, sickness, and ignorance, three of the major factors that obstruct environmental care.[97]

3.17 ***Siyām*: Fasting.** For one full month each year, Muslims fast each day from the first light of dawn until the setting of the sun. We begin our fast and end it with the sighting of the crescent moon. We abstain from eating, drinking, and marital intimacy to celebrate the month of Ramadan in which the Qur'an was first revealed to the prophet Muhammad, upon him be blessings and peace, in a cave on Mount Hirā' near Makkah. Fasting this month makes us aware of our dependence on our Lord, grateful for the blessings of food, drink, and intimate physical love and leads us to appreciate these blessings. By experiencing the pangs of hunger and thirst for a month, we learn compassion for those who suffer hunger and thirst, whether human beings or other forms of life. And we learn steadfastness, will-power, and self-control. We fast in a spirit of celebration, and we end our fast with a feast and the giving of food in charity.[98]

3.18 ***Hajj*: Pilgrimage.** Once in our lives, if we are able, we make the pilgrimage to Makkah, in the *Haram*, the primordial sanctuary or protected area on Earth, where native animals or plants may not be killed, injured, or disturbed, and while on pilgrimage, we strive to live in harmony with all, and cause no injury to them. There we walk the same hills and vales where walked the prophets Abraham, Ishmael, and Muhammad, upon them be blessings and peace, and their wives and companions, and all the generations of the faithful who came after them. We see the same rocks, breathe the same air, tread the same sands, drink the same water of Zamzam, and view the same species of plants and animals as did they. Dressed alike in simple clothes like death shrouds, we stand in prayer on the plain of 'Arafah, spend a night under the stars at Muzdalifah, and camp three days in the valley of Minā. We cast stones at symbols of evil and we sacrifice livestock, taking life to feed life in sacrament to God.[99] We circle round the Ka'bah, the first house of worship dedicated to the God of all beings, and if we are fortunate enough to have the chance, we might kiss the black stone, the last remaining fragment of that original house, in the most tender gesture known to humankind, whereby our lips symbolically meet the lips of the prophet Muhammad, upon him be blessings and peace, and of all the pilgrims who have followed him in that gesture,[100] and all who will do so after us until the Day of Resurrection.

A Beautiful Exemplar: A Mercy to All Beings

3.19 In the Qur'an, God describes the prophet Muhammad, upon him be peace and the blessing of God, as a mercy to the worlds: a mercy to all creation, a mercy to all beings.[101] ***"We have not sent thee but as a mercy to all beings"*** (21:107).

3.20 In his rulings, his teachings, and his deeds, he practiced reverential care, unbounded goodness, and compassion toward the entire creation. He called humanity to a theology of nature that celebrates the signs of divine glory in all created beings, cherishes and defends them. He strove for and established an order under God whereby the rights of all created beings are

championed.[102] He taught an ethic of nobility unparalleled, of boundless compassion, incomparable care, and utmost good to all things, not as sentimental ideals that sidestep the real ethical dilemmas of living in a world where taking life is unavoidable, where life must feed on life to live. Not only did he teach; he fought, and he laid down laws to secure the rights and wellbeing of all that is.[103]

3.21 Even when he became the most powerful man in all Arabia, he lived gently on the Earth. He lived frugally in a house of clay, mended his own clothes, and ate flesh but rarely. He once reproached his wife Aishah on her handling of an untrained camel, saying: "'A'ishah, Verily God is gentle and He loves gentleness. He rewards for gentleness what He does not give for harshness and He does not reward anything else like it." [104] He once consoled a distraught camel, then asked its owner, "Do you not fear God regarding this animal that God has given into your possession? It has complained to me that you keep it hungry and burden it to the point of exhaustion." [105] He forbade that human beings demean their fellow living beings, especially for amusement, and he outlawed inciting animals to fight each other. [106] Despite his gentleness, he cursed anyone who takes a creature with the spirit of life as a target for marksmanship.[107] He told his Companions of examples of a woman and a man thanked by God and forgiven their sins for giving water to a thirsty dog,[108] and of a woman punished by God in hellfire for starving a cat to death.[109] He ordered one of his Companions who had captured some nestlings to return them to their nest and to the mother bird, who was struggling to protect them.[110] When he came upon a fire that had been lit upon an anthill, he commanded, "Put it out, put it out!"[111]

3.22 Who in the history of humanity achieved what he did to conserve the diversity of life on Earth? He forbade the felling of any tree in the wilderness that provides valuable shade or sustenance, either for people or animals,[112] and declared, "If anyone plants a tree, no human, nor any of God's creatures will eat from it, without its being reckoned as charity from him." [113] When he emigrated to Al-Madinah, he established a sacred sanctuary encompassing that oasis city and its date palm groves, wherein the native vegetation may not be cut and wherein wild animals may not be hunted or disturbed, and surrounding that zone, a wider protected area (*himā*), in which wild trees and shrubs may not be felled.[114]

3.23 On the march from Al-Madinah to Makkah with an army of 10,000 men, he came across a mother dog and her litter of new-born pups, and he posted a guard over her to ensure that no one disturbed her.[115] When he entered Makkah in triumph – the city that had persecuted him and his community of faith, killed many of his Companions, and tried repeatedly to annihilate them, they awaited a terrible reprisal. Yet he forgave its inhabitants, saying the words of forgiveness that, according to the revelation, Joseph spoke to his brothers when they came to him in Egypt: "***There shall be no blame on you this day. May God forgive you – He is the Most Merciful of the merciful*** (12:92).[116] Then, he re-established God's sacred sanctuary surrounding and encompassing Makkah – the primordial protected area on Earth – wherein no wild trees, nor shrubs, nor vegetation may be cut, and wherein no wild animals may be hunted or disturbed.[117] He returned once more to Makkah, on pilgrimage, before his death, and he gathered vast numbers of people to hear the declarations that are known as his Farewell Sermons, in which he proclaimed: *O people, your Lord is One, and your father is one: all of you are from Adam, and Adam was from dust. The noblest of you in the sight of God are those with the greatest reverential care: There is no superiority of an Arab over a non-Arab, nor of a non-Arab over an Arab, nor of a red over a black, nor a black over a red, except in reverential care*.[118]

3.24 For all these reasons, we celebrate the prophet Muhammad as the paragon of compassion, reverential care, and utmost good toward all creation. May the peace and blessings of God be upon him, his wives, and his Companions. His noble example is forever before us to emulate. We urge all our fellow Muslims, particularly those who teach the young, to study deeply his example and strive to realise it in their lives. And we urge all people who do not follow our faith to consider his example, as we urge everyone on Earth to cherish and celebrate the best in all the prophets, as well as in great sages and teachers of wisdom of the East and the West, the South and the North with respect to tending the Earth and its communities of life.

Chapter 4

Equity, Fairness, and Justice in Sharing the Sources of Life

Prosperity in Perspective

4.1 Viewing images of the Earth taken from outer space, we realise that with respect to matter, it functions essentially as a closed system. Nearly everything that life on Earth has ever needed through aeons of time has been made available to us by this system, driven by the flow of energy of the sun, nudged by the pull of the moon, with the myriad elements, stardust, air, water, and nutrients circulating constantly in their various cycles.[119] This leads us to recognise that the Earth's surface area, its materials, and its resources are finite. It has limits; as the Qur'an reminds us, God "***has created all things and ordained them in precise measure***" (25:2), "***All things We have created in precise measure***" (54:49), and in the warning, "***…Eat and drink, and do not waste by excess: God does not love those who waste by excess***" (7:31; also see 6:141), it cautions us not to overstep those limits.

4.2 It is more than likely that the years 2020 and 2021 will go down in history as years in which humankind collectively faced one of our greatest challenges**.** Our concerns over climate change and other environmental cataclysms notwithstanding, we have struggled to control a virus which has the potential to affect every single human being. The Covid-19 virus has exposed the fault lines in our shrinking world. The richer countries have bought up doses of the newly developed vaccine by the millions, leaving the poorer countries without, thus exposing the inequity and iniquity that prevails in our global village.

4.3 We now live on an overloaded, overheated planet as a result of rapid population and economic growth. Our increasing numbers continue to demand more from shrinking resources in the natural world. It is estimated that when the ice receded some 12,000 years ago, Earth's human population was perhaps 4 million. In nearly 14,000 years it reached 1.6 billion by the year 1900, and just 120 years later, we are now some 8.1 billion souls. Our population is expected to peak at around 11 billion by 2100.[120] How will that multitude be fed, clothed, and sheltered? And what will be the state of the planet by 2100, if we continue to degrade it as we are doing now?

4.4 It has come to be recognised that an educated population contributes to reduce human numbers by limiting the size of families. But the expectation that an educated population would contribute to reduce the human impact on the environment has not held. Education tends to give rise to a middle-class of prosperous consumers, generating economic growth. But how can we have growth in a shrinking resource base? The advanced industrial countries with their highly educated consumer population are the biggest contributors to climate change and the degradation of our planet at the expense of poorer societies. Despite national and international commitments to sustainable development, the gulf between the rich and the poor keeps widening while the environment continues to deteriorate. This raises questions about the nature of the good life our institutions have been promising. What are the limits to the good life and the prosperity we yearn for? The Qur'an tells us, "***…do not forbid the good things God has permitted***

you [but] do not waste by excess" (5:87). How can we, all 8.1 billion of us, set about having reasonably satisfactory lifestyles and at the same time reduce our impact on the natural world? As was famously noted by Mohandas Gandhi, "Earth provides enough to satisfy every man's need but not for every man's greed".[121] The following discussion highlights pertinent Islamic teachings regarding lifestyle and the sources of life, usufruct and property, and economy, including trade, finance, and governance.[122]

Development and Lifestyle

4.5 Development – the modification of the Earth and its resources to satisfy human needs and improve the quality of life – is high on the list of priorities in many Muslim countries. Some of them are presently among the most impoverished and least developed on Earth. Life expectancy, literacy, and income are low in most of them, while maternal and infant mortality are high. But what exactly does development mean in an Islamic context, and what are its environmental costs? We traditionally describe Islam as a balanced way, neither extravagant nor ascetic. The Qur'an tells us to seek the good of the present material world together with the ultimate spiritual good of the hereafter, and to pray:

…Our Lord, grant us what is good in the present world, and what is good in the hereafter, and keep us far from the torment of the fire. (2:201)

What does this imply with regard to the lifestyles to which we aspire? In seeking the good of the present, ephemeral world, we should not lose sight of the fact that the everlasting good of the hereafter must take precedence. We must not allow our quest for material welfare to be achieved at the expense of our spiritual welfare; it must be subject to ethical constraints.[123]

4.6 The contemporary economic order, based on continual economic growth stoked by usury/interest (*ribā*), is by nature insatiably consumptive, unsustainable, and antithetical to the principles of Islam. Apart from whether it is possible for us to enjoy the lifestyle of the modern industrialised nations, it must be questioned whether, in light of Islamic teachings, it is permissible. While the prophet Muhammad, upon him be blessings and peace, and his Companions took great joy in things of this world – their spouses and children, a drink of cold water, a verdant glen, a fine riding animal, and the touch of rain on their shoulders – by today's standards, they lived their lives most frugally.

4.7 The object of development is surely not to consume as much as possible, but to enable people to lead healthy, fulfilling, and ennobling lives. It is indeed possible to live a healthy and joyous life without excessive consumption of the Earth's resources. That is easy to proclaim, but more difficult to practice, especially on a national or global scale. We urge Muslim jurists, economists, and ecologists to work with their countries' administrations and local communities to prescribe measures to stabilise and reduce our consumption of the sources of life while enhancing the real quality of life. We urge them to ensure that development meets the needs of the present without compromising the ability of future generations to meet their own needs, and that it does not threaten the integrity of nature or the survival of other species.

4.8 The limits to population growth: What population the Earth, or any one of its countries, can sustain depends both on how many people there are and on how much energy and other resources each person consumes and wastes. Environmental scientists, together with the less

affluent, non-industrialised nations have pointed out that through excessive and wasteful use of the Earth's resources, the industrialised countries cause greater environmental damage, by most measures,[124] than the larger populations of the non-industrialised world. Some have called for equitable redistribution of resources as an alternative to population control. But even with more equitable distribution of resources, we must face the fact that the rate at which we procreate will have a direct bearing on the way of life to which we and our descendants can realistically aspire.[125] The question we should ask is not merely what number of human beings the Earth can sustain, but what number it can sustain in health and happiness, when distributive justice prevails.

4.9 We believe that draconian interventions by states to limit the number of offspring families have been unethical, as are autocratic attempts to block access to most means of fertility control. The right to enjoy the blessing of children is fundamental in Islam, and it is difficult to limit an individual's freedom to procreate by force of law. Offspring are described in the Qur'an as an adornment of this world, and jurists have held that safeguarding of progeny is one of the essential aims of Islamic law.[126] Like everyone else on Earth, Muslim families are faced with a trade-off between the blessings of raising a large quantity of children and the blessings of providing a high quality of upbringing, education, and health care. Individuals need the freedom, empowerment, and sound information to make rational, ethical choices in light of their individual situations and the ethical principles of our faith.[127]

The Sources of Life

4.10 The air we breathe, the water we drink, the soil we cultivate, and all the communities of life with which we share the Earth and on which we all depend are commonly called resources. But if we look at the association of the Arabic word – *mawārid* – with springs and other sources of water, that vital resource of which all living beings on Earth are made and on which the lives of all depend, we could understand that these are more fundamentally the sources of life. In the economic system that dominates the modern world, raw material resources and primary agricultural products are viewed as commodities to be bought and sold. Resources and commodities are believed to have no inherent worth, only the value they are given by human beings. However, as noted earlier, the Qur'an describes these things, both living and lifeless, as the signs of God, creations of God, submitters to God, glorifiers of God, worshippers of God. Nothing that God the Almighty and Glorious has created is without worth. Nothing is created wantonly or in vain. All are created in Truth and for Right, and each has rights on us. All created things have a basic inviolability (*hurmah*), which human beings are obliged to respect. We are not free to make light of them or to disregard them, much less to squander, exhaust, degrade, or defile them, to treat them wantonly or excessively. In using them, we are obliged to regard and revere their Creator.

4.11 As for our fellow sentient beings, the wild and domestic animals with whom we share the Earth, the Qur'an describes them as communities like ourselves (6:38). Their value as communities precedes their value as commodities. No commodity should be denigrated or abused; all should be respected and treated with care. Nonetheless, communities are treated with a still higher degree of reverence and care (*taqwā*), compassion (*rahmah*), and goodness (*ihsān*). The "common good" is explicitly understood to include the good of all species and all generations.

4.12 In Islamic law, the essential environmental elements and sources of life, such as water, rangeland, fire (including fuelwood and other sources of energy), forests and woodlands, fish and

wildlife, cannot be owned in their natural state; they are held in common by all members of society. Individuals are entitled to benefit from them to the extent of their need, so long as they do not infringe or violate the rights of other members. In return for profiting from the resource, they are obliged, as far as possible, to maintain its original value; if they cause its destruction, impairment, or degradation, they are held liable to the extent of repairing the damage, because they have violated the rights of all other members of society.[128]

4.13 Accountability for the conservation of resource, accords with the fundamental legal principle established by the prophet Muhammad, upon him be peace and the blessing of God, "The benefit of a thing is in return for the liability attaching to it," [129] and its converse, "Liability for a thing is an obligation accompanying the benefit thereof." [130] The right to sustainably use a source of life for profit provides an incentive to reinvest in its conservation and enhancement. Similarly, a fair share of the economic benefits of the conservation of a source should return to those people who have borne the burden of its conservation.[131] In our view, these principles require that all the sources of life, renewable and non-renewable, be used efficiently and with restraint. Renewable sources should be used sustainably: they should be harvested at rates that do not exceed their capacity for regeneration. Although it is not possible to use non-renewable sources sustainably, their lives should be extended by recycling. using less, and using renewable substitutes.[132]

4.14. **Property as Usufruct.** Islamic law affirms the need for private property. But its ownership is not absolute; it is akin to usufruct. In the words of the 14th century jurist Abū 'l-Faraj 'Abd ar-Rahmān ibn Rajab, "People do not in fact own things, for the only real owner of things is their Creator, be He glorified and exalted. Indeed, people do not own anything but their usufruct in the manner permitted by the revealed Law."[133] While the right to hold private property is rigorously safeguarded, there are important restrictions on its *use.* Among the most important of these restrictions are those which pertain to the abuse of rights.[134]

4.15 **No Damage.** The prophet Muhammad, upon him be peace and the blessing of God, declared that "There shall be no infliction of damage and no retaliation through damage – *Lā darar wa lā dirār*." [135] Accordingly, Muslim jurists have ruled that a person invalidates his or her right if, by exercising it, he or she *intends* to cause damage to another; or if its exercise *results* in damage to another without corresponding benefit to its possessor; or if despite bringing benefit to its possessor, its exercise results in either *excessive damage* to other individuals or in *general damage* to society and the creation as a whole (*al-khalq*). Impairment of ecosystems and reduction of biodiversity clearly fall within general damage.

4.16 The expertise of Muslim jurists in the allocation of water rights represents the distillation of experience that civilisations in the arid and semi-arid Middle East have gained over millennia in tending a scarce resource, and in bringing its management within the ethical parameters of Islam. This most vital source of life, of which every living thing is made and upon which each depends, may serve as an analogical basis for the allocation of rights to other sources of life that formerly were abundant, but are now becoming progressively more scarce.[136]

4.17 Among the most remarkable achievements of Islamic civilisation were the flourishing agronomies that Islamic cultures, from Yemen and Oman to Iran and Turkistan, North Africa and Andalusia, India and Southeast Asia, developed within the framework of these water rights.[137] The farming heritage of Islamic civilisation is generally known by the Arabic word *filāhah*, meaning

"cultivation," but also meaning "to thrive or prosper."[138] The double meaning is beautifully expressed by the author of a treatise on the *hisbah*: "Husbandry is the foundation of civilisation - all sustenance derives from it, as well as the principal benefits and blessings that civilisation brings."[139] The horticultural methods of *filāhah* were supported by highly refined techniques of terracing to harvest rainwater and soil that were developed in Yemen, Oman, Indonesia and other Islamic lands. There were also underground and surface aqueducts in Iran and Oman (and formerly in the Hijāz, *'Ayn Zubaydah*) and Andalusia. These aqueducts are known as *falaj* (plural *aflāj*) in the Arabian Peninsula and as *qanāt* or *kārez* in Persian speaking countries.[140]

4.18 The caliph 'Alī ibn Abī Tālib wrote to Mālik Al-Ashtar An-Nakha'ī, whom he chose to govern Egypt, a letter on good governance, in which he stressed the need to cultivate the land (*'imārat al-ard*), stating "You should…keep your eye on cultivating the land more than on collecting revenue, because revenue cannot be had without cultivation. Whoever demands revenue without cultivation ruins the area and brings devastation to the people. His rule will last only a moment."[141] In advising a man who had reclaimed and developed abandoned land, the caliph 'Alī eloquently summed up Islamic ethics pertaining to the use of the land thus: "Partake of it gladly, so long as you are a benefactor, not a despoiler; a cultivator, not a destroyer." [142]

Our World in Debt: Growth by Exploitation or by Contribution

4.19 The global economy is built on a subterfuge which is now devouring the natural world. Money is a fiction and it is described as a "naked symbol with no intrinsic value of its own and no direct linkage to anything specific".[143] Money has come to be recognised as mere tokens as "there is something quite magical about the way money is created. No other commodity works in quite the same way. The money supply grows through use; it expands through debt. The more we lend, the more we have. The more debt there is, the more [money] there is".[144] Over-extended debt, fuelling consumption patterns propelled by an economic growth model that cannot be sustained, is a direct cause of global ecological collapse. For how long can we allow this ever-growing amount of debt to lay waste to the real and tangible resources of a finite world?[145]

4.20 ***Ribā*.** Islam prohibits *ribā,* that is usury or unjust, exploitative gains made in trade or business, including the taking of interest. *Ribā* also applies to creating money from nothing in the form of a debt and charging interest on it, and to economic injustice in general. The Qur'an condemns those who exploit others through *ribā* and warns us,

"**That which you give in usury that it might increase through people's wealth has no increase with God. But that which you give in alms, seeking the Face of God – it is they who receive a manifold increase**" (30:39).

"**God blights usury but blesses acts of charity to grow; and God does not love any evil ingrate**" (2:276).

Ribā manifests a power relationship whereby those who have can exploit those in need; whereby the borrower is forced to work harder to repay the capital created from nothing, which grows with compounding interest; whereby the powerful manipulate the defenceless. The wealthy use money that does not exist to enable them to live their exaggerated lifestyles, which ultimately degrade ecosystems worldwide. [146]

4.21 ***Zakāh.*** *Ribā* is so central to the global economic system that few economists can imagine a world without it; however, for most of the past millennium, the taking of interest was forbidden in Christian Europe as well as in the Islamic world. In contrast to the economy based on exploitation, Muslim economists call to the vision of an economy based on the principle of purifying charity (*tazkiyah)*, and exemplified by z*akāh*,[147] an obligatory wealth tax, which is on a par with prayer. The Qur'an commands, *"***Be steadfast in prayer and give the purifying alms…***"* (2:110). Just as wealth is purified by sharing its surplus with those who are in need, societies are purified by the circulation of wealth from the wealthy to the needy.[148] Other contributions to this purification include *sadaqah* (voluntary alms, charity), *awqāf* (charitable endowments), *infāq*, (support, whereby needy relatives and domestic animals have a right in a person's wealth), and *qard hasan* (a beautiful loan), a loan without interest, which the Qur'an encourages the wealthy to give to those in need.

Revere God as best you can, and hear and obey, and give: that is better for your souls. Those who are safeguarded from their own greed, they shall prosper. If you give a beautiful loan to God, He will return it to you manifold … (64:16-17).

The Qur'an further asserts,

*"**You will never attain to utmost good until you donate some of what you cherish. And whatever you give is well known to God**"* (3:92).

Between Frugality and Wasteful Excess

4.22 ***Iqtisād* and *Isrāf*.** The Arabic word *iqtisād*, meaning frugality, prudence, moderation, and conservation, is, significantly, the term used for economics in Islam.[149] The prophet Muhammad, upon him be peace and the blessing of God, is reported to have said, "Beware of wasteful extravagance in wealth and spending; it is binding on you to be cautious, for no people that was prudent in their spending has been reduced to poverty."[150] The Qur'an guides humankind to moderation, balance and preservation.[151] It describes the true servants of the All-Merciful as *"**those who, when they spend, are neither wasteful nor miserly, but keep to the mean between these two**"* (25:67). Moderation tends toward fairness (*qist*) and the balance associated with it, whereas immoderation feeds transgression and injustice and disturbs the balance by which God has set up the creation.[152] The Qur'an is clear in its condemnation of wasteful excess: "***… eat and drink, and do not waste by excess: God does not love those who waste by excess***" (7:31; also see 6:141). A well-known *hadīth* shows clearly how even in the use of copious resource, waste is detested: *… the Messenger of God, upon him be blessings and peace, passed by Sa'd while he was washing for prayer, and said: "What is this excess, O Sa'd?" He replied: "Is there excess in washing for prayer?" The Prophet said: "Yes, even if you are beside a flowing river*." [153]

Thus, wasteful use of even such abundant resources as the air, the soil, the oceans, and the once-vast forests is forbidden, to say nothing of other, scarcer, mineral and biological resources.

4.23 **Overconsumption.** God has provided humankind with all that we need and more, yet human greed knows no bounds. In the Islamic worldview, greed is deemed a kind of ingratitude to our Lord, the Lord of all beings.

Surely, human beings are most ungrateful to their Lord. And to this do they bear witness: for, surely, in the love of wealth are they most fierce.
(100:6-8)

The accumulation of wealth for its own sake – deemed a worthy goal in some economic systems – is discouraged. The Qur'an declares in the chapter entitled 'Competition',

You are obsessed by greed for more and more until you visit the graves. But no, you will come to know! Again no, you will come to know! No, if you knew the truth with certainty: you will see hellfire. You will see it with certain vision. Then on that day you will be questioned about the blessings you had enjoyed (102:1–7).

The following *hadīth* exemplifies the Prophet's teaching on the accumulation of wealth and attitude to debt: *If I had gold equal to the mountain of Uhud, it would not please me that it should remain with me for more than three days, except an amount which I would keep for repaying debts*.[154]

Thus arises the need to reconsider the pursuit of abundance through accumulation, shifting toward a way grounded in the fulfillment found in doing without unneeded things.

4.24 **An Open, Fair Economy.** Among the salient characteristics of the Islamic economic heritage[155] are its insistence that the welfare of individuals and society takes precedence over profit[156] and the rulings that markets must be free to all traders, prices are determined by open transactions, and produce must be open to inspection. Hoarding, monopoly trading, over charging and false or misleading advertising are forbidden. These rulings enable the fair distribution of resources and trade based on equity and justice. Its emphasis on workers' rights is expressed in the *hadīth*: "Give the worker his wages before his sweat dries."[157] The use of gold and silver as a medium of exchange is more receptive to measures to ensure transparency, than are digitalised money and the current fractional reserve banking system. The stand of Islamic economic teachings against wasteful extravagance favours economic circularity over linear models of production.

Conduct by Mutual Consultation

4.25 A fundamental right of people is consultation (*shūrā*) in all matters that affect their welfare.[158] Each individual man and woman, as a *khalīfah* on the Earth, will be judged alone on the Day of Judgment for what he or she did with his or her life. This enormous responsibility requires the freedom to participate effectively in planning and decision-making processes.[159] The Qur'an promises that ***"those who conduct their affairs by mutual consultation"*** (42:38) will receive a better, more lasting reward from God. People of all social and ethnic groups are to be consulted without discrimination; the weakest are to be held as strongest until their rights are fully secured, and the strongest held as weakest until they comply fully with the law.[160] The caliph 'Alī ibn Abī Tālib declared, "The right of the weak shall be taken from the strong until the virtuous enjoys peace and protection from (the oppression of) the wicked."[161] He advised Muhammad ibn Abī Bakr, his governor in Egypt, "Accord them equal treatment so that the great should not expect injustice from you in their favour and the low should not despair of your justice to them."[162]

4.26 We call on the governing authorities in Islamic countries and in all countries throughout the world to prioritise the measures needed to empower the powerless and ensure effective

participation of people whose interests are at stake in the decision-making processes, so that they may make full use of their intelligence and experience and not be disadvantaged by racial, ethnic, sexual, religious, or other forms of discrimination.[163]

Chapter 5

Principles and Practices for Tending the Earth

The *Sharīʿah* and its Aims

5.1 **The Earth as a Ship.** In recent years, writers have imagined the planet Earth as a ship, an ark of Noah sailing round the sun with its precious cargo, the species of life, all interlinked and united in destiny. The prophet Muhammad, upon him be peace and the blessing of God, used the parable of a ship to illustrate the responsibilities arising from interdependence. The passengers in their various positions on deck and below required each other's services, as in the distribution of drinking water. In his impatience to obtain water, one of the passengers below deck began to chop a hole in the hull with an axe, claiming his right to drink. "Now, if they were to hold back his hands," said the Prophet, "they would save both him and themselves. But if they were to leave him alone, they would cause both him and themselves to perish." [164] The passenger in the parable exemplifies the behaviour and attitude of contemporary human beings, who in their impatience to extract from nature the goods that they desire, have significantly diminished the capacity of the Earth to support life. Environmental legislation, policy, and activism – the subjects of this section – are among the means by which our hands may be restrained.

5.2 A distinctive aspect of the Islamic faith tradition is its emphasis on securing the rights of created beings, humans and other beings alike. Indeed, Islam is often said to be a religion of law. [165] The moral Law of Islam, derived mainly from the Qur'an and the normative practice (*sunnah*)[166] of the prophet Muhammad, upon him be blessings and peace, is known as the *sharīʿah*, which means literally the Way, the path to water, the source of life.[167] Its aim is to chart how to do the will of the Merciful, Compassionate Lord of all beings; to live life – individually and collectively – in the most moral and ethical way. Indeed, the science of ethics and that of law are essentially one and the same.[168] Acts are evaluated according to a five-tiered scale; an act may be obligatory, recommended, permitted, disfavoured, or prohibited. [169] The *sharīʿah* is thus not only prohibitive and injunctive, but also prescriptive, charting the ethical course of what "ought" to be: in addition to the essential legal imperatives that fall within the jurisdiction of the courts, it sets forth ideal standards of behaviour that can be implemented only by individual and social conscience. Even when the courts fail, or where Islamic courts do not exist, the *sharīʿah* sets out the norms toward which believers are always to aspire.[170]

5.3 The *sharīʿah*'s principles, applied with discern and care to changing circumstances in different times and places, provide a set of ground rules aimed at ensuring cooperation and responsible behaviour. As has been observed with regard to Islamic water law, local communities usually implement *sharīʿah* rulings without recourse to government intervention, for this requires only that people believe in it and are prepared to accept arbitration by those with learning to interpret the rules. With its distillation of expertise gained over more than 1400 years and "through an emphasis on open and fair dealing the *sharīʿah* has provided a 'true way' by which any Islamic community may find a solution to its…problems." [171] The *sharīʿah* abounds in values, principles, precepts, and rulings that pertain to the environment, as well as environmental

instruments and policies. This body of knowledge is beginning to be recognised as *fiqh al-bī'ah* (Islamic environmental law), and its revival is now being pioneered in various parts of the world.[172]

5.4 **The Ultimate Aims of the Sharī'ah.**[173] A fundamental principle of Islamic law is that "matters are evaluated in light of their aims (*maqāsid*). The ultimate aim of the *sharī'ah* is to promote the welfare of God's creatures (*masālih al-khalq* or *masālih al-'ibād*).[174] Muslim jurists have generally agreed that for human society to function and prosper, at least five essential prerequisites[175] must be safeguarded. The first is *dīn*, or religion, the foundation of beliefs, moral values, and ethics upon which society is built. Life (*nafs*) is the second prerequisite; without safeguarding life, no society can function. Third, a society's posterity (*nasl*) must be safeguarded through ensuring that its progeny are born and raised within secure family relationships. Fourth, reason (*'aql*) must be safeguarded to ensure rational behaviour, both individually and collectively. Fifth, rights to property (*māl*) are needed to enable individuals to secure their livelihoods. These necessities apply to the welfare both of present and future generations, explicitly in the case of posterity and implicitly with regard to religion, life, reason, and property.

Benefits and Detriments

5.5 In Islamic jurisprudence, all acts are assessed with regard to their consequences as benefits (*masālih*) and detriments (*mafāsid*).[176] Through comprehensive analysis of similar rulings, jurists in the past have formulated methodological legislative principles (*qawā'id usūlīyah fiqhīyah*), which serve as guidelines in solving particular legal problems.[177] They are an essential element in the evolving science of Islamic environmental jurisprudence. Muslim jurists and legislators should always aim at the common good of all created beings: they should strive to harmonise and fulfil all interests. However, when it is not possible to satisfy all interests, the universal common good requires that rules of prioritisations be followed. The 14th century jurist Taqī ad-Dīn Ahmad ibn Taymīyah articulated the basic principle thus:

> What is required is to safeguard all benefits and bring them to completion, and to eliminate all detriments or at least minimise them. If they prove irreconcilable, it is to safeguard the greater good by the exclusion of the lesser, and to remove the greater harm by acceptance of the lesser. That is the mandate of the Law.[178]

The following paragraphs summarise the principles set out by jurists to secure the general good by weighing the welfare of the greatest number, the importance of the various interests involved, the certainty or probability of benefit and harm, and the ability of those affected to secure their welfare without intervention of the authorities:

- **Universal and individual welfare.** Universal interests[179] take priority over the interests of individuals and particular groups when they cannot be reconciled. Among the principles of Islamic law are: "Priority is given to preserving the universal interest over particular interests," and "The general welfare takes priority over individual welfare." From this basis is derived the principle that "A private injury is accepted to avert a general injury to the public."[180] However, individual rights are not negated in the name of the public interest.[181]
- **Greater and lesser needs.** *Benefits* and detriments are assessed according to their importance and urgency.[182] Priority is given to fundamental necessities if these conflict with less acute needs or refinements, and to the lesser needs if these conflict with refinements. Pertinent juristic principles are: "The lesser of two evils shall be chosen,"

"Severe damage shall be removed by means of lighter damage," and "If one of two opposing detriments is unavoidable, the more injurious is averted by commission of the less injurious."

- **Upholding priorities (*al-ahamm wa'l-muhimm*).** If faced with a choice between mutually exclusive obligations or prohibitions, or an obligation and a prohibition, the more important takes precedence over the less important.[183]
- **Actual and conjectural interests.** Priority is given to actual or known interests in case of conflict with conjectural or probable interests of similar importance; costs and benefits that are certain are given greater weight than uncertain costs and benefits.
- **The interests of the powerful and the powerless.** Consideration is given to the abilities of various groups to secure their own welfare. It is obligatory to protect the disadvantaged and less influential groups in accordance with the juristic principles that "The averting of harm from the poor takes priority over the averting of harm from the wealthy," and "The welfare of the poor takes priority over the welfare of the wealthy." [184]
- **Averting detriments.** It is obligatory to avert or minimise damage before it occurs in application of the principles "There shall be no infliction of damage and no retaliation through damage," "Damage shall be removed," and when it cannot be removed entirely, "Damage shall be removed to the extent that is possible." When securing benefits brings about unavoidable detriments of similar or greater magnitude, the juristic principle to be applied is, "Averting harm takes precedence over acquiring benefits." [185] Herein is a strong justification for adoption of the precautionary principle, namely, that activities which involve a risk of irreversible or serious harm should be averted.

Rights and Wrongs

5.6 **Extirpation of Species.** As noted above (para. 2.5), God has created each thing *bi 'l-haqq*, in truth and for right, and all created beings have rights. "***Not in jest have We created the Heavens and the Earth and all that is between them. We have not created them but for truth…***" (44:38–39). Nothing has been created in vain; all are created for right. We must therefore treat none wantonly, and we must take no life except by right. But if human beings may be justified in taking individual lives, we have no right to extirpate any species of God's creatures from the face of the Earth[186] – to erase a sign of the Divine, to silence a mode of God's glorification, to obliterate a community that embodies such a mode of glorification, worship, and service, to destroy a unique and irreplaceable element in the fabric of life on Earth. The enormity of the crime of ecocide – the extirpation of entire ecosystems, communities of species, including our own – can best be appreciated by considering the horrors of genocide – the extirpation of ethnicities and cultures. Crimes against the creation – *al-khalq, al-'ālamīn* – are analogous to crimes against humanity and are no less grave.[187] This kind of corruption in the Earth has yet to be recognised, litigated, and penalised in national and international legislation.[188]

5.7 **Animal Welfare and Animal Rights.** The rights of animals, *huqūq al-bahā'im wa 'l-hayawān*, are enshrined as one of the categories of *huqūq al-'ibād*, the rights of God's servants, that is, human beings and animals.[189] These rights are detailed in numerous *ahādīth* and are summarised in rulings by Muslim jurists. Most of the rights articulated by jurists apply to domestic animals and captive individuals of wild species, while a few pertain to the hunting of wild animals. Our ethical obligations naturally apply primarily to those creatures whose welfare is most dependent on our actions. In the past, most wild populations were far less affected by the acts of human beings than they are today. Now, their welfare and survival are increasingly, sometimes utterly, dependent on

the acts of humanity.[190] The rights of animals are meant to be safeguarded by the force of the law – not only through the office of the *muhtasib* (the inspector charged with securing good and averting evil – see para. 5.32), but also, in the view of the majority of jurists, by courts of law.[191] If these rights of animals are secured, the impact on industrial farming and fishing practices will be revolutionary. Major changes will be required in the ways that biological and medical research and trade in wildlife are conducted, and in the design and management of abattoirs, livestock farms and markets, zoos, and pet shops. Muslim jurists will have to look closely at the implications of the *sharī'ah* with regard to the use and abuse of living beings, and take bold stands to rectify the wrongs.[192]

Harvesting our Food: *Halāl,* and *Tayyib*

5.8 In light of this grounding in the basic ethical values of our faith, let us consider the food we eat. Consider these two Qur'anic *āyahs*:

Eat of that which God has provided you, lawful and good – and fear God, in Whom you have faith. (5:88)

There shall be no blame on those who have faith and do good works for what they have eaten, if they fear God, have faith, and work rightly; then fear and have faith, then fear and work utmost good – for God loves those who work utmost good. (5:93)

Without in any way negating the specific legal import of the texts with respect to consumption of foods that are not lawful – not *halāl*, we can see here a wider implication with respect to foods that are not purely good – not *tayyib*, and indeed, with respect to the consumption of food in general. As consumers of food, and producers of food, we are morally bound to minimise suffering and destruction.[193] Consuming food – taking life, whether animal or plant, to build our lives – is no small thing. When we take into account the losses of sentient and non-sentient life associated with farming and ranching, fishing and hunting, we cannot escape the fact that our lives inevitably involve the death of an appalling amount of life, including sentient life. [194] We are morally bound to redeem their killing by using the strength we gain to give back more than we have taken.[195] If, in slaughtering and eating, we take God's name in gratitude and render thanks by works of utmost good, we may give meaning to their deaths. Then the act of slaughter will no longer be an act of desecration, but an offering of sacrifice.[196] Significantly, the *hadīth* on utmost good that is quoted in para. 3.3, that "God has prescribed utmost goodness with regard to all things," continues with a tangible illustration in a field not usually associated with goodness, namely the taking of life, but that is the field in which there is the most at stake when goodness is lacking.[197]

God has prescribed utmost goodness, beauty, and excellence (*ihsān)* with regard to all things. So, if you kill, make the kill most good, and if you slaughter, make the slaughter most good: let each of you sharpen his blade and give ease to the one being slaughtered. [198]

5.9 Some kinds of farming, some kinds of ranching, and some kinds of hunting are far more wasteful of life and far more destructive of the fabric of life on Earth than other kinds.[199] Most destructive, most wasteful by far are industrial farms that poison the soil, air, and water, that replace the diversity of native plants with sterile monocultures, industrial livestock production facilities, such as poultry farms, feedlots, slaughterhouses, and dairies, and industrial fisheries – trawlers with vast nets that scrape the seabed and aquaculture systems that replace thriving

coastal and freshwater ecosystems with festering sources of contamination. Industrial agriculture, as practiced today, is perhaps the single greatest factor effacing the diversity of life on Earth, and the gravest agent of global climate change.[200] Is this not the quintessence of *ifsād fī 'l-ard*, causing corruption, destruction, degradation, and desecration in the Earth?

5.10 **Hunting and Fishing.** The Qur'an allows hunting and fishing for food and similar valid needs. But Islamic Law forbids that God's creatures be used cruelly or wastefully. It does not allow corruption in the Earth (*ifsād fī 'l-ard*), or wasteful excess (*isrāf*). Any act that threatens to obliterate a species from an ecosystem is corruption in the Earth. Any killing that goes beyond the legitimate need is wasteful excess. Nor does Islamic teaching allow wanton cruelty (*'abath, ta'dhīb*) or infliction of avoidable pain. The prophet Muhammad, upon him be blessings and peace, cursed anyone who "takes a living creature as a target."[201] He warned that, if anyone kills a sparrow or anything smaller, it will cry out to God the Almighty and Glorious on the Day of Resurrection, "O Lord, this one killed me wantonly – neither did he benefit from my killing, nor did he leave me free to live in Your Earth!"[202] According to a precept of Islamic law, "hunting is permissible, except for sport."[203] As individuals, we are obliged to abjure frivolous killing for sport, and as societies, we should take measures to avert it.[204]

5.11 **Pests and invasive alien species.** Killing of animals and plants is legitimate in defence of our lives, our health, and our crops and properties. A major threat to biological diversity is the introduction of invasive alien species, and for the well-being of the community of life on Earth, it is necessary to prevent the introduction of exotic species that are likely to threaten ecosystems or native species, and to control or remove such species where damage has occurred.[205] However, to avoid wreaking corruption (*ifsād*) and wasteful excess (*isrāf*), we are obliged to use the means that are most efficient and least destructive.[206] Once, when the prophet Muhammad, upon him be peace and the blessing of God, was with some of his companions in a cave at Minā, a viper – a snake with deadly venom – appeared among them. He ordered them to kill it; but as it fled from them, he did not tell them to pursue it. Instead, he said, "God has saved her from your evil as He has saved you from her evil." [207] We need to translate this principle of restraint into regulations to ensure that the defence of our lives, our domestic animals, and our crops does not lead to unnecessary killing, much less the utter extermination of any species of God's creatures.[208]

5.12 **Genetically Modified Organisms.** Genetic engineering brings with it a host of ethical and practical problems. Is genetic manipulation to be prohibited absolutely as the satanic "changing of God's creation," which may lead to environmental catastrophe? Or does it offer legitimate means to cure genetic illnesses and to stave off starvation by enhancing the drought resistance and disease resistance of our crops? We might bear in mind that justifications are offered for most evils on the basis of the benefits they bring, whereas if, like intoxicants and gambling, the harm in them is greater than the good, the *sharī'ah* requires their prohibition.[209] If, on the other hand, genetic engineering is permissible within limits, how are these limits to be defined? [210]

Protecting the Sources of Life

5.13 It is now widely recognised that we have much to learn from conservation practices Muslims used in the past that are all but lost as a result of our corrupted relationship with the natural world today. Institutions such as the *Haramān*, the *himā*, *harīm* zones, and the *waqf*

constitute a basis for conservation of the Earth, its lands and waters, and the forms of life they harbour, as summarised below.

5.14 **The Haramān.** In Islamic teaching, Al-Haramān ash-Sharīfān, the two inviolable sanctuaries that surround and encompass Makkah and Al-Madinah, are the primordial protected areas on Earth. Each of them is an inviolable sanctuary[211] for human beings, for wildlife, and for native vegetation. Within them the destruction of native plants and the killing or injury – even the disturbance – of wild animals is forbidden. [212] On the day that the people of Makkah as a whole embraced Islam, the prophet Muhammad, upon him be peace and the blessing of God, proclaimed with regard to its sacred zone,

> *It is sacred by virtue of the sanctity conferred on it by God until the day of resurrection. Its thorn trees shall not be felled, its game shall not be disturbed, objects lost within it shall be picked up only by those who announce them, and its fresh herbage shall not be cut.*[213]

The prophet Muhammad, upon him be blessings and peace, established a similar sanctuary between the mountains and lava fields surrounding Al-Madinah,[214] saying,

> *Verily Abraham declared Makkah a sanctuary and I declare Al-Madinah, that which lies between its two lava tracts, a sanctuary; its trees shall not be cut, and its game shall not be hunted.*[215]

His Companion Abū Hurayrah stated, "Were I to find gazelles in the land between its two lava tracts, I would not disturb them; and he (the Prophet) also made the environs of Al-Madinah to twelve miles[216] a reserve (*himā*)." [217]

5.15 **Planning for the conservation of the Two Sacred Sanctuaries.** As stated above, within the two inviolable sanctuaries, the destruction of native plants and the killing and injury – even the disturbance – of wild animals is forbidden. Averting injury to native vegetation and wildlife cannot be achieved without protecting their habitats. In our view, this mandates that all planning, design, and construction within the sacred precincts of Makkah and Al-Madinah be carried out with extraordinary sensitivity and care.[218] Were this to be implemented fully, the two inviolable sanctuaries would become models of environmental conservation and sustainable, even regenerative development, demonstrations of best practice in integrated bioregional urban and rural environmental planning. These two sites are visited each year by millions of pilgrims for *hajj* and *'umrah*, the greater and lesser pilgrimage. By demonstrating the highest standards of environmental excellence, as embodiments of harmony between humanity and other created beings, and expressions of human responsibility on the Earth (the concept of *khilāfah* in Islamic teaching), they have the potential to spread environmental consciousness throughout the Muslim world. Conversely, if these two most sacred sites on the face of the Earth are degraded and abused, the message will be broadcast throughout the Muslim countries that to despoil the rest of the planet is not wrong.[219]

5.16 **The *Himā*.** In Islamic law, the word *himā*[220] means "protected area". *Himā*s existed in pre-Islamic Arabia, but in its present form, the *himā* keeps to the rules that were laid down by the prophet Muhammad, upon him be blessings and peace, and by which it came to be one of the essential instruments of conservation. In announcing: "There shall be no reserves except for God and His Messenger," he abolished the pre-Islamic practice of making private reserves for the

exclusive use of rulers and tribal chieftains, and ruled that a *himā* may be established only for the common good in the widest sense.[221]

5.17 The prophet Muhammad, upon him be blessings and peace, established two *himā*s: the first, widely known as Himā ash-Shajar (the *Himā* of the Trees)[222] surrounds the Haram of Al-Madinah. The *Haram* and the surrounding *himā* are conservation zones where it is forbidden to both hunt and cut woody vegetation within the *Haram*, and where it is forbidden to cut trees and woody shrubs within the surrounding *himā*.[223] In contrast to *Himā ash-Shajar*, which he effectively designated to preserve the biodiversity of the native plant communities and their associated fauna, he established the much smaller *Himā an-Naqī'*, some 90 kilometres south of Al-Madinah, for (sustainable – and regenerative) use, namely for pasturing the cavalry horses of the beleaguered Islamic community.[224] *Himā ar-Rabadhah*, centred 160 kilometres east of Al-Madinah, [225] was designated by the caliph 'Umar ibn Al-Khattāb, who articulated the principle that *himā*s are to be managed in a manner that does not cause injury to the local people when he instructed its manager,

> Take care, O Hunayy! Lower your wing over the people! Beware the prayer of the oppressed for it will be answered. Let enter those who depend on their camels and sheep and turn away the herds of Ibn 'Awf and Ibn 'Affān, for they, if their herds should perish, will fall back on their palms and fields; whereas the needy one, if his herds perish, will come to me crying "O Commander of the Faithful…!" It is easier for me to provide them with pasture than to spend on them gold or silver. Indeed, it is their land, for which they fought in the time of ignorance and upon which they embraced Islam.[226]

5.18 These three historical *himā*s are the main precedents from which Muslim jurists have derived the rulings pertaining to protected areas in Islamic law. The policies of early caliphs with respect to *himā*s became a supplementary source of legislation for the institution.[227] Juristic views are well represented and summarised by the 15th century Egyptian jurist Jalāl ad-Dīn 'Abd ar-Rahmān As-Suyūtī, who stipulated that a *himā* must meet the following conditions to be valid: [228]

- it should be constituted by the "imām" – the legitimate governing authority;
- it should be established in the Way of God, i.e. for purposes that pertain to the public welfare, the common good;
- it should not cause undue hardship to the local people – it should not deprive them of resources that are indispensable to their subsistence;
- it should continue to realise greater actual benefits than detriments – if that ceases to be the case, then its management should be amended.

These four conditions accord with current thinking on equity in protected areas.

5.19 Although the *himā* is the most important cultural precedent in Islamic law for protecting wildlands and the diversity of life they harbour, it is one of many similar conservation practices that communities have evolved, over centuries, indeed millennia, in Islamic and other civilisations throughout the world, to protect and conserve the local natural ecosystems on which their survival depends.[229] Examples of such traditional conservation practices are the Minangkabau *lubuk larangan* and *hutan larangan* within the *adat* system[230] in Indonesia, the *agdal* of North Africa, and *hawtah*s of Oman. In the endeavour to revitalise traditional conservation practices, it should be borne in mind that the success of traditional practices and technologies depends on the presence of arrangements that enable the local communities that are the repositories and

practitioners of these traditions to participate equitably in tending the sources of life on which their livelihoods depend.[231]

5.20 We call upon conservation agencies, non-governmental organisations, conservation advocates, faith-based groups, and local communities in the Islamic countries to recognise the value of *hima*s and analogous traditional protected areas and other effectively managed conserved areas, such as *lubuk larangan* and *hutan larangan*, *agdal*, *hawtah*s, and the like, and to empower the traditional managers in whom lies the cumulative inherited cultural knowledge that is embodied in these practices to continue managing them. We also urge such agencies, groups, and communities in Islamic countries and in all countries to set up such effectively and equitably managed protected areas and other effective area-based conservation measures, whatever they may call them, that embody the ethical principles of the *himā*, that conserve areas of particular importance for biodiversity and ecosystem services, are ecologically representative and well connected, and are integrated into the wider landscapes and seascapes.[232]

5.21 **The Value of Wildlands and Wilderness.** In legislation, policy, and planning for protected areas, we would like to see far more attention given to the value of wilderness, or wildlands, which are rapidly vanishing under the onslaught of "civilisation" – in the Islamic countries and all other countries of the Earth.[233] Should we not expect Muslim ethicists, imbued with the teaching that all created beings are unique signs that glorify the Creator, and that each is created in truth and for right, to be foremost in striving to protect the Earth's remaining wildlands? It is in untrammelled wildlands that we have the best prospects for observation, study, and immersion in the glory of these signs and the natural processes – the *sunan* of God – by which He orders and sustains His creation. In Islamic cultures, after all, there is a strong tradition of the wilderness representing spiritual truth, for prophets – Moses, Elijah, John (Yahyā), Jesus, Muhammad, and others, may the peace and blessings of God be upon them all – went into wildlands to encounter the presence of the Lord of all beings, and came back with the truth and wisdom of divine revelation.[234]

5.22 ***Harīm* Zones: Environmental Easements and Greenbelts.** In the Islamic heritage of conservation practices, there are inviolate zones called *harīm*, within which developments are prohibited or restricted to prevent the impairment of utilities and natural resources. Water sources, whether natural, such as seas and lakes, rivers, streams, and springs, or developed, such as wells, cisterns, and surficial and subterranean canals, also have inviolable zones in Islamic law. These *harīm*s resemble easements; they are prescribed to prevent the impairment of water sources, to facilitate their management, and to prevent nuisances and hazards.[235] According to some jurists, every settlement (*'āmir*) should have a surrounding *harīm* resembling a greenbelt within which the right to acquire vacant land by developing it is restricted. These municipal common lands are to be managed by the people of the settlement to provide for their needs, such as forage, firewood, and the like, and to facilitate the use and development of these lands in the manner most conducive to the inhabitants' welfare.[236]

5.23 ***Awqāf*: Charitable Endowments.** *Awqāf* (singular *waqf*) are charitable endowments that are dedicated in perpetuity to the cause of God. In Islamic civilisation, they are the most important institution by which individuals may make bequests for the public good.[237] The *waqf* originated when 'Umar ibn al-Khattāb asked the Prophet what he should do with some land he had acquired in Khaybar. The Prophet suggested that he make the land an endowment and give its produce in charity. 'Umar's son 'Abd-Allāh reported that his father gave the property in charity, declaring

that: "It must not be sold or gifted or inherited and that the harvest would be devoted to the poor, kinsfolk, the freeing of slaves, for the cause of God, for travellers and for guests."[238]

5.24 A *waqf* can be dedicated to the public good at large, or it can be devoted to any legitimate cause that the donor specifies. It is commonly a trust comprised of land or buildings dedicated in perpetuity for charitable purposes prescribed by the donor. It can also be a financial trust, a business, or a share in the proceeds of a business. Wells and cisterns are often donated for the public good, following the example of 'Uthmān ibn 'Affān who bought the well of Rawmah and dedicated it to the public.[239] Although there have long been endowments for the feeding of birds and care for domestic animals, the *waqf* remains nearly untapped as an instrument for conservation. A *waqf* might take the form of a land trust for charitable purposes, such as ecological and range research, wildlife propagation and reintroduction, habitat development, a village woodlot or pasture, or a facility for environmental education and recreation. Alternatively, it might be used to fund such research and reintroduction, to acquire land for purposes of conservation, or to fund habitat restoration and enhancement within or outside protected areas. The value of the *awqāf* system can be gleaned from the fact that the twelfth century ruler of greater Syria, Nūr ad-Dīn Mahmūd Zangī, established an endowment to care for ageing animals in Damascus, which continued to function into the middle of the twentieth century.

5.25 In many countries of the world, charitable contributions are major sources of material and financial support for conservation. Governments cannot bear the full costs of conservation, especially in the poorer countries. Nor should they. Through private contributions, individuals may exercise their role as *khalīfah*s on the Earth and support the projects which they deem most beneficial. We urge Islamic countries – and indeed all countries – to encourage the use of *awqāf* and similar endowments, trusts, and gifts for the care of the Earth and its communities of life.

5.26 **International Cooperation and Conflict.** The general principles of *siyar* (the Islamic conduct of state) recognise that no nation has the right to deprive another of the means of subsistence and that development undertaken in one country should not lead to damage or degradation of another country's natural environment.[240] Nations and their leaders should reject the tendency to retaliate in kind when wronged, for the prophet Muhammad, upon him be peace and the blessing of God, declared, "There shall be no injury or retaliation by injury." [241] He also taught us, "Do not be a people who say, 'if others do good to us, we will do good to them, and if they wrong us, we will wrong them.' Rather, make up your minds to do good to those who do you good, and do not wrong those who do evil to you."[242] Muslim legal scholars prohibited environmental destruction as a military tactic[243] and ruled that the inviolability (*hurmah*) of God's creatures is not nullified by war.[244] The scorched-earth tactics commonly employed in modern warfare are the antithesis of such restraint and the embodiment of the destruction of tilth and fertility (*halāk al-harth wa 'n-nasl*). We call on governments and jurists in Islamic countries and in all the countries of the Earth to condemn unequivocally scorched-earth tactics and the use of nuclear and other weapons of mass destruction, to strive to ensure that their governments abjure them, and to work together for their elimination.

Ethical *Sharī'ah*-based Policies

5.27 ***As-Siyāsat ash-Shar'īyah*.** Muslim jurists define the responsibility of the governing authorities by the principle, "The management of subjects' affairs by the ruler shall accord with their welfare." [245] With increasing human impact, there is an ever-increasing need to plan with

foresight based on a sound understanding of natural processes and the inherent suitabilities and constraints of different places with respect to different uses. Planning for development should always include assessment of environmental impacts, to minimise damage to the natural environment and depletion of natural resources.[246] The governing authorities also have an obligation to act in consultation (*shūrā*) with the people who are affected by their plans. At the local level, this is best realised through participatory planning and collaborative management in which key stakeholders take part.

5.28 **Ecological Planning: Design with Nature.** We urge policy makers, planners and designers in the Islamic countries and throughout the world to endorse the vision that human beings should plan and design in compliance with the natural laws and patterns by which the Lord of all beings directs the natural creation, in alertness to the divine signs that pervade it, and in harmony with its inherent disposition (*fitrah*), neither domineering over it nor unmindful toward it. We understand the natural elements and communities of life that make up any place as expressions of the divine will; working in accord with them is indispensable to any endeavour that seeks utmost good and beauty in devoted service to the Lord of all being. Such responsiveness toward the Earth means little in the abstract; it needs to be grounded in the specific realities of each place.[247] The aim is to thrive within the riches and limitations of that place, to encourage the consumption of local foods, use of local materials, cultivation of native plants, and conservation of local wildlife.

5.29 **Ecological Design: The Islamic Tradition of Garden Design.** The Islamic garden tradition can provide a cosmological, aesthetic, and ethical framework for Muslim communities worldwide to design with nature. The roots of this tradition are in the heritage of *filāhah* in oases, orchards, and agricultural terraces of arid and semiarid lands, where water is scarce and precious. In its classical and vernacular variants alike, it is a tradition rooted in growing food: it is, in its essence, life-sustaining, with fruits and herbs, fodder for farm animals, dovecotes and beehives, nesting for birds, and water for all – it is as beneficial as it is beautiful.[248] It represents a conscious striving to attain *ihsān* – utmost good and beauty, a paradise on Earth. It is an expression of human *khilāfah*, responsibility in tending the Earth. In making nature flourish to the utmost, we humans enjoy and thrive with nature to the utmost, and a relationship of *takāful*, reciprocity, symbiosis, is realised, tending toward the fundamental objective of the *sharī'ah*, the utmost good of all. What nobler kind of gardening can there be than enhancing the natural landscape to bring more life to the land? In the words of the prophet Muhammad, upon him be blessings and peace, "whoever brings lifeless land to life, for him is a reward in it, and whatever any creature seeking food eats of it shall be reckoned as charity from him."[249]

Securing Right, Averting Wrong

5.30 **The *Hisbah*.** A distinctive aspect of Islamic teaching is that all individuals are responsible to command the good and avert evil, to the full extent that they are able. *Amr* means command: empowering individuals, both male and female:

Let there be of you a society that calls to goodness, establishes right and averts wrong. Such are they who shall prosper. (3:104; also see 3:110, 114; 9:71, and 22:41).

The prophet Muhammad, upon him be blessings and peace, declared, "If any of you sees a wrong, let him change it with his hand; if he is unable, let him change it with his tongue; and if he is unable, let him change it in his heart – but that is the least degree of faith."[250]

5.31 This obligation to establish good and avert wrongdoing is known in Islamic law as the *hisbah*. Ethical teachings must be backed with sanctions, for appeals to conscience without positive inducement and enforcement put those who respond to their nobler ethical instincts with self-restraint at a disadvantage with respect to those who fail to rise above their most petty and selfish desires, exceed the bounds of fairness, and infringe the rights of others as they please. The force of law and political authority are therefore indispensable to bring about justice and equity.[251] The caliph ʻUthmān ibn ʻAffān observed that "Through the *sultān* (the governing authority) God curbs evils that He does not curb through the Qur'an."[252]

5.32 **The *Muhtasib*.** One of the most important institutions with power to safeguard the rights of society when individual and social conscience fail was the office of the *muhtasib*, charged with implementing the *hisbah*. The *muhtasib* was a jurist who had to be thoroughly familiar with the rulings of Islamic law that pertained to his or her position as inspector of markets, roads, buildings, watercourses, *himā*s, and the like. Many of the responsibilities of environmental protection and conservation came under the *muhtasib*'s jurisdiction, such as implementation of regulations and standards pertaining to safety and hygiene, removal of pollutants; elimination of hazards and nuisances; protection of *himā*s from violation and trespass; and upholding of animal rights. The *muhtasib* held wide discretionary authority to make immediate judgements based on the *sharīʻah* together with local customs and practices (*ʻurf wa-ʻādah*) that did not violate its purposes and values, to assess damages, and to impose fines and other penalties in order to secure the public welfare.[253] Functioning as an adjunct to the formal Islamic courts, the office had the benefit of immediate enforceability.[254] It is reported that the first *muhtasib*, appointed by the caliph ʻUmar ibn Al-Khattāb, was the woman known as Ash-Shifā' bint ʻAbd-Allāh.[255]

5.33 On the individual level, each man and woman is responsible for his or her own behaviour and is obliged to influence family, neighbours, and the society at large in accordance with an enlightened conscience. Social conscience can be immensely powerful and, when functioning effectively, obviates much of the need for intervention by the governing authorities. The prophet Muhammad, upon him be blessings and peace, declared that "the believer who is strong is better, and better loved by God, than the believer who is weak."[256] Each individual man and woman is a *khalīfah* on the Earth and will be judged alone on the Day of Judgment for what he or she did with his or her life.

5.34 **Environmental Activism.** The individual's obligation to secure good and to avert evil takes on greater prominence when the governing institutions fail to stand against horrific wrong or even enable it, whether through inability, incompetence, ignorance, corruption, or through wilful oppression and tyranny. It also takes on greater prominence as the threats become progressively more grave. Muslims are taught to defend their rights – and the rights of others – to faith, life, offspring, mental health, and property. This is to be achieved by persuasion whenever possible and by more forceful measures if this fails. What is at stake now is far greater than the freedom to practice faith, or defend one's property or even one's life, for the gravity of the looming environmental crisis may eclipse all other crises in human history. What inheritance have we, the older generations, bequeathed to our children and our children's children? Small wonder that they point accusingly to the intergenerational injustice of our corrupted legacy. They have no option but to seize every means of empowerment to secure their future and that of the wider community of life on Earth. As gathering evidence points to acts of humankind leading toward mass extinction on a scale not seen since the cataclysm that brought about the end of the Cretaceous Period,[257]

the consequences in devastation of our own and other forms of life on Earth may eclipse all the war crimes, crimes against humanity, and genocides committed throughout human history.[258]

5.35 What are the moral obligations of individuals and groups under these circumstances? Activism in defence of God's creation finds its ethical culmination in striving in the way of God, devoting one's own life in the cause of the Lord of all, as the prophet Muhammad, upon him be blessings and peace, was commanded: **Say: "Truly, my prayer and my sacrifice and my living and my dying are for God, the Lord of all beings"** (Qur'an 6:162). Muslims are increasingly devoting their lives to removing the effects of corruption in the Earth and striving for the well-being of its glorious, vulnerable communities of life. In such striving, the gentlest, most harmonious approaches must take precedence over tougher, more forceful approaches. Educational awareness, advocacy, and other methods of persuasion to protect the creation of the All Merciful on Earth are incumbent on every sane adult Muslim man and woman. If these approaches fail, what is to be done? Peaceful resistance may be necessary, but it must be the most ethical resistance possible. And if peaceful resistance fails? A Muslim's striving in the way of God must be enveloped in utmost goodness, for the prophet Muhammad, upon him be blessings and peace, declared that God has prescribed utmost goodness with respect to all things, and that there shall be no injury or retaliation by injury. There are bounds beyond which one cannot go, for as Muslim jurists, as well as spiritual leaders of other faith traditions and people of wisdom and ethics throughout the world maintain, unethical means cannot be justified to secure ethical ends. The positive approach of Islam in the face of calamity is exemplified in the commandment of the prophet Muhammad, upon him be peace and the blessing of God, "If the hour of resurrection comes upon any one of you, and in his hand is a palm shoot, let him plant it!"[259]

Annex

A Way Forward

As Muslims now comprise a quarter of the population of humankind of Earth, we should be contributing at least a forth part towards resolving global crises. Indeed, we see distinctive aspects of our faith which suggest that we should be contributing more than that:

- The cosmology of our faith is rooted in recognition that all things in the heavens and the Earth support one another to the glory of the Lord of all, Who holds human beings responsible to work good in the Earth and keep far from wreaking devastation in it.
- The ethos and ethics of our faith are steeped in revering the Lord of all creation in our treatment of every creature, devotion to the Lord of all by working utmost good and beauty in all we do and responding to the grace of the All-Merciful that encompasses all things through compassion that sets no limits.
- The economic values of our faith are embodied in frugal moderation while taking joy in the sources of life for humankind and other living beings, respecting their inherent limits by forsaking wasteful excess for just, equitable sharing of their fruits, and forsaking exploitation of the Earth and its inhabitants for charity and cultivation.
- The Law of our faith and the policies and practices derived from it aim to secure the rights and the welfare of all things, to secure good and avert harm, and to realise the human responsibility of *khilāfah* on the Earth.

At least two things threaten to militate against our success. One is that we might fail to embody these teachings in our lives: that we might allow greed, laziness, or pettiness to divert us from the nobility of our teachings. The other is the dominant economic paradigm of unending growth and consumption. Only a few understand the economics of globalisation, and only a few run and benefit by it. But failure to confront it might ultimately seal the demise of our global village.
The gravity of the looming environmental crisis threatens to eclipse all other crises in human history. Its effects make no distinction between race, religion, culture, or the lines we draw on maps. It should remind us that we are irrevocably connected with the Lord of all in the natural world. ***"To God belong all things in the heavens and on the Earth. And God has ever encompassed all things"*** (4:126). In consideration of the foregoing, we make the following pledges:

- To urge educators to experience viscerally the joy of learning about natural creation in the wild and then to arrange visceral contact with wild nature in a way that compels participants to understand, respect, and care for it. (see para. 3.11)
- To urge all our fellow Muslims, particularly those who teach the young, to study deeply the example of the prophet Muhammad, upon him be peace and the blessing of God, with respect to tending the Earth and its communities of life and strive to realise his example in their lives (see para. 3.23).

- To urge Muslim jurists, economists, and ecologists to work with their countries' administrations and local communities to prescribe measures that do not compromise the ability of future generations to meet their own needs and that do not threaten the integrity of nature or the survival of other species. (see para. 4.7)
- To remind leaders and decision makers that it is essential that people of all social and ethnic groups, traditional societies and indigenous people be consulted without discrimination, and that the weakest be held as strongest until their rights are fully secured, and the strongest held as weakest until they comply fully with the law. (see para. 4.26)
- To call upon the governing authorities and corporations in Islamic and other countries to take the actions necessary to transition swiftly from fossil fuels, to usher in a global economy powered by sun, wind, and water, and to progressively reduce the ecological impacts of these "green" energy sources (see para. 1.11)
- To call upon the governing authorities and corporations in Islamic and other countries to take the actions necessary to transition swiftly from unsustainable, unethical means of food production and harvesting (see para. 5.8)
- To call upon conservation agencies, non-governmental organisations, conservation advocates, faith-based groups, and local communities in the Islamic countries to recognize the value of *hima*s and analogous traditional protected areas and other effectively managed conserved areas, and to empower the traditional managers in whom lies the cumulative inherited cultural knowledge that is embodied in these practices to continue managing them (see para. 5.20)
- To urge conservation agencies, non-governmental organisations, conservation advocates, faith-based groups, and local communities in all countries to set up effectively and equitably managed protected areas and other effective area-based conservation measures, that embody the ethical principles of the *hima*, that conserve areas of particular importance for biodiversity and ecosystem services, are ecologically representative and well connected, and are integrated into the wider landscapes and seascapes. (see para. 5.20)
- To urge Islamic communities globally to set about reviving the *waqf* (charitable endowments) system that has led the way in establishing exemplary conservation practices in the past (see para. 5.24).
- To urge all governments and jurists in Islamic countries to issue unequivocal condemnation of scorched-earth tactics and the use of nuclear and other weapons of mass destruction, to strive to ensure that their governments abjure them, and to work together with other countries for their elimination (see para. 5.26).
- To urge policy makers, planners, and designers in the Islamic countries and throughout the world to endorse the vision that human beings should plan and design in a manner that harmonises with the natural world, that is the universal al-Mizan created by God (see para. 5.28).

We further pledge:

- To establish an academy for environmental teachings from an Islamic perspective.
- To create a faith-based Civil Society Organisation to lead the implementation of Al-Mizan principles and recommendations.
- To implement an Al-Mizan Decade of Action with initiatives and campaigns from cities, universities, schools, institutions, civil society, etc.

- To create an Al-Mizan Youth Council and Summit encouraging young faith leaders to take the lead on environmental action.
- To create an Al-Mizan Global Award of Achievements on environmental action.
- To create an Al-Mizan Trust Fund for action to promote local level projects addressing the initiative's recommendations.
- To create an Al-Mizan Network to connect Muslims around the world and to share their knowledge and experiences.
- To create Al-Mizan International Day; a day dedicated to raise awareness and celebrate actions around Al-Mizan.
- To facilitate Al-Mizan Global Bi-Annual Conference where scholars, institutions and activists meet to discuss relevant issues and topics.
- To implement Al-Mizan Mosques Initiative. This will mean that in every participating mosque, teachings pertaining to Islam and the environment will be conducted.
- To empower Muslim youth to become the future leaders of *Al-Mizan* and entrust them to take it forward in the directions they see fit.

A Prayer

We ask the Lord of all beings to guide us – all of humankind – to mend the devastation in the Earth that we, as a species and as individuals, have wrought, to cease distorting His creation, to return to the natural way of God on which He originated us, and to bear in mind that "***The servants of the All-Merciful are those who walk gently on the Earth…***" (25:63).

We ask the Lord of all beings to guide us a right to care for this beautiful, glorious Earth and all that live on it – and to help us remember, show gratitude, and render devotion most beautiful.[260]

ACKNOWLEDGEMENTS

CORE TEAM:

Dr. Iyad Abumoghli (Chair)	Founder and Director of the United Nations Environment Programme (UNEP) Faith for Earth Initiative
Dr. Abdelmajid Tribak	Senior at ICESCO
Aishah Ali Abdallah	Wilderness leader and member of the IUCN Commission on Education and Communication
Dr. Evren Tok	Associate Professor and Assistant Dean for Innovation and Community Advancement. Program Coordinator at College of Islamic Studies, Hamad Bin Khalifa University
Dr. Fatima Saleh Al-Khulaifi	Manager of Qatar Qur'anic Botanic Garden
Sidi Fazlun Khalid	Founder of the Islamic Foundation for Ecology and Environmental Sciences (IFEES)
Dr. Ibrahim Özdemir	Professor of philosophy and Dean, Faculty of Humanities and Social Sciences, Uskudar University, Istanbul. President, Uskudar University Forum on Environmental Ethics
Kamran Shezad	Director, Islamic Foundation for Ecology and Environmental Sciences (IFEES/EcoIslam) and the Sustainability Lead for the Bahu Trust
Othman Abd-ar-Rahman Llewellyn	Member of the IUCN World Commission on Protected Areas and World Commission on Environmental Law, and Ecological Planner in the National Center for Wildlife, Kingdom of Saudi Arabia

DRAFTING TEAM:

Sidi Fazlun Khalid (Chair & Co-author)	Founder of the Islamic Foundation for Ecology and Environmental Sciences (IFEES)
Othman Abd-ar-Rahman Llewellyn (Lead Author)	Member of the IUCN World Commission on Protected Areas and World Commission on Environmental Law, and Ecological Planner in the National Center for Wildlife, Kingdom of Saudi Arabia
Dr. Abdelmajid Tribak	Senior at ICESCO
Aishah Ali Abdallah Co-Author	Wilderness leader and member of the IUCN Commission on Education and Communication
Datuk Prof. Azizan Baharuddin	Director, Centre for Civilisational Dialogue, University of Malaya. UKM-YSD Chair for Sustainability, Faculty of Engineering and Built Environment, Universiti Kebangsaan Malaysia. Member of the Institute of Islamic Understanding Malaysia (IKIM)
Dr. Evren Tok	Associate Professor and Assistant Dean for Innovation and Community Advancement. Program Coordinator at College of Islamic Studies, Hamad Bin Khalifa University
Prof. Fachruddin Mangunjaya	Environmentalist, author and senior Lecturer at School of Graduate Program Universitas Nasional, Chairman Centre for Islamic Studies Universitas Nasional
Dr. Ibrahim Özdemir	Professor of philosophy and Dean, Faculty of Humanities and Social Sciences, Uskudar University, Istanbul. President, Uskudar University Forum on Environmental Ethics
Shaykh Jafer Ladak	Lecturer of Islamic Jurisprudential Studies (*Fiqh*)
Kamran Shezad	Director, Islamic Foundation for Ecology and Environmental Sciences (IFEES/EcoIslam) and the Sustainability Lead for the Bahu Trust
Prof. Odeh Al-Jayoussi	Author, professor and head of Innovation and Technology Management at Arabian Gulf University, Bahrain
Imam Saffet Catovic	Muslim Community Organizer and Environmental Leader. Member of the Parliament of the World's Religions Climate Action Task Force and Board of Trustees

Translating and Editing of the Arabic Text

Zina Alani Mougharbel
Zainab A. Alsuhaibany, PhD
Ali As-Sammani Muhammad Umar
Randa Hamwi
M. Anas Zarka, PhD
Hany M. A. Tatwany
Tarek Abul Hawa
Samir Boudinar
Amal Salem Alhadrami
Amr Al-Hafi. PhD
Abdulhadi Aloufi, PhD
Hanaan Llewellyn
Othman Abd-ar-Rahman Llewellyn
Aishah Ali Abdallah

Reviewers

Abdulhadi Aloufi, PhD, Taibah University, Al-Madinah Al-Munawwarah
Hany M. A. Tatwany, Former Vice President, Saudi Wildlife Authority
Samir Boudinar, Executive Director, Al-Hokama Center for Peace Research, Rabat, Morocco
Tarek Abul Hawa, consultant in protected area management and community outreach, Amman
Md. Abu Sayem, PhD, associate professor of World Religions and Culture, University of Dhaka
Azizah Al-Hibri, PhD, Professor Emerita, The Law School, University of Richmond
Azmaira Alibhai, Faith and Ecosystems Coordinator, UNEP Faith for Earth Initiative
Wardah Alkatiri, PhD, Universitas Nahdlatul Ulama Surabaya / Amani Institute Indonesia
Hassane Bendahmane, PhD, environmental consultant in environmental policy and sustainable development
Mohammad Khalil Elahee, PhD, Professor, The University of Mauritius
Atallah FitzGibbon, Islamic Relief Worldwide
Muhammed Nizaar Gardee, Consultant, United Ulama Council of South Africa
Karenna Gore, J.D., Founder and Executive Director, Center for Earth Ethics, Union Theological Seminary,
Mumtaz Hussain, Chief Editor, *The Environ Monitor*
Mawil IzziDien, PhD, Professor of Islamic Studies, University of London SOAS
Samira Idllalene, PhD, University Cadi Ayyad, Marrakech, consultant in environmental law
David Solomon Jalajel, PhD, Prince Sultan Institute for Environmental, Water & Desert Research, King Saud University
Hajj Muhammad Amir Kpakpo Addo, Federation of Muslim Councils, Ghana and Ghana Conference of Religions for Peace
Farhana Mayer, DPhil Researcher, Qur'anic Studies, Faculty of Oriental Studies, St Stephen's House, University of Oxford
Patricia Musick, environmental artist and educator
Alesandra Safiyah Palange, University College London, founding member of Muslims Declare
Mothiur Rahman, founder of New Economy Law, member of Muslims Declare
Muhammad Tariqur Rahman, Islamic Circle of North America (ICNA)
Reza Shah-Kazemi, PhD, Research Associate, Institute of Ismaili Studies, London
Joyce d'Silva, Ambassador Emeritus & former Chief Executive of Compassion in World Farming
Sarra Tlili, PhD, Associate Professor of Arabic Language and Literature, University of Florida
Risikatu Usman, Muslim Women's Association in Nigeria
Rianne C ten Veen, Green Creation, GreenFaith, and IFEES
Nafi Yalçın, PhD, Istanbul Foundation for Science and Culture
M. Anas Zarka, PhD, Advisor, Shariah compliance at The International Investor Co, Kuwait

INTRODUCTORY NOTES

Although we have chosen not to write an Introduction to ***Al-Mīzān***, we have included as annexes two of the elements that would normally belong in it, namely an explanation of the system that we use to reference classical sources and a note on our approach to the translation of Qur'anic passages.

Among the other elements that should be included is an explanation of the Standard Transliteration system and the diacritical marks that we intend to use.

The System Used to Reference Primary Arabic Source Materials

One of the challenges that we have faced in drafting this Covenant is that the primary Arabic sources that we have used, such as collections of *ahādīth*, *tafsīr*s, and books of *fiqh* and *usūl al-fiqh*, have been published in a wide array of publishers, based in many countries, from Egypt to Lebanon, the Gulf Countries, Iraq, Iran, Morocco, and others. The pagination of these sources differs from edition to edition, and many readers do not have access to more than one edition, or two at most. Although many of these sources are now available on the Internet, not all of them are, and some traditional scholars continue to rely exclusively on the physical copies of these books. For this reason, we have chosen, in our references, to refer to the chapter titles of our primary sources, which are usually identical in all editions, instead of referring to the page numbers of specific editions. This has the disadvantage of taking up more space, but we believe that it is outweighed by the benefit of making the references more easily available to scholars and other readers throughout the Islamic world.

At the same time, we have endeavoured to include reliable digital references to these sources in our endnotes, and digital versions, such as PDF documents under Works Cited and Suggested Readings, so that readers who have computers and access to the Internet can see them instantly.

Our Approach to the Translation of Qur'anic Passages

In this document, we have not held to a single translation of the Qur'an. Many good translations are available, but each one has its weaknesses, and limiting ourselves to one translation would cut us off from the deep insights of other translators. Like any author who strives for the truest possible approximation of the Arabic text, we treat each passage on its own, seeking to convey it as comprehensively as we are able, with emphasis on its most important implications and its most apposite nuances with respect to the subjects at hand. In doing so, we make use of nearly all the well-known and widely accepted English translations available online and in our libraries. Among the translations we have relied on most extensively are those by Muhammad Asad (1980), Abdal Hakim Murad, et al. / the Nawawi Foundation (2002), Muhammad Marmaduke Pickthall (1930), and Abdullah Yusuf Ali (1934). Among the less well-known translations that we have used are those by A. J. Arberry (1955), Syed Abdul Latif (1969/1993), Muhammad Abdel-Haleem (2004), and Tarif Khalidi (2009). We have also referred to the newer translations by Mustafa Khattab (2015) and *The Study Qur'an* by Seyyed Hossein Nasr et al. (2015). We have found the Islam Awakened website https://www.islamawakened.com/quran/ very useful to compare translations. We have also made use of several of the widely respected *tafsīrs*, especially the early, encyclopaedic *tafsīr* of At-Tabarī and the balanced, elegant *tafsīr* of Al-Qurtubī, distinguished by its emphasis on legal rulings.

KEY ARABIC TERMS (GLOSSARY)

In defining the key Arabic terms that will help readers understand the message of this Covenant, we have made use of the comprehensive lexicon ***Lisan al-'Arab***, completed by Ibn Manzur in 1290 G., the ***Arabic-English Lexicon*** by Edward William Lane, and ***A Dictionary of Modern Written Arabic*** by Hans Wehr (1974). For each term, we first consider the Arabic root and its meanings, and then the term as used in ***Al-Mīzān***.

Allāh (See paragraphs 1.1, 2.1-2.9, 2.23, 3.1-3.8, 4.10, 5.28, 5.35; endnotes 32, 35, 37-39, 40-43, 46, 47, 71-73, 76-82, 95, 96, 189; *Key Arabic Terms: Rabb al-'ālamīn*, *tawhīd*, *'ibadah*, *islām.*)
The main word for God in the Arabic language, *Allāh* is held by most philologists to be a contraction of the Arabic definite article *al-* "the" and *ilāh* "deity, god" to *al-lāh* meaning "the deity", or "the God". It is linguistically related to the Aramaic word *Elah* and the Hebrew word *El* (*Elohim*) for God. Allāh refers to the same God worshipped by Muslims, Jews, and Christians alike, and Arabic speaking Christians and Jews speak of God as Allāh, just as do Muslims. Muslims regard "Allāh" as the foremost and preeminent of God's most beautiful names, for unlike the other names, each of which focuses on a particular divine attribute, the name "Allāh" is all-comprehensive and supreme.

Al-Amānah (See paragraphs 2.16, 2.20, 2.21; endnote 67; Key Arabic Terms: *khalīfah fī 'l-ard / khilāfah fī 'l-ard*, *islāh fi 'l-ard*, *fasād fī 'l-ard / ifsād fi 'l-ard*, *ibadah*, *īmān*.)
Derived from the Arabic root *a–m–n*, which means to be faithful, reliable, trustworthy, as well as safety and security, the word *amānah* signifies trustworthiness and trusteeship. *Al-Amānah* is the trust that, according to Qur'anic teaching, God offered to the Heavens, the Earth, and the mountains, but they feared it and declined to bear it, whereas humanity foolhardily undertook to bear it (33:72). The *Amānah* is usually understood to be the assumption of responsibility of moral accountability (*taklīf*) to God for one's beliefs, intentions, and actions and their repercussions – with the reward and punishment that this entails. It is closely associated with the concept of *khilāfah fī 'l*-ard, responsibility and accountability on the Earth (see below), and like that concept, the *amānah* stands in opposition to the wreaking of corruption, devastation, and ruin in the Earth (*ifsād fi'l-ard*).

Al-Amr bi 'l-Ma'rūf (See paragraphs 4.17, 5.7, 5.30-5.34; A Way Forward; endnote 252; Key Arabic Terms: *an-nahy 'an al-munkar, hisbah, muhtasib*)
Derived from the Arabic root a–m–r, signifying authority, the word *amr* means to command, order, instruct, and influence; it concerns power, authority, and influence. The word *ma'rūf* is derived from the Arabic root *'–r–f*, which signifies to know by experience, to recognise, to approve, and to acknowledge as right and good, and means that which is known to be good, right, and honourable. *Al-amr bi 'l-ma'rūf* thus means to command and establish what is well known to be good and right. A distinctive aspect of Islamic teaching is that all individuals, both male and female, are empowered with the responsibility to command the good and avert evil to the full extent that they are able (3:104; also see 3:110, 114; 9:71, and 22:41). This obligation to establish good and avert wrongdoing is also known in Islamic law and ethics as the *hisbah* (see below).

An-Nahy 'an al-Munkar (See paragraphs 4.17, 5.30-5.34; A Way Forward; endnote 252; Key Arabic Terms: *al-amr bi 'l-ma'rūf, hisbah, muhtasib*)
Derived from the Arabic root *n–h–w*, signifying prohibition and prevention, the word *nahy* means to forbid, prohibit, prevent, avert, and restrain. The word *munkar* is derived from the Arabic root *n–k–r*, which signifies not to know, to abjure, reprehend, disapprove, disavow, blame, rebuke, reproach, detest, loathe, and reject, and means that which is abjured as evil, wrong, reprehensible, detestable, abominable, or dishonourable. *An-nahy 'an al-munkar* thus means to forbid and avert what is well known to be evil and wrong. A distinctive aspect of Islamic teaching is that all individuals, both male and female, are empowered with the responsibility to command the good and avert evil to the full extent that they are able (3:104; also see 3:110, 114; 9:71, and 22:41). This obligation to establish good and avert wrongdoing is also known in Islamic law and ethics as the *hisbah* (see below).

Āyah / āyāt (See paragraphs 1.1, 2.8, 2.10, 2.15, 2.23, 3.7, 3.8, 3.20, 4.10, 5.6, 5.21, 5.28; endnotes 42, 43, 83, 233; Key Arabic Terms: *khalq*, *īmān*, *Rabb al-'ālamīn*, *Allāh*.)
The word "*āyah*", plural "*āyāt*" means a sign, a wonder, a marvel, a masterpiece, or a miracle. In Islamic teaching, each created being is a wondrous sign that points beyond itself to its Maker, His wisdom, and His mercy; each is a portent filled with meaning and lessons to be learned. The same word "*āyah*" is used also for the verses of the Qur'an. Muslim scholars have stressed the parallels between the revelations of the written texts revealed to humankind through the prophets, the messengers of God, and God's revelations in the world of nature. Each are revelations composed of signs, *āyāt*, and they come from the same source. The signs of the divine in nature clarify the meanings of those in the texts and the written texts guide us to understand the signs in the creation.

'Ahd (See Title, paragraphs 1.2, 1.3, 1.6, 1.10, 1.14; Introductory Note; endnotes 29, 176.)
The Arabic word *'ahd* derives from the root '*–h–d*, which signifies to observe closely, to heed, adhere to, attend to, to look after, take care of, or stand up for something, to advocate, to entreat, to authorise, charge, vest in, empower, or entrust someone with, to enjoin, obligate, to pledge, commit, or bind oneself to do something, to promise, and to fulfil or keep one's promise. The word *'ahd* means a covenant, especially in the sense of a solemn agreement or accord, a pledge, or a promise, and the keeping or fulfilment of a promise. In the case of *Al-Mīzān*: *A Covenant for the Earth*, we have chosen the word *'ahd* rather than the word *mīthāq*, which tends to signify a covenant in the more formal sense of a binding contract, treaty, pact, or charter, because we, the authors of this Covenant, do not have the authority to make such a treaty on behalf of our community of faith.

Fasād fī 'l-ard / Ifsād fi 'l-ard **(**See paragraphs 1.20, 2.16, 2.17, 2.19, 5.9, 5.10, 5.11; endnotes 59, 63, 232; Key Arabic Terms: *islāh fi 'l-ard*, *khalīfah fī 'l-ard / khilāfah fī 'l-ard*, *mafāsid / mafsadah*)
The Arabic word *fasād* derives from the root *f–s–d*, which signifies corruption, degradation, desecration, devastation, destruction, and ruin. Accordingly, *fasād fī 'l-ard* means corruption, degradation, devastation, desecration, destruction, and ruin in or on the Earth, and *ifsād fi'l-ard* means wreaking corruption, degradation, desecration, devastation, destruction, and ruin in the Earth. The dread of humankind wreaking *fasād* in the Earth and the catastrophes that such transgression unleashes loom large in the Qur'anic cosmology of justice: if good is done to it or in it, good will return; if evil is wrought to it or in it, what accrues is sheer terror. The Qur'an instructs us to behold what has happened in the end to the *mufsidūn fī 'l-ard*, those who wrought corruption, devastation, and ruin in the Earth (7:85-86, etc.): the peoples of Pharaoh, 'Ād, Thamūd, and Madyan were all powerful and wealthy but wrought corruption in the Earth and thus destroyed themselves. The corrupters on the Earth abuse the trust of the *amānah* and are in clear contrast to those who are responsible as *khalīfah*s on the Earth.

Filāhah (See paragraphs 4.17, 5.29; endnotes 137-139; Key Arabic Terms: *ibādah*.)
The farming heritage of Islamic civilisation is generally known by the Arabic word *filāhah*, meaning "cultivation," and by extension "agriculture, farming, husbandry", and *fallāh*, "husbandman, tiller of the soil, peasant, farmer", are derived from the verbal form of the root *f–l–h* meaning "to cleave, split", and in particular, "to plough, till, cultivate the land". but also meaning "to thrive, to prosper. be successful, fortunate, or happy. " See Fitzwilliam Hall, *Filāha*. Husbandry, well-being (in this world and the next) and worship are thus intimately linked in the Arabic language." The Islamic garden tradition is rooted in the heritage of *filāhah* in oases, orchards, and agricultural terraces of arid and semiarid lands, where water is scarce and precious.

Fiqh (See paragraphs 5.3, 5.5; endnotes 133, 172, 177, 236; Key Arabic Terms: *sharī'ah*, *haqq / huqūq*, *masālih / maslahah*, *mafāsid / mafsadah*.)
Derived from the Arabic root *f–q–h*, which signifies understanding and comprehension, *fiqh* is the term for the science of law and ethics, the human endeavour to understand the *sharī'ah* (see below). It is also used for the branches of law and ethics, such as *fiqh al-bī'ah* – environmental law and ethics and *fiqh al-'umrān*, law and ethics pertaining to development. *The term ūsul al-fiqh*, meaning the "*roots of fiqh*" means jurisprudence, legal theory, and legal methodology, covering the sources and methods of deriving rulings from the study of textual sources as well as various methods of legal reasoning. *Fiqh* also applies to certain disciplines, such as *fiqh al-muwāzanāt*, the science of measuring benefits and detriments, and *fiqh al-awlawīyāt*, the science of stablishing priorities, as well as *fiqh al-'umrān*, architectural planning and design that accords with Islamic values.

Fitrah (See paragraphs 2.13, 5.28; endnote 189; Key Arabic Terms: *khalq*, *islām*.)
Derived from the Arabic root *f–t–r*, which signifies to cleave, rift, split, break apart, to bring forth, and to bring into being, the word *fitrah* means the primordial pattern or natural disposition of a thing or a person. The Qur'an tells us that humankind are created within the primordial pattern (*fitrah*) of the natural creation and that our inherent disposition (*fitrah*) is defined by that patterning. Human beings are ordered not to alter or distort their own inherent disposition (*fitrah*) or the inherent disposition (*fitrah*) of the natural creation. The Qur'an teaches that that "God's creation shall not be altered" (30:30) and informs us that altering (in the sense of distorting or perverting) God's creation is satanic – the epitome of evil, for in the Qur'an, Satan declares, "***I will command them so that they will alter God's creation***" (4:119).

Haqq / Huqūq (See paragraphs 2.5, 2.17, 2.19, 5.6, 5.7; endnotes 35, 160, 184, 189; Key Arabic Terms: *khalq*: *sharī'ah*, *fiqh*.)
The Arabic word *haqq*, derived from the root *h–q–q*, which means at once truth, reality, right, law, and due, denotes truth, reality, and right. From this word comes the sense of the due that we owe to each created being, expressed as

rights (*huqūq*). According to Islamic teaching, each being exists by virtue of the truth (*haqq*) and is also owed its due (*haqq*) according to its nature; human beings must respect and pay what is due to each creature, and each creature has its rights accordingly. We cannot take away the *haqq* of various creatures given to them by God. See S. H. Nasr, "Islam, the Contemporary World, and the Environmental Crisis," p. 97. In Islamic teaching, God has created each thing *bi 'l-haqq*, in truth and for right, and all created beings have rights (44:38–39). The rights of animals, *huqūq al-bahā'im wa 'l-hayawān*, are enshrined as one of the categories of *huqūq al-'ibād*, the rights of God's servants, e.g., human beings and animals. These rights are detailed in numerous *ahādīth* and are summarised in rulings by Muslim jurists.

Haram (See paragraphs 3.18, 5.13, 5.14, 5.17; endnotes 72, 211-219, 221-223; Key Arabic Terms: *hurmah*.)
The term *haram* is derived from the Arabic root *h–r–m*, signifying that which is forbidden, prohibited, sacred, sacrosanct, inviolate, or inviolable, and denotes a place that is sacred, sacrosanct, holy, inviolate, or inviolable – in short, a sanctuary. In Islamic teaching, Al-Haramān ash-Sharīfān, the two inviolable sanctuaries that surround and encompass Makkah and Al-Madinah, are the primordial protected areas on Earth. Each of them is an inviolable sanctuary for human beings, for wildlife, and for native vegetation. Within them, the destruction of native plants and the killing, injury, and disturbance of wild animals is forbidden.

Himā (See paragraphs 3.22, 5.13, 5.14, 5.16-5.20, 5.32; A Way Forward; endnotes 217, 220-228, 231, 232; Key Arabic Terms: *muhtasib*.)
The word *himā* is derived from the Arabic root *h–m–y*, which signifies protection, defence, cover, shelter, shielding, guarding, and standing up for someone or something. It has sometimes been transliterated as "*hema*," but "*himā*" better reflects its pronunciation in the dialects of the Arabian Peninsula and accords with the transliterations of both classical and modern standard Arabic, neither of which employs the letter "e", as the vowel it represents does not exist in the Arabic language.

Hisbah (See paragraphs 4.17, 5.30-5.34; endnotes 251-255; Key Arabic Terms: *al-amr bi 'l-ma'rūf, an-nahy 'an al-munkar, muhtasib*.)
A distinctive aspect of Islamic teaching is that all individuals are responsible to command the good and avert evil, to the full extent that they are able (3:104; also see 3:110, 114; 9:71, and 22:41). This obligation to establish good and avert wrong doing is known in Islamic law as the *hisbah*, a term derived from the Arabic root *h–s–b*, which signifies accounting, reckoning, calculation, estimation, appraisal, and valuation, as well as to consider, deem, regard, esteem, and value, and in its various forms, to be careful, to take precautions, to take into account, to render account, to call to account, to hold someone accountable, and to examine one's conscience. On the individual level, each man and woman is a *khalīfah* on the Earth and will be judged alone on the Day of Judgment for what he or she did with respect to influencing family, neighbours, and the society at large to do good and desist from evil. On the collective level, intervention by the governing authorities is also needed, for appeals to conscience without positive inducement and enforcement are ineffective. The force of law is indispensable to bring about justice and equity; hence the office of the *muhtasib* (see below).

Hurmah (See paragraphs, 4.10, 5.26; endnotes 243, 244; Key Arabic Terms: *haqq* / *huqūq*, *haram*.)
Derived, like the word *haram*, from the Arabic root *h–r–m*, signifying that which is forbidden, prohibited, sacred, sacrosanct, inviolate, or inviolable, the word *hurmah* denotes a legal status of inviolability and sanctity, and the respect, regard, reverence, deference, and honour. Muslim jurists and theologians have recognised that all created things have a basic inviolability, which human beings are obliged to respect. We are not free to make light of them or to disregard them, much less to squander, exhaust, degrade, or defile them, to treat them wantonly or excessively. We are obliged to regard and revere their Creator in using them. Muslim legal scholars have ruled that the inviolability of God's creatures is not nullified by war and prohibited environmental destruction as a military tactic. The scorched-earth tactics commonly employed in modern warfare are the antithesis of such restraint and the embodiment of the destruction of tilth and fertility (*halāk al-harth wa 'n-nasl*).

Ihsān (See paragraphs 1.1, 2.5, 2.12, 2.16, 2.19, 3.1, 3.4, 3.7, 3.9, 3.14, 3.15, 3.20, 3.24, 4.11, 4.21, 5.8, 5.28, 5.29, 5.35; endnotes 36, 69, 77, 97; A Way Forward; Key Arabic Terms: *'ibadah*, *taqwā*, *rahmah*, *Rabb al-'ālamīn*, *Allāh*, *tawhīd*, *khalq*, *islāh fi'l-ard*,)
Derived from the root *h–s–n*, which signifies good, beauty, loveliness, excellence, and perfection, the word *ihsān* means to do works of utmost good, beauty, and excellence. It expresses the highest degree of goodness as explained in the saying of the prophet Muhammad, upon him be blessings and peace, as though we see the Lord of all beings before us, for surely the Lord of all sees us. "To worship God as if you see Him, and if you cannot see Him, He sees you." In Islamic teaching, it is not enough to do good; we are required to do the *utmost good*. Works of goodness and beauty are the very purpose of life and death (67:2). The prophet Muhammad, upon him be peace and the blessing of

God, declared that "God has prescribed utmost goodness, beauty, and excellence (*ihsān)* with regard to all things". This includes utmost goodness in our conduct toward every created being and utmost goodness or excellence in every act. its highest manifestation in our deeds is to serve the Lord of all beings by doing *utmost good* to *all* His creatures.

Īmān (See paragraphs 2.17, 2.19, 3.6, 5.8, 5.30; endnote 92; Key Arabic Terms: *islām*, *ihsān*, *al-amānah*, *islāh fi 'l-ard*,)
Derived from the root *a–m–n*, which means to be faithful, reliable, trustworthy, loyal, upright, and honest, as well as reliability, trustworthiness, faithfulness, fidelity, fealty, loyalty, safety, security, and peace, the word *īmān* signifies faith and belief. It is used in two senses, one being the beliefs, the articles of faith in the Islamic creed, and the other being the state of faith, faithfulness, commitment, and dedication that is intermediate between *islām* (see below), the state of submission to the will of God and *ihsān* (see above), the state of utmost goodness, beauty, and excellence (49:14). The Qur'an pairs faith and beneficial works (*īmān* and *al-a'māl as-sālihah*, *as-sālihāt*), as the converse of rejection of faith and corruption on the Earth (*kufr* and *ifsād fi'l-ard*). Just as the wreaking of corruption and devastation on the Earth leads to our perdition, in faith and good, right, wholesome, beneficial works lies the redemption and ultimate prosperity of humankind (95:4-6, 103:1-3).

Iqtisād (See paragraph 4.22, endnotes 149-153; Key Arabic Terms: *mīzān*, *tazkiyah*, *zakāh*, *isrāf*.)
The Arabic word *iqtisād*, is derived from the root *q–s–d*, which means to intend, to aim, to aspire, to resolve, and to head straight toward an objective, to proceed straightaway to achieve an end, a purpose, an aim, or a goal. *Iqtisād* means frugality, thriftiness, prudence, moderation, and conservation, and is, significantly, the term used for economics in Islamic teaching, dealing with finance, banking, trade, commerce, and industry. The Qur'an guides humankind to moderation, balance and preservation. It describes the true servants of the All-Merciful as ***"those who, when they spend, are neither wasteful nor miserly, but keep to the mean between these two"*** (25:67). Moderation tends toward fairness (*qist*) and the balance (*mīzān*) associated with it, whereas immoderation (*isrāf*) feeds transgression and injustice and disturbs the balance that God has set in the creation.

Islāh fi'l-ard (See paragraphs 2.16-2.19, 3.6, 3.7; endnotes 61, 63, 68, 83; Key Arabic Terms: *khalīfah fī 'l-ard / khilāfah fī 'l-ard*, *fasād fī 'l-ard / ifsād fi 'l-ard*, *masālih / maslahah*)
The Arabic word *islāh* derives from the root *s–l–h*, as does the word *sālih*, and like it, signifies what is good, beneficial, healthy, wholesome, and right. From the same root are derived the words *al-a'māl as-sālihah* and *as-sālihāt* meaning good, beneficial works. Faith and beneficial works are the converse of rejection and corruption in the Earth; in them lies the redemption and ultimate prosperity of humankind (95:4-6, 103:1-3). Just as the wreaking of corruption and devastation in the Earth leads to our perdition, the doing of good, right, wholesome, beneficial works is key to our survival and prosperity on the Earth, for God declares, ***"My servants, the right-doing, shall inherit the Earth"*** (21:105). Good work is so essential to the service of God and the fulfilment of human responsibility on the Earth beneficial works, by striving to bring about beauty, excellence and utmost good, and by avoiding and averting all that leads to corruption, devastation, and ruin (*fasād*) in it, as we are told in the Qur'an (7:56).

Islām (See paragraph 2.7; endnotes 40, 41; Key Arabic Terms: *īmān*, *ihsān*, *'Ibādah, khalq*, *fitrah*.)
Derived from the Arabic root *s–l–m*, meaning to be safe, sound, secure, unharmed, uninjured, unimpaired, intact, whole, integral, complete, healthy, at peace, in harmony, and in a state of integrity, as well as to submit, surrender, consent, accept, reconcile, and hand over. The word *islām* means willing, whole-hearted submission to God, the Lord of all beings. According to Islamic teaching, all beings submit to their Creator, Lord and Sustainer, in willing obedience and devotion (3:83) all bow down to Him in worshipful service and prayer – all, that is, except for humankind, who, although they cannot avoid submitting to the natural laws by which their Lord sustains all things, are endowed with free will: they may opt to serve in willing devotion or to resist by refusing their Lord's commandments, by which they incur His wrath and retribution: (22:18). From the willing submission of all things to their Lord comes the recognition of their being *muslim* and making up a vast community of *islām*, which human beings may willingly embrace and become part of that community.

Isrāf (4.22 5.10, 5.11; endnotes 149-153, 206, 208; Key Arabic Terms: *fasād fī 'l-ard / ifsād fī 'l-ard, mafāsid / mafsadah*.)
Derived from the Arabic root *s–r–f*, which means exceed all bounds or limits, *isrāf* means wasteful excess, squandering, and overuse. The Qur'an forbids wasteful excess (*isrāf*). "***… Eat and drink, and do not waste by excess: God does not love those who waste by excess***" (7:31; also see 6:141) A well-known *hadīth* shows clearly how even in the use of copious resource, waste is detested:

> *… the Messenger of God, upon him be blessings and peace, passed by Sa'd while he was washing for prayer, and said: "What is this excess, O Sa'd?" He replied: "Is there excess in washing for prayer?" The Prophet said: "Yes, even if you are beside a flowing river."*

The wasteful use of even such abundant sources of life as the air, the soil, the oceans, and the once-vast forests is forbidden, to say nothing of other, scarcer, mineral and biological resources. Taking life without legitimate justification is likewise prohibited as *isrāf*.

'Ibādah (See paragraphs 1.1, 2.2, 2.7, 2.9, 2.17, 2.22, 2.23, 3.1, 3.2, 3.4, 3.5, 3.13-3.18, 4.10, 4.22, 5.6, 5.7, 5.28; A Way forward, A Prayer; endnotes 40, 41, 44-47, 61, 63, 84, 139, 175, 233, 260; Key Arabic Terms: *ihsān*, *islām*, *islāh fi 'l-ard*, *khalīfah fī 'l-ard / khilāfah fī 'l-ard*, *Allāh, Rabb al-'ālamīn*, *tawhīd*, *taqwā*, *rahmah*, *shukr*, *khalq*, *filāhah*.)
Derived from the Arabic root *'–b–d*, which signifies service, devotion, worship, adoration, veneration, and enthrallment, as well as compliance, the term *'ibādah* means the devoted service and worship of God, the Lord of all beings. All beings submit to their Creator, Lord and Sustainer in willing obedience and devotion, all bow down to Him in worshipful service and prayer – all, that is, except for humankind, who, although they cannot avoid submitting to the natural laws by which their Lord sustains all things, are endowed with free will: they may opt to serve in willing devotion or to refuse and resist their Lord's commandments and thereby incur His wrath and retribution (22:18, 3:83). The ultimate aim of human life is to serve and worship God, the Lord of all beings. Service and worship include all that is loved by God by way of words and works, in all spheres of life.

'Ilm (See paragraphs 2.22, 2.23, 3.7-3.9, 3.12; endnotes 84-87; Key Arabic Terms: *khalq*, *āyah / āyāt*.)
Derived from the Arabic root *'–l–m*, signifying to know, have knowledge, be aware, be to perceive, to learn, and to discern, hence factual knowledge, learning, cognition, intellection, perception, as well as that which is demarcated, delineated, and distinguished. *'Ilm* is the overall word for factual knowledge and science. It is also used for specific disciplines of science and art, such as *'ilm al-hisāb*, mathematics, *'ilm al-ahyā'*, biology, *'ilm an-nafs*, psychology, and *'ilm al-akhlāq*, ethics.

Khalīfah fī 'l-ard / khilāfah fī 'l-ard (See paragraphs 1.20, 2.16-2.22, 3.9, 4.25, 5.15, 5.25, 5.29, 5.33; endnotes 85, 159, 176, 193; Key Arabic Terms: *al-amānah, ihsān*, *islāh fi 'l-ard*, *fasād fī 'l-ard / ifsād fi 'l-ard*, *'ibādah*, *Allāh, Rabb al-'ālamīn*, *khalq*, *taqwā*, *rahmah*)
In Qur'anic teaching, the concept of *khilāfah fī 'l-ard* – *khilāfah* on the Earth – is central to the understanding of the role of humankind on Earth and in particular, the responsibility and accountability of human beings:

> **And lo! Your Lord said to the angels: "Behold, I am placing a *khalīfah* on the Earth," They said: "Will you place on it one who will wreak corruption therein and shed blood – whereas we extol Your limitless glory, and praise You, and hallow Your name?" He answered: "Verily, I know what you know not.** (2:30)

What, then, is a *khalīfah*? The word has widely differing interpretations, which are highly contentious and fiercely debated. In drafting this Covenant, we have therefore set out to understand the meaning of *khilāfah fī 'l-ard* within the limits of its usage in the Qur'anic *āyāt* and Prophetic *ahādīth*, and not to stray outside those boundaries.

The word *khalīfah* is derived from the root *kh–l–f*, which signifies to come after, follow, succeed, remain after, or replace another one who has perished or passed away, or is not present; it can also mean to act on behalf of another, as in the prayer of the prophet Muhammad, upon him be peace and the blessing of God, "O God, You are the *khalīfah* over my family". A secondary meaning of this root is to cultivate, to husband, to thrive, and cause to thrive; yet another meaning is to be at variance with, offend against, violate or break a rule, command or promise – a significant connotation in the light of the angels' premonition. *Khilāfah* is an ethical mandate assigned to human beings individually and to humankind collectively by the All-Merciful, All-Compassionate Lord and Sustainer of the worlds. This is especially clear the related form of the word *istikhlāf*, which occurs in the Qur'anic verses 6:133, 7:129, 11:57, and 24:55. It takes place on the Earth, implying a relationship with the Earth, and it is inherited by one individual after another, by one generation after another, and by one people after another. It is a test and a trial (*ibtilā'*) by which the Lord of all examines what we do. It is associated with the knowledge of right and wrong and empowerment to act and to affect created beings and the Earth itself for good or ill, for ability entails responsibility, and it varies in scope according to the degree of the *khalīfah*'s empowerment. Yet even the highest degrees of empowerment entail judging justly with respect to human actions, not ruling over or managing the Earth.

The All-Merciful, All-Compassionate Lord and Sustainer of the worlds is Master of the judgment day and holds the *khalīfah* responsible for faith (*īmān*) and devoted service (*'ibādah*) by way of good works (*al-a'māl as-sālihah, as-sālihāt*) toward all created things on Earth, whether humans, living beings, lifeless beings, and indeed the Earth itself. He has made the Earth good and wholesome, and He holds the *khalīfah* accountable and warns specifically against wreaking corruption, devastation, and ruin (*fasād*) on the Earth – the very evil that the angels feared that humans would commit; He threatens those who wreak *fasād* in the Earth that He may remove them and replace them with

other peoples, who in turn will receive the ethical mandate of *khilāfah*. Hence, *khilāfah* in the Earth entails avoidance and averting of *ifsād* in it and maintaining its *islāh* by way of *sālihāt*, that we humans might continue to inherit it. It is closely associated with the divine covenant or trust of moral accountability – *al-amānah* (see above). Accordingly, *khilāfah* is the careful and responsible tending of something entrusted to one's care, and a *khalīfah* is one who inherits or is entrusted with a position of responsibility and is held to account for careful and responsible fulfilment of that trust.

Following the adoption of the title *khalīfah* (caliph) by political leaders of the Islamic nation, the concept became complicated by the idea of the *khalīfah* representing God on Earth, but that is not among the original meanings, and it is important to note that nowhere does the Qur'an speak of *khalīfat Allah* – a *khalīfah* of God. The notion that a *khalīfah* is God's viceroy, viceregent, or vicegerent, who is charged with dominion over the Earth or its management is a false and dangerous misreading of the term. The concepts of 'steward' and 'stewardship' are much closer to the meanings of *khalīfah* and *khilāfah*; as these terms convey the sense of responsibility that is inherent in the Arabic. However, 'stewardship' is burdened with connotations of representing an absent landlord and managing his property, whereas *khilāfah* is in large part realised through avoiding and averting interference in the natural processes by which God has set the Earth aright and made it flourish. For authenticity, accuracy, and clarity, we have therefore left off using 'steward' and 'stewardship' and have translated *khilāfah fi 'l-ard* as 'responsibility,' 'accountability,' or 'trusteeship' on the Earth and *khalīfah fi 'l-ard* as 'one entrusted,' 'made responsible,' or 'held accountable' on the Earth. We thank Dr. Sarra Tlili and Dr. David Solomon Jalajel for their critiques and advice regarding the interpretation of *khilāfah*.

Khalq / khalīqah / khalā'iq / makhlūqāt (See paragraphs 1.1, 2.1, 2.8, 2.9, 2.13-2.16, 2.19, 2.23, 3.1-3.3, 3.9, 3.10, 4.15, 5.4, 5.6; 5.12, 5.21, 5.28, 5.35; A Way Forward, A Prayer; endnotes 30, 33, 34, 37, 47, 77, 174, 233; Key Arabic Terms: *haqq / huqūq*, *hurmah*, *ihsān*, *islāh fi 'l-ard*, *āyah / āyāt*, *Rabb al-'ālamīn*, *taqwā*, *rahmah*, *'ibādah*, *islām*,)
The Arabic word *khalq*, meaning "creation," is derived from the root *kh–l–q*, which includes the meanings of forming, shaping, estimation, calculation, and measurement, implying that the creation is an intricate system, interconnected with detail and accuracy. The Qur'an contains over 250 verses where this word is used in its various grammatical forms. The word *khalq* is sometimes used to refer to humankind, but unlike words such as *insān* or *bashar, khalq* is not restricted or exclusive to humanity; it is open, extending to all created beings. The word *khalīqah* tends to refer to the creation in the sense of the cosmos or universe, and the plurals *khalā'iq* and *makhlūqāt* refer to created beings.

Mafāsid / Mafsadah (See paragraphs 2.17, 5.5; endnotes 176, 178, 184, 185, 188, 189; Key Arabic Terms: *fasād fī 'l-ard / ifsād fi 'l-ard*; *masālih / maslahah*, *sharī'ah*, *fiqh*.)
The term for detriments in Islamic law and ethics is *mafāsid* (singular *mafsadah*). It derives from the root *f–s–d*, as does the term *fasād*, and like it, signifies corruption, degradation, desecration, devastation, destruction, and ruin. In Islamic jurisprudence, all acts are assessed with regard to their consequences as benefits and detriments. The concept of *masālih* and *mafāsid* is similar to secular ideas of costs and benefits, but not identical. Muslim individuals, administrators, legislators, and jurists are obliged to avert detriments resulting from human actions to all created beings; in doing so, they seek to identify the detriments that are preponderant and weigh the urgency and importance of the various injuries involved, the certainty or probability of injury and benefit, and the ability of those affected to ward off injury without assistance. In cases where acquiring a benefit brings about an unavoidable detriment of similar or greater magnitude, averting the detriment takes priority; this corresponds to the precautionary principle, namely, that activities which involve a risk of grievous or irreversible harm should be prevented.

Masālih / Maslahah (See paragraphs 2.17, 5.4, 5.5; endnotes 45, 166, 174, 176, 178-185, 189, 236; Key Arabic Terms: *islāh fi 'l-ard*, *mafāsid / mafsadah*, *sharī'ah*, *fiqh*.)
The term for benefits in Islamic law and ethics is *masālih* (singular *maslahah*). It derives from the root *s–l–h*, as does the word *sālih*, and like it, signifies what is good, beneficial, healthy, wholesome, and right. This is the same concept of good works that embodies responsible *khilāfah* on the Earth and is rewarded with inheriting the Earth (see 2.18-2.19 of this Covenant): it is the opposite of *mafāsid*. Good work is essential to the service of God and the fulfilment of human responsibility on the Earth. In Islamic jurisprudence, all acts are assessed with regard to their consequences as benefits (*masālih*) and detriments (*mafāsid*). The concept of *masālih* and *mafāsid* is similar to secular ideas of costs and benefits, but not identical: the welfare of God's creatures encompasses both our immediate welfare in the present and our ultimate welfare in the hereafter, for not everything that gives material benefit to human beings is allowed. It also encompasses the welfare of the entire creation (*masālih al-khalqi kāffah*). No species or generation may be excluded from consideration. Muslim individuals, administrators, legislators, and jurists are obliged to aim at the common good of all created beings; they should strive to harmonise and fulfil all interests. When they are unable to satisfy all interests, they are to weigh the urgency and importance of the various interests involved and seek to

identify those that are preponderant, the certainty or probability of benefit or injury, and the ability of those affected to secure their interests without assistance.

Mīzān (See Title, paragraphs 1.1, 1.2, 1.9, 1.21, 2.10, 2.11, 2.19, 4.22; A Way Forward; endnotes 48, 151, 152; Key Arabic Terms: *khalq*, *āyah / āyāt*, *fitrah*, *haqq / huqūq*, *islāh fi 'l-ard*, *iqtisād*.)
The Arabic word *mīzān*, meaning equilibrium and balance, is derived from the root *w–z–n*, which signifies weighing, balance, equilibrium, proportion, harmony, reciprocity, equity, fairness, and justice, The Qur'an describes a cosmic equilibrium (*Al-Mīzān*) in which all interconnected and interdependent beings are integrated in harmony (15:19-20, 55:7-10). The cosmic balance or equilibrium is associated in the Qur'an with *al-qist*: equity, fairness, and justice (57:25, 6:152). Our interactions and all economic activities must be based on this primordial cosmic balance (*al-mīzān*) as it has been created and sustained by God.

Muhtasib (See paragraphs 5.7, 5.32; endnotes 253-255; Key Arabic Terms: *al-amr bi 'l-ma'rūf, an-nahy 'an al-munkar, hisbah*, *haqq / huqūq*.)
Derived from the term *hisbah* (see above), the word *muhtasib* refers to the official charged with implementing the *hisbah*. The *muhtasib* was a jurist who had to be thoroughly familiar with the rulings of Islamic law that pertained to his or her position as inspector of markets, roads, buildings, watercourses, *himā*s, and the like. Many of the responsibilities of environmental protection and conservation came under the *muhtasib*'s jurisdiction, such as implementation of regulations and standards pertaining to safety and hygiene, removal of pollutants; elimination of hazards and nuisances; protection of *himā*s from violation and trespass; and upholding of animal rights and welfare. Functioning as an adjunct to the Islamic courts, the *muhtasib* held wide discretionary authority to make and enforce 4immediate judgements based on the *sharī'ah* together with local customs and practices (*'urf wa-'ādah*) that did not violate its aims and values, to assess damages, and to impose fines and other penalties to secure the public welfare.

Rabb al-'ālamīn (See paragraphs 1.1, 1.21, 2.2, 2.5, 2.6, 2.16, 2.22, 2.23, 3.1-3.5, 3.8, 3.10, 3.14, 3.15, 4.23. 5.2, 5.6, 5.21, 5.28, 5.35; A Way Forward, A Prayer, endnotes 32, 73, 80, 95, 96, 165, 193, 206, 233; Key Arabic Terms: *Allāh, tawhīd*, *islām*, *'ibādah*, *taqwā*, *ihsān*, *rahmah*, *shukr*, *khalīfah fī 'l-ard / khilāfah fī 'l-ard*, *khalq*.)
The Qur'ān opens with the praise of God as ***"Lord of the worlds"*** (***rabb al-'ālamīn***) (1:1). This expression is made up of two words. The word *rabb*, derived from the Arabic root *r–b–b*, denotes, on the one hand, the Lord and Master Whom we serve and, on the other, the Sustainer Who brings each being into existence, then provides for it, Who nurtures, develops, and guides it until its destiny is fulfilled. The second word is *al-'ālamīn*, which is derived from the Arabic root *'–l–m*, signifying to know, have knowledge, be aware, to perceive, to learn, and to discern; hence the noun *'ālam* means the things that can potentially be known, that exist: the world of being. The plural noun *'ālamīn* means all the worlds of being. In defining *al-'ālamīn*, At-Tabarī's *tafsīr* quotes Ibn 'Abbās, "Say, All praise be to God, to Whom belongs all creation – all the heavens and the beings therein, and all the earths and all things therein, that which is known and that which is unknown." It notes further that the word *'ālam* (world), signifies a type of *ummah* or community: there is the world of humans, and the world of *jinn*s, and each other kind or species of created beings is a world; further, each age or generation of humans, of *jinn*s, and of every other kind of created beings is a world. Hence, the term *al-'ālamīn* encompasses all created beings. An important dimension of this word *'ālamīn* (worlds) is that it expands the horizons of our awareness to consider the myriad dimensions of reality that are unknown to us. In many instances, we have translated *Rabb al-'ālamīn* as 'Lord of all beings' to focus in the term's moral and ethical implications. God is the Lord of every species, every generation, and every individual created being. If we recognise that God is the one and only Lord of all created beings, then we know that devotion to Him requires utmost goodness toward His entire creation – for all created beings have inherent worth and value by virtue of being created by God.

Rahmah (See paragraphs 1.1, 2.6, 2.8, 2.12, 2.16, 2.23, 3.5, 3.14, 3.15, 3.17, 3.19, 3.20, 3.24, 4.11, 5.2; A Way Forward; endnotes 37-39, 47, 69, 78, 79, 103, 189; Key Arabic Terms: *ihsān*, *taqwā*, *shukr*, *khalq*, *āyah / āyāt*, *Rabb al-'ālamīn*, *'ibādah*,)
The Arabic word *rahmah* derives from the root *r–h–m*, which signifies mercy, compassion, and the female womb. It means compassion and mercy, encompassing divine grace, mercy, and compassion to the compassion and mercy of humans and other created beings. The Lord and Sustainer of all beings is All Merciful, All Compassionate. The extent of His overwhelming mercy, grace, and compassion is greater than we can ever grasp (7:156). God has filled the universe with glory, with beauty, and given living beings all the varied senses by which they, and we, can perceive this glory and beauty. The best way to give thanks to serve Him. How shall we serve the All-Merciful, the All-Compassionate? The prophet Muhammad, upon him be blessings and peace, said, "The compassionate are shown compassion by the All-Compassionate. Show compassion to those on Earth, and He Who is in Heaven will show compassion to you." see Umar Abd-Allah, "Mercy."

Ribā (See paragraphs 4.6, 4.20, 4.21; endnote 146; Key Arabic Terms: *fasād fī 'l-ard / ifsād fi 'l-ard*; *isrāf*, *tazkiyah*, *zakāh*.)
The word *ribā*, derived from the Arabic root *r–b–w*, which means to increase, grow, or exceed, refers to usury and interest. Islam prohibits *ribā,* that is usury or unjust, exploitative gains made in trade or business, including the taking of interest. *Ribā* also applies to creating money from nothing in the form of a debt and charging interest on it, and to economic injustice in general. The Qur'an condemns those who exploit others through *ribā* and warns them of punishment in this world and the hereafter (2:275-281). *Ribā* manifests a power relationship whereby the wealthy exploit the needy; whereby the borrower is forced to work harder to repay the capital created from nothing, which grows with compounding interest; whereby the powerful manipulate the defenceless. The wealthy use money that does not exist to enable them to live their exaggerated lifestyles, which ultimately degrade ecosystems worldwide. The contemporary economic order, based on continual economic growth stoked by *ribā* is by nature insatiably consumptive, unsustainable, and antithetical to the principles of Islam.

Sharī'ah (See paragraphs 5.2-5.7, 5.12, 5.27-5.29; 5.32; endnotes 165-175, 186, 189, 191, 192; Key Arabic Terms: *fiqh*, *haqq / huqūq*, *masālih / maslahah*, *mafāsid / mafsadah*.)
In its etymology, the term *sharī'ah* , derived from the root *sh–r–'*, means a broad way or trodden path that leads to water, the source of life, as well as a tributary stream that leads to the main water source – the river or the sea. The importance and value of all life forms is implied in both symbolic connotations of this term. The *sharī'ah* is also concerned with death and the hereafter, as human beings are passengers travelling between the two worlds, with the *sharī'ah* as the map to which they refer to find the surest way to spiritual bliss in the hereafter. Its aim is to chart how to do the will of the Merciful, Compassionate Lord of all beings; to live life – individually and collectively – in the most moral and ethical way. Indeed, the science of ethics and that of law are essentially one and the same.

The *sharī'ah* is often translated as "Islamic law"; however, to people from secular societies, the idea of religious law might be confusing. Law is widely considered to be dry and somewhat distasteful, even if it is recognised as essential for the functioning of civilised society and the defence of individual freedoms. It is viewed almost as a necessary evil. After all, why does a person seek a lawyer? To press a lawsuit, perhaps, or to defend oneself against one; to find out how to pay the minimum amount in taxes; or to secure the most advantageous terms in a business contract or a divorce. How far from the spiritual and ethical values of faith! In Islamic civilisation, however, the *sharī'ah* is perceived quite differently. The most common reason that one seeks out a *muftī*, or expert in Islamic law, is to ask what is the most ethical, moral course of action in a given situation, the act most pleasing to the Lord of all beings and leading most surely to eternal spiritual bliss.

The Qur'an and the *sunnah* – the normative practice of the prophet Muhammad, God's blessing and peace be upon him, form the foundation of the *sharī'ah*, which embraces in its scope every human act, including religious devotions and purely ethical issues, as well as the various fields of law, such as constitutional and international law, family law, penal law, law of contracts, property law, and environmental law. Each act is examined to determine how much good and harm it may lead to, not only in the material realm of the present world, but also in the spiritual realm of the hereafter. Acts are evaluated according to a five-tiered scale; an act may be obligatory, recommended, permitted, disfavoured, or prohibited. The *sharī'ah* is thus not only prohibitive and injunctive, but also prescriptive, charting the ethical course of what "ought" to be: in addition to the essential legal imperatives that fall within the jurisdiction of the courts, it sets forth ideal standards of behaviour that can be implemented only by individual and social conscience. Even when the courts fail, or where Islamic courts do not exist, the *sharī'ah* sets out the norms toward which believers are always to aspire. The ultimate aim of the *sharī'ah* is to promote the welfare of God's creatures (*masālih al-khalq* or *masālih al-'ibād*). Unlike *fiqh* (see above), which refers to the science of law and ethics, the human endeavour to understand the *sharī'ah* and the objective body of humanly crafted "Islamic law" in the sense of the Muslim scholars' legal rulings, which are the outcome of that endeavour, the *sharī'ah* refers to the divinely prescribed Way, unaffected by the shortcomings of fallible human beings. Hence the 14th century jurist Ibn Qayyim Al-Jawzīyah's declaration:

The foundation and basis of the *sharī'ah* is wisdom and the welfare of God's worshippers (humans and other created beings) in this life and in the hereafter. It is entirely justice, entirely mercy, entirely benefit, and entirely wisdom. Hence, any case that deviates from justice to oppression, from mercy to its opposite, from benefit to harm, or from wisdom to frivolity does not belong to the *sharī'ah*, though it may be introduced therein by way of interpretation. For the *sharī'ah* is God's justice among His worshippers, His mercy among His creatures, His shade upon His Earth (*I'lām al-Muwaqqa'īn 'an Rabb al-'Ālamīn, fasl fi taghyīr al-fatwā wa ikhtilāfihā*).

Shukr (See paragraphs 2.4, 3.5, 3.6, 3.7, 5.8; A Prayer; endnotes 80-83, 196, 259; Key Arabic Terms: *Rabb al-'ālamīn*, *ihsān*, *khalq*, *islāh fi 'l-ard*.)

Derived from the root *sh-k-r*, which signifies appreciation, gratitude and thanksgiving, the word *shukr* means to show gratitude, to give thanks, to acknowledge, recognise, and display a blessing from God, the Lord of all beings. Its opposite is *kufr* – literally, ingratitude: to conceal, cover, forget, ignore, or deny a blessing. Hence, *kufr* is the word for unbelief and disbelief in Islam. Our response to the grace of the All-Merciful is to show gratitude and appreciation, to give thanks for His blessings (36:33-35). The Qur'an awakens us to rejoice in the beauty in the universe, to nourish our emotions as well as our bodies, as shown in the Qur'anic verses that describe the beauty, adornment, and splendour in the creation and awaken us to savour and take delight in it. Like the praise of God, *shukr* is felt in the heart and expressed by the lips, but it needs also to be expressed by the limbs, in doing good works (*al-aʿmāl as-sālihah*, *as-sālihāt*) and in deeds of utmost good (*ihsān*) toward God's creatures. Gratitude for God's blessings is shown by maintaining and increasing them, and by using them well, according to the ends for which they are created.

Shūrā (See paragraphs 4.25, 5.27; endnotes 158-163; Key Arabic Terms: *haqq / huqūq*, *masālih / maslahah*, *mafāsid / mafsadah*.)
Deriving from the Arabic root *sh-w-r*, which signifies signalling, signing, indicating, pointing out, and beckoning, *shūrā* means mutual consultation and counselling. A fundamental right of people is consultation in all matters that affect their welfare. Each individual man and woman, as a *khalīfah* on the Earth, will be judged alone on the Day of Judgment for what he or she did with his or her life. This enormous responsibility requires the freedom to participate effectively in planning and decision-making processes. The Qur'an promises that ***"those who conduct their affairs by mutual consultation"*** (42:38) will receive a better, more lasting reward from God. People of all social and ethnic groups be consulted without discrimination; the weakest be held as strongest until their rights are fully secured, and the strongest held as weakest until they comply fully with the law. The governing authorities also have an obligation to act in consultation (*shūrā*) with the people who are affected by their plans. At the local level, this may best be realised through participatory planning and collaborative management in which key stakeholders, or their representatives, take part.

Taqwā (See paragraphs 1.1, 2.12, 2.21, 2.22, 3.1, 3.3, 3.4, 3.8, 3.9, 3.13-3.15, 3.20, 3.21, 3.23, 3.24, 4.10, 4.11, 4.21, 5.8; endnotes 69, 73, 103, 118; Key Arabic Terms: *Allāh, Rabb al-ʿālamīn, khalq*, *hurmah*, *ihsān*, *rahmah*, *tawhīd*.)
Derived from the root *t–q–y*, the Arabic word *taqwā* means reverence and awe, to be aware of God and to revere Him – and to beware offending Him in the treatment of His creatures. The caliph 'Umar ibn Al-Khattāb compared *taqwā* to passing through a thicket of lote trees (*sidr*) while wearing fine clothing; anyone who is familiar with their sharp, hooked thorns and how painful they are will understand the extreme care and carefulness required to move through them. The philologist Randa Hamwi Duwaji has coined the word "bewareness" to translate *taqwā*. The adjective *taqīy* is often translated as "Godfearing" and "God-conscious"; on the Islam4u website, it is nicely translated as "Godwary". In this Covenant, we have generally translated the noun *taqwā* as "reverence" "reverential care," or "reverential awe" depending on the context, the verb *ittaqi* as "revere" or "care", and the adjective *taqīy* as "reverent", "caring", or "careful". As God is the Lord of <u>all things</u>, we are to revere Him in our conduct toward each thing. The attitude of *taqwā*: profound awareness and reverence toward the Lord of all beings, coupled with utmost care and carefulness in our treatment of His creation. This attitude is the essence of nobility. "***Most noble of you in the sight of God are they who are most reverent."*** (49:13)

Taskhīr (See paragraphs 2.14, 2.15; endnotes 52-55; Key Arabic Terms: *khalq*, *shukr*.)
The Arabic word *taskhīr*, derived from the root *s–kh–r*, signifies serviceability. The Qur'an describes the universe and all things in it, the seas, the mountains, the plants, and the animals, even the day, the night, the sun, the moon, and the stars as being of service (*musakhkhar*) to humankind. Being *musakhkhar* means that these things are of benefit to humankind; it does not mean that they are subjected to the dominion or authority of human beings. Nor does it preclude their being of service to other species as well as to humankind; indeed, it is evident that the day, the night, the sun, the moon, and the stars serve the living beings on Earth in general. Nowhere has God indicated that other creatures are created only – or even primarily – to serve human beings. It would be preposterous to imagine that these things were created merely for our enjoyment. As noted in para. 2.15, it is well known that in these creatures God has exalted purposes other than and greater than the service of humankind, and the Qur'an states that the creation of heaven and Earth is greater than the creation of humankind (40:57). For more comprehensive examinations of the concept of *taskhīr*, see Tlili, Sarra, *Animals in the Qur'an*, Cambridge University Press, 2012, 92-115 and Izzi Dien, *Environmental Dimensions of Islam*, 78, 128. Also see *Riʿāyat al-Bīʾah*, 34-35. Likewise, with respect to the Qur'anic phrase, "**He it is Who created for you all that there is on Earth**" (2:29), Izzi Dien argues that "The word 'you' here refers to all those creatures, who inhabit the earth with no limit as to time or place. This conclusion does not stretch the meaning beyond its original intent, as some might assert, since Muslim scholars accept the principle of generality in textual interpretation, providing there is no reason that opposes this principle" (pp. 87-88).

Tawhīd (See paragraphs 2.2, 2.5, 3.1, 3.2; endnotes 34, 35, 71, 72; Key Arabic Terms: *Allāh, Rabb al-ʻālamīn, taqwā*, *ihsān*, *khalq*, *ibādah*, *islām*, *islām*,)
Tawhīd, the affirmation of God's oneness, is derived from the Arabic root *w–h–d*, which signifies oneness, unity, uniqueness, singularity, matchlessness, and incomparability. *Tawhīd* is the bedrock of the Islamic ethos. Muslims hold that the oneness of God is the basis of our faith, its metaphysics, its ethics, its Law, and its spirituality. God – be He glorified and exalted – has not made any of His creatures worthless: the very fact that He has created a being gives it inherent worth and value. The most essential ethical implication of God's oneness is to serve the one God – the Lord of all beings – by doing the greatest good we can to ***all*** His creatures. If we recognise that God is the one and only Lord of every created being, then we must know that devotion to Him requires utmost goodness toward His entire creation – and that we must treat every single creature with *taqwā*, or reverence toward its Creator. All created beings have inherent worth and value by virtue of being created by God. To exclude any created being from moral consideration violates the principle of *tawhīd*. Indeed, to make our ultimate aim less than the good of all beings is unethical and immoral: it violates the principal ethical demand of *tawhīd*.

Tazkiyah (See paragraphs 4.20, 4.21; endnotes 147, 148; Key Arabic Terms: *zakāh*, *islāh fi 'l-ard*, *khalq*, *iqtisād*. *ribā*.)
Derived, like the word *zakāh* (see below), from the root *z–k–w*, which signifies moral purity, purification, justification, guiltlessness, and blamelessness, together with thriving, growth, and increase, the word *tazkiyah* means both purification and growth. The term is used to signify economic growth through purifying charitable acts, a concept developed by the Pakistani economist Khurshid Ahmad, who calls to the vision of an economy exemplified by purifying charity (*zakāh* and *tazkiyah*), in sharp contrast to economic growth based on exploitation of those in need, exemplified in usury (*ribā* – see above). Just as wealth is purified by sharing its surplus with those who are in need, societies are purified by the circulation of wealth from the wealthy to the needy. Izzi Dien, *Environmental Dimensions of Islam*, 132-133. Growth through purifying charity, unlike exploitation, leads to ecological, economic, social, and spiritual prosperity (*falāh*).

Zakāh (See paragraphs 2.9, 3.16, 4.20, 4.21; endnotes 46, 97, 147,148; Key Arabic Terms: *tazkiyah*, *haqq / huqūq*, *khalq*, *ibādah*, *iqtisād*. *ribā*)
The Arabic word *zakāh*, derived from the root *z–k–w*, signifying moral purity, purification, justification, guiltlessness, and blamelessness, together with thriving, growth, and increase has both general and specific meanings, both of which connote this underlying dual implication, the specific meaning is the obligatory charity or alms tax that Muslims who possess more savings than a certain minimum are required to give once each year. This is 2½ percent of their surplus monetary savings and various proportions of other surplus capital, such as their crops and livestock to the poor and the needy, to purify the remainder that is kept. Wealth is purified by sharing its surplus with those who are in need. In its general sense, *zakāh* means acts of charity by which people and indeed other creatures contribute to the well-being and growth of the wider community of life. Through *zakāh*, we participate in social solidarity and it purifies the soul by targeting human greed (Izzi Dien, *Environmental Dimensions of Islam*, 48) and teaching us that money and wealth are not the objectives of life (Izzi Dien,17). Also see *Riʻāyat al-Bīʼah*, 241-245.

Notes

Section 1

[1] https://www.unhcr.org/refugee-statistics/ Accessed 27.01.2024
[2] https://inequality.org/facts/global-inequality/ Retrieved 12.08.2021
[3] https://www.oxfam.org/en/press-releases/worlds-billionaires-have-more-wealth-46-billion-people Retrieved 12.08.2021
[4] "Physical and human causes of climate change" (BBC Bitesize, undated). Available at: http://www.bbc.co.uk/education/guides/z3bbb9q/revision/6.
[5] This has resulted in the drastic increase of atmospheric CO_2 from estimated levels of 280 parts per million (ppm) during pre-industrial times and possibly for millions of years before that, to over 400 ppm today.
[6] "Climate change widespread, rapid and intensifying". See report by the Intergovernmental Panel on Climate Change (IPCC) – https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/
[7] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
[8] https://unfccc.int/sites/default/files/resource/cp2023_L1_cma2023_L1.pdf
[9] https://library.wmo.int/index.php?lvl=notice_display&id=21778#.X7YSIS-l3s2 Retrieved 12.08.2021
[10] https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa Retrieved 12.08.2021
[11] https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector Retrieved 12.08.2021
[12] https://unfccc.int/sites/default/files/resource/cma2023_L17_adv.pdf ; https://unfccc.int/news/cop28-agreement-signals-beginning-of-the-end-of-the-fossil-fuel-era ; https://www.theguardian.com/environment/2023/dec/14/failure-cop28-fossil-fuel-phase-out-devastating-say-scientists#:~:text=The%20UN%20climate%20summit%20ended,by%20petrostates%20including%20Saudi%20Arabia
[13] https://fossilfueltreaty.org Retrieved 03.08.2022 ; https://www.ted.com/talks/tzeporah_berman_the_bad_math_of_the_fossil_fuel_industry Retrieved 10.08.2022 Climate policy has been designed on the premise that reduced demand and the rising price of fossil fuels, together with the availability of cheaper clean energy sources will lead the markets to constrain supply. But that is not happening fast enough; the markets are distorted by tax breaks and subsidies, so the extraction of fossil fuels continues apace, fuels that our governments have promised not to burn! This extraction continues to degrade and fragment major remaining habitats of the communities of wild plants and animals with whom we share the Earth.
[14] Even in the most apocalyptic of nuclear holocausts that are hypothesised, many bacteria and other microbiota are expected to survive, and perhaps some complex forms of life as well.
[15] Richard Leakey and Roger Lewin, *The Sixth Extinction: Biodiversity and its Survival* (London: Widenfeld and Nicolson, 1996), 245.
[16] Most of the life forms that survived previous mass extinctions were microorganisms and invertebrates; few complex forms of life remained. As large, warm-blooded mammals with fast metabolism, human beings are vulnerable to food chain disruptions; our comparatively slow reproduction time and small number of offspring – the population crisis notwithstanding – slows our rate of biological adaptation. Our wide geographic range, spanning diverse habitats in all the continents, our abundance, greater by far than that of wild vertebrate species, our ability, as omnivores, to consume a vast array of food sources, and above all, our cultural adaptivity, might enable our species to survive a mass extinction. Mere survival, however, seems a poor aim to aspire to, and the disruptions and devastations resulting from the loss of more than three quarters of the forms of life on Earth would be hard to imagine.
[17] See Qur'an 6:133, 56:61, 46:20, etc. Although the Qur'anic commentators have understood the Qur'anic verses that describe God's ability to replace human beings with a new creation in terms of replacing nations or generations of humans with others – and that meaning is well established, we maintain that additional understandings involving the replacement of humans with other species may warrant consideration in light of the scientific evidence that this is likely to occur – and God is indeed capable of doing whatever He wills; we humans cannot place limits on what the Lord of all can do.
[18] Fossil fuels and mineral resources, important as they are, are supplementary to biological diversity, which is the basis of our lives. We have built our modern economies upon them, but ultimately, our lives do not depend on the on them as they do on the web of life: humanity prospered before they were harnessed to our use and can surely prosper if they are gone.
[19] "Abandoning the normally sober tone of scientific papers, researchers call the massive loss of wildlife a 'biological annihilation' representing a 'frightening assault on the foundations of human civilisation'" https://www.theguardian.com/news/2018/mar/12/what-is-biodiversity-and-why-does-it-matter-to-us Retrieved 12.08.2021
[20] The multilateral treaty known as the Convention on Biological Diversity (CBD), which was launched in 1992, has not received the attention it merits. The Convention produced 20 objectives known as the "Aichi Biodiversity Targets" during the United Nations 2011-2020 Decade on Biodiversity. In its September 2020 report, Global Biodiversity Outlook 5 observed that "…none of the 20 targets have been fully achieved…" and added alarmingly, "…the world is not on track to achieve most of the current globally agreed targets for biodiversity, or for land degradation or climate change, nor the other Sustainable Development Goals." See p. 131 of https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf . Yet another cause of frustration is the latest failure in August 2022 of the parties to the UN High Seas Treaty to agree on addressing the impacts of overfishing, deep sea mining, and shipping traffic through measures that would raise the conservation of the Earth's international waters from 1.6 percent to 30 percent in marine protected areas, subject commercial activities to environmental impact assessments, provide finance and capacity building to developing countries, and give developing and landlocked nations more equitable access to marine genetic resources.
[21] https://www.cbd.int/gbf/goals/
[22] We note that there is a scarcity of research papers linking biological diversity with cultural diversity. Further scholarly activity is needed in this field. For a rare study of this subject see https://www.jstor.org/stable/26392968?seq=1#metadata_info_tab_contents.
[23] Fazlun Khalid, *Signs on the Earth: Islam, Modernity and the Climate Crisis* (Leicester, UK: Kube, 2019), p. 23.
[24] We note that prestigious international organisations and the scientific and academic communities voice their concerns over the consequences of the unprecedented human assault on sensitive earth systems. The Organisation for Economic Co-operation and Development (OECD) finds that the consequences of inaction without new policies on (a) Climate change will be to raise global average temperature between 3 degrees Celsius to 6 degrees Celsius above pre-industrial levels by the end of the century, exceeding the internationally agreed goal of limiting it to 2 degrees Celsius and (b) Further biodiversity loss will result from the expansion of commercial forestry, infrastructure development, human encroachment and fragmentation of natural habitats, as well as pollution and climate change. OECD Environmental Outlook to 2050: *The Consequences of Inaction* -

Key Facts and Figures. https://www.oecd.org/env/indicators-modelling-outlooks/oecdenvironmentaloutlookto2050theconsequencesofinaction-keyfactsandfigures.htm .

[25] World Scientists 'Warning to Humanity: A Second Notice. *BioScience*, Volume 67, Issue 12, 1 December 2017, Pages 1026–1028. American Institute of Biological Sciences, 13.11.17. HTML https://academic.oup.com/bioscience/article/67/12/1026/4605229. Accessed January 2018.

[26] In December 2020, the Secretary General of the United Nations declared that, "the state of our planet is broken." https://www.un.org/sites/un2.un.org/files/sgspeech-the-state-of-planet.pdf Retrieved 12.08.2021

[27] 13:12, 30:24

[28] Our world today looks to be grander, more powerful, more knowledgeable and more prosperous than previous civilisations, enjoying an unprecedented degree of technological sophistication, when in reality it has no more stability than the great civilisations of past ages. The environmental historian Clive Ponting observes that, "it was not until the end of the seventeenth century that the continuing increase in scientific knowledge and the steady advance of technology…began to convince some thinkers that history might be a chronicle of progress rather than decay." It came to be accepted by European intellectuals "that history was a series of irreversible changes in only one direction – continual improvement" and marked in the eighteenth century "by a wave of optimism about the future and the inevitability of progress in every field." See Clive Ponting, *A New Green History of the World: The Environment and Collapse of Great Civilisations* (London: Vintage Books, 2007), 1, 56, 57, 69-72, 125.

[29] Joel Kurtzman, *The Death of Money: How the Electronic Economy Has Destabilised the World's Markets and Created Financial Chaos* (Toronto: Little Brown & Co., 1993), 71. Kurtzman is a prolific American economist, and former Editor-in-Chief of the *Harvard Business Review*.

[30] See para. 2.14 of this Covenant. Altering the nature of God's creation and wreaking corruption in the Earth refer explicitly to anthropogenic impacts – "what the hands of humankind have wrought" (30:41).

[31] Khalid, *Signs on the Earth,* 149, 150.

Section 2

[32] The Qur'an does not contain the words 'environment', 'environmental', or 'environmentalism'. The closest term to 'environment' in classical Arabic is *muhīt*, meaning surrounding; in Qur'anic usage, however, it is the divine presence and knowledge that is described as *muhīt,* encompassing all things, as in 2:115 and 4:126. The word for 'environment' in modern Arabic usage is *bī'ah*, which describes a habitat to which one naturally gravitates or returns, whether by intent or instinct (See *Ri'āyat al-Bī'ah fī Sharī'ati 'l-Islām* (Cairo: Dār ash-Shurūq, 2006), pp. 12-14); several words derived from its root letters occur in the Qur'an (29:58, 59:9, 10:87, 2:187), but not the word *bī'ah*, itself. The ideological movement known as "environmentalism" dates only to the second half of the last century. At this point, humankind were jolted to take notice that the outcome of our endeavours to create the modern world has brought us to the brink of environmental collapse. Traditional and indigenous societies did not have a word for "environmentalism" in their vocabulary. Neither did they have a word for "holistic" as their lifestyles were naturally so. This same could be said for the major faiths before their adherents were subverted by modernity, and Islam is no exception to this. Nor does the Qur'an use the Arabic word *tabī'ah*, meaning 'nature', an abstraction derived from Greek and Roman philosophy.

[33] On the Arabic word *khalq*, meaning "creation," see Key Arabic Terms. Also see Mawil Izzi Dien, *The Environmental Dimensions of Islam* (Cambridge: The Lutterworth Press, 2000) 50-51. In addition to over 250 Qur'anic verses that use this word in its various forms, about 500 other verses in the Qur'an make direct references to the creation.

[34] In defining *al-'ālamīn*, At-Tabarī's *tafsīr* quotes Ibn 'Abbās, "Say, All praise be to God, to Whom belongs all creation – all the heavens and the beings therein, and all the earths and all things therein, that which is known and that which is unknown." It notes further that the word *'ālam* (world), means a type of *ummah* or community: there is the world of humans, and the world of *jinn*s, and each other kind or species of created beings is a world; further, each age and each generation of humans, of *jinn*s, and of every other kind of created beings is a world. An important dimension of this word *'ālamīn* (worlds) is that it expands the horizons of our awareness and ethics to consider the myriad worlds of reality that are unknowable to us.

[35] From this very word *haqq*, which denotes truth, reality, and right, comes the sense of the due that we owe to each created being, expressed as rights (*huqūq*). All created beings have rights. In his paper, "Islam, the Contemporary World, and the Environmental Crisis," in Richard C Foltz, Frederick M Denny and Azizan Baharuddin (Eds), *Islam and Ecology: A Bestowed Trust* (Cambridge, MA: Harvard University Press, 2003), Seyyed Hossein Nasr reflects on the interrelated meanings of *haqq*:

> A central concept of Islam cited often in the Qur'an is *haqq* (plural *huquq*), which means at once truth, reality, right, law, and due. The term *al-Haqq* is also a Name of God as well as of the Qur'an. It is also of the utmost importance for understanding the Islamic view of human beings in relation to the natural environment when it is used in the case of creatures. According to Islam, each being exists by virtue of the truth (*haqq*) and is also owed its due (*haqq*) according to its nature. The trees have their due, as do animals or even rivers and mountains. In dealing with nature, human beings must respect and pay what is due to each creature, and each creature has its rights accordingly. Islam stands totally against the idea that we human beings have all the rights and other creatures have none except what we decide to give them. The rights of creatures were given by God and not by us, to be taken away when we decide to do so….We cannot take away the *haqq* of various creatures given to them by God, but must pay each being its due (*haqq*) in accordance with the nature of that creature. (p. 97)

[36] The verb *ahsana* in the Qur'anic verse 32:7 brings together the meanings of utmost good, utmost beauty, excellence, and perfection. The verb *atqana* in verse 27:88 means to perfect a thing by way of precision, exactitude, and consummate skill.

[37] In the Islamic tradition, the All-Merciful (*Ar-Rahman*) and the All-Compassionate (*Ar-Rahim*) are said to be the greatest names of God after Allah, and of all His names, the most expressive of His relation to the creation. All chapters of the Qur'an but one begin with the short, poetic phrase "In the Name of God, All Merciful, All Compassionate" which contains the true essence of the Qur'an and repeated 114 times, as the phrase occurs also in the text of Surat an-Naml. The scriptural sources of Islam indicate that above all other divine attributes, it is grace – divine mercy – that marks God's creation and frames His primary relation to it from its inception through eternity, here and hereafter. See Umar Abd-Allah, "Mercy" 2004.

[38] All that transpires – even pain, suffering, harm, death, and evil – will, in due course, fall under the rubric of cosmic mercy. The verse that reads: "God ordained mercy upon himself" (6:12) emphasises that mercy is a universal law (*sunnah*), the dominant theme of the cosmos, and the fundamental purpose of the creative act. See Umar Faruq Abd-Allah, "Mercy: The Stamp of Creation" (Nawawi Foundation, 2004); Mohammed Rustom, *The Triumph of Mercy: Philosophy and Scripture in Mullā Ṣadrā*, SUNY Press, 2015.

[39] "In [verse 40:7], mercy – technically an attribute of act – is given priority over knowledge – an attribute of essence – again emphasizing mercy's predominance in the universal plan." Umar Abd-Allah, "Mercy" 2004).

[40] Human beings are endowed with the free choice of obeying or disobeying the command of God. The difference is that "while every other creature follows its nature automatically, humans *ought* to follow their natures; this transformation of the *is* into *ought* is both the unique privilege

and unique risk of being human." (Ibrahim Özdemir, "Towards an Understanding of Environmental Ethics from a Qur'anic Perspective," in Foltz, Denny and Baharuddin (Eds), *Islam and Ecology*, 2003), 17) The ability to choose to serve in willing devotion or to refuse their Lord's commandments and resist or attempt to subvert them applies to *jinn*s as well as humankind (51:56).

[41] Although beings other than humans do not have the ability to disobey their Lord, in Qur'anic teaching, they do submit willingly: "Then He comprehended in His design the Heaven as it was smoke and said to it and to the Earth, Come both of you willingly or unwillingly. They answered, We come willingly. (41:11). "The Qur'an therefore applies the term *islām* ("submission") to the entire universe insofar as it (ineluctably) obeys God's law. Working according to God's laws, nature submits itself to God's will…. Since every thing in the universe behaves in accordance with laws enacted by God, the whole universe is therefore *muslim*, surrendering to the will of God" (Ibrahim Özdemir, "Towards an Understanding of Environmental Ethics…" 16-17).

[42] See *Ri'āyat al-Bī'ah fī Sharī'ati 'l-Islām* (Cairo: Dār ash-Shurūq, 2006), 31 and Seyyed Hossein Nasr, *Islam and the Environmental Crisis*, 95-96, and in *The Need for a Sacred Science* (Albany, NY: State University of New York Press, 1993), 130-133.

[43] On the signs of God in the creation, see *Ri'āyat al-Bī'ah*, 31, 33-34, 155; Nasr in "*Islam and the Environmental Crisis*," 95-96, and in *Sacred Science*,130-133; Izzi Dien, *Environmental Dimensions of Islam*, 27, 98, 100; Özdemir, "Environmental Ethics," 10-11, 19-22; Nomanul Haq, "Islam and Ecology: Toward Retrieval and Reconstruction" in Foltz, Denny and Baharuddin (Eds), *Islam and Ecology*, 2003) 126, 130; and 'Ali Gomaa, *Al-Bī'ah wa'l-Hifāz 'alayhā min Manzūr Islāmī* (Cairo: Al-Wābil As-Sayyib, 2009), 33-34. Said Nursi, *The Supreme Sign* (trans. Hamid Algar), Berkeley, California, 1979.

[44] *Ri'āyat al-Bī'ah*, 12-14.

[45] 'Izz ad-Dīn ibn 'Abd as-Salām (d. 660 H. / 1262 G.), *Qawā'id al-Ahkām fī Masālih al-Anām*, *fasl fī bayān masālih al-mu'āmalāt wa't-tasarrufāt*. This observation regarding human society pertains equally to the creation as a whole. It applies even to predators and prey, for although they are outwardly in conflict as individuals, yet as species, they are ultimately dependent on one another.

[46] 'Abd ar-Ra'ūf Muhammad Al-Munāwī (952-1031 H. / 1545-1621 G.) in *Fayd al-Qadīr Sharh al-Jāmi' as-Saghīr* quoted in *Ri'āyat al-Bī'ah*, 18.

[47] *Hadīth* of unsubstantiated authenticity related by Abū Bakr Ahmad ibn Husayn Al-Bayhaqī (d. 458 H. / 1066 G.) from Anas ibn Mālik and 'Abd-Allāh ibn Mas'ūd, in *Shu'ab al-Īmān*, chapter 49 (*bāb fī tā'at ulī 'l-amr*): *fasl fī nasīhat al-wilāt wa wa'zihim*, *hadīth* nos. 7444–7449, and by Walī ad-Dīn Muhammad ibn 'Abd-Allāh Al-Khatīb at-Tabrīzī in *Mishkāt al-Masābīh*, compiled 737 H. / 1337 G., *kitāb al-ādāb*, *bāb ash-shafaqah wa 'r-rahmah 'alā 'l-khalq*, *hadīth* nos. 4998, 4999. See Othman Abd-ar-Rahman Llewellyn, "The Basis for a Discipline of Islamic Environmental Law" in Foltz, Denny and Baharuddin (Eds), *Islam and Ecology*, 2003), 185-247. Also see Abubakr A. Bagader, Abdullatif T. E. El-Sabbagh, Mohamed A. Al-Glayand, and Mawil Y. I. Samarrai, in collaboration with Othman A. Llewellyn, *Environmental Protection in Islam*, 2d rev. ed., IUCN Environmental Policy and Law paper no. 20 Rev, World Conservation Union / Meteorology and Environmental Protection Administration of the Kingdom of Saudi Arabia (Gland, Switzerland and Cambridge: IUCN, 1994), 1–2. http://cmsdata.iucn.org/downloads/eplp_020reven.pdf. Also see Othman A. Llewellyn, "Islamic Jurisprudence and Environmental Planning," *Journal of Research in Islamic Economics* (Jeddah) 1, no. 2 (1984): 29; and Othman Llewellyn, "Shari'ah-Values Pertaining to Landscape Planning and Design," in *Islamic Architecture and Urbanism* (Dammam, Saudi Arabia: King Faisal University, 1983), 32.

[48] This same powerful combination of the terms *mīzān* and *qist* is used in the Qur'an in relation to the care of orphans – *And that you do not go near the property of orphans before they reach maturity – except in a good way; that you give full measure and full weight with equity.* (6:152)

[49] Fazlur Rahman, *Themes of the Qur'an*. Chicago: Bibliotheca Islamica, 1980, p. 45.

[50] 'Abd-Allāh ibn Ziyādah Al-Bakrī asked the sons of Bishr Al-Māzinī whether they knew of any ruling from the Prophet about beating one's riding animal with a quirt and controlling it roughly with the bridle. They said no, and a woman answered him from within the house, "O questioner, God has declared, 'There is no animal on the Earth, nor any bird that wings its flight, but is an *ummah* (community, society, people) like yourselves' " (6:38). They told him that she was their older sister, who had known the Prophet. Rigorously authenticated report related by Al-Bayhaqī in *Shu'ab al-Īmān* and the Imām Ahmad from 'Abd-Allāh ibn Ziyādah. https://quranpedia.net/ar/surah/1/6/book/273

[51] In the Qur'anic account, Satan declares that he will command human beings to cut the ears of cattle (4:119). Hence the mutilation of animals, such as the trimming of dogs' ears and the breaking of horses' tails for show is abjured in Islamic civilisations. How much more grievous and satanic an abomination, then, is the vivisection that takes place in animal experimentation, let alone the corruption, devastation, and desecration of entire ecosystems that occurs with the use of defoliants and other pesticides with radiation, and, for that matter the other impacts that our species has wreaked upon the Earth?

[52] For a comprehensive examination of the concept of *taskhīr*, see Tlili, Sarra, *Animals in the Qur'an*, Cambridge University Press, 2012, 92-115. Being *musakhkhar* (of service) means that the day, night, sun, moon, stars, seas, mountains, plants, and animals are of benefit to humankind; it does not mean that they are subjected to the dominion or authority of human beings. Nor does it preclude their being of service to other species as well as humankind; indeed, it is evident that they serve the living beings on Earth in general. See Tlili, 92, 100, 111-115; Izzi Dien, *Environmental Dimensions of Islam*, 128; Also see *Ri'āyat al-Bī'ah*, 34-35.

[53] Human beings and the rest of creation are alike and equal in being created. Making the claim that human beings are superior to other created beings seems disobedient to God in the same way as was Satan's refusal to obey God's order to bow to Adam on the grounds of superiority: "He said: 'I am better than he: You have created me from fire, and him from clay'" (7:12). See Izzi Dien, *Environmental Dimensions of Islam*, 78.

[54] Izzi Dien, *Environmental Dimensions of Islam*, 128:

> Although some interpreters of the Qur'an consider this service, *taskhīr*, to be restricted to human benefit, the examination of the various verses reveals that there is no apparent evidence to substantiate such a claim. Although human beings benefit from the service of other creatures, it is not necessarily a one-way process. *Taskhīr* might lead to this meaning if the examination is confined solely to verses dealing with animals serving humans. However, the meaning becomes clearer when we consider other elements of the environment such as day, night, sun, moon and the stars. Although these elements are described… [as] for the service of humans, it is evident that they are also serving other creatures, and the Qur'an does not indicate otherwise…

Likewise, with respect to the Qur'anic phrase, "He it is Who created for you all that there is on Earth" (2:29), Izzi Dien suggests that "The word 'you' here refers to all those creatures, who inhabit the earth with no limit as to time or place. This conclusion does not stretch the meaning beyond its original intent, as some might assert, since Muslim scholars accept the principle of generality in textual interpretation, providing there is no reason that opposes this principle" (pp. 87-88).

[55] Taqī ad-Dīn Ahmad ibn Taymīyah, *Majmū' al-Fatāwā*, 11:96–97. For discussion of this edict, see Samarrai, "Environmental Protection and Islam," 37–38; Izzi Dien, *Environmental Dimensions of Islam*, 99-100; Llewellyn, "Islamic Environmental Law," 36-37; Bagader et al., *Environmental Protection in Islam*, 5.

[56] Samarrai, "Environmental Protection and Islam," 37; Izzi Dien, *Environmental Dimensions of Islam*, 27, 97-100. Also see Bagader et al., *Environmental Protection in Islam*, 5–6, 33–34 and Llewellyn, "Islamic Environmental Law," 37.

[57] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim and others from Abū Hurayrah. Ants feature in several illustrations of Islamic ethics, perhaps because they are among the smallest living beings perceived by human eyes. Some of the rulings that apply to them might apply to still smaller creatures, such as the archaea, bacteria, and other micro-organisms. These species are among the most abundant and diverse forms of life on Earth and may account for over half Earth's biomass. Moreover, 27th chapter of the Qur'an named as the Ant (*An-Naml*).

[58] Nomanul Haq, "Islam and Ecology," 132. The Qur'an teaches that when God announced to the angels, "I am setting a responsible agent on the Earth (*khalīfah fī 'l-ard*)," the angels asked, "Will you put therein one who will wreak corruption in the Earth and shed blood?" (2:30). This indicates that the angels could foresee that the children of Adam would have the freedom and the power to do evil as well as good.

[59] Abdal Hamid [Fitzwilliam-Hall], "Exploring the Islamic Environmental Ethics" In A.R. Agwan, (Ed.), *Islam and the Environment*, (New Delhi, India: Institute of Objective Studies, 1997), 55. The Qur'an makes it clear that *fasād* is connected to the destruction of tilth and fertility (2:205; 7:85), and that *fasād* has appeared on land and at sea (30:41).

[60] Özdemir, "Environmental Ethics," 203.

[61] See para. 5.5. The Qur'anic verse, "My servants, the right-doing, shall inherit the Earth" (21:105) closely echoes the 29th verse of Psalm 37 in the Masoretic numbering of the Hebrew Bible (Psalm 36 in the Greek Septuagint and Latin Vulgate translations): "The righteous shall inherit the land, and dwell therein for ever."

[62] Rigorously authenticated *hadīth* related by Muslim from Abū Sa'īd Al-Khudrī. This *hadīth* closely echoes the Qur'anic *āyah*: "Thus We have made you to succeed one another as responsible agents on the Earth (*khalā'if fī 'l-ard*), that We might behold how you conduct yourselves." (10:14).

[63] The 11th century thinker Ar-Rāghib Al-Isfahānī considered the ultimate aims of God with regard to humankind as responsible, accountable beings to be exemplified in three functions: The first of these is to serve and worship God. Service and worship include all that is loved by God by way of words and works, in all spheres of life. The second is to practice *khilāfah* on the Earth by tending it, upholding right and justice; and spreading good and utility on Earth, as shown in God's command to the prophet David *"O David! We have made you a khalīfah on the Earth: judge, therefore, with justice between humankind, and do not follow passions that may divert you from the way of God"* (38:26). The third is to cultivate and cause the land to thrive and flourish (*'imārat al-ard*), as in the *āyah*, *"…He has brought you forth from the earth and made you husband it to thrive therein…"* (11:61). The land is made to thrive by way of planting trees, sowing plants, and construction, by restoration and cultivation, by revitalising it, and by keeping away from its corruption and devastation (*fasād*) and its impairment (*ikhlāl*). Ar-Rāghib Al-Isfahānī (d. 502 H. / 1108/1109 G.), quoted in *Ri'āyat al-Bī'ah*, 23.

[64] 95:4–8.

[65] Llewellyn, "Letter to Aishah"; The Qur'an, 99:7–8; rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh ibn 'Umar. Also see Abū 'Ubayd Al-Qāsim ibn Sallām (d. 224 H.) *Kitāb al-Amwāl: bāb haqq al-imām 'alā 'r-ra'īyah wa haqq ar-ra'īyah 'alā 'l-imām*.

[66] Rigorously authenticated *hadīth* related by Muslim from Abū Mālik Al-Ash'arī.

[67] 33:72.

[68] Llewellyn, "Letter to Aishah"; Llewellyn, "Islamic Environmental Law," 6; Bagader et al., *Environmental Protection in Islam*, 30.

[69] The Qur'an, (2:286). The prophet Muhammad himself, God's blessing and peace be upon him, the paragon of reverential care, compassion, and utmost good, he who was sent as a mercy to all beings, and who was shielded from committing sins, said, "Do good deeds properly, sincerely and moderately, and receive good news because one's good deeds will not make him enter Paradise." They asked, "Even you, O Messenger of God?" He said, "Even I, unless and until God bestows His pardon and mercy on me." (rigorously authenticated *hadīth* related by Al-Bukhārī from 'Ā'ishah. Book 76 (*Ar-Riqāq*), no. 474).

[70] Treading gently on the Earth implies that we should reduce all our harmful impacts on it as far as we possibly can, by taking no more than we need to live our lives in a manner that is good and beautiful for us and our fellow creatures: taking no more than our fair share in the sources of life, without impinging on the shares of our species and others, of the present and future generations. It implies that we should live our lives in a manner that averts corruption and devastation in the Earth, from befoulment of its air and waters to impoverishment of its soils and extirpation of the diversity of life forms that share it with us. It implies that we live our lives frugally, abjuring wasteful excess in our food and travel, reducing our contribution to global warming and to the loss of biodiversity. It implies that we should heal these wounds in every way we can.

Section 3

[71] Llewellyn, "Reverence and Utmost Good: Merciful Harvests" delivered at conference: *Halal and Tayyib: Rethinking the Ethical*, Zaytuna College Center for Ethical Living and Learning, 2019.

[72] Othman Llewellyn, unpublished statement prepared on behalf of the Drafting Team, *Islamic Declaration on Global Climate Change*, 2015; variations appear in Llewellyn, "Reverence and Utmost Good," 2019 and in Othman A. Llewellyn and Abdallah R. Altlasat, "The Haraman and the Hima: Inviolable Sanctuaries and Protected Areas in Islam" Proceedings of Delos4 Workshop, 23-27 April 2017, Malta (IUCN/WCPA Specialist Group on Cultural and Spiritual Values of Protected Areas, in press). With respect to the evils of nationalism and racism, the caliph 'Alī ibn Abī Tālib is reputed to have declared in this regard that, "Justice is the shield of nations." See *Ghurar al-Hikam wa Durar al-Kalim*, ʿAbd al-Wāhid b. Muhammad al-Āmidī, *Hadīth* no. 1873.

[73] Llewellyn, "Letter to Aishah"; Samarrai, "Environmental Protection and Islam," 37–39; Bagader et al., *Environmental Protection in Islam*, 5–6, 9–10. Yet another aspect of *taqwā* is to be aware that the Lord of all beings will try us and judge us in our use of the smallest particles of the creation, such as molecules and genes, for none are without worth and significance.

[74] Llewellyn, "Letter to Aishah"; The Qur'an, 44:38–39, 21:16–18, 38:26–28, 3:190–191, 14:19, 16:3, 25:68, 29:44, 45:22, 64:3, etc.

[75] See Ibrāhīm ibn Mūsā Ash-Shātibī (d. 790 H. / 1388 G.), *Al-Muwāfaqāt fī Usūl ash-Sharī'ah: kitāb al-maqāsid*: preface.

[76] Rigorously authenticated *hadīth* related by Al-Bukhārī, Muslim, and Ibn Mājah from 'Umar ibn al-Khattāb and Abū Hurayrah (*Sahīh al-Bukhārī* no.4777, etc.).

[77] Rigorously authenticated *hadīth* related by Muslim and Abū Dāwūd from Shaddād ibn Aws. Here, "utmost goodness with regard to every thing" includes utmost goodness in our conduct toward every created being and utmost goodness or excellence in every act. The prophet Muhammad, upon him be blessings and peace, is also reported to have said that, "Created beings are the dependents of God, and the creatures dearest unto God are they who do most good to His dependents" (For the source of this *hadīth*, *see endnote 47*).

[78] Also see Umar Abd-Allah, "Mercy."

[79] *Hadīth* related by Abū Dāwūd and At-Tirmidhī from 'Abd-Allāh ibn 'Amr (*Mishkāt al-Masābīh*, *hadīth* no. 4969).

[80] *Shukr* is to show gratitude, to give thanks, to acknowledge, recognise, and display a blessing from God, the Lord of all beings. Its opposite is *kufr* – literally ingratitude: to conceal, cover, forget, ignore, or deny a blessing, and the word for unbelief and disbelief in Islam. Among the many *āyah*s that call us to show gratitude, these two are prominent:

"He it is Who brought you forth from the wombs of your mothers when you knew nothing – and He gave you hearing and sight and hearts, that you might give thanks. (16:78)
Have you seen the water that you drink? Is it you who bring it down from the raincloud or We? If We had willed, We could have made it bitter – why then do you not give thanks? (56:68-70)

[81] *Ri'āyat al-Bī'ah*, 35-37.

[82] *Ri'āyat al-Bī'ah*, 33-34.

[83] *Ri'āyat al-Bī'ah*, 34-35. Furthermore, every masterpiece of art deserves not only our attention, appreciation, and admiration, but also our care and protection. How much more does the Earth, which is full of the signs of God and a masterwork of His making, and which includes all the living beings we know of in the cosmos, deserve our care and conservation. See Özdemir, "Environmental Ethics," 20-22.

[84] Rigorously authenticated *hadīth*, related by Ibn Mājah from Anas ibn Mālik (no. 224). The full text reads. "Seeking knowledge is an individual obligation upon every Muslim, and all things ask forgiveness for the seeker of knowledge, even the fishes (or whales) in the sea." Numerous textual sources show the importance of learning. The very first verse of the Qur'an that was revealed to the prophet Muhammad, upon him be blessings and peace, commanded him to "Read! in the name of your Lord Who has created" (96:1) and he was instructed to pray, "My Lord, increase me in knowledge" (20:114). He declared that the superiority of the learned over the mere worshiper is as that of the full moon over the stars (well authenticated *hadīth* related by Abū Dāwūd and At-Tirmidhī from Abū 'd-Dardā') and that one who treads a path in search of knowledge has his or her path to paradise smoothed thereby, and over him or her the angels spread their wings (rigorously authenticated *hadīth* related by Muslim from Abū Hurayrah). That the aim of knowledge is to teach goodness is shown in the *hadīth*, "God and His angels and those who dwell in the Heavens and the Earth – even the ant in its burrow, bless the one who teaches people goodness" (*hadīth* related by At-Tirmidhī from Abū Umāmah Al-Bāhilī).

[85] It seems evident that the same educational system of Muslim countries which was shaped by nation-state mentality of the 20th century is not capable of preparing us to return to better ways of living on the Earth. Therefore, the current educational systems may be adequate to offer technical solutions, which treat symptoms, but technical solutions cannot remove the root causes of the crisis. We are in dire need of a radically new kind of education that prioritises ecological values and provides us and the coming generations with the ecological literacy to address and resolve the crisis and become caring, competent *khalīfah*s on the Earth. See David Orr, *Earth in Mind: On Education, Environment, and the Human Prospect* (Washington, DC: Island Press, 2004), 5-25.

[86] Orr, *Earth in Mind*, 9. With regard to the question of whether the Earth and its systems, in all their complexity, can ever be safely managed, see Jack Turner, *The Abstract Wild* (Tucson, AZ: U. of Arizona Press, 1996), 107-125.

[87] Orr, *Earth in Mind*, 9.

[88] UNESCO, Tbilisi Declaration, 1978. In the forty years since the Tbilisi Declaration, the five original objectives of environmental education have been further developed and refined as a continuum from Awareness to Action. See Joel Barnes, "Awareness to Action: The Journey toward a Deeper Ecological Literacy," in *The Journal of Sustainability Education*, 2013. Available from Barnes.2013.TheAwarenesstoActionContinuum.JournalofSustainabilityEducation.pdf

[89] We are deeply troubled by the paradox that, even though we have better books, films, images, and interactive computer games than ever before to learn about the Earth and its communities of life, each generation has progressively less contact with wild nature. Books, films, images, and interactive games, however excellent they might be, are no substitute for actual contact with the natural creation. See Aishah Abdallah, "Islamic Values relating to Wildlands and Wildlife, and Wilderness Leadership" (presentation delivered at Zawiyah Rosales, Spain, 2017). Also see Jack Turner, *The Abstract Wild*, 89-90.

[90] Aishah Abdallah, "Wildlands and Wildlife."

[91] Wildland values shaped the culture and society into which the prophet Muhammad, upon him be blessings and peace, and his Companions were born. A common custom was to send young children to be raised for a time by Bedouins in the healthy wildlands, and he lived some four years in the mountains of the Banū Sa'd near At-Tā'if with his foster-mother Halīmah bint Abī Dhu'ayb.

[92] Aishah Abdallah, "Wildlands and Wildlife." In poetry, the lover Majnūn, mad with suffering from unrequited love, finds refuge in the desert where its wild creatures are his companions. In the literature of philosophy, Hayy ibn Yaqzān, a child of nature, is raised by a gazelle on an island without people. Immersed in nature, he lives a life of observation, reflection, and experimentation on the natural world and learns to treat it with reverence and care. Decades later, a scholar named Absal comes to the island to contemplate, meets Hayy, and teaches him to speak. They discover that Hayy has arrived at the same essential truths of faith, ethics, and wisdom that Absal has reached through the study of scriptural revelation, philosophy, and mysticism.

[93] Aishah Abdallah, "Wildlands and Wildlife." Even two or three generations ago, urban people were attuned to the seasons, the rainwater they harvested, the groundwater they drew, and the farms that grew their food. Many people love to camp in wildlands. But now, more and more people are detached and alienated from the land, from the communities of living beings, and even, in some ways, from one another. Girls especially are isolated from the natural world by communities that imagine it as dangerous or unfit for ladies.

[94] Nasr, *Sacred Science* (1993), 142. Also see Reza Shah-Kazemi, "Seeing God Everywhere Qur'anic Perspectives on the Sanctity of Virgin Nature", (Cambridge Central Mosque, 2019).

[95] Rigorously authenticated *hadīth* related by Al-Bukhārī from Jābir ibn 'Abd-Allāh.

[96] Othman Llewellyn, "Surat al-Fatihah" (presentation delivered at Zawiyah Rosales, Spain, 2017) After these verses we recite whatever other verses of the Qur'an we choose, and we bow, as the stars and the trees bow down (55:6), then place our faces on the Earth, from the dust of which we are made. We pray with our whole being, heart and mind, tongue, and limbs. If we are in a group, we pray together, shoulder to shoulder.

[97] *Ri'āyat al-Bī'ah*, 241-245.

[98] Izzi Dien, *Environmental Dimensions of Islam*, 48. Said Nursi, *On Fasting: Meanings and Messages from the Month of Ramadan*, (Translated by Colin Turner), Nursi Society, Windsor, CT, 2021.

[99] Muhammad Asad and other scholars have noted that our circling round the Ka'bah echoes the orbits of the Earth around the sun, and the moon around the Earth. See Muhammad Asad, *The Road to Mecca* (Gibraltar: Dar al-Andalus, 1980), 370.

[100] Muhammad Asad, *The Road to Mecca*, 368-369. The Black Stone has been worn hollow by the lips of unnumbered pilgrims who have kissed it over more than fourteen hundred years.

[101] See *tafsīr*s of this Qur'anic verse (1:1) by At-Tabarī and Ibn Kathīr.

[102] It is for the prophet Muhammad's dual role, upon him be blessings and peace, both as a spiritual leader, and as a ruler and reformer of society that the writer Michael H. Hart ranked him as the most influential human being in the history of humanity. A self-described white separatist, Hart is neither a Muslim nor a supporter of Islamic values. The influence of Islamic teachings on the treatment of animals in Muslim countries was noted by visitors from Europe. The French poet, traveller, and diplomat Alphonse de Lamartine (1790-1869), who made a pilgrimage in 1832-1833 to Jerusalem by way of Istanbul and Turkey, made the following observation:

Muslims have good relations with all creatures, animate and inanimate: trees, birds, dogs, in short, they respect all the things God has created. They extend their compassion and kindness to all the species of wretched animals which in our countries are abandoned or ill-treated. In all the streets at specific intervals, they leave bowls of water for the dogs of the district. Some Muslims found pious foundations at their deaths for the pigeons they have fed throughout their lives, thus ensuring that grain will be scattered for [the birds] after they have departed. (Alphonse de. Lamartine, Travels in the East, 1850, p. 160.)

Edward William Lane (1801-1876) likewise remarked in *Manners and Customs of the Modern Egyptians* (1836) "I was much pleased at observing their humanity to dumb animals." On observing a decline in this sensitivity to animals, he noted that he believed it to be an effect of the conduct of Europeans: "I do not remember to have seen acts of cruelty to dumb animals except in places where Franks either reside or are frequent visitors." See Nomanul Haq, "Islam and Ecology," 148).

[103] Orphaned as a child, the prophet Muhammad, upon him be blessings and peace, experienced first-hand the cruelty and harshness of a society, known to Muslims as the Days of *Jāhiliyah*, Ignorance, in which the weak were at the mercy of the powerful. Orphans such as he, widows, slaves, women, strangers, ethnic and racial minorities, domestic and wild animals enjoyed no rights and few safeguards beyond the fickle protection of tribal leaders. Steadfast, stern, and strong in his struggle against evil and injustice, his gentleness in dealing with the weak, both humans and other created beings, was breath-taking. He exemplified the bonds of love and compassion that God put between husbands and wives, in the Qur'anic prayer, "Our Lord, grant us, in our mates and our children, the comfort and joy of our eyes, and make us foremost among the reverential caring" (25:74). He greeted brides and bridegrooms with the words, "May God's blessings dwell in you, may He shower blessings upon you, and join you together in good." He showed kindly good humour and playfulness in interacting with his family, Companions, neighbours, and domestic animals. He would race his wife 'A'ishah, sometimes losing, sometimes winning, and when he won, said, "This makes up for that." He would prolong his prostration in prayer when children climbed upon his back. When a woman earnestly entreated him for a camel, he offered her "a camel's child," and when she burst out in frustration, he said, "Isn't every camel the child of a camel?" One of his mounts was uncomfortable to ride, so he named it Duldul: "Porcupine." Also see Ibrahim Özdemir, "Muhammed", in Encyclopedia of Religion and Nature, ed. Bron Taylor and Jeffrey Kaplan (New York: Continuum, 2003), pp. 1124-1125.

[104] Rigorously authenticated *hadīth* related by Muslim (No. 2593) from 'Ā'ishah; also see Al-Bukhārī No. 6528.

[105] Sunan Abī Dāwūd; See Abdal Hamid [Fitzwilliam-Hall], "Islamic Environmental Ethics," 62.

[106] *Hadīth* related by At-Tirmidhī from 'Abd-Allāh ibn 'Abbās.

[107] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh ibn 'Umar.

[108] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from Abū Hurayrah.

[109] Rigorously authenticated *hadīth* related by Al-Bukhārī from 'Abd-Allāh ibn 'Umar (*Sahīh al-Bukhārī* 2365).

[110] *Hadīth* related by Abū Dāwūd from 'Āmir Ar-Rām.

[111] *Hadīth* of unsubstantiated authenticity, related by the Imām Ahmad from 'Abd-Allāh ibn Mas'ūd (See *Majma' az-Zawā'id: kitāb as-sayd wa 'dh-dhabā'ih*, *bāb ma nahā 'an qatlihī min an-naml*…); Llewellyn, "Islamic Jurisprudence and Environmental Planning," 35.

[112] *Hadīth* related by Abū Dāwūd and At-Tabarānī from 'Abd-Allāh ibn Hubshī (*Mishkāt al-Masābīh*, *hadīth* no. 2970); also see *ahādīth* in Nūr ad-Dīn 'Alī ibn Abī Bakr Al-Haythamī (d. 807 H.), *Majma' az-Zawā'id wa Manba' al-Fawā'id: kitāb al-buyū'*, *bāb fīman qata'a as-sidr* and *kitāb al-adab*, *bāb fīman qata'a as-sidr*.

[113] *Hadīth* related by Ahmad ibn Hanbal and At-Tabarānī from Abū 'd-Dardā'.

[114] See paras. 5.14-5.17.

[115] Muhammad ibn 'Umar Al-Wāqidī, *Kitāb al-Maghāzī*. See Abdal Hamid [Fitzwilliam-Hall], "Islamic Environmental Ethics" 63.

[116] *Hadīth* related by Abu ash-Shaykh in *Akhlaq an-Nabi* (80) from 'Umar ibn al-Khattab,

[117] See paras. 5.14-5.15.

[118] See Musnad of Imām Ahmad (*hadīth* no.19774), also Sahīh Muslim and Al-Bayhaqī, *Shu'ab al-Īmān*. In his Farewell Sermons, he also proclaimed, "Fear God with regard to women! Verily you have taken them as a trust from God, and you enjoy them lawfully by the word of God… You have rights over your women and your women have rights over you, So fear God in regard to women, and concern yourselves with their welfare. Have I conveyed the message? – O God, be my witness."

Section 4

[119] See Carl Sagan, "The Pale Blue Dot" "Look again at that dot. That's here. That's home. That's us…. every saint and sinner in the history of our species lived there-on a mote of dust suspended in a sunbeam…." by replicating the Earth's self-contained survival system to enable astronauts to live in space, scientists have paradoxically given us a deeper appreciation of the Earth.

[120] https://ourworldindata.org/world-population-growth

[121] Mohandas K. Gandhi, quoted by E. F. Schumacher in *Small Is Beautiful: A Study of Economics as if People Mattered* (London: Blond and Briggs, 1973), p. 29.

[122] Khalid, *Signs on the Earth,* p. 159. On sustainable development in the Islamic context, see Safei-Eldin A. Hamed, "Capacity Building for Sustainable Development: The Dilemma of Islamisation of Environmental Institutions," in Foltz, Denny and Baharuddin (Eds), *Islam and Ecology*, 2003).

[123] In accordance with this vision, development is linked to other central concepts in this context, such as sustainable development and its spiritual and ethical aspects necessary to resolve the dilemmas of dealing with resources in the long term. We find these rooted in the acts of the Companions, such as the suspending of the division of conquered lands by 'Umar ibn Al-Khattāb, may God be pleased with him, considering the right of future generations.

[124] There are some exceptions to the rule that the industrialised nations cause most of the environmental devastation on the Earth, such as the immense amounts of plastic that enter the oceans from non-industrialised countries, the felling and burning of rainforests, and the desertification of drylands.

[125] Moderation in using the sources of life on Earth, combined with equitable distribution of access to them and preservation of wild ecosystems might allow humanity to increase in number without causing great damage to the biosphere, but that possibility will remain academic until we make radical changes to the way we live. Except for the few of us who live by permaculture, each life we bring into the world will be a burden on it. Meanwhile, the Earth's wildlands and the habitats of many endangered species are shrinking fast.

[126] The prophet Muhammad, upon him be peace and the blessing of God, encouraged Muslim men to "marry loving, fertile women, for I would outnumber the peoples by you." Rigorously authenticated *hadīth* related by Abū Dāwūd, An-Nasā'ī, and Ahmad from Ma'qal ibn Yasār (*Mishkāt al-Masābīh*, *hadīth* no. 3091). He is also reported to have said: "Marry, bear children, and I will take pride in you among the peoples on the day of resurrection.

Indeed, within the coming decades, Islam will have a larger number of adherents than any other faith, if population projections are to be believed; and this is due largely to our birth rate. But should this *hadīth* be construed as a commandment or a license to multiply *ad infinitum*? We think not, in view of the trade-off of values discussed in the text. In planning to bear children, every Muslim couple should consider how to reduce their family's footprint on the Earth, its living inhabitants, and future generations, and commit themselves to ensure that the new lives they bring into the world will not add burdens to the biosphere.

[127] Relevant principles include this, quoted in Llewellyn, "Islamic Environmental Law": "If two good things prove mutually exclusive, "the greater good is to be secured by exclusion of the lesser good." "If two obligations come into conflict, that which is more fundamental is to be fulfilled." If a benefit unavoidably brings with it a detriment, "the averting of harm takes precedence over the securing of benefits." See 5.5 of this document for elaboration of such principles.

[128] Bagader et al., *Environmental Protection in Islam*, 19; Llewellyn, "Islamic Jurisprudence and Environmental Planning," 42.

[129] *Hadīth* related by Abū Dāwūd, At-Tirmidhī and An-Nasā'ī from 'Ā'ishah. Also see *Majallat al-Ahkām al-'Adlīyah*, articles nos. 85, 87, and 88; Mahmassani, *Falsafat al-Tashrī' fī al Islām: The Philosophy of Jurisprudence in Islam*, 203–204; Bagader et al., *Environmental Protection in Islam*, 19; Llewellyn, "Islamic Environmental Law," 14.

[130] Llewellyn "Islamic Environmental Law," 14.

[131] Bagader et al., *Environmental Protection in Islam*, 30–31.

[132] Topsoil, surface waters and wetlands, fisheries, forests and woodlands, rangelands and farmlands, as well as wild and domesticated species and the ecosystems to which they belong are renewable. This means that they can be used sustainably, provided that they are harvested at rates that do not exceed their capacity for regeneration. The processes by which most minerals, including fossil fuels and fossil groundwater, are produced, stored, and cycled in the Earth occur over spans of time so vast that they are effectively non-renewable as far as human beings are concerned. Hence, it is not possible to use them sustainably. The lives of these resources can be extended, however, by recycling, using less, and using renewable substitutes. See *Caring for the Earth: A Strategy for Sustainable Living* (Gland, Switzerland: IUCN, UNEP, and WWF, 1991), 9–10. Also see Llewellyn, "Islamic Environmental Law," 15.

[133] Abū 'l-Faraj 'Abd ar-Rahmān ibn Rajab (d. 795 H. / 1393 G.), *Al-Qawā'id: qā'idah* no. 86, with reference to *Al-Wādih fi Usūl al-Fiqh* by Ibn 'Aqīl. Here, usufruct is understood as the right to the benefits of another's (God's) property without degrading it.

[134] Bagader et al., *Environmental Protection in Islam*, 18; Llewellyn, "Islamic Jurisprudence and Environmental Planning" 39, 43.

[135] Well authenticated *hadīth* related by Ibn Mājah, Ad-Dāraqutnī, and others from Abū Sa'īd al-Khudrī and by the Imām Mālik in Al-Muwatta'.

[136] "Water is to some extent a fugitive resource and therefore a particularly appropriate precedent for other resources such as wildlife and even grazing, with their fugitive properties in arid lands. Conceptually there are striking parallels between the benefits to be derived from the best possible allocation and use of a flow of water and those that can be harvested from the flow of energy in natural ecosystems." Graham Child and John Grainger, *A System Plan for Protected Areas for Wildlife Conservation and Sustainable Rural Development in Saudi Arabia* (Gland, Switzerland: National Commission for Wildlife Conservation and Development and IUCN, 1990), 107. A fugitive resource is not fixed in time or space; it may move from place to place and be fleeting, transient, or ephemeral.

[137] The Arabs may be better known as pastoralists than cultivators, and the Islamic civilisation they engendered may be renowned more for its achievements in architecture and its learning in philosophy, mathematics, medicine and the sciences, than for proficiency in agriculture. Yet they were heirs to venerable traditions of terrace farming and spate irrigation in Yemen and of intensive oasis agriculture irrigated by means of subterranean and surficial aqueducts known as *aflāj* in Oman. See Abdal Hamid Fitzwilliam Hall, *An Introductory Survey of the Arabic Books of Filāha and Farming Almanacs*, (2010). http://www.filaha.org/introduction.html

[138] The Arabic words *filāhah,* 'cultivation, tillage', and by extension 'agriculture, farming, husbandry', and *fallāh*, 'husbandman, tiller of the soil, peasant, farmer', are derived from the verbal form *falaha* meaning 'to cleave, split', and in particular, 'to plough, till, cultivate the land'. It also means 'to thrive, prosper, be successful, lucky, or happy'. See Fitzwilliam Hall, *Filāha*.

[139] Moreover, the word *falāh* is sung out from the minarets of every mosque throughout the Muslim world five times each day during the call to prayer - *hayya 'ala 'l-falāh* : "Come to success, come to salvation." Husbandry, well-being (in this world and the next) and worship are thus inextricably linked in the Arabic language." "Islamic husbandry as applied in Al-Andalus shows that it was an intensive, organic, mixed-farming system that supported a large population and flourishing civilisation for some four hundred years (and up to seven hundred years in the case of Granada) without the aid of agrochemical fertilisers or pesticides." Fitzwilliam Hall, *Filāha*.

[140] See M. K. Suleiman, et al, Towards an Implementation Strategy for the Human Integrated Management Approach Governance System: Theories, Concepts, Methodologies, Case Studies and Action Plans, https://manualzz.com/doc/18375749/proceedings-towards-an-implementation-strategy-for-the-hu... [Retrieved: 12.08.2022] .

[141] (Ar-Radhī, Muhammad ibn al-Husayn ash-Sharīf, *Nahj al-Balāghah*, Letter no. 53). The caliph 'Alī also stated, "Verily the livelihood of God's creatures is found in five matters: good leadership, sound cultivation, fair commerce, leasing and charity. With regard to cultivation, God's declaring, "He produced you from the Earth and established you therein" (11:61) He teaches us, be He glorified, that He commanded them to cultivate, that it would be a means of livelihood by what comes forth from the Earth of grain and fruits and the like thereof, of what God has made sources of life for His creatures" Muhammad ibn al-Ḥasan Al-Ḥurr al-ʿĀmilī, *Wasā'il ash-Shī'ah*, vol. 13, Kitāb al-Muzāra'ah, Ch 2, *Hadīth* no.10.

[142] *Athar* related by Yahyā ibn Ādam Al-Qurashī (d. 203 H.) in his *Kitāb al-Kharāj*, from Sa'īd ad-Dabbī. Also see Bagader et al., *Environmental Protection in Islam*, 3; Llewellyn, "Islamic Jurisprudence and Environmental Planning," 36.

[143] Kurtzman, *The Death of Money*, 71.

[144] Kurtzman, *The Death of Money*, 85.

[145] Looked at from this perspective, money, as the modern world has contrived it, is assuming the characteristics of a virus eating into the fabric of the planet. See Khalid, *Signs on the Earth,* 29-30.

[146] https://www.economist.com/content/global_debt_clock

Global debt is now rapidly approaching the $100 trillion mark. The Global Footprint Network reports that we now need 1.6 planets to "support humanity's demand on Earth's ecosystems" and calculates that, "world overshoot day fell on the 22nd of August, 2020." That is, we will have consumed in less than eight months what it takes the planet to generate in twelve.

[147] *Zakāh* is the 2½ per cent of surplus monetary savings and various proportions of other surplus capital, such as crops and livestock, that Muslims who have more savings than the set minimum, are required to give to the poor and the needy every year to purify the remainder of their wealth.

[148] Izzi Dien, *Environmental Dimensions of Islam*, 132-133. Through *zakāh*, we participate in social solidarity and it purifies the soul by targeting human greed (Izzi Dien, *Environmental Dimensions of Islam*, 48) and teaching us that money and wealth are not the objectives of life (Izzi Dien,17).

[149] *Iqtisād* deals with Islamic teachings on finance, banking, economics, trade, commerce, and industry.

[150] *Hadīth* related by Jalāl ad-Dīn As-Suyūtī in Al-Jāmi' al-Kabīr and arranged by 'Alī ibn 'Abd al-Malik Al-Hindī in *Kanz al-'Ummāl*, *hadīth* no. 5454.

[151] Abdal Hamid [Fitzwilliam-Hall], "Islamic Environmental Ethics," 57.

[152] Abdal Hamid [Fitzwilliam-Hall], "Islamic Environmental Ethics," 58.
[153] *Hadīth* of unsubstantiated authenticity related by the Imām Ahmad in the *Musnad* and by Ibn Mājah from 'Abd-Allāh ibn 'Amr (*Mishkāt al-Masābīh*, *hadīth* no. 427). Sunan Ibn Mājah 425: *Sahīh* (rigorously authenticated) according to Ahmad Shākir. For a comprehensive explanation of this *hadīth* see Özdemir, *Environmental Ethics* pp. 14-15.
[154] Sahīh al-Bukhārī 2389 - https://sunnah.com/bukhari/43/5
[155] Trade: Some examples of fair contractual obligations permitted in Islam are: *shirkah*, a partnership in which the lender shares the risk; *mudārabah*, an agreement between the provider of capital and labour; *bay' as-salam*, an advance payment based on the weight of produce and delivery time; futures trading as practised today is prohibited).
[156] Concepts like socio-financing and poverty alleviation currently in use are articulated in the Qur'an and exemplified by the practice of the Prophet, upon him be peace and the blessing of God. Asutay, Mehmet. 2013. "Islamic Moral Economy as the Foundation of Islamic Finance." Pp. 55–68 in *Valentino Cattelan, Islamic Finance in Europe: Towards a Plural Financial System.* Cheltenham: Edward Elgar Publishing.
[157] *Sunan Ibn Mājah*, Book 16, *Hadīth* 2537 (Sunnah.com, undated). Available at: https://sunnah.com/urn/1267610 (accessed 9 May 2018).
[158] Islamic law recognises that the governing authorities should consult the experts (*ahl al-hall wa 'l-'aqd*) in their various fields of expertise, where others may not have all the facts to form an informed opinion; nonetheless, safeguards are required to ensure that this does not lead to the marginalisation of any community or group of people. No matter how conscientious people may be, they know their own needs and interests and their associates' needs and interests far better than they can know the competing needs and interests of other people and other social groups; thus, even moral impulses can work against the common good. That is one reason why all groups of people and all individuals, especially the most vulnerable, need empowerment. See Llewellyn, "Islamic Environmental Law," 29.
[159] Llewellyn, "Islamic Environmental Law," 30-31: Among the worst aspects of totalitarian rule is that it leads human beings to abdicate their role as *khalīfah*s on the Earth: it reduces them to something less than fully human.
[160] Abū 'Ubayd Al-Qāsim ibn Sallām, *Kitāb al-Amwāl: bāb haqq al-imām 'alā 'r-ra'īyah wa haqq ar-ra'īyah 'alā 'l-imām*; Llewellyn, "Islamic Jurisprudence and Environmental Planning," 45. Women as well as men took oaths of allegiance to the prophet Muhammad, upon him be peace and the blessing of God. Upon the death of the caliph 'Umar ibn al-Khattāb, the committee whom he appointed to select his successor hastened to consult not only the people of knowledge and the leaders of the tribes, but also the ordinary people, including the women in their homes, the youths in the schools, and visiting travellers. See Ibn Kathīr, *Al-Bidāyah wa 'n-Nihāyah: khilāfat 'Uthmān*, ed. 'Abd al-Hamīd Hindāwī (Sidon; Beirut: Al-Maktabat al-'Asrīyah, 2001) 5:373. See Llewellyn, "Islamic Environmental Law," 30.
[161] (Ar-Radhī, *Nahj al-Balāghah*, Sermon no. 40).
[162] (Ar-Radhī, *Nahj al-Balāghah*, Letter 27, Instructions to Muhammad ibn Abī Bakr).
[163] Equitable and effective consultation requires that women as well as men, rural as well as urban, unlettered as well as literate people have standing in judicial and administrative processes, so that they may contribute their views and seek remedy for environmental damage. It requires public access to information, so that people may make enlightened decisions. It requires that the agencies responsible for implementation and enforcement of environmental legislation be held accountable for their actions and inactions. And it requires that local communities be enabled to take care of the resources on which their livelihoods depend.

Section 5

[164] Rigorously authenticated *hadīth* related by Muhammad ibn Ismā'īl Al-Bukhārī (194–256 H.) from An-Nu'mān ibn Bashīr.
[165] See Llewellyn, "Islamic Environmental Law," 2-3: However, the very idea of "Islamic law" may be confusing, especially to people from secular societies. In many parts of the world, law is considered rather dry and somewhat distasteful at best, even if it is essential for the functioning of civilised society and the defense of individual freedoms. It is viewed almost as a necessary evil. After all, why does a person seek a lawyer? To press a lawsuit, perhaps, or to defend oneself against one; to find out how to pay the minimum amount in taxes; or to secure the most advantageous terms in a business contract, a divorce, or the like. How far from the spiritual and ethical values of faith! In the context of Islamic civilisation, however, the Law, or *sharī'ah*, is perceived altogether differently. The most common reason that one seeks out a *muftī*, or expert in Islamic law, is to ask what the most ethical, moral course of action is in a given situation, the act most pleasing to the Lord of all beings, and leading most surely to eternal spiritual bliss.
[166] The Qur'an and *sunnah* form the foundation of Islamic law and ethics, broadly recognised as the *sharī'ah*. As the Islamic civilisation grew, the scholarly community introduced the concept of consensus (*ijmā'*) and various methods of reasoning (*ijtihād*) to deal with emerging issues. The primary method in most schools of law being deduction by analogy (*qiyās*). In various schools of law, however, analogical rulings may give way to considerations deriving from stronger or more fundamental values, which are given preference (*istihsān*) over them; where no suitable precedent is to be found, judgments may be made on the basis of public welfare (*al-masālih al-mursalah*), those unrestricted benefits which are not bound directly to texts of the Qur'an and *sunnah*, and cannot be deduced from them by analogical reasoning. Other methods of *ijtihād* include *sadd adh-dharā'i'*, by which outwardly legitimate means may be prevented from being used as pretexts for illegitimate ends, and *istishāb al-'urf as-sālih*, by which customary practices and definitions (*'ādah* and *'urf*) may acquire legal force when they accord with the aims of the *sharī'ah*. See Llewellyn, "Islamic Environmental Law," 6-7.
[167] In its etymology, the *sharī'ah* means a broad way or path to water, the source of life. The importance and value of all life forms is implied in the symbolic connotation of the term *shari'ah*, meaning the path to water (see 'Izzi Dien, *Environmental Dimensions of Islam*, 101). The *shari'ah* is also concerned with death and the hereafter, as human beings are passengers travelling between the two worlds, with the *shari'ah* as the map to which they refer to find the surest way to spiritual bliss in the hereafter (see 'Izzi Dien, *Environmental Dimensions of Islam*, 79). Also see Asutay, *Islamic Moral Economy*.
[168] Llewellyn "Islamic Environmental Law," 2-3.
[169] The *sharī'ah* embraces in its scope every human act, including religious devotions and purely ethical issues, as well as the various fields of law known to the modern world, such as constitutional and international law, family law, penal law, law of contracts, property law, and indeed, environmental law. Each act is examined to determine how much good and harm it may lead to, not only in the material realm of the present world, but also in the spiritual realm of the hereafter. See Llewellyn, "Islamic Environmental Law," 3. Also see Asutay, *Islamic Moral Economy*.
[170] See Llewellyn, "Islamic Environmental Law," 3.
[171] J. C. Wilkinson, "Islamic Water Law with special Reference to Oasis Settlement," *Journal of Arid Environments* (London) 1 (1978): 95. The passage quoted in the text continues: "It is for this reason that isolated societies inhabiting a wide range of arid and semi-arid environments from the Sahara to central Asia recognize and apply a code which regulates the very basis of their economic life without any central government intervention."

[172] See, for example, Mawil Izzi Dien, *The Environmental Dimensions of Islam* (Cambridge: The Lutterworth Press, 2000) and Othman Llewellyn, "The Basis for a Discipline of Islamic Environmental Law." *Islam and Ecology*: *A Bestowed Trust*, edited by Richard C. Foltz et al. (Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School, 2003).

[173] *Maqāsid ash-sharī'ah*, the ultimate aims of Islamic law, is a distinctive branch of knowledge within, and in some ways, above, Islamic jurisprudence (*usūl al-fiqh*); the importance of the *maqāsid* is receiving ever greater attention by contemporary Muslim jurists. For information on *maqāsid ash-sharī'ah*, see Jasser Auda, *Maqasid Al-Shariah as Philosophy of Islamic Law: A Systems Approach* (Washington, DC: International Institute of Islamic Thought, 2008) and Jasser Auda, *Maqasid Al-Shariah: A Beginner's Guide* (Washington, DC: International Institute of Islamic Thought, 2008).

[174] The welfare of God's creatures encompasses both our immediate welfare in the present and our ultimate welfare in the hereafter, for not everything that gives material benefit to human beings is allowed. It also encompasses the welfare of the entire creation (*masālih al-khalqi kāffah*). No species or generation may be excluded from consideration, for every atom's weight of good and every atom's weight of harm that has resulted from our actions will be weighed on the Day of Judgment (99:7-8); also 45:15, 53:31, etc.). See Llewellyn, "Islamic Environmental Law," 7-8; "Islamic Jurisprudence and Environmental Planning," 27-28; Bagader et al., *Environmental Protection in Islam*, 17, 20, 30.

[175] It is worth noting the extent to which the *sharī'ah* safeguards these necessities for species other than human beings. In the Qur'an, God declares that "There is no animal on the Earth, nor any bird that wings its flight, but it is an *ummah* (community, society) like yourselves" (6:38). All species are recognised as participating in the glorification, service, and worship of their common Lord. The *sharī'ah* safeguards not only species, but also the lives of individual animals from wanton destruction. Islamic teachings likewise promote the conservation of biodiversity. The posterity of animals is protected by the ruling that captive animals should be allowed to breed in season and the position of many *fuqahā'* against surgical sterilisation. The sanity and psychological well-being of animals is regarded in the prohibition on imprisoning them in cramped or unsuitable conditions and in the limitations on keeping wild animals in captivity, as well as in the prohibition on slaughtering a young animal within view of its mother and the prohibition of holding fights between animals for entertainment. While animals do not have rights to property, their rights to adequate maintenance are safeguarded. Llewellyn, "Islamic Environmental Law," 8. For a thorough examination of *Islamic teachings with respect to animals, see* Sarra Tlili, *Animals in the Qur'an.* (Cambridge Studies in Islamic Civilization). Cambridge: Cambridge University Press, 2012.

[176] The terms *masālih* and *mafāsid* are derived from the root *s-l-h*, describing what is good, beneficial, healthy, wholesome, and right, and the root *f-s-d*, describing corruption and devastation: the same contrasting concepts of good works that embody responsible *khilāfah* on the Earth and are rewarded with inheriting the Earth and its opposite, corruption, devastation in the Earth, which is rewarded with perdition (see paragraphs 2.18-2.19 of this Covenant). The concepts of *masālih* and *mafāsid* are not identical to secular ideas of benefits and costs, but there is much common ground.

[177] These methodological legislative principles are central to the sciences of measuring benefits and detriments, and of establishing priorities, *fiqh al-muwāzanāt*, and *fiqh al-awlawīyāt*, respectively. Three of the jurists who pioneered their development were As-Subkī, As-Suyūtī, and Ibn Nujaym. See Tāj ad-Dīn 'Abd al-Wahhāb ibn 'Alī As-Subkī (d. 771 H.); *Al-Ashbāh wa 'n-Nazā'ir*; Jalāl ad-Dīn 'Abd ar-Rahmān As-Suyūtī (d. 911 H.), *Al-Ashbāh wa 'n-Nazā'ir*; Zayn al-'Ābidīn ibn Nujaym (d. 970 H.), *Al-Ashbāh wa 'n-Nazā'ir*; *Majallat al-Ahkām al-'Adlīyah*; Subhi Mahmassani, *Falsafat al-Tashrī' fī al Islām: The Philosophy of Jurisprudence in Islam*, tr. Farhat J. Ziadeh (Leiden: E. J. Brill, 1961), 149–159. On applying these legislative principles to environmental issues, see Bagader et al., *Environmental Protection in Islam*, 13, 18–23 and S. Waqar Ahmed Husaini, *Islamic Environmental Systems Engineering* (London: Macmillan, 1980), 76–79.

[178] Taqī ad-Dīn Ahmad ibn 'Abd al-Halīm ibn Taymīyah (d. 728 H. / 1328 G.), *As-Siyāsat ash-Shar'īyah: al-bāb ath-thānī: al-amwāl, al-fasl al-khāmis: az-zulm al-wāqi' min al-wilāt wa 'r-ra'īyah*; Bagader et al., *Environmental Protection in Islam*, 20.

[179] The universal public interest is too often confused with private and national interests. The national community should not be given priority over the global community. See Izzi Dien, *Environmental Dimensions of Islam*, 144.

[180] Ash-Shātibī, *Al-I'tisām: al-bāb ath-thāmin fī 'l-farq bayn al-bida' wa 'l-masālih al-mursalah wa 'l-Istihsān*; As-Suyūtī, quoted in 'Uthmān ibn Fūdī (d. 1817 G.), *Bayān Wujūb al-Hijrah 'alā 'l-'Ibād*, ed. and trans. F. H. El-Masri (Khartoum: Khartoum University Press; New York: Oxford University Press, 1978), Arabic text, p. 82, English translation, p. 104; Bagader et al., *Environmental Protection in Islam*, 20.

[181] Sacrificing a private interest for the purpose of achieving and protecting the common interest of the public is surely accepted in one way or another by every society and legal system, except the most extreme libertarian ideologies. The problem lies in working out the details and defining the limits so that individual rights are not eclipsed in the name of the public interest.

[182] There are necessities (*darūrīyāt*), which are indispensable to preserve religion, life, posterity, reason, and property; then needs (*hājīyāt*), which if unfulfilled will lead to real hardship and distress; and finally supplementary benefits or refinements (*tahsīnīyāt*), which involve the perfection of ethics and the enhancement of life.

[183] This ensures the protection of priorities, for in their abandonment lies damage or disdain for what is fundamental in the public welfare. Choosing what is of lesser importance may even invalidate the action, for the choice itself is wrong.

[184] 'Izz ad-Dīn ibn 'Abd as-Salām, *Qawā'id al-Ahkām fī Masālih al-Anām: fasl fī tanfīdh tasarrufāt al-bughāh wa a'immat al-jūr limā wāfaq al-haqq li-darūrat al-'āmmah*. Also see Bagader et al., *Environmental Protection in Islam*, 21.

[185] In line with this principle, a factory that fails to meet environmental standards may be closed down, mineral extraction permits may be denied, or housing may be prevented in environmentally sensitive locations. See Bagader et al., *Environmental Protection in Islam*, 21; Husaini, *Islamic Environmental Systems Engineering*, 80–81, ref. to *Majallah*, article 30.

[186] Bagader et al., *Environmental Protection in Islam*, 6, 10, 23–24, 29; Llewellyn, "Islamic Environmental Law," 3-4, 36; Izzi Dien, *Environmental Dimensions of Islam*, 98. Nasr, *Islam and the Environmental Crisis*, 95-96.

[187] Llewelyn, "Reverence and Utmost Good."

[188] Llewelyn, "Reverence and Utmost Good." An absence of malicious intent should not be easily accepted as a defence against prosecution for ecocide or for genocide and similar atrocities. Nor should a presumption or plea of ignorance be accepted from Muslims, when the value of all created beings is proclaimed in the Qur'an.

[189] 'Izz ad-Dīn ibn 'Abd as-Salām, *Qawā'id al-Ahkām fī Masālih al-Anām: al-qism ath-thālith min aqsām ad-darb ath-thānī min jalb al-masālih wa dar' al-mafāsid*; Llewellyn, "Islamic Jurisprudence and Environmental Planning," 27-30; Othman A. Llewellyn, rejoinder in *Journal of Research in Islamic Economics* (Jeddah) 3, no. 1 (1985): 90; Bagader et al., *Environmental Protection in Islam*, 11, 35.

Llewellyn, "Islamic Environmental Law," 39. It would appear that we should treat wild animals in the wild naturally – according to their *fitrah* and their *haqq*. Essentially, this means that we should not impede their thriving. We are morally obliged to conserve their habitats in good health and integrity, and to respect them and their ways of living as individuals, as representatives of their species, and as members of their ecological communities. This implies that we should not intervene or interfere in the divinely ordained natural processes – *sunan-Allah* – that govern their lives. These *sunan* involve not only cooperation and symbiosis, but also competition, predation, even starvation and disease. From a human perspective, these processes might appear to be harsh or cruel, but in the greater picture, they are aspects of divine mercy, for they hone creatures

to be fleeter, stronger, smarter, fitter over time. Muslim jurists have long recognised that keeping wildlife in captivity is problematic, and should only be allowed for valid purposes, which do not degrade their integrity, insult their *fitrah*, and their *haqq*. See Holmes Rolston, "Challenges in Environmental Ethics" in Zimmerman, M. E., Callicott, J. B., Warren, K. J., et al., (Eds.). *Environmental Philosophy: From Animal Rights to Radical Ecology*, 2nd ed. Upper Saddle River, NJ: Pearson / Prentice Hall, 1998, pp. 124-144.

[190] Whenever we remove wild animals from the wild and put them under our control, we reduce their integrity as autonomous creatures of God; we also become directly responsible for their welfare. We are obliged to provide them the conditions that enable them to thrive; at the very least, to live lives worth living: nutrition, water, comfortable living, a social life with their own kind; when needed, veterinary care, and in the view of many jurists, the right to mate and breed. See Llewellyn, "Reverence and Utmost Good." The caliph 'Alī ibn Abī Tālib told his daughter, "These birds cannot speak so take care to feed them! If you cannot do that, then you must free them so they can find their food by going around the earth" Ja'far Husayn, *Seerah Ameer al-Mo'mineen* (Ansariyan Publications, 2006), 707.

[191] Whereas the predominant position in the Hanafi school of law, much like contemporary Western law, held that it is not possible for animals to be represented in court because they are analogous to crops, Muwaffaq ad-Dīn ibn Qudāmah (d. 620 H.) argued in line with the majority of Sunni schools that animals are in reality analogous to slaves, and that their rights are to be safeguarded by the courts. See Ibn Qudāmah, *Al-Mughnī: kitāb an-nafaqah: fasl wa man malaka bahīmah*… In 1972, Christopher Stone argued that, like various inanimate objects such as corporations, ships at sea, and municipalities, natural objects should have the right to legal representation in United States law. See Christopher D. Stone, *Should Trees Have Standing? Toward Legal Rights for Natural Objects* (New York: Avon Books, 1975). Also see Llewellyn, "Islamic Environmental Law," 39. Also see Bagader, et al., *Environmental Protection in Islam*, 39, The governing authorities are obliged to intervene for the protection of animals whenever they are abused; to prohibit their killing by illicit methods or for illicit purposes, and to protect them from cruelty and wanton destruction. If an animal's owner mistreats it or fails to provide it adequate maintenance (*nafaqah*: food, water, shelter, and the like), the governing authorities are to compel him to provide for its needs.

[192] Llewellyn, "Islamic Environmental Law," 40; Llewellyn, "Reverence and Utmost Good."

[193] Llewellyn, "Islamic Environmental Law," 38; Llewellyn, "Reverence and Utmost Good." Being pure, *tayyib*, we believe, implies that food is ethically and regeneratively grown and harvested, whether it comes from plants, fungi, vertebrates, or invertebrates, and whether it is farmed, gathered, or hunted. Sentient beings should have the opportunity for healthy, natural lives and quick deaths with suffering averted as far as possible. Ecological impacts from pesticides, fertilisers, feeds, and bycatch should be avoided, as should exploitation of farmers and workers. In general, raising animals for food comes at far higher environmental and ecological costs than do cultivating plants and fungi, although the world's rangelands are largely in semiarid ecosystems that are marginal for farming. Invertebrates such as locusts require far less land, feed, water, and energy than do ungulates and poultry, and are far easier to farm sustainably. The prophet Muhammad, upon him be blessings and peace, ate meat but rarely, and we would do well to follow his example in this regard. Unethical and unsustainable practices should be averted by means of legislation, regulations, and policies. Pricing should reflect the full environmental costs of production. Transparent labelling should enable individual consumers to make informed ethical choices in accordance with the values they hold dear and in awareness of their accountability before the Lord of all beings. Ultimately, each individual is responsible and accountable as a *khalīfah* on the Earth to make the choices he or she believes are best, asking the Lord of all beings for guidance, and for forgiveness in falling short.

[194] We must take into account not only animals that are slaughtered and hunted, but also the parasites that live upon them or within them, the bycatch of fishing, all the insect, bird, and mammal pests that must be killed to raise a viable crop, all the minute and microscopic creatures in the soil that are crushed by ploughing or trampling, all the lives affected by the biological controls and chemicals we use… Llewellyn, "Reverence and Utmost Good."; Llewellyn, "Islamic Environmental Law," 38.

[195] We do not mean to slight parasitic organisms, which have their divinely ordained roles in the web of life; however, we believe that the role of humankind should not be defined by parasitism.

[196] See Llewellyn, "Letter to Aishah"; Llewellyn, "Islamic Environmental Law," 38; Llewellyn, "Reverence and Utmost Good." "The daily bread and meat from which we draw our strength and build our flesh is at the cost of a myriad lives. How shall we redeem their killing? If we do not use this strength to give back more than we have taken, then what are we ourselves but parasites? But if, in slaughtering and eating, we take God's name in gratitude and render thanks by building beauty, teaching truth, bringing new life to the land, or striving in His cause, we may transmute their lives into yet more life, and give meaning to their deaths, and sanctify them. Then the self-same act of slaughter will no longer be an act of desecration, but an offering of sacrifice." To participate ethically in the cycles of life and death demands that we not close our eyes. *Ghaflah* – heedlessness, carelessness, negligence – is not a quality deemed praiseworthy. The harvest of plants and animals may be best performed by skilled professionals, but might it be noblest, from an experiential point of view, to take full responsibility for the meat we eat by raising and caring for it and by slaughtering or hunting it ourselves, and by planting and tending our own crops or gathering them with our own hands from the wild?

[197] Llewellyn, "Reverence and Utmost Good"; for deeper explorations of this *hadīth*, see Patrick Bensen, "The Meaning of Ihsan: Excellence in All Things" https://beyondhalal.org/meaning-of-ihsan/ and Friedlander, Nuri. 2020. "Sharpen Your Blade and Put Your Animal at Ease": Islamic Ethics and Rituals of Killing Non-Human Animals. Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences, pp. 5-7. https://nrs.harvard.edu/URN-3:HUL.INSTREPOS:37365851

[198] Rigorously authenticated *hadīth* related by Muslim and Abū Dāwūd from Shaddād ibn Aws.

[199] Llewellyn, "Reverence and Utmost Good." We can be noble or ignoble as predators, and noble or ignoble as consumers of plants. It is not a simple matter of choosing to eat – or grow – plants rather than animals. We must recognize that cultivating crops can be at least as costly by way of suffering and loss of life – and environmental impact – as can the raising and harvesting of farm animals. See Llewellyn, "Reverence and Utmost Good."

[200] Source; Llewellyn, "Reverence and Utmost Good." We do not contend that all industrial farms and fisheries are unavoidably antithetical to Islamic ethical teachings, but that most of them, as currently practiced, are.

[201] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh ibn 'Umar.

[202] *Hadīth* related by At-Tabarānī in *Al-Mu'jam al-Kabīr*, from 'Umar ibn Yazīd. See *Majma' az Zawā'id: kitāb as-sayd wa 'dh-dhabā'ih*, *bāb fīman qatala hayawānan bi-ghayri manfa'ah*.

[203] Ibn Nujaym, *Al-Ashbāh wa 'n-Nazā'ir: al-fawā'id: kitāb as-sayd wa 'dh-dhabā'ih wa 'l-udhīyah*.

[204] This is largely a matter of the hunter's intent, and it is not easy to regulate. At what point does the hunter's legitimate pleasure in his tracking and stalking skills, or the excitement of the chase, become blameworthy killing for sport? See Llewellyn, "Islamic Environmental Law," 40; Llewellyn, "Reverence and Utmost Good." Özdemir, "Muhammed".

[205] Ecosystems are not static, and every species, anywhere on Earth, was at one time not there – but in nature, introductions normally occur gradually over long periods of time, so that ecosystems are able to adjust and adapt. Introductions brought about by the activities of human beings have resulted in a significant reduction of the Earth's biological diversity. It is neither possible nor desirable to prevent every introduction –

introduced species of crops and farm animals can be essential to our survival, although there are many good reasons to favour native crops and animals. See Llewellyn, "Islamic Environmental Law," 37; Llewellyn, "Reverence and Utmost Good."

[206] Llewellyn, "Reverence and Utmost Good." Pesticides are essentially bound up with corruption in the Earth; as poisons, they are among the most toxic of pollutants. Among their unintended consequences have been the death and disease brought to uncounted individual lives of farm workers and local communities, not to mention the untold devastation brought to species not targeted and to the fabric of life on Earth. Even the intended consequences of their use are hardly free of evil. Insecticides, herbicides, and other pesticides should be avoided as far as possible; if they cannot be avoided, biodegradable substances and narrow-spectrum toxins are better than their more destructive alternatives. And whenever we deem the use of such poisons unavoidable, let us use them with restraint and ask the Lord of all beings for forgiveness. Also see Llewellyn, "Islamic Environmental Law," 12, 37.

[207] Rigorously authenticated *ahādīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh and Al-A'mash (*Sahīh Al-Bukhārī*, *abwāb al-muhsar wa jazā' as-sayd*, etc.; *Sahīh Muslim*, *kitāb as-salām*, *hadīth* nos. 5553, 5554, 5556).

[208] Llewellyn, "Islamic Environmental Law," 12, 37; Llewellyn, "Reverence and Utmost Good." For example, Integrated Pest Management schemes – which use a combination of cultural controls (such as crop diversification and rotation, and the timing of planting and harvesting to avoid peak pest periods), resistant or tolerant cultivars, appropriate biological controls, and selective and nonpersistent chemical controls – are surely mandated by the principles of Islamic ethics, which forbid needless killing.

[209] Seyyed Hossein Nasr, personal communication (at the conference on Islam and ecology, Harvard University), with reference to the Qur'an, 2:219.

[210] Llewellyn, "Islamic Environmental Law," 37-38.

[211] The term *haram* is derived from the Arabic root h-r-m and signifies a place that is sacred, sacrosanct, holy, forbidden, inviolate, or inviolable – in short, a sanctuary. See Key Arabic Terms.

[212] The prohibition on killing and injury pertains to wild animals and plants but not to farm animals or cultivated crops, which may be slaughtered and harvested (although waste and cruelty are in all cases forbidden). Some 560 km^2 in area, the *haram* of Makkah extends roughly thirty-five kilometres east to west at its widest, and twenty-two kilometres north to south. In addition to the city of Makkah with its population of over one million, it includes some perennial and ephemeral wetlands in Wādī 'Uranah and relatively undisturbed granitic mountain peaks, of which the most renowned are Jabal Thawr and Jabal Hirā' (also known as Jabal an-Nūr). The Haram harbours a remarkable diversity of native wildlife, including some 157 species of flowering plants, at least 172 species of birds, 20 species of reptiles, 2 species of amphibians, and 13 species of mammals, among them the Arabian wolf, striped hyaena, hamadryas baboon, honey badger, and rock hyrax. See Llewellyn and Altlasat, "The Haraman and the Hima." Also see Llewellyn, "Islamic Environmental Law," 19-20 and Bagader, et al., *Environmental Protection in Islam*, 26.

[213] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh ibn 'Abbās. The *hadīth* goes on to relate that at the Prophet's proclamation that green herbage within the Haram should not be cut, his uncle and Companion Al-'Abbās requested an exemption with respect to the medicinal, fragrant, insect-repelling native lemongrass *Cymbopogon schoenanthus*, called *idhkhir* in Arabic, because the people needed it for their homes and graves, and in some transmission, their blacksmiths or goldsmiths. The Prophet then granted that exception.

[214] The Haram of Al-Madinah is some 230 km^2 in area and occupies the lands between Jabal 'Ayr, southwest of the city and Jabal Thawr to its northeast (not the Jabal Thawr of Makkah). In recent decades, it has become mainly urban, but it still supports groves of date palms, which harbour a diverse array of resident and migratory birds, and it contains some rocky outcrops with native Acacia-dominant plant communities; the largest of these is Jabal Uhud, a rugged red rhyolite mountain of which the prophet Muhammad, God's blessing and peace be upon him, said, "Uhud is a mountain that loves us, and we love it." Vertebrate wildlife species recently recorded in the Haram of Al-Madinah include Arabian wolf, red fox, rock hyrax, desert hedgehog, Egyptian fruit bat, Arabian toad, and a wide variety of birds and reptiles. See Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[215] Rigorously authenticated *hadīth* related by Muslim from Jābir ibn 'Abd-Allāh; Bagader et al., Environmental Protection in Islam, 26.

[216] The Arabic *mīl*, or mile is nearly identical to the international nautical mile, which is derived from it.

[217] Rigorously authenticated *hadīth* related by Muslim from Abū Hurayrah; Bagader et al., *Environmental Protection in Islam*, 26.

Llewellyn and Altlasat, "The Haraman and the Hima" (in press); also see Llewellyn, "Islamic Environmental Law," 19-20; Bagader, et al., *Environmental Protection in Islam*, 26.

[218] Llewellyn and Altlasat, "The Haraman and the Hima" (in press); also see Llewellyn, "Islamic Environmental Law," 19-20.

[219] Llewellyn and Altlasat, in Press; also see Llewellyn, "Islamic Environmental Law," 2003.

[220] The word *himā* is derived from the Arabic root *h-m-y*, which signifies protection, defence, cover, shelter, shielding, guarding, and standing up for someone or something. It has sometimes been transliterated as "*hema*," but "*himā*" better reflects its pronunciation in the dialects of the Arabian Peninsula and accords with the transliterations of both classical and modern standard Arabic, neither of which employs the letter "e", as the vowel it represents does not exist in the Arabic language.

[221] Abū Yūsuf (d. 182 H. / 798 G.), *Kitāb al-Kharāj: fasl fī 'l-kala' wa 'l-murūj*; Ibn Qudāmah, *Al-Mughnī: kitāb ihyā' al-mawāt: fasl fī 'l-himā*; see also Llewellyn, "Islamic Environmental Law," 22; Llewellyn and Altlasat, "The Haraman and the Hima" (in press). For more information on the *himā*, see John Grainger and Othman Llewellyn, "Sustainable Use: Lessons from a Cultural Tradition in Saudi Arabia," *Parks: The International Journal for Protected Area Managers* (Gland, Switzerland) 4, no. 3 (1994); Hala Kilani, Assad Serhal, and Othman Llewellyn, *Al-Hima: A Way of Life* (Amman, Jordan: IUCN West Asia Regional Office and Beirut, Lebanon: SPNL, 2007); Lutfullah Gari, "A History of the Hima Conservation System," *Environment and History 12*(3) (2006), 213-228. [DOI:10.3197/096734006776680236]; Mohammed A. Eben Saleh, "Land Management Systems in the Highlands of the Southwestern Saudi Arabia: Indigenous vs. State Experiences" (Riyadh, Saudi Arabia: King Saud University, 1997); and Hala Kilani, *Al-Hima: A Way of Being* (London: University College of London, Master's thesis, 2009).

[222] On Hima ash-Shajar, see Abdullah M. Al-Shanqiti, *Ahma' al-Madinah al-Munawwarah: Hima ash-Shajar, Hima an-Naqi', Hima ar-Rabadhah* (Al-Madinah: Almahmoudia Press, 2013), 21-99 and Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[223] Together with the 230 km^2 Haram of Al-Madinah, which it surrounds, Hima ash-Shajar makes up an area of some 1,300 km^2, more than twice as large as the Haram of Makkah. Hima ash-Shajar is a biologically diverse and scenic greenbelt, encompassing rugged volcanic lava terrain, volcanic and granitic hills and mountain peaks, well-vegetated canyons, and ephemeral wetlands. The ecosystems of Jibāl Tiyam and the adjacent Wādī al-Khanaq are relatively intact, while Jabal al-Malsā' and adjacent volcanic cones of Harrat Rahat in the south-eastern parts of the *himā* remain in remarkably natural condition, protected from overgrazing by rugged lava fields. Hima ash-Shajar significantly strengthens the Haram of Al-Madinah as a haven for plants, birds, mammals, reptiles, amphibians, and invertebrates, making it similar to the Haram of Makkah in the spectrum of biodiversity that it harbours. See Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[224] The caliphs 'Umar ibn al-Khattāb and 'Uthmān ibn 'Affān pastured camels of the cavalry there as well. Over time, Hima an-Naqi' was expanded further to sustain larger numbers of grazing animals; boundary markers, placed by a committee of governmental agencies, delineate the widest

extent of the *himā*, an area of some 90 km^2 (See Al-Shanqiti, *Ahma' al-Madinah*, 101-185). The site receives abundant runoff and following rains, it is green with ephemeral herbaceous vegetation. See Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[225] Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[226] Abū Yūsuf, *Kitāb al-Kharāj: fasl fī 'l-kala' wa 'l-murūj*; Ibn Qudāmah, *Al-Mughnī: kitāb ihyā' al-mawāt: fasl fī 'l-himā*. Hima ar-Rabadhah was expanded by the caliph 'Uthmān ibn 'Affān, and the Companion Abū Dharr Al-Ghifārī spent the latter part of his life at Ar-Rabadhah. Under later rulers, Hima ar-Rabadhah was expanded to cover an area of some 4,000 square kilometres (See Al-Shanqiti, *Ahmā' al-Madīnah*, 187-313).

[227] Over the centuries that followed the prophetic era and that of the early caliphs, later governments – such as the Umayyads, 'Abbasids, and Ottomans, the Ashraf, and Al Sa'ud – established and managed *himā*s. Some *hima*s were designated and managed directly by central governments, but most of them were managed by villages and tribes. Rulers often delegated authority to tribal leaders to establish and manage *himās*. Until the middle of the 20th century, nearly every village in the southwestern mountains of the Arabian Peninsula was associated with one or more *himā*s. Other *himās* were found scattered in the northern and central regions. *Himās* varied from 10 to well over 1,000 hectares. Most *himās* were small, but together they made up a vast area of land that was effectively conserved and used sustainably by local communities (Eben Saleh, "Land Management Systems," pp.; Gari, "History of the Hima," pp.: Kilani, *A Way of Being*, pp.). In recent decades, however, under nationalisation of land, population increase, and changing land uses, most of these *himā*s have been lost. Perhaps a dozen *himā*s continue to be conserved effectively by their traditional managers. The *himā* is an important cultural precedent for protecting and managing public lands over which individuals enjoy usufructuary rights, such as rights to grazing, harvesting, and beekeeping. This is especially significant in countries where there are few private landholdings and most of the land is given over to communal grazing (Grainger and Llewellyn, "Sustainable Use," pp.; Kilani, et al., *Al-Hima* pp.; Llewellyn, "Islamic Environmental Law," 22-26; Llewellyn and Altlasat, "The Haraman and the Hima" (in press).

[228] Jalāl ad-Dīn 'Abd ar-Rahmān As-Suyūtī (1445-1505 G.), quoted in 'Uthmān ibn Fūdī, d. 1817; The *himā* was one of the *sharī'ah* practices applied by the 19th Century Sokoto Caliphate in what is now northern Nigeria.

[229] See M. K. Suleiman, et al, Towards an Implementation Strategy for the Human Integrated Management Approach Governance System: Theories, Concepts, Methodologies, Case Studies and Action Plans, https://manualzz.com/doc/18375749/proceedings-towards-an-implementation-strategy-for-the-hu... [Retrieved: 12.08.2022]

[230] The Adat system of customary laws in Indonesia is called after the Arabic term *'ādāt*, meaning cultural precedents that are compatible with the aims of Islamic law and ethics.

[231] Llewellyn, "Islamic Environmental Law"; also see Aishah Abdallah, "A Process to Establish Traditional Himas as Community Conserved Areas: Essential Skills Required," in M. K. Suleiman, et al. (Eds), *Human Integrated Management Approach*.

[232] Llewellyn and Altlasat, "The Haraman and the Hima" (in press); also see targets 1 and 3 of the Global Biodiversity Framework at https://www.cbd.int/gbf/goals/.

[233] We find it deeply troubling that so few leaders and thinkers in the Islamic countries show significant concern for the vanishing wildlands of the Earth. Perhaps they have not had the experience of immersion in wild nature and do not know what they are missing. Or perhaps, in their enthusiasm to tend the Earth and care for it, they imagine that human beings, as *khalā'if* on the Earth, can be trusted to manage it; can they not see that human attempts to manage the Earth are precisely what has led to its corruption (*fasād, ifsād*) and threatens to bring about the extinction of the communities of life of which we are a part? (See Jack Turner, *The Abstract Wild*). If, as we are told in the Qur'an, the natural creation is a revelation of God's signs and attributes, a manifestation of the glory of God, and worships and praises the Lord of all being; if corruption in the Earth is so enormous an evil, for which God's punishment is so terrifying that it must be avoided at all costs; then the value of untrammelled wilderness should loom large and the preservation of its rapidly diminishing remnants should be a high priority. See Aishah Abdallah, "Wildlands and Wildlife."

[234] Aishah Abdallah, "Wildlands and Wildlife." Ibn Qayyim Al-Jawzīyah (1292–1350 G / 691–751 H) discussed the value of wildlands and deserts as wildlife habitat in his book *Miftāh Dār as-Sa'ādah* (Riyadh, n.d., vol. 1, p. 223). He observed the need of wild animals for open space on the land and sea, as well as their need for distinct seasonal habitats, and he extolled God's grace in providing for their needs. See Izzi Dien, *Environmental Dimensions of Islam*, pp 25-26. Also see Reza Shah-Kazemi, "Seeing God Everywhere".

[235] On *harīm* zones, see Bagader et al., *Environmental Protection in Islam*, 26–27; Llewellyn, "Conservation in Islamic Law," 51–52; Abū Yūsuf, *Kitāb al-Kharāj*; Ibn Qudāmah, *Al-Mughnī: kitāb ihyā' al-mawāt: fasl fī ahkām al-miyāh*; 'Uthmān ibn Fūdī, *Bayān Wujūb al-Hijrah 'alā 'l-'Ibād*, Arabic text, pp. 40–41, English translation, pp. 72–73.

[236] In the *fiqh* literature – depending on the school of law – the *harīm* for a river may cover half the width of the river on both banks; for a well, a radius of forty cubits from the centre of the well with variations depending on local conditions; and for a spring there are variations depending on local conditions. See, for example, Ibn Qudāmah, *Al-Mughnī: kitāb ihyā' al-mawāt: fasl wa mā qaruba min al-'āmir wa ta'allaqa bi-masālihihī…* A tree providing shade considered to be of public benefit can be part of a *harīm*.

[237] Historically, the role of charitable gifts has been enormous; a*wqāf* have been the primary source of funding for mosques, schools, hospitals, and other public works in the Muslim world. Even now, after governments have assumed the primary responsibility of financing public welfare, charitable contributions are underestimated, including, notably, the contributions of women, whose financial assets may be less bound up in family maintenance. Nowadays, *awqāf* are largely administered by the governing authorities in many Muslim countries, but originally, this was not the case.

[238] Rigorously authenticated *hadīth* related by Al-Bukhārī and Muslim from 'Abd-Allāh ibn 'Umar. See Llewellyn, "Conservation in Islamic Law," 26–27; Bagader, et al., *Environmental Protection in Islam*, 27.

[239] Bagader, et al., *Environmental Protection in Islam*, 27; Llewellyn, "Conservation in Islamic Law," 52–53.

[240] Bagader et al., *Environmental Protection in Islam*, 11, 31. The natural elements and processes that support life on Earth do not recognise the political boundaries imposed by humankind. This is particularly clear with regard to migratory species, international river basins, marine ecosystems, and air pollution, including global warming, and acid rain. Creative approaches to conflict resolution are needed to settle international disputes over environmental impacts and the use of shared natural resources. Graver still is the need to secure the natural environment and the sources of life on Earth from severe or irreparable damage caused by military actions, See Llewellyn, "Islamic Environmental Law," 40-41.

[241] Well authenticated *hadīth* related by Ibn Mājah, Ad-Dāralqutnī, and others from Abū Sa'īd al-Khudrī and by the Imām Mālik in Al-Muwatta'.

[242] *Hadīth* of unsubstantiated authenticity, related by At-Tirmidhī from Hudhayfah (*Mishkāt al-Masābīh*, *hadīth* no. 5129); a rigorously authenticated *isnād* goes back to 'Abd-Allāh ibn Mas'ūd (*mawqūf*).

[243] The caliph Abū Bakr exhorted his generals Zayd ibn Thābit and Abū Sufyān, as related in the *Muwatta'*: "I adjure you ten things: Do not kill a child or a woman or an old infirm person; do not cut fruit-bearing trees or devastate thriving lands (*'āmir*); do not wound a sheep or a camel except to eat it; do not drown bees or burn them, do not steal booty, and do not be cowardly" (*Al-Muwatta'* 965). Also see *Ri'āyat al-Bī'ah*, p. 149; Gomaa, *Al-Bī'ah wa'l-Hifāz 'alayhā*, pp. 78-79.

[244] Muslim legal scholars ruled that the inviolability (*hurmah*) of God's creatures pertains even in war; see paragraph 2.13. Ibn Qudāmah notes that *hurmah* gives animals non-combatant status, as it does to women and children. See Ibn Qudāmah, *Al-Mughnī: kitāb al-jihād: mas'alah: qāla wa lā yughriq an-nahl*; also see Izzi Dien, *Environmental Dimensions of Islam*, pp 90-91; Bagader et al., *Environmental Protection in Islam*, 11; Samarrai, "Environmental Protection and Islam," 39; and Tlili, *Animals in the Qur'an*. The use of animals as weapons to spread diseases or to deliver and detonate explosives is particularly abhorrent.

[245] *Majallat al-Ahkām al-'Adlīyah*, article no. 58; Bagader et al., *Environmental Protection in Islam*, 19.

[246] This accords with the precedent established in the prohibition of building and settlement in flood-prone areas, unsuitable land use practices and activities should not be permitted in areas that are inherently or potentially hazardous to life, nor should they be permitted in areas that are vulnerable to disruption of natural processes. See Ibn Qudāmah, *Al-Mughnī: kitāb ihyā' al-mawāt: fasl wa mā nadiba 'anhū al-mā' min al-jazā'ir*… Bagader et al., *Environmental Protection in Islam*, 24, 31; Llewellyn, "Islamic Jurisprudence and Environmental Planning," 44–46. A comprehensive approach to environmental planning is known as bioregional planning; see the *Global Biodiversity Strategy* (n. p., WRI, IUCN, UNEP, 1992), 97-100.

[247] This grounding may be realised in the vision and strategy for sustainable, regenerative living and governance known as *Bioregionalism*. It asserts that administrative units should be defined by boundaries of landforms, watersheds, and biotic communities, together with the cultures shaped by and adapted to those entities. In the methodologies of design with nature and bioregional planning, bioregions (also called ecoregions) are defined by mapping and overlaying natural factors such as the geology, topography, climate, hydrology, soils, plant communities, and wildlife of a place, and the maps are overlain to find the sites that are inherently suitable and unsuitable for each land use. Classic references on ecological planning and design include: Ian L. McHarg, *Design with Nature* (New York: John Wiley & Sons, 1967); Kirkpatrick Sale, *Dwellers in the Land: The Bioregional Vision*, Athens, GA: U. of Georgia Press, 2000; Bill Mollison, *Permaculture: A Designer's Manual*, Tyalgum, Australia: Tagari Publications.

[248] Conceptually, the Islamic garden tradition reflects divinely ordained patterns in nature, focused on geometric patterns of irrigation "in which water is shown symbolically and physically as the source of life." This geometry is interlaced and overlain by the rampant freedom of plant growth, and where it runs up against the bold or jagged rockforms typical of dry lands, the rocks prevail. Aesthetically, it reflects the Qur'anic imagery of earthly gardens and especially of the archetypal gardens of Paradise depicted in the Qur'an. Islamic gardens abound in beauty for all the senses, the utmost intensification of lushness and abundance. Llewellyn, "Shari'ah-Values Pertaining to Landscape Planning and Design," 1983. Also see Safei El-Deen Hamed, Paradise on Earth: Historical Gardens of the Arid Middle East, *Arid Lands Newsletter* No. 36 Fall/Winter 1994. https://cals.arizona.edu/OALS/ALN/aln36/Hamed.html Retrieved 12.08.2021

[249] Related by Ibn Hibbān in his *Sahīh*, from Jābir ibn 'Abd-Allāh.

[250] Rigorously authenticated *hadīth* related by Muslim from Abū Sa'īd al-Khudrī.

[251] Bagader et al., *Environmental Protection in Islam*, 30; Llewellyn, "Islamic Environmental Law," 29.

[252] *Athar* related by Ibn al-Qāsim from the Imām Mālik. See Yūsuf ibn 'Abd-Allāh ibn 'Abd al-Barr, *Tajrīd at-Tamhīd limā fī 'l-Muwatta' min al-Asānīd*, 1:118; 'Uthmān ibn Fūdī, *Bayān Wujūb al-Hijrah 'alā 'l-'Ibād*, Arabic text, p. 143, English translation, p. 163. Jurists have maintained that government is required because the fundamental obligation to command the right and forbid the wrong cannot be discharged without power and authority. See Ibn Taymīyah, *As-Siyāsat ash-Shar'īyah*. Also see Erwin I. J. Rosenthal, *Political Thought in Medieval Islam* (Cambridge: Cambridge University Press, 1958), 51–61; Husaini, *Islamic Environmental Systems Engineering*, 92.

[253] Bagader et al., *Environmental Protection in Islam*, 21; On the *hisbah* and the *muhtasib*, see Tāj ad-Dīn As-Subkī, *Mu'īd an-Ni'am wa Mubīd an-Niqam*, 'Abd ar-Rahmān ibn Nāsir Ash-Shayzarī (d. 589 H. / 1193 G.), *Nihāyat ar-Rutbah fī Talab al-Hisbah*, and Diyā' ad-Dīn Muhammad ibn Muhammad ibn Al-Ukhūwah (d. 729 H. / 1329 G.), *Ma'ālim al-Qurbah fī Ahkām al-Hisbah*. In the larger cities, the *muhtasib* would be assisted by a staff of experts in pertinent fields. He or she had wide discretionary authority to take the measures necessary to ensure the public welfare. Some jurists held that the *muhtasib* should have expertise in *ijtihād* beyond that required of a judge.

[254] Abū'l Hassan al-Māwardī (Translation by Assadullah Yate), *Al-Ahkam As Sultaniyyah: The Laws of Islamic Governance* (London: Ta-Ha, 1996), 337–362.

[255] Laylā bint 'Abd-Allāh, better known as Ash-Shifā' for her medical expertise, was one of the most educated Companions of the prophet Muhammad, upon him be blessings and peace. She taught others to read and write, among them his wife Hafsah, daughter of 'Umar ibn Al-Khattāb. Her being charged with the responsibility of the *hisbah* is disputed. See Ibn Hajar Al-'Asqalāni (1372-1449 G. / 773-852 H.), *Al-Isābah fī Tamyīz as-Sahābah*.

[256] Rigorously authenticated *hadīth* related by Muslim from Abū Hurayrah

[257] The Cretaceous Period, notable for the later dinosaurs and pterosaurs and the appearance of flowering plants, lasted from about 145 to 66 million years ago. Its abrupt end is believed to have been caused by an asteroid impact in which some 76 percent of the Earth's life forms vanished, this being the fifth and most recent mass extinction in the history of complex life on Earth.

[258] In no way do we intend to diminish the horror of war crimes, crimes against humanity, and genocides. The suffering of the victims should never be belittled in any way; they are utterly appalling atrocities. Yet we feel compelled to point out that a mass extinction would be likely to erase nearly all vertebrate life forms, a great portion of invertebrates and plants, and unleash unimaginable suffering upon human beings and other life forms alike – on a scale never before witnessed by humankind. International legal bodies have rightly condemned war crimes, crimes against humanity, and genocides, and have introduced procedures for litigation and sanction, imperfect as they are. And yet, no such institution has recognised that to bring about mass extinction is a crime!

[259] Rigorously authenticated *hadīth* related by Ahmad from Anas ibn Mālik (no. 12902); also by Al-Bukhārī in *Al-Adab al-Mufrad* (no. 479), and Al-Bazzār (no. 7408).

[260] See the supplication that the prophet Muhammad, upon him be peace and the blessing of God, advised us to ask our Lord after each of the formal daily prayers: O God, help me to remember You, show gratitude to You, and serve You most beautifully (rigorously authenticated *hadīth* related by Abū Dāwūd (no. 1522) and An-Nasā'ī (no. 9937) from Mu'ādh ibn Jabal).

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Islam and Ecology: Toward Retrieval and Reconstruction by Syed Nomanul Haq. From R. Foltz, *et al*. (Eds.). ***Islam and Ecology: A Bestowed Trust***. (2003). Cambridge, MA: Harvard Divinity School Center for the Study of World Religions. Focuses on key Qur'anic doctrinal concepts and imperatives from the Prophetic Sunnah and reconstructs them to illuminate contemporary environmental concerns. View or Download PDF.

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Reverence and Utmost Good: Merciful Harvests by Othman Llewellyn. A paper delivered at the Zaytuna College Center for Ethical Living and Learning conference on Halal and Tayyib: Rethinking the Ethical, in 2019. Ethical teachings and issues that pertain to the growing, raising, and harvesting of the foods we eat. View or Download PDF.

Letter to Aishah by Othman Llewellyn. Exhortations on living well. View or Download PDF.

Seeing God Everywhere: Qur'anic Perspectives on the Sanctity of Virgin Nature by Reza Shah-Kazemi. Cambridge Central Mosque. Reflections on the sacredness of the natural environment, the spiritual roots of the environmental crisis, deepening the sense of personal responsibility, and practical ethics. View or Download PDF.

Mercy: The Stamp of Creation by Umar Faruq Abd-Allah. (2004). Chicago, IL: Nawawi Foundation. View or Download PDF.

Restoring the Amanah through Earth Repair: Islam, Permaculture, & Ecosystem Restoration Work by Rhamis Kent. An introduction to the practical actions that we as individuals can do toward healing our lifestyles and the land we live on. View or Download PDF.

Recommended Readings in Arabic

Ri'āyat al-Bī'ah fī Sharī'ati 'l-Islām (Care for the Environment in the *Shari'ah* of Islam) (2006). Cairo, Egypt: Dār ash-Shurūq. A comprehensive overview of Islamic theology, ethics, *tasawwuf*, *fiqh*, *usūl al-fiqh*, and *maqāsid ash-Sharī'ah* as they pertain to the environment. View or Download PDF.

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Additional Readings on General Environmental Ethics, Philosophy, & Husbandry:

Revolution and American Indians: "Marxism is as Alien to My Culture as Capitalism" by Russel Means: an indictment of the Eurocentric civilization that has given rise to the global environmental crisis. View or Download PDF.

The Land Ethic, from ***A Sand County Almanac and Sketches Here and There*** by Aldo Leopold: The classic essay articulating ecological ethics. View or Download PDF.

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