

FAITH_{FOR} EARTH

A CALL FOR ACTION



Faith for Earth: A Call for Action
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PREFACE

This book was first published at the beginning of the twenty-first century.

A joint project of the United Nations Environment Programme and the Interfaith Partnership for the Environment, it was titled *Earth and Faith: A Book of Reflection for Action*. The partners printed tens of thousands of copies and gave them to schools, congregations, and communities throughout the world. The book described the growing threats to our planet’s life support systems, the reverence all faiths share for life on Earth, and the responsibility that people have to future generations.

Teachers, students, leaders of religious congregations, and community organizers used the book to introduce and talk about critical environmental issues and how faith communities were addressing these issues. Intended primarily as an educational resource, it has also been used as a reference and inspiration for practice.

During the twenty years that have passed since the book’s publication, the planet has undergone profound and rapid changes. The impact of our actions and choices continues to escalate, causing the ever-worsening global climate emergency, altering natural global processes and major ecosystems, accelerating extinctions of countless forms of life, and deepening human suffering on an unprecedented scale.

Scientific evidence documenting the crisis is undeniable and grows with every passing day. At the same time, there has been a surge of faith-based action and advocacy on behalf of the environment from religious groups everywhere. The response is coming from every corner of the world, reflecting both the diversity of the ways we define our relationship with nature and the essential unity of values at the core of all our hope.

As we begin this century’s third decade, the new edition — produced through a partnership between the United Nations Environment Programme and the Parliament of the World’s Religions Climate Action — offers an introduction to the magnitude of the task we now face and to the faith communities that are becoming a force for the global environmental future. Also, in keeping with the urgency of the work that must be done to heal our planet, we have changed the book’s title. It is time, as never before, to call on our faith, our values, our religious teachings and traditions – on Faith for Earth. And it is time for action.

**MESSAGE FROM THE FAITH FOR EARTH
INITIATIVE OF THE UNITED NATIONS
ENVIRONMENT PROGRAMME**

I am privileged to have this opportunity to welcome you to *Faith for Earth, A Call for Action*, the new, revised edition of *Earth and Faith*, last published twenty years ago. It is an honor to have worked in partnership with the Parliament of the World's Religions to produce this book.

Faith for Earth describes the essential, unshakeable reverence that all religions have for creation and nature, and provides an introduction to the world's major life support systems. I hope it will give you information and inspiration to learn more about our planet, to share your knowledge and commitment to care for it, and to become part of the flourishing global interfaith movement that is increasingly bringing people together to protect and sustain life on Earth.

In the last 60 years, more than 40% of the world's civil wars have been linked to control over natural resources such as land, oil, and water. Climate change is on track to make this situation worse, with unprecedented new impacts on the functioning ecosystems we depend upon for survival, as well as on where people can live and grow food, build cities, practice their faith, and raise their children in peace and health. The security implications of climate change are being recognized at the highest levels, and UN Secretary-General António Guterres has put it at the heart of our conflict prevention agenda.

The Secretary-General announced in April 2020 that "the global crisis we are facing today due to the COVID-19 pandemic is the gravest challenge since the establishment of the UN 75 years ago," but it also remains an irrefutable fact that climate change continues to be one of the most systemic environmental threats that humankind has ever faced.

We are in a race against time that will require political will, innovation, inclusion, tolerance, values and ethics, financing, and partnerships. We are calling on everyone—countries, cities, the private sector, individuals, and faith-based organizations—to strengthen their actions to mitigate climate change, restore ecosystems, and protect the health of the planet without delay. The world has the scientific understanding, the technological capacity, and the financial means to do this. We need to trust our abilities and act accordingly.

Let us adopt an integrated approach to tackling the cry of the planet and achieving sustainable development. The private sector is already taking various actions to ensure environmental sustainability through sustainability budgeting and innovations. Many in the financial sector know that investing in a clean energy future and nature-based solutions will pay dividends.

We need to think about how we commute and about the sustainability of our houses and buildings. Are we encouraging means of mass transportation? Are we reducing the need to commute by encouraging working from home and using smart phones and computers for transactions? Do our buildings produce their own energy? Do they recycle their own water? Are we treating and recycling our waste and moving to adopt a circular economy with zero waste?

Are we eating healthy food? Are we buying locally grown vegetables? Or are we importing off-season produce from countries that are thousands of miles away?

Technology is on our side. Our challenge is not that we do not know what to do—it is how quickly we can do it. The problem is massive, and such large and complex challenges will require transformational thinking, integration, and big movements. But it will also require progress on myriad smaller and manageable scales. We need faith-based organizations to be part of the global accountability and monitoring system to achieve sustainable development goals, and we need a common ethical system of values no matter what religion we believe.

I write this with hope and optimism because I am convinced that the love for power and greed that led us to where we are today can be overcome by the power of love, science, and faith.

The UN has adopted Global Action for People and the Planet, its global environmental agenda, through 2030, but the faith agenda is eternity. Our concern should not be the just next generation; it should be all generations to come. We must make a global pact, on behalf of the natural world, to bring the values of faith to the practices of people and decisions of politicians. We need to work with the environment to avoid new global catastrophes. I call upon all the faith communities in the world to lead by example and join our Coalition in putting our Faith for Earth into action today.

*Iyad Abumoghli, Ph.D. Eng.
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**PRACTICING
WHAT WE PREACH**

Faith-based organizations own 8% of the habitable land surface, 5% of all commercial forests, 50% of the schools in the world and 64% of schools in sub-Saharan Africa, 10% of world's total financial institutions, and 14% of its community development corporations.

There are 37 million churches in the world with 34,000 (Christian) denominations. The current number of mosques in the world is around 4 million. There are 20,000 synagogues and countless temples.

Adapting these establishments to produce their own energy, reduce their carbon footprint, and extend these benefits to neighboring communities will be a massive demonstration of practicing what we preach.

MESSAGE FROM PARLIAMENT OF THE WORLD'S RELIGIONS CLIMATE ACTION

Two decades into the 21st century, we know far more about the complex web of forces and influences that determine the interconnected relationship between humans and nature than we did when the previous edition of this book was published in 2000. It is now indisputable that humans are a force of geological proportions, one that is putting ever-increasing pressure on natural resources and ecosystems everywhere on Earth.¹

The dilemmas we face are unavoidable and grow more critical with every passing year. If business as usual were capable of solving them we would not have the poverty, the unequal distribution of wealth, the increased conflict and use of violence for political purposes, the environmental destruction, and the unsustainable patterns of production and consumption that surround us today.

In the last 20 years, each of these dilemmas has been dramatically worsened by the realities of climate change. We are proceeding headlong into a future shaped by the discharge of our wastes into our atmosphere and our oceans.

The decades ahead present us with a crucible of moral choices.

We are the first generation in human history that has had the opportunity to achieve sustainable and just societies. We have the knowledge, the technology, and the wealth to succeed. Moreover, for half a century, we have known that the choices we make will have serious consequences for the world of the future and for our children. It is clear that most often we have lacked the courage and the will to make the morally right choices, to do what we know is necessary.

Each and every one of us is responsible for the consequences of our choices. Each day that passes without our finding the courage to make the decisions we know are necessary adds to the unconscionable burden we bequeath to our children and grandchildren. The difficulty of the decisions we leave to them will far exceed the difficulty of the decisions we face today.

Examples of faith-based environmental teachings and traditions in the first part of this book stand in direct contradiction to the human choices that have written our crisis across the face of the planet. The reality that results from our refusal or inability to act is clear in its outline, and even in much of its detail; an overview of the impact of our actions on the natural world is introduced in the second half of the book.

Today the voices of our children call out to us, challenging our cowardice and greed as they consider their legacy of emptiness, poverty, and violence



Courtesy of Nathaniel Hales.

— but an even more dire fate awaits our grandchildren. We leave them a world that our parents would not recognize, bereft of much of the beauty, complexity, and richness we have squandered. Our actions are poised to break the bond between grandparents and grandchildren; we will not recognize the world in which we condemn them to live, and they will be strangers to the beauty and bounty of the world our parents left to us.

The context in which we will make our choices must include the full panoply of faith, science, and societal institutions. If these institutions are to become agents of sustainability, they will need to be enabled by knowledge and inspired by faith.

*David Hales
Chair, Climate Action
Parliament of the World's Religions*

THE SACRED
UNIVERSE

“A recovery of the sublime meaning of the universe could lead both to a greater intimacy of the human with the manifestation of the divine in the natural world and to a greater intimacy of the different religions among themselves. Restoration of the sense of the natural world as divine manifestation has a special urgency because of the devastation that we are presently causing to the natural world... Only the religious forces of the world with their sense of the sacred can evoke the psychic energies needed to transform a declining Cenozoic Era into the emerging Ecozoic Era...To initiate and guide this next creative moment of the great story of the Earth is the Great Work of the religions of the world as we move on into the future.”

—Thomas Berry,
The Sacred Universe, pp. 80-87.

THE EARTH CHARTER

The mission of the United Nations Environment Programme and the Parliament of the World’s Religions align with the principles and goals articulated in The Earth Charter (<https://earthcharter.org/>), an international declaration of fundamental values and ethical framework for building a just, sustainable, and peaceful global society in the 21st century. The Charter was launched in June 2000 by an independent international entity in a ceremony at the Peace Palace in The Hague. It is the product of a ten year, worldwide, cross-cultural dialogue on common goals and shared values, and is the most inclusive and participatory process ever associated with an international declaration. The Charter recognizes that the goals of ecological protection, the eradication of poverty, equitable economic development, respect for human rights, democracy, and peace are interdependent and indivisible. It provides an inclusive, integrated ethical framework to guide the transition to a sustainable future, and has been endorsed by over 6,000 organizations, including many governments and international organizations.

The Charter contains four basic principles, each of which includes a specific set of goals, commitments, and actions:

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

- 1. Respect Earth and life in all its diversity.
- 2. Care for the community of life with understanding, compassion, and love.
- 3. Build democratic societies that are just, participatory, sustainable, and peaceful.
- 4. Secure Earth’s bounty and beauty for present and future generations.

II. ECOLOGICAL INTEGRITY

- 5. Protect and restore the integrity of Earth’s ecological systems, with special concern for biological diversity and the natural processes that sustain life.
- 6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.
- 7. Adopt patterns of production, consumption, and reproduction that safeguard Earth’s regenerative capacities, human rights, and community wellbeing.
- 8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.

III. SOCIAL AND ECONOMIC JUSTICE

- 9. Eradicate poverty as an ethical, social, and environmental imperative.
- 10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
- 11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.
- 12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual wellbeing, with special attention to the rights of Indigenous Peoples and minorities.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

- 13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.
- 14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.
- 15. Treat all living beings with respect and consideration.
- 16. Promote a culture of tolerance, nonviolence, and peace.

The Charter asks that human beings “imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally”; preserve cultural diversity; and work collaboratively in the search for truth and wisdom. It calls on the arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments to offer creative leadership, and asks the nations of the world to fulfill their obligations under existing international agreements and support implementation of Earth Charter principles.

“Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.”

YALE FORUM ON
RELIGION AND ECOLOGY

The Yale Forum on Religion and Ecology (FORE), (<https://fore.yale.edu>) is an international multi-religious project contributing to the field of religion and ecology and is an engaged moral force of religious environmentalism. Its mission is to inform and inspire people to preserve, protect, and restore the Earth community. The religions of the world transmit ecological and justice perspectives in their scriptures, rituals, and contemplative practices, as well as in their moral and ethical commitments. FORE identifies those perspectives in order to share comprehensive and collaborative solutions to global environmental crises, cultivating dialogue among religious/spiritual communities in partnership with scientists and policy makers. Its website provides a clearinghouse for news, information, and resources about religion and ecology, highlighting over 300 engaged projects.

FORE works to nurture a flourishing Earth community, where religious and spiritual traditions join together for the shared wellbeing of ecosystems, life forms, and people in our common planetary home. Founded by Mary Evelyn Tucker and John Grim at the United Nations in 1998 and based at Yale University since 2006, FORE plays a pivotal part in the study of religion and ecology and has had an instrumental role in making the publication of this book possible.



Faith

During The World Wildlife Fund (WWF) International’s 25th anniversary celebration in Assisi, Italy in September 1986, leaders of five of the world’s religions — Buddhism, Christianity, Hinduism, Islam, and Judaism — presented statements about their traditions’ understanding of nature and their religion’s values concerning conservation and the environment. Known as the Assisi Declarations, those five statements are regarded as a landmark in religious environmental ethics. WWF also launched the Network on Conservation and Religion at that time, leading to the formation of the Alliance of Religions and Conservation (ARC). The Bahá-í Faith, Confucianism, Daoism, the Jain Religion, the Sikh Religion, Shinto, and Zoroastrianism joined ARC and created statements about their faith’s relation to nature, and the Assisi Declarations themselves expanded to include additional detail. Each of the faith traditions’ teachings in the following pages begins with brief excerpts from the five Assisi Declarations, from the statements by the seven religions that joined the ARC network, and from a declaration by the Alliance of Mother Nature’s Guardians, a group of Indigenous leaders and activists from around the world, at their second assembly in 2017.

INDIGENOUS TRADITIONS

There are more than 370 million Indigenous Peoples living in 70 countries on six continents, with unique cultures distinct from the dominant societies in which they live and long-standing connections to particular ancestral lands. The United Nations Permanent Forum on Indigenous Issues states that “...the most fruitful approach is to identify, rather than define, indigenous peoples. This is based on the fundamental criterion of self-identification as underlined in a number of human rights documents.” Despite their diversity, the traditions of Indigenous Peoples share several common themes, including recognition of the community of all life, in which humans are just one member; respect for nature and other-than-human forms of life; the imperative of harmony with nature; and living in accord with original instructions given by spiritual beings and the Creator.

ABRAHAMIC RELIGIONS

Judaism, Christianity, and Islam agree that nature is God’s creation. God has made the universe and the order of the natural world, and has provided for all God’s creatures. These faiths press us to recognize that we are one small part of a complex, interdependent creation. And yet God has given humans a special responsibility to take care of and protect creation, as good stewards or guardians. All beings in creation have value in God’s eyes and should be treated with respect.

INDIC RELIGIONS

Religious traditions originating in India are Hinduism, the Jain Religion, Buddhism, and the Sikh Religion. While their worldviews differ, they share certain basic concepts, including belief in many births, or “reincarnation,” in which life can take different forms, creating continuity between human life and other living things. Rebirth is determined in part by one’s karma, which may be ethically good, bad, or neutral. The word karma means “action,” and implies that every action has a result, an important idea for ecological ethics. Indic traditions affirm that there is a right order of the universe and of human society, often called Dharma, a term of central importance in Indian civilization. Indicating universal moral norms, Dharma has many possible translations, including “law,” “duty,” and “righteousness.” Indic religions also share systems of spiritual discipline and contemplative practice known cross-traditionally as Yoga or “union,” aiming at oneness with a sacred reality.

EAST ASIAN RELIGIONS

The religions originating in East Asia are Confucianism, Daoism, and Shinto. Chinese civilization is at least 5,000 years old and the roots of Confucianism and Daoism are very ancient. They share a worldview in which the universe is seen as a living organic whole, united by matter-energy (*qi* or *ch’i*). This vital force is the basis for dynamic change and creativity. The great triad of Heaven, Earth, and Humans forms the unity of the universe. Within this triad, humans cultivate virtue, following the Way of the Sages. Confucian teachings on humaneness and filial piety contribute to social and political harmony. Daoist teachings contribute to individual health and wellbeing. In Japan, the indigenous tradition of Shinto centers on the community of deities (*kami*) in the natural and human worlds. These deities are to be respected so that the natural world, infused with divinity and purity, will continue to sustain all life.

Note: The pages that follow are guided by the concept that a religion has three aspects: a worldview or “cosmovision”; a value system, or ethics; and a set of practices or “way of life” that attune the individual and the community to that worldview. A religious worldview (as distinct from a secular one) references a larger reality sometimes called the Sacred.

We have consulted with community members from each religious tradition on the content of individual sections. We recognize that not all may agree on how a given religion should be named, and have tried to be respectful of different points of view.

We have made slight revisions in a few places in wording to accommodate gender-inclusive language.



Mesa Arch Trail, Moab. Photo by Jad Limcaco.

Indigenous Traditions



Courtesy of allianceofguardians.org.

We, Guardians and Children of Mother Earth, Indigenous Peoples and allied partners, held our Second Assembly, and our prophecies, our wisdom, our insights have allowed us to see that life on Mother Earth is in danger and is coming to a time of great transformation. Indigenous Peoples have continually taken care of Mother Earth and humanity. We wish that this can continue with the support of the people of the world. The Indigenous prophecies place in us the responsibility to tell the world that we must live in peace with each other and Mother Earth to ensure harmony with her natural laws and with the Creation. We are calling for effective solutions that recognize the rights of Indigenous Peoples. We are calling to the world leaders, the States, the United Nations, and civil society to start thinking about phasing out those juridical systems inherited from the colonial times and replacing them with others that take up Nature, Mother Earth as an entity which has fundamental rights. We must evolve towards a paradigm based on Indigenous thought and philosophy, which grants equal rights to Nature and which honors the interrelationships between all life forms and the preservation of Mother Earth.

— *The Declaration of the Alliance of Guardians and Children of Mother Earth: On November 28th, 2015, The Constituent Assembly of the Alliance of Mother Nature's Guardians, November 28, 2015 and October 11-16, 2017.*

WATER IS LIFE

As children of water,
we raise our voices in solidarity to speak for all waters.

Water, the breath of all life, water the sustainer of all life,
water the voice of our ancestors, water pristine
and powerful.

Today we join hands, determined to honor,
trust and follow the ancient wisdom of our ancestors
whose teachings and messages continue to
live through us.

The message is clear: Honor and respect water
as a sacred and life-giving gift from the Creator of Life.
Water, the first living spirit on Earth.

All living beings come from water,
all is sustained by water,
all will return to water to begin life anew.

We are of water, and the water is of us.
When water is threatened, all living things are
threatened.

What we do to water, We do to ourselves.

— Declaration of Water, adopted at the Hopi Hisot Navoti Gathering, October 23,
2003, Second Mesa, Arizona. <https://www.blackmesatrust.org/>



Ancient Hopi Village of Wolpi on the Hopi
Reservation in Arizona. U. S. National Archives and
Records Administration.

INDIGENOUS KNOWLEDGE

Indigenous knowledge is a way of thinking applied to phenom-
ena across biological, physical, cultural, and spiritual systems.
It includes insights based on evidence acquired through direct
and long-term experiences and extensive and multi-genera-
tional observations, lessons, and skills. It has developed over
millennia and is still developing in a living process including
knowledge acquired today, and in the future, and it is passed
on from generation to generation. Under this definition, it is
recognized that Inuit knowledge is a way of life. It goes beyond
observations, ecological knowledge, and research, offering a
unique “way of knowing.”

—Utqiagvik Declaration 2018, Inuit Circumpolar Council.
<https://www.inuitcircumpolar.com/>

In the Beginning

In the beginning were the Instructions. We were to have com-
passion for one another, to live and work together, to depend
on each other for support. We were told we were all related and
interconnected with each other...The Instructions during that
time, at the beginning, were to love and respect one another
even with all the differences, different cultures, different lan-
guages. We were told we were all from the same source.

— Vickie Downey (Tewa, Tesuque Pueblo), in Wall, S. Wisdom’s Daughters:
Conversations with Women Elders of Native America, p.2.

A Message of the Haudenosaunee
to the World

In the beginning we were told that the human beings who
walk about on the Earth have been provided with all the things
necessary for life. We were instructed to carry a love for one
another, and to show great respect for all the beings of this
Earth. We are shown that our life exists with the tree life, that
our wellbeing depends on the wellbeing of the vegetable life,
that we are close relatives of the four-legged beings. In our
ways, spiritual consciousness is the highest form of politics.

Ours is a Way of Life. We believe that all living things
are spiritual beings. Spirits can be expressed as energy forms
manifested in matter...

All things of the world are real, material things. The
Creation is a true, material phenomenon, and the Creation
manifests itself to us through reality. The spiritual universe,
then, is manifest to man as the Creation, the Creation that sup-
ports life. We believe that man is real, a part of Creation, and
that his duty is to support life in conjunction with the other
beings. That is why we call ourselves Onkwehón:we — Real
People.

—A Basic Call to Consciousness, pp. 85-86.



Forest management workshop, Wajäpi village, Brazilian Amazon.
Courtesy of nature.org.

THE BEAUTY WAY

...As it used to be long ago, may I walk.
Happily may I walk.
Happily, with abundant dark clouds, may I walk.
Happily, with abundant showers, may I walk.
Happily, with abundant plants, may I walk.
Happily, on a trail of pollen, may I walk. Happily may I walk.
Being as it used to be long ago, may I walk.
May it be beautiful before me,
May it be beautiful behind me,
May it be beautiful below me,
May it be beautiful above me,
May it be beautiful around me,
In beauty it is finished.

— From the Navajo Night Chant Ceremonial, in Sanders, T. E. and W. W. Peek,
eds. Literature of the American Indian, pp.193-94.

Words of a Yanomami Shaman

I would prefer the white people to talk about “nature” or “ecol-
ogy” as a whole thing. If we defend the entire forest, it will stay
alive. If we cut it down only to protect small parcels that are
leftovers of what was ruined, it will yield nothing. With leftover
trees and leftover watercourses, leftover game, fish, and humans
who live there, its breath of life will become too short. This is
why we are so worried...

We shamans say simply say that we are protecting “na-
ture” as a whole thing. We defend the forest’s trees, hills, moun-
tains, and rivers; its fish, game, spirits, and human inhabitants.
We even defend the land of the white people beyond it and all
those who live there. These are the words of our spirits, and they
are ours. The xapiri are truly the defenders of the forest, and
they give us their wisdom.

— Davi Kopenawa and Bruce Albert, The Falling Sky, pp. 396-98.

SPIRITUAL COOPERATION

All peoples living like the Saami, linked to nature as reindeer
herders, have spiritual contact. We live adoring nature and
then it becomes sacred. There is a necessity to please nature
so that it gives to you. You have to be kind to nature so that
nature will give you more. You have to be friends with the
environment, otherwise it won’t work in cooperation with you
on whatever you call the spiritual.

— John Mathis Turi (Saami), in “Voices of the Earth,” Cultural and Spiritual
Values of Biodiversity, p. 152.

A Covenant with Nature

The people of ancient Africa did not regard nature as some-
thing to be exploited, governed, or conquered. They did not
believe that nature was made only for humans to use, misuse,
or enjoy and exploit solely for economic or material benefit as
we do today...

Yoruba religion is based on a profound respect for the
natural environment due to an ancient covenant between
humans and all the other creatures and objects of nature. That
ancient covenant, which was broken in Ilé-Ifé (because of
humans’ disrespect of animals), has got to be re-examined. In
the face of the excessive greed, capitalism, materialism, and
wanton exploitation of the earth, forests, the oceans, animals,
and other creatures of nature in contemporary times, and in
the face of man’s inhumanity to man on the dying planet, we
should ask ourselves... “Isn’t it time we made a new cove-
nant?”

— Baba Wande Abimbola (Yoruba, Nigeria),
Ifá Will Mend Our Broken World, pp. 18, 23.



Ethiopian Highlands. Photo by Erik Hathaway.



Samburu, Kenya. Photo by Emily Marie Wilson/shutterstock.com.

MOTHER EARTH

African religion, no matter the level of sophistication or education of the individual, permeates every aspect of his or her life, from seedtime to harvest, through the rites of passage — birth, puberty, marriage, death, and hereafter. We have no creeds to recite, as these dwell in the heart, and each one of us is the living creed.

All over Africa, Earth is regarded as the female spirit, Asase Yaa, Mother Earth. One is expected to care for her, nurse, cherish, and love her. Generally, one will not till the land without her prior permission. We ask her permission again before digging to bury the dead so that her child may return into her womb. Asase Yaa is also known as the upholder of the Truth, and whenever someone's word is in doubt, he is asked to touch his lip to some soil to become credible.

Before every function and ceremony, a libation is done whereby water or spirits are poured onto the ground while calling the name of the God, Mother Earth, and the ancestors, and beseeching their blessings upon all present. Gesture and symbol play an important part in the African rites. When in a dance a priestess raises her hands, she is delivering a message, “I am leaving all in the power of God.”

The aim of African religion is to promote harmony between humans, the spirit world, society, and the environment. Its distinctive feature is the sharing spirit. We believe that Earth is God's gift to us. We are merely the keepers of Earth and are charged with taking care of it and leaving it in a better condition than we found it. If we fail, our children will not have any Earth to inherit.

– Queen Boakyewa Yiadom I (Akan, Ghana).



Uluru Indigenous Protected Area, Australia. Photo in the public domain.



Dancer at the Homeground Festival, Sydney, Australia. Photo by PomInOz.

This world was not always as we know it now. Once, all was featureless, shapeless potential, and into this potential, the Ancestors came. Land, water, sky, life was given shape, and life in all its shapes was given the way of living, the Law, that the world might go on as the Ancestors had made it. These are the beings, events, “everywhen,” that the invader calls the Dreaming. In the language of my grandfather, it is called Manguny.

For Aboriginal peoples, country is much more than a place. Rock, tree, river, hill, animal, human — all were formed of the same substance by the Ancestors who continue to live in land, water, sky. Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and country loves, needs, and cares for her peoples in turn. Country is family, culture, identity. Country is self...

For Aboriginal peoples, learning began when the world did. The Ancestors taught the peoples the ways of living in country, and these ways were called the Law. It was Law that sustained the web of relationships established by Ancestors, and the web of relationships established by the Ancestors formed the pattern that was life itself...Life, and the knowledge of how to care for it, was created at the same time. This land never endured a Dark Age when the light of learning grew dim, and existence was threatened. Until now...

In the end, all that seeks to uphold the pattern that is creation is the same good, just as all that seeks to destroy it is the same evil. In the learning borne of Country is the light that nourishes the world, and if Country, and the world, is to be helped now, it is this light that must show the way home.

— Ambelin Kwaymullina (Bailugu and Njamal, Pilbara region, Western Australia), in “Seeing the Light: Aboriginal Law, Learning and Sustainable Living in Country,” Indigenous Law Bulletin (May-June 2005).



Photo by Françoise Foliot. Israel National Museum.

Judaism

The festivals of the Jewish religion do call upon us to stand before God, in awe at his majesty, trembling before His judgments, but that is not the dominant mood of the Jewish faith. The festivals celebrate, in joy, the cycle of the season of nature. The rabbis even insisted that: “He who has denied himself any one of the rightful joys of this world is a sinner” (Baba Kama 91b). The highest form of obedience to God’s commandments is to do them not in mere acceptance but in the nature of union with Him. In such a joyous encounter between man and God, the very rightness of the world is affirmed.

The encounter of God and man in nature is thus conceived in Judaism as a seamless web with man as the leader, and custodian of the natural world. Even in the many centuries when Jews were most involved in their own most immediate dangers and destiny, this universalist concern has never withered. ...Now, when the whole world is in peril, when the environment is in danger of being poisoned, and various species, both plant and animal, are becoming extinct, it is our Jewish responsibility to put the defense of the whole of nature at the very center of our concern...Man was given dominion over nature, but he was commanded to behave towards the rest of creation with justice and compassion. Man lives, always, in tension between his power and the limits set by conscience.

— *The Jewish Declaration on Nature: Rabbi Arthur Hertzberg, Vice President, World Jewish Congress, Assisi 1986.*

GOD CREATES EARTH AND ALL WHO LIVE ON IT, AND SEES THAT IT IS GOOD

When God was about to create heaven and earth, the earth was a chaos, unformed, and on the chaotic waters’ face there was darkness. Then God’s spirit glided over the face of the waters, and God said, “Let there be light!” – and there was light. And when God saw how good the light was, God divided the light from the darkness...

God then said, “Let the waters beneath the sky be collected in one place, so that the dry ground may be seen!” – and so it was. And God called the dry ground Earth, and called the collected waters Seas. And when God saw how good it was, God said, “Let the earth grow vegetation, seed-bearing plants; fruit trees on the earth that bear fruit, each true to its type, with its seed in it!” – and so it was...And God saw how good it was.

God then said, “Let the waters bring forth swarms of living creatures, and let the birds fly over the earth, across the face of the expanse of the sky!” God then formed the great sea monsters, and every living creature that creeps, with which the waters swarm, all true to their types, and every winged bird, each true to its type; and God saw how good it was. God then blessed them, saying, “Be fruitful and multiply, fill the waters of the seas, and let the birds multiply in the earth!”...



Photo by Kevin Bubriski. <https://kevinbubriski.com>

God then said, “Let the earth bring forth living creatures of every type: domestic animals and creeping things and wild animals, each true to its type!” – and so it was...and God saw how good it was.

God created the human beings in [the divine] image, creating [them] in the image of God, creating them male and female. God then blessed them, and God said to them, “Be fruitful and multiply; fill the earth and tame it; hold sway over the fish of the sea and the birds of the sky, and over every animal that creeps on earth” ...God then surveyed all that [God] had made and look – it was very good!

HUMANS ARE MADE FROM THE DUST OF EARTH

Then God Eternal fashioned the man [adam] – dust from the soil [adamah] – and breathed into his nostrils the breath of life, so that the man became a living being...So God Eternal took the man, him in the Garden of Eden to work it and keep it.

Genesis 1:1-5, 9-12, 20-21, 24-26, 28, 31, and 2.7, and 15.

GOD MAKES A COVENANT WITH ALL CREATURES

God then said to Noah and his sons who were with him, “As for Me, I am going to establish My covenant with you, and your descendants after you, and with every living being in your care — the birds, the beasts, and all the land animals in your care — all who have gone out of the ark, all Earth’s animals.”

Genesis 9.8-10.

THE SABBATHAL YEAR – A SABBATH FOR THE LAND

Six years you may sow your field and six years you may prune your vineyard and gather in the yield. But in the seventh year the land shall have a Sabbath of complete rest, a Sabbath of the Eternal...it shall be a year of complete rest for the land.

Leviticus 25.3-5.

Selections from the Torah are from Gunther Plaut, The Torah, A Modern Commentary, Revised Edition.

HUMANS DO NOT OWN EARTH

The earth is God Eternal’s and all that it holds.

Psalm 24.1

ALL OF CREATION PRAISES GOD

Let the sea and all within it thunder.
The world and its inhabitants,
Let the rivers clap their hands,
The mountains sing joyously together
At the presence of the Eternal...

Psalm 98.7-9

Praise God, sun and moon,
praise God, all bright stars,
Praise God, highest heavens,
and you waters that are above the heavens.
Let them praise the name of the Eternal,
for it was God that commended that they be created.
God made them endure forever,
establishing an order that shall never change.
Praise God, O you who are on earth,
all sea monsters and ocean depths,
fire and hail, snow and smoke,
storm wind that executes God’s commands,
all mountains and hills,
all fruit trees and cedars,
all wild and tamed beasts,
creeping things and winged beasts.

Psalm 148.3-10.

Selections from the Psalms are from Tanakh: The Holy Scriptures: A New Translation of the Holy Scriptures according to the Traditional Hebrew Text.



Photo by Cam Adams.

Vows for Earth

Judaism teaches that the whole world is God’s house and the wind is ruach elohim, God’s breath. It teaches that the meaning of goodness derives from the water and earth and all the creatures. It teaches that the earth is the ground of our being and that how we live reverberates within it.

It provides us with a Sabbath day to stop—to refrain from working and using the land, to remember that God is master of the universe, not we. And it provides the land with a Sabbath year—a year of release when no hand works the land and the land enjoys complete rest.

Judaism teaches that we are indelibly connected to the land and that when we behave in accord with God’s law, the rain falls in its season and a fecund, verdant earth bears fruit in abundance. And if we neglect the law, the rains stop, the land dries up and all creatures suffer famine, drought, and every disaster. It teaches that we are all responsible for each other, and that the land is a gift from God and the gift is conditional. If we do not care for the gift, we lose the gift.

I vow to listen for the voice of the land and the wind, and to pray and plant, and write and teach that the preservation of our beautiful world is our greatest religious imperative.

— Rabbi Ellen Bernstein Interfaith Service, Cathedral of St. John the Divine, following the People’s Climate March, September 21, 2014.



A greenhouse in the Arava Desert, Israel.
Photograph by Nghia Tru’o’ng. Courtesy of wmac.org.

DO NOT DESTROY

At the culmination of Creation, the Holy One led the human creature through the Garden of Eden and said, “Enjoy the beauty and glory of the universe. Take heed not to corrupt or destroy My world. For if you corrupt it, there is no one to make it rights after you.”

Ecclesiastes Rabba 7.13

Jewish tradition teaches Bal Tashchit — do not destroy or waste. This commandment has become central to Jewish environmental ethics.

When in your war against a city you have to besiege it for a long time in order to capture it, you must not destroy its trees, wielding the ax against them. You may eat of them, but you must not cut them down. Are the trees of the field human to withdraw before you into the besieged city?

Deuteronomy 20.19

A basic principle in rabbinic interpretation is to move from a specific and narrow application —here, the exceptional conditions of war — to a much broader and more inclusive one. Thus “do not destroy” means that we must never destroy needlessly and should not waste Earth’s precious resources.



Clearcut at Arch Cape, Oregon. Photo by Sam Beebe. Courtesy of oregonwild.org.



Celebrating Simchat Torah, at the completion of the annual Torah reading cycle. Photo by meuniard/shutterstock.com.

PRAYERS

From the Nishmat...

The breath of all that lives praises You, our God,
The force that that drives all flesh exalts you, our Sovereign, always.
Transcending space and time, You are God...
God of all creatures, endlessly extolled,
You guide the world with kindness, its creatures with compassion.

Could song fill our mouth as water fills the sea
And could joy flood our tongue like countless waves
Could our lips utter praise as limitless as the sky
And could our eyes match the splendor of the sun
Could we soar with arms like eagle's wings
And run with gentle grace, as the swiftest deer,

Never could we fully state our gratitude
For one ten-thousandth of the lasting love

Which is your precious blessing, dearest God,
Granted to our ancestors and to us.

— Siddur Sim Shalom: A Prayerbook for Shabbat, Festivals, and Weekdays, p. 335.

Mater of the Universe, grant me the ability to be alone:
May it be my custom to go outdoors each day, among the trees and
grasses, among all growing things, there to be alone and enter into
prayer, There may I express all that is in my heart, talking with You,
to Whom I belong. And may all grasses, trees, and plants awake
at my coming. Send the power of their life into my prayer, making
whole my heart and my speech through the life and spirit of grow-
ing things.

— Rabbi Nachman of Bratslav (1772-1810), quoted in Bernstein, E. and D. Fink, This
Sacred Earth: Religion, Nature, Environment, p. 459.

Blessings through the day

Before eating bread: Blessed are You, Eternal our God,
Sovereign of the universe, who brings forth bread from the
earth.

Before eating fruit: Blessed are You, Eternal our God, Sover-
eign of the universe, who creates the fruit of the tree.

Upon smelling the fragrance of shrubs and trees: Blessed
are You, Eternal our God, Sovereign of the universe, who
creates fragrant trees.

Upon smelling the fragrance of plants and herbs: Blessed
are You, Eternal our God, Sovereign of the universe, who
creates fragrant plants.

Upon smelling fragrant fruit: Blessed are You, Eternal our
God, Sovereign of the universe, who gives a pleasant fra-
grance to fruits.

Upon seeing trees or creatures of unusual beauty: Blessed
are You, Eternal our God, Sovereign of the universe, who
has such beauty in the world.

Upon hearing thunder: Blessed are You, Eternal our God,
Sovereign of the universe, whose might and power fill the
entire world.

Upon seeing lightning, shooting stars, mountains, or a
sunrise: Blessed are You, Eternal our God, Sovereign of the
universe, Source of creation.

Upon seeing a rainbow: Blessed are You, Eternal our God,
Sovereign of the universe, who remembers the covenant
and is faithful to all promises.

— Ronald H. Isaacs, Every Person's Guide to Jewish Prayer, pp. 83-90.

STEWARDSHIP

There can be no doubt to any enlightened or thoughtful person
that the “dominion” mentioned in the Bible in the phrase “and
have dominion over the fish of the sea, and over the fowl of the
air, and over every living thing that creeps upon the earth,” is
not the dominion of a tyrant who deals harshly with his people
and servants in order to achieve his own personal desires and
whims. It would be unthinkable to legislate so repugnant a
subjugation and have it forever engraved upon the word of
God, who is good to all and whose mercy extends to all. He has
created, as is written, “The earth is founded on mercy.”

—Rabbi Avraham Yitzak HaKohen Kook (First Chief Rabbi of Palestine),
Psalm 89.3: “Hazon ha Tzimhonut v’haShalom (A Vision of Vegetarianism and
Peace),” A kim baNegev II in Lahai Ro’I, p. 207.

Tu B’shvat—A Day for Trees

The 15th day of the lunar month of Shevat, coming in mid-
January to mid-February, is known as the New Year of the Trees.
It is a harbinger of spring, a time to be thankful for the land,
to plant trees, and to be engaged in environmental projects. It
has become a holiday for reflection on humanity’s place in the
natural world and remembering teachings to protect it. Many
celebrate Tu B’shvat with a seder or festive meal, with multiple
kinds of fruit, fashioned after the custom of the 16th century
mystics in Safed, Israel.

Finish your planting

If you are in the midst of planting and word reaches you that
the Messiah has arrived, do not interrupt your work. First finish
your planting, and only then go out to welcome the Messiah.

— Rabbi Yohanan Ben Zakkai, The Fathers according to Rabbi Nathan, B31.

In the realm of Nature there is nothing purposeless, trivial, or
unnecessary.

— Maimonides (1135-1204), from The Guide of the Perplexed,
M. Friedlander, tr. Vol. 3, 3.25, p. 122.



Photo by Kasturi Laxmi Mohit.

ELIJAH’S COVENANT: A RABBINIC CALL FOR ACTION ON CLIMATE CHANGE

On January 2, 2020, five hundred rabbis, cantors, and other Jewish leaders from around the world signed “Elijah’s Covenant Between the Generations to Heal Our Endangered Earth,” a letter calling for action on climate change, including actions protecting the environment, supporting political change, and welcoming refugees displaced by disasters. Organized by Rabbi Arthur Waskow, founder and director of the Shalom Center, the full text and list of signatories is available at www.theshalomcenter.org. The letter says, in part:

For the first time in the history of Humanity, we are actually moving toward the burning and devastation of the web of life on Earth by human action — the unremitting use of fossil fuels. Our children and grandchildren face deep misery and death unless we act. They have turned their hearts toward us. Our hearts, our minds, our arms and legs, are not yet fully turned toward them...

Our sacred task requires affirming not only the biological ecosystem but also a cultural/ social ecosys-tem — a modern word for how the diverse Images of God become ECHAD (One). Jews, Indigenous Nations, Christians, Muslims, Unitarians, Buddhists, Hindus, and many others — each community must bring its own unique wisdom to join, in the Name of the ONE Who is the Interbreathing Spirit of all life. Whose univer-sal Breathing is the “nameless name,” the “still small voice” that supports and suffuses all the many diverse Names of God in many cultures and communities. That Interbreathing Spirit supports and suffuses all life on Planet Earth.



Lac d'Anterne, Passy, France. Photo by Hugues de Buyer-Mimeure.

Christianity

For Christians, the Hebrew Bible is part of Scripture, along with the New Testament. Selections from the Hebrew Bible that are relevant to a religious and spiritual understanding of the natural world and to environmental ethics are given in the preceding section. Below are selections from the New Testament. (All New Testament passages are from Holy Bible: New Revised Standard Version with Apocrypha.)

God declared everything to be good, indeed, very good. He created nothing unnecessarily and has omitted nothing that is necessary...creatures have received their mode of existence by the will of the Creator, whose purpose is that through their interdependence they should bring to perfection the beauty of the universe. It is the very nature of things considered in itself, without regard to man's convenience or inconvenience, that gives glory to the Creator.

Man's dominion cannot be understood as license to abuse, spoil, squander or destroy what God has made to manifest his glory. That dominion cannot be anything other than a stewardship in symbiosis with all creatures... At the risk of destroying himself, man may not reduce to chaos or disorder, or worse still, destroy God's bountiful treasures.

Every human act of irresponsibility towards creatures is an abomination. According to its gravity, it is an offence against that divine wisdom which sustains and gives purpose to the interdependent harmony of the universe.

In his personalized relationship with all creatures, St. Francis recognized his duty to reciprocate divine love, with love and praise, not only in the name of creatures, but in, with and through them. For St. Francis, work was a God-given grace to be exercised in that spirit of faith and devotion to which every temporal consideration must be subordinate. All human effort in the world must therefore lead to a mutual enrichment of man and creatures.

— *The Christian Declaration on Nature: Father Langfranco Serrini, Minister General, OFM Conv., Assisi 1986.*

CREATION OF ALL THINGS BY GOD'S WORD

The opening of the Gospel of John presents the cosmic Christ as the Word.

In the beginning was the Word, and the Word was with God and the Word was God. He was in the beginning with God. All things came into being through him, and without him not one thing came into being. What has come into being was life, and the life was the light of all people.

The same divine Word that gives light and life to all has been united with the material world when "the Word became flesh" in the person of Jesus of Nazareth.

And the Word became flesh and lived among us and we have seen his glory, the glory as of a father's only son, full of grace and truth.

John 1.1-5, 14

REDEMPTION WILL BE OF ALL CREATION

We know that the whole creation has been groaning in labor pains until now.

Romans 8.22

THE EUCHARIST OR HOLY COMMUNION

The central sacrament of Christianity makes God present in bread and wine, things of Earth.

Blessed are You, Lord God of all creation, for through Your goodness we have received the bread we offer you: fruit of the earth and work of human hands, it will become for us the bread of life.

— The Roman Missal: English Translation According to the Third Typical Edition for use in the Dioceses of the United States, p. 529.

This reflects an understanding of all creation as sacrament: God's Presence in the material world.

The Eucharist joins heaven and earth; it embraces and penetrates all creation.

— Pope Francis, *Laudato Si'* (236)



Blessed Hildegard von Bingen.
Image by Zvonimir Atletic/shutterstock.com.

SISTER OF WISDOM

St. Hildegard of Bingen was a Benedictine abbess, theologian, composer, and artist who lived in the 12th century. She was both canonized and declared a Doctor of the Church in 2012. A mystic whose visions and theology were one, she often illustrated her visions and composed songs.

God speaks as The Holy Spirit

I, the fiery life of divine essence, am aflame beyond the beauty of the meadows, I gleam in the waters, and I burn in the sun, moon, and stars. With every breeze, as with invisible life that contains everything, I awaken everything to life...I remain hidden in every kind of reality as a fiery power. Everything burns because of me in the way our breath constantly moves us, like the wind-tossed flame in a fire.

— Hildegard of Bingen's *Book of Divine Works*,
with *Letters and Songs*, pp. 9-10.

Hildegard praises the Holy Spirit

O Fire of the Spirit, the Comforter,
life of the life of all creation,
holy are You, giving life to the Forms...
O mighty course that penetrated all,
in the heights, upon the earth,
and in all abysses...
From you clouds overflow, winds take wing,
stones store up moisture,
waters well forth in streams –
and earth swells with living green.

— Barbara Newman, Hildegard of Bingen, *Symphonia: A Critical Edition*
of the *Symphonia armonie celestium revelationum*, 2nd ed., p. 151.

CANTICLE OF THE CREATURES

Most High, all-powerful, good Lord,
Yours are the praises, the glory, and the honor, and all blessing,

To You alone, Most High, do they belong.
and no human is worthy to mention Your name.

Praised be You, my Lord, with all Your creatures,
especially Sir Brother Sun,
Who is the day and through whom You give us light.

And he is beautiful and radiant with great splendor;
and bears the likeness of You, Most High One.

Praised be You, my Lord, through Sister Moon and the stars,
in heaven You formed them clear and precious and beautiful.

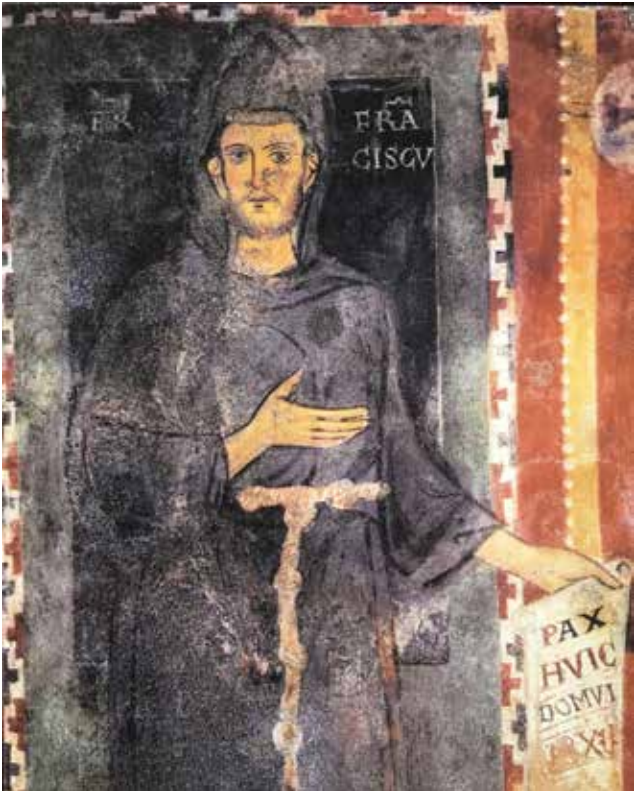
Praised be You, my Lord, through Brother Wind,
and through the air, cloudy and serene, and every kind of weather,
through whom You give sustenance to Your creatures.

Praised be You, my Lord, through Sister Water,
who is very useful and humble and precious and chaste.

Praised be You, my Lord, through Brother Fire,
through whom You light the night,
and he is beautiful and playful and robust and strong.

Praised be You, my Lord, through our Sister Mother Earth,
who sustains and governs us, and who produces various fruit with
colored flowers and herbs.

—St. Francis of Assisi, "Canticle of the Creatures,"
in Francis of Assisi: Early Documents, Vol. 1, pp. 113-114.



Courtesy of RedwoodsMonastery.org.

LAUDATO SI'

The encyclical of Pope Francis, Laudato Si - On Care for Our Common Home has been a turning point in public awareness and discussion of the crisis of Earth, the home we all share. It was promulgated on May 24, 2015 and takes its title from the opening words of "The Canticle of the Creatures" of St. Francis. Broad in scope and searchingly analytical, the encyclical covers ecology, economics, politics, education, theology, and spirituality. Proposing the perspective that the Pope calls "integral ecology," Laudato Si' affirms that concern for the natural world and for social justice are indivisible, rigorously critiques contemporary society, and calls for a conversion to ecological ways of knowing and living. The encyclical has been a milestone in establishing that the environmental crisis, including climate change, is an ethical and spiritual issue. Research (Meyers, et al.) suggests that since it was published, public perception of climate change as a moral issue has increased significantly and more people have been motivated to take action.

From Laudato Si'

Faced as we are with global environmental deterioration, I wish to address every person living on this planet. (3)

The urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development, for we know that things can change. (13)

We have to realize that a true ecological approach always becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear both the cry of the earth and the cry of the poor. (49)

It cannot be emphasized enough how everything is interconnected... We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature. (138-139)

The majority of people living on our planet profess to be believers. This should spur religions to dialogue among themselves for the sake of protecting nature, defending the poor, and building networks of respect and fraternity. (201)

What kind of world do we want to leave to those who come after us, to children who are now growing up? (160)

Laudato Si' is available to read online and download at <https://laudatosi.com/watch>. A list of resources for the study of Laudato Si', along with selected media coverage and other materials can be found at the website of the Yale Forum on Religion and Ecology: <http://fore.yale.edu/laudato-si-resources>.



Photo by Ashwin Vasvani.

A PRAYER FOR OUR EARTH

All-powerful God, you are present in the whole universe and in the smallest of your creatures. You embrace with your tenderness all that exists. Pour out upon us the power of your love, that we may protect life and beauty. Fill us with peace, that we may live as brothers and sisters, harming no one. O God of the poor, help us to rescue the abandoned and forgotten of this earth, so precious in your eyes. Bring healing to our lives, that we may protect the world and not prey on it, that we may sow beauty, not pollution and destruction. Touch the hearts of those who look only for gain at the expense of the poor and the earth. Teach us to discover the worth of each thing, to be filled with awe and contemplation, to recognize that we are profoundly united with every creature as we journey towards your infinite light. We thank you for being with us each day. Encourage us, we pray, in our struggle for justice, love, and peace.

— Pope Francis, *Laudato Si'* (247)

THE GREEN PATRIARCH

Known for decades as “The Green Patriarch,” His All-Holiness the Ecumenical Patriarch Bartholomew likes to emphasize that the environment is primarily a religious and spiritual issue, not only a political or technological one. He relates the environment to the familiar icons that decorate Orthodox churches. Creation itself is like an icon, just as the human person is created “in the image and likeness of God” (Gen. 1.26 and Col. 1.15). The Patriarch invites people to contemplate the Creator God through the icon of the created world (Col. 1.16-18). He refers to human beings as endowed by God to serve as “priests,” stressing that personal responsibility for the physical world and the slightest action of even the feeblest among us can change the world for the better.

— The Reverend Archdeacon John Chryssavgis, *Theological Advisor on Environmental Issues* (<https://www.patriarchate.org/the-green-patriarch>)

ECOLOGICAL SIN

To commit a crime against the natural world is a sin. For human beings to cause species to become extinct and to destroy the biological diversity of God’s creation; for human beings to degrade the integrity of the earth by causing changes in its climate, by stripping the earth of its natural forests, or by destroying its wetlands; for human beings to injure other human beings with disease by contaminating the earth’s waters, its land, its air, and its life, with poisonous substances — all of these are sins.

— His All-Holiness the Ecumenical Patriarch Bartholomew



Photo by Nikolaos Manginas.

A JOINT MESSAGE

The human environment and natural environment are deteriorating together, and this deterioration of the planet weighs upon the most vulnerable of its people. The impact of climate change affects, first and foremost, those who live in poverty in every corner of the globe. Our obligation to use the earth’s goods responsibly implies the recognition of and respect for all people and all living creatures. The urgent call and challenge to care for creation are an invitation for all of humanity to work toward sustainable and integral development...

On this occasion, we wish to offer thanks to the loving Creator for the noble gift of creation and to pledge commitment to its care and preservation for the sake of future generations. After all, we know that we labor in vain if the Lord is not by our side (cf. Ps. 126-127), if prayer is not at the center of our reflection and celebration. Indeed, an objective of our prayer is to change the way we perceive the world in order to change the way we relate to the world. The goal of our promise is to be courageous in embracing greater simplicity and solidarity in our lives...

We urgently appeal to those in positions of social and economic, as well as political and cultural, responsibility to hear the cry of the earth and to attend to the needs of the marginalized, but above all to respond to the plea of millions and support the consensus of the world for the healing of our wounded creation. We are convinced that there can be no sincere and enduring resolution to the challenge of the ecological crisis and climate change unless the response is concerted and collective, unless the responsibility is shared and accountable, unless we give priority to solidarity and service...

— Pope Francis and Patriarch Bartholomew, from the *Joint Statement on the World Day of Prayer for Creation, September 1, 2017*

Christians are called “to accept the world as a sacrament of communion, as a way of sharing with God and our neighbors on a global scale. It is our humble conviction that the divine and the human meet in the slightest detail in the seamless garment of God’s creation, in the last speck of dust of our planet.”

— Ecumenical Patriarch Bartholomew, as quoted by Pope Francis in *Laudato Si* (9)



Photo by Courtney Mooney. www.courtneymooney.com

The Ten Green Commandments of *Laudato Si'*

Using the “See, Judge, Act” method of discernment...

Seeing

- 1. Earth, our common home, is in peril. Take care of it.
- 2. Listen to the cry of the poor who are the disproportionate victims of the crisis of our common home.

Judging

- 3. Rediscover a theological vision of the natural world as good news (gospel).
- 4. Recognize that the abuse of creation is ecological sin.
- 5. Acknowledge the human roots of the crisis of our common home.

Acting

- 6. Develop an integral ecology as we are all interrelated and interdependent.
- 7. Learn a new way of dwelling in our common home and manage it more responsibly through a new economics and a new political culture.
- 8. Educate toward ecological citizenship through change of lifestyles.
- 9. Embrace an ecological spirituality that leads to communion with all of God’s creatures.
- 10. Care for our common home by cultivating the ecological virtues of praise, gratitude, care, justice, work, sobriety, and humility.

—Fr. Joshtrom Isaac Kureethadam, *The Ten Green Commandments of Laudato Si'*



Creation of the Cosmos, Land, Water, and Plants, Orthodox Christian Icon, by the hand of Rev. Father Luke Dingman (lukedingman.com).

ICON OF CREATION OF THE COSMOS

Orthodox icons teach the theology of Christianity through images of the Gospel and the saints.

Let the waters bring forth swarms of living creatures, and let the birds fly over the earth... —Genesis 1:20-21

**THE WORLD EVANGELICAL ALLIANCE:
Statement on Creation Care**

Established in 1846, the World Evangelical Alliance (WEA) is a network of national evangelical church alliances in 129 countries and over 100 international evangelical organizations. The WEA provides a worldwide identity, voice, and platform to more than 600 million evangelical Christians. At the 2008 WEA General Assembly in Thailand, the globally gathered evangelical community ratified the WEA Statement on the Care of Creation (<https://www.weacreationcare.org/wea-statements-on-creation-care>). The statement represents the WEA’s core beliefs about creation care. It concludes:

We recall Jesus’ words that our lives do not consist in the abundance of our possessions, and therefore we urge followers of Jesus to resist the allure of wastefulness and overconsumption by making personal lifestyle choices that express humility, forbearance, self-restraint, and frugality, and stand alongside all who suffer as a result of environmental degradation.

In Christ, the presence of the kingdom of God is marked not only by renewed fellowship with God, but also by renewed harmony and justice between people and the rest of the created world.

Therefore we call upon all Christians to reaffirm that all creation is God’s, that God created it good, and that God is renewing it in Christ.

We also call upon Christians to listen to and work with all those who are concerned about the healing of creation with an eagerness both to learn from them and also to share with them our conviction that the God whom all people sense in creation is known fully only in the Word made flesh in Christ the living God who made and sustains all things...

— World Evangelical Alliance Sustainability Center, Bonn, Germany

**WORLD COUNCIL OF CHURCHES
GENERAL SECRETARY:
From the Pastoral Letter on the Climate
Emergency**

Let us redouble our efforts to make a meaningful contribution to averting the most catastrophic consequences of further inaction and negative actions by governments. Let us join in confronting this global crisis through concerted advocacy for climate change mitigation and adaptation, zero fossil fuel use, and a “just transition.”

Let us press relentlessly for public officials and governments and business to keep faith with the people and their future. Let us advocate with our national governments to pursue the goals for addressing climate losses and damages, mobilizing sufficient and additional finances, and radically reducing emissions to keep global warming to 1.5 C.

Wealthy nations — as well as the new and emerging carbon emitters — need to pave the way to provide financial support in solidarity with vulnerable communities around the world facing loss and damage due to climate change. Countries that produce fossil fuel must develop plans for downscaling this pillar of their economy and proactively change their focus to global sustainability and renewable energy.

Nations and international agencies, we need you to step outside your transient comfort zones, to transform policies, take responsibility, and act against the unbridled consumption pattern that is destroying our planet. Sea level rise, greenhouse gases, hurricanes, cyclones, and droughts cannot be stopped at national borders. Destruction of ecosystems and dispossession and displacement of Indigenous Peoples sap the very life out of our one living planet.

As individual Christians, let us pray for our planet and each other, critically interrogating our own lifestyles and economies to discern what is most needed in our families, communities, and local contexts, and then committing with others to addressing them head-on. As people of faith and goodwill, let us unite across religious traditions and divides to nurture and protect creation for all living creatures today and for generations to come.

— Rev. Olav Fykse Tveit, General Secretary, World Council of Churches
(December 19, 2019)



Photo by Daniel Mingook Kim.



Genesis Farm, in Blairstown, New Jersey.
© Angela Evancie. Courtesy of Kosmos Journal.

SISTERS OF EARTH NETWORK

Many communities of vowed Catholic religious women or nuns have committed themselves to a way of life based on ecological spirituality, eco-justice, and sustainability, answering “the call of the Earth.” Since the early 1980s, this movement of “green sisters” congregations — including Dominicans, Franciscans, Benedictines, and many others — have turned their communal lands and properties into centers for “Earth literacy,” sustainability, conservation, and environmental advocacy.

Today there are more than 50 such centers in the United States and Canada, with others in Europe, Latin America, Australia, New Zealand, the Philippines, and elsewhere. They emphasize preservation and restoration of farmland and open space; the importance of providing “sanctuary” for diverse species, including heirloom seeds and educational programs in organic agriculture; avoiding

harm to nature in general; and living in sustainable relationship with “the Earth community.”

Many of these green sisters are informed by the ideas of Thomas Berry and see their work in the context of Earth within the journey of the universe. They create liturgy, art, and meditations to express and contemplate this vision. They renew and expand the ancient vocation of monastic life by taking routine daily actions as spiritual disciplines — saving water, not using toxic substances, choosing food that is not harmful when produced or eaten, composting, and recycling. The green sisters’ centers also work with their neighbors, involving them in community-supported gardens and farming, education, and spiritual resources, including retreats. The global Sisters of Earth network holds a gathering every two years (<https://www.sisters-of-earth.net>).



The Sultanahmet Mosque, Istanbul, Turkey. Photo by Fatih Yürür.

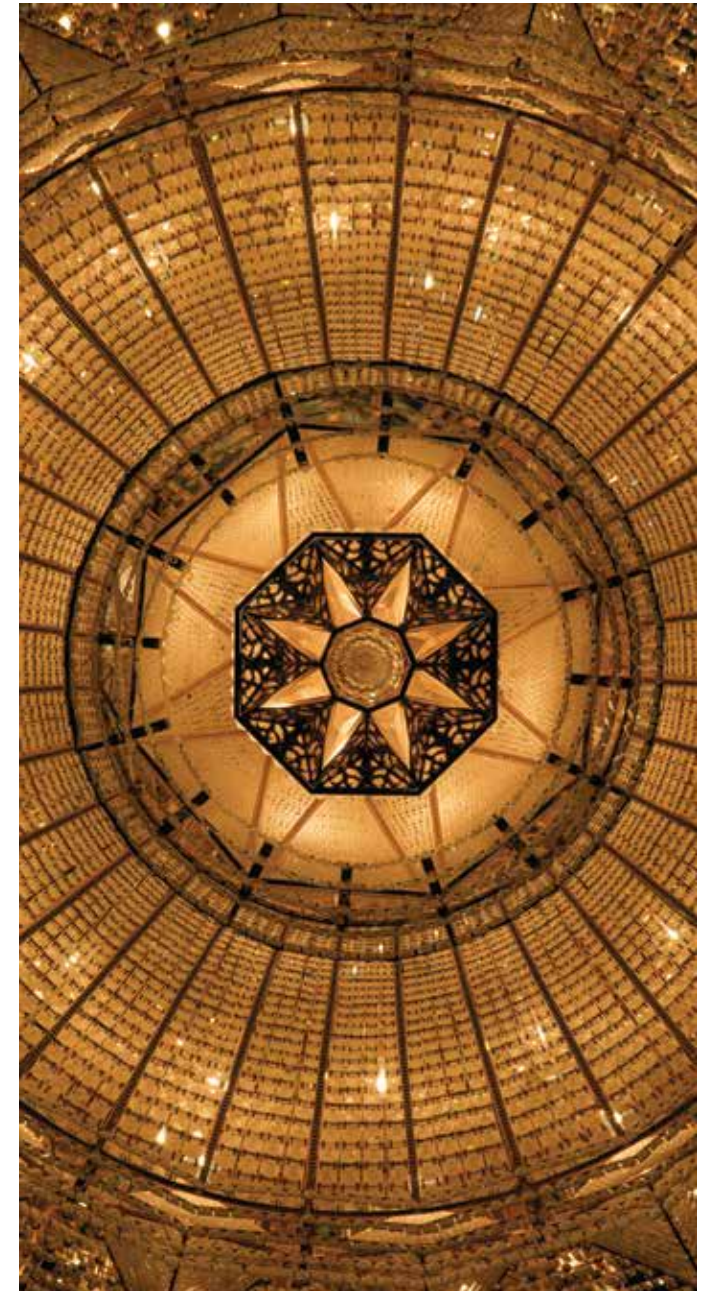
ISLAM

Unity, trusteeship, and accountability, that is *tawheed*, *khali-fa*, and *akhrah*, the three central concepts of Islam, are also the pillars of the environmental ethics of Islam. They constitute the basic values taught by the Qur'an. It is these values which led Muhammad, the Prophet of Islam, to say, "Whoever plants a tree and diligently looks after it until it matures and bears fruit is rewarded," and "If a Muslim plants a tree or sows a field and men and beasts and birds eat from it, all of it is charity on his part," and again, "The world is green and beautiful and God has appointed you stewards over it." Environmental consciousness is born when such values are adopted and become an intrinsic part of our mental and physical makeup.

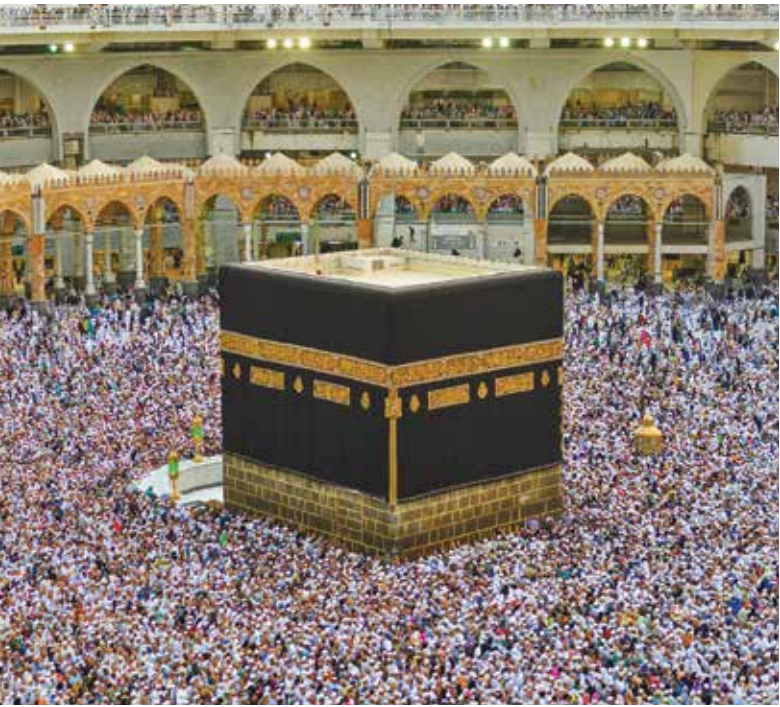
The notions of unity, trusteeship, and accountability should not be reduced to matters of personal piety; they must guide all aspects of life and work... They furnish us with a worldview which enables us to ask... what we can do within the ethical boundaries established by God, without violating the rights of His other creations. If we use the same values, the same understanding in our work as a scientist and technologist, economist or politician as we do to know ourselves as Muslims – those who subject themselves to the Will of God – then, I believe, we will create a true Islamic alternative, a caring and practical way of being, doing, and knowing, to the environmentally destructive thoughts and actions which dominate the world today.

— *The Muslim Declaration on Nature: Dr. Abdullah Omar Nasseef, Secretary General, Muslim World League, Assisi 1986.*

The Qur'an is the primary revelation in Islam, held to be the direct Word of God given to the Prophet Muhammad. The Qur'an affirms that God is the one Creator and Sovereign of the universe, has willed its right order and balance, and that all beings (not only humans) praise and glorify God. God has entrusted the care and guardianship of Earth, Khulafa, to human beings to be good stewards caring for God's creation, which we must not damage or waste.



Sultan Qaboos Grand Mosque. Photo by Mostafa Meraji.



The Kaaba at the Grand Mosque in Mecca, Saudi Arabia.
Photo by Adli Wahid.

WORDS OF THE QUR'AN

In the name of God, the Gracious, the Merciful.

55.1. The Compassionate.

55.2. Has taught the Qur'an.

55.3. He created man.

55.4. And taught him clear expression.

55.5. The sun and the moon move according to plan.

55.6. And the stars and the trees prostrate themselves.

55.7. And the sky, He raised; and He set up the balance.

55.9. But maintain the weights with justice, and do not violate

55.10. And the Earth; He set up for the creatures.

55.11. In it are fruits, and palms in clusters.

55.12. And grains in the blades, and fragrant plants.

55.13. So which of your Lord's marvels will you deny?

2.116. ...His is everything in the heavens and the Earth; all are obedient to Him.

2.117. Originator of the heavens and the Earth. Whenever He decrees a thing, He says to it, "Be," and it becomes.

14.32. God is He Who created the heavens and the Earth, and sends down water from the sky, and with it produces fruits for your sustenance. And He committed the ships to your service, sailing through the sea by His command, and He committed the rivers to your service.

14.33. And He committed the sun and the moon to your service, both continuously pursuing their courses, and He committed the night and the day to your service.

6.38. There is no animal on land, nor a bird flying with its wings, but are communities like you.

22.18. Do you not realize that to God prostrates everyone in the heavens and everyone on Earth, and the sun, and the moon, and the stars, and the mountains, and the trees, and the animals, and many of the people.

24.41. Do you not realize that God is glorified by whatever is in the heavens and the Earth, and even by the birds in formation? Each knows its prayer and its manner of praise. God knows well what they do.

24.42. To God belongs the dominion of the heavens and the Earth, and to God is the ultimate return.

24.43. Have you not seen how God propels the clouds, then brings them together, then piles them into a heap, and you see rain drops emerging from its midst? How He brings down loads of hail from the sky, striking with it whomever He wills, and diverting it from whomever He wills? The flash of its lighting almost snatches the sight away.

24.44. God alternates the night and the day. In that is a lesson for those who have insight.

24.45. God created every living creature from water. Some of them crawl on their bellies, and some walk on two feet, and others walk on four. God creates whatever He wills. God is Capable of everything.

6.165. It is He who made you guardians on the Earth, and raised some of you in ranks over others, in order to test you through what He has given you. Your Lord is Quick in retribution, and He is Forgiving and Merciful.

33.72. We offered the Trust to the heavens, and the Earth, and the mountains; but they refused to bear it, and were apprehensive of it; but the human being accepted it.

30.41. Corruption has appeared on land and sea, because of what people's hands have earned, in order to make them taste some of what they have done, so that they might return.

7.31. O Children of Adam! ... eat and drink, but do not be excessive. He does not love the excessive.

25.63. The servants of the Merciful are those who walk the earth in humility, and when the ignorant address them, they say, "Peace."

— All selections from Qur'an in English, translated by Talal Itani, available in multiple formats.



Dubai, United Arab Emirates. Photo by Levi Clancy.

FROM THE HADITH

The Messenger of Allah (may peace be upon him) said: ...
“The whole earth has been made a mosque for us...”
—Sahih Muslim 522a; Book 5, Hadith 5, USC-MSA web (English reference, Book 4, Hadith, deprecated numbering scheme).

Allah's Messenger (pbuh) said, “There is none amongst the Muslims who plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him.”
— Sahih al-Bukhari 2320; Book 41, Hadith 1; USC-MSA web (English reference, Vol. 3, Book 39, Hadith 513, deprecated numbering scheme).

Allah's Messenger (pbuh) said, “While a man was walking, he felt thirsty and went down a well and drank water from it. On coming out of it, he saw a dog panting and eating mud because of excessive thirst. The man said ‘This (dog) is suffering from the same problem as that of mine.’ So he (went down the well), filled his shoe with water, caught hold of it with his teeth and climbed up and watered the dog. Allah thanked him for his good deed and forgave him.” The people asked, “O Allah's Messenger! Is there a reward for us in serving animals?” He replied, “Yes, there is a reward for serving any animal.”
— Sahih al-Bukhari 2363; Book 42, Hadith 11; USC-MSA web (English reference, Vol. 3, Book 40, Hadith 551, deprecated numbering scheme).

Collections of Hadith are available at <https://sunnah.com>.

KNOWLEDGE OF CREATION

The Qur'an lays down the foundations for the conduct of our affairs in creation. At one level it is about conserving the body and soul and the marking out of our relationships with the natural order; at another level it is about the communities of beings that fly and crawl and lope and swim; and at yet another level it is about the cosmos, the elements, forests, mountains, and rivers. The body of teaching in the Qur'an that deals with these matters may be described as Ilm ul Khalq (Knowledge of Creation), which predates the science of ecology by fourteen centuries.
— Fazlun Khalid, Qur'an: Creation and Conservation, Introduction.

THE QUR'AN ADDRESSES THE WHOLE COSMOS

The Islamic view of nature and the environment, as everything else that is Islamic, has its roots in the Qur'an, the very Word of God, which is the central theophany of Islam... the Qur'an addresses not only men and women, but the whole of the cosmos. In a sense, nature participates in the Qur'anic revelation. Certain verses of the Qur'an address natural forms as well as human beings, while God takes nonhuman members of His creation, such as plants and animals, the sun and stars, to witness in certain other verses. The Qur'an does not draw a clear line of demarcation between the natural and the supernatural, nor between the world of man and that of nature. The soul, which is nourished and sustained by the Qur'an, does not regard the world of nature as its natural enemy to be conquered and subdued, but as an integral part of its religious universe sharing in its earthly life and in a sense even its ultimate destiny.

— Seyyed Hossein Nasr in Spirit and Nature: Why the Environment Is a Religious Issue, p. 88.



Wind turbines near Rothenburg, Germany. Photo by Dimitry Anikin.

Statement on Fossil Fuel Divestment by the Fiqh Council of North America

The Fiqh Council of North America (FCNA) is a body of recognized and qualified Islamic scholars from the United States and Canada. The mission of FCNA is to provide guidance to the Muslims of North America in all matters related to Islamic law. This statement was adopted by members of FCNA on September 10, 2019, during the annual gathering of the Islamic Society of North America (ISNA) in Houston, Texas, and subsequently presented at Financing the Future: The Global Climate Divest-Invest Summit, September 10-11, 2019, in Cape Town, South Africa. The entire statement is available at: <https://financingthefuture.global/statement-of-fiqh-council-of-north-america-on-fossil-fuel-divestment>.

We acknowledge that there is an urgent existential threat to the health, wellbeing, and continuity of life on Earth... The time to effectively respond with individual and collective actions to environmental challenges is extremely limited. Therefore, we call on all human beings; individuals, families, communities, scholars, religious and other institutions, and governments, to urgently respond in a wise and unified and coordinated manner to the challenge of changing our individual behaviors and life style choices to ones which seek to conserve, not waste, the divine gifts of life sustaining resources; to use, not abuse, these divine gifts...

At a fundamental level, this means that we must reduce our energy consumption in three primary areas that can make the greatest impact: 1) dramatically reduce emissions from our home energy use, 2) adopt a more plant-based diet and reduce food waste, and 3) minimize automobile and air travel. While these life style changes are necessary, they may not be enough to stop and reverse the effects of global warming and climate change.

We affirm that it is the overwhelming consensus of climate scientists that this clear and present danger is caused by the continued burning of fossil fuels. To go beyond the 1.5-degree limit will endanger all human civilization and planetary life... Clear, consistent, coordinated, and effective action is essential. We therefore call upon all fellow humans to urgently invest, as much as possible, in renewable and clean energy sources and solutions [the green economy].

From an Islamic perspective, the supreme objectives [Maqaasid] of Islamic Shari'ah are: to protect faith, freedom of belief and worship for all [2:256; 18:29; 22:40], sanctity of human life [5:32; 17:33], reason, progeny, and private property. Failure to deal with the environmental dangers undermines those key objectives including life itself...

We affirm that means exist to transform the entire energy systems in the U. S. and in Canada into fully renewable energy systems. Functioning examples already exist. We call on all to effectively contribute to the development, establishment, and support of these systems. We acknowledge the need to contribute to the re-sequestration of carbon through the urgent development of tree planting projects through civic initiatives in the U. S., Canada, and beyond. We also encourage Muslims to participate in as many tree planting projects as possible with other persons of faith and civic organizations.

We call for a shift to clean renewable energy-based electric transport systems in Canada and the U. S. and beyond. We call upon Islamic investment houses and other investment fund administrators and managers to immediately develop fossil free investment vehicles and portfolios that include investments in renewable and clean energy companies. We stand ready to assist and advise in this process. In the end, Allah knows best.

The Global Climate Divest-Invest Summit

10-11 September 2019



Courtesy of greenramadan.com.

GREEN RAMADAN

Many Muslims around the world have joined the "Green Ramadan" campaign. During the holy month of Ramadan, Muslims fast during the hours of daylight. Overall it is a time of intensified prayer and spirituality. The practices of "Green Ramadan" include conserving food at Iftar, the evening meal of fast-breaking, adopting a Prophetic diet, more of a plant-based diet, and giving excess food to people in need; using biodegradable paper products for Iftar and not foam cups and plates; encouraging the use of reusable water bottles; recycling all materials, especially plastic water bottles; replacing all light bulbs with energy-saver bulbs and thus conserving electricity, and giving a khutbah/bayyan – a sermon or address – on the Islamic imperative to conserve and protect our environment. For more information, see <http://greenramadan.com> and <http://isna.net/greenramadan/>.



Zoroastrianism

In Zoroastrianism, Ahura Mazda is seen as the first cause of all things Good in the universe. The universe in turn is set in accord with the concept of Asha, an ordered Truth, governed by Righteousness. In the Gathas, Zarathushtra’s sacred hymns, Ahura Mazda is seen as the Father of Asha, who has established the course of the sun, moon, and stars and upheld the earth and heavens. It is He who sustains the waters, the plants, the winds, and the clouds. He is the Creator of Light, Life, and Righteousness.

The role of mankind in the world is to serve and honor not just the Wise Lord but the Seven Bounteous Creations of the sky, water, earth, plants, animals, man, and fire—gifts of God on High to mankind on earth. In helping to bring about a state of perfection in this world and in the Seven Creations, Zarathushtra enjoined his followers to tread an ethical and righteous path.

This is only possible if one shows responsibility toward the Wise Lord’s creations. Those who perpetrate pollution and cause the defilement of all that is natural and good in the world are antithetical to the creations and to the Wise Lord Himself, as the physical world is made for the benefit of all who exist and live in the world. They must keep the Wise Lord’s world pure (pak) while living life to the fullest and participating in the goodness of the Seven Creations.

— Zoroastrian Faith Statement: Prepared by the Athravan Education Trust and Zoroastrian Studies, the two main academic bodies responsible to the Zoroastrian faith for theological developments and study. (See Palmer and Findlay, Faith in Conservation).

Zoroastrianism was founded by the Prophet Zarathushtra, who lived around 1,000-1,200 B.C.E. The religion developed in the region that is today’s Iran and Afghanistan. Zarathushtra’s inspired words in his Gāthas (songs) are the earliest part of the Avesta, the Zoroastrian sacred writings. Zoroastrians worship one supreme God, Ahura Mazda or “Wise Lord,” who is the Creator of the universe and Author of its right order, the Asha or Divine Plan, based on truth and righteousness.

ZARATHUSHTRA SPEAKS: The Wise Lord creates and orders Nature

This I ask Thee, tell me truly, Ahura. Who is by generation the Father of Right, at the first? Who determined the path of sun and stars? Who is it by whom the moon waxes and wanes again? This, O Mazda, and yet more, I am fain to know.

This I ask Thee, tell me truly, Ahura. Who upholds the Earth beneath and the firmament from falling? Who the waters and the plants? Who yoked swiftness to winds and clouds? Who is, O Mazda, creator of Good Thought?

This I ask Thee, tell me truly, Ahura. What artist made light and darkness? What artist made sleep and waking? Who made morning, noon, and night, that call the understanding man to his duty?

— Gāthas, Yasna 44.3-5



Zoroastrian Eternal Flame at the Fire Temple in Yazd, Central Iran. Photo by Adam Jones.

The Faith of All

Of what faith are the waters,
Of what faith the trees,
Of what faith the bounteous Mother Earth,
Of what faith Ahura Mazda,
Of what faith was Zarathushtra,
Of that faith and of that Law as well,
A Mazda-worshipper am I.

— Yasna 12.7

Worship for the Benefit of All

I announce and carry out this Yasna [worship] for these places and these lands, and for these pastures, and these abodes with their springs of water and for the waters, land, and plants, and for this Earth and for yonder heaven, and for the Asha-sanctified wind, and for the stars, moon, and sun, and for the eternal stars, without beginning and self-disposing. And for all the Asha-sanctified creatures of Spenta Mainyu [the creative Spirit], male and female, the regulators of Asha.

— Yasna 1.16

Seven great spiritual entities, the “Holy Immortals” or Amesha Spentas, manifest the divine attributes of Ahura Mazda: “Good Mind,” “Divine Law,” “Divine Kingdom,” “Holy Devotion,” “Perfection,” “Wholesomeness,” and “Immortality.” They also are the guardians of the seven aspects of material creation: sky, water, earth, plants, animals, humans, and fire. It is the task of humans to respect and care for the Seven Bounteous Creations and to work against evil forces which oppose right order, and in so doing to bring the world back to its original state of harmony. Thus Zoroastrianism requires humans to protect the environment; to avoid harm, pollution, and waste; and to restore what has been damaged.

Whoever teaches care for all these seven creations does well and pleases the Bounteous Immortals; then his soul will never arrive at kinship with the Hostile Spirit.

When he has cared for the creations, the care of these Bounteous Immortals is for him, and he must teach this to all humanity in the material world.

— Shayasht ne Shayast 15:6

NATURE IS ANIMATE

To a Zoroastrian, the ostensibly “inert” world is full of life, which is sanctified as it is imbued with the fravashi, “the transcendental divine essence.” All creatures, as well as plants, possess the fravashi. Nature is seen as not only having its intrinsic value, but is perceived as being sacred. All forms of life have a right to live and grow in the biosphere. Our concern for nature is not confined to only plants and vegetation; it respects all creatures. In one of the Afrins a Zoroastrian recites, “I pray for the good of the life of all the living creatures which Ahura Mazda has created.”*

The devout Zoroastrian regards the elements of nature with the most profound reverence. The Avestan texts clearly reflect this veneration for the earth, the air, the waters, and even plant life. In his daily prayers he is reminded of the beauty and majesty of nature, and from nature he turns to nature’s God.

— Homi Dhalla, in “The Zoroastrian View of Ecology,”
Third International Congress Proceedings, K. R. Cama Oriental
Institute, Mumbai, January 6-9, 2000.

*Afrin-i-ha Amesha Spandan, 16.

Passages from the Avesta and other Zoroastrian sacred literature can be found at Avesta-Zoroastrian Archives (www.avesta.org).

Dandenong Ranges, Mount Dandenong VIC, Australia. Photo by Pat Whelan.

The Bahá'í Faith



Santiago Bahá'í Temple in Chile. Courtesy of Bahá'í World News Service.

Nature in its essence is the embodiment of My Name, the Maker, the Creator. Its manifestations are diversified by varying causes, and in this diversity there are signs for men of discernment. Nature is God's Will and is its expression in and through the contingent world. It is a dispensation of Providence ordained by the Ordainer, the All-Wise."

With those words, Bahá'u'lláh, Prophet-Founder of the Bahá'í Faith, outlines the essential relationship between man and the environment: that the grandeur and diversity of the natural world are purposeful reflections of the majesty and bounty of God. For Bahá'ís, there follows an implicit understanding that nature is to be respected and protected, as a divine trust for which we are answerable.

A century ago, Bahá'u'lláh proclaimed that humanity has entered a new age. Promised by all the religious Messengers of the past, this new epoch will ultimately bring peace and enlightenment for humanity. To reach that point, however,

humankind must first recognize its fundamental unity as well as the unity of God and of religion. Until there is a general recognition of this wholeness and interdependence, humanity's problems will only worsen.

"The wellbeing of mankind, its peace and security, are unattainable unless and until its unity is firmly established," Bahá'u'lláh wrote. "The earth is but one country, and mankind its citizens."

For Bahá'ís the goal of existence is to carry forward an ever-advancing civilization. Such a civilization can only be built on an earth that can sustain itself. The Bahá'í commitment to the environment is fundamental to our Faith.

— The Bahá'í Faith Statement on Nature: Presented in October 1987, when the Bahá'í Faith became the sixth religion to join the Network on Conservation and Religion.

The founder of the Bahá'í Faith, Bahá'u'lláh (1817-1892), is regarded by his followers as the most recent in the line of God's messengers that includes Abraham, Moses, the Buddha, Zoroaster, Jesus, and Muhammad. At the heart of Bahá'í belief is the conviction that humankind is a single people with a common destiny.

The earth is but one country, and mankind its citizens.
— Tablets of Bahá'u'lláh revealed after the Kitáb-i-Aqdas, p. 167.

Blessed is the spot, and the house, and the place, and the city, and the heart, and the mountain, and the refuge, and the cave, and the valley, and the land, and the sea, and the island, and the meadow where mention of God hath been made, and His praise glorified.

— Bahá'í Prayers, title page.

Nature in its essence is the embodiment of My Name, the Maker, the Creator. Its manifestations are diversified by varying causes, and in this diversity there are signs for men of discernment. Nature is God's Will and is its expression in and through the contingent world. It is a dispensation of Providence ordained by the Ordainer, the All-Wise.

— Tablets of Bahá'u'lláh revealed after the Kitáb-i-Aqdas, p. 142.

By nature is meant those inherent properties and necessary relations derived from the realities of things. And these realities of things, though in the utmost diversity, are yet intimately connected one with the other.

— Bahá'í World Faith, p. 340.



Families in Bangui, Central African Republic, gather to commemorate the birth of the Báb. Courtesy of Bahá'í World News Service.

Liken the world of existence to the temple of man. All the limbs and organs of the human body assist each other; therefore life continues. Likewise, among the parts of existence there is a wonderful connection and interchange of forces, which is the cause of the life of the world and the continuation of these countless phenomena.

— 'Abdú'l-Bahá, Star of the West 6 (17), pp. 138-139 and Compilation on Social and Economic Development, no. 47.

Look not upon the creatures of God except with the eye of kindness and of mercy, for Our living providence hath pervaded all created things, and Our grace encompassed the earth and the heavens.

— Bahá'u'lláh, Gleanings from the Writings of Bahá'u'lláh, XIV, p. 33.



Photo by Kyle Glenn.

Hinduism



Morning on the Ganges River, Varanasi, India. Photo by Arindam Bangergee/shutterstock.com.

Not only in the Vedas, but in later scriptures such as the Upanishads, the Puranas, and subsequent texts, the Hindu viewpoint on nature has been clearly enunciated. It is permeated by a reverence for life, and an awareness that the great forces of nature — the earth, the sky, the air, the water and fire — as well as various orders of life including plants and trees, forests and animals are all bound to each other within the great rhythms of nature. The divine is not exterior to creation, but expresses itself through natural phenomena.

According to Vaishnava tradition, the evolution of life on this planet is symbolized by a series of divine incarnations beginning with fish, moving through the amphibious forms and mammals, and then on into human incarnations. This view clearly holds that man did not spring fully formed to dominate the lesser life forms, but rather evolved out of these forms, and is therefore integrally linked to the whole of creation.

The Hindu tradition of reverence for nature and all forms of life, vegetable or animal, represents a powerful tradition which needs to be re-nurtured and reapplied in our contemporary context.

Let us declare our determination to halt the present slide towards destruction, to rediscover the ancient tradition of reverence for all life and, even at this late hour, to reverse the suicidal course upon which we have embarked. Let us recall the ancient Hindu dictum – “The Earth is our mother, and we are all her children.”

— *The Hindu Declaration on Nature: Dr. Karan Singh, President, Hindu Virat Samaj, Assisi 1986.*

The Earth has enough for everyone’s needs but not for some people’s greed.

My ethics not only permit me to claim but require me to own kinship with not merely the ape, but the horse and the sheep, the lion and the leopard, the snake, and the scorpion.

—*Mohandas K. Gandhi*

GOVARDHAN ECOVILLAGE

Govardhan Ecovillage, in the hills of Maharashtra, about three hours drive north of Mumbai, is dedicated to ecological harmony based on spiritual principles in the ancient tradition of devotion to Krishna (bhakti yoga). It is an ashram, a retreat and conference center, and a facility for Ayurvedic holistic health. Its numerous environmental programs include sustainable energy, water conservation, organic farming, tree planting, and animal protection. Govardhan Ecovillage also works to support and develop the livelihood and education of Indigenous People in the surrounding area, developing a local circular economy and promoting the empowerment of girls and women. Govardhan Ecovillage was founded with the inspiration of Radhanath Swami, a spiritual leader of the International Society for Krishna Consciousness (ISKCON).

— <https://ecovillage.org.in>



Courtesy of Govardhan Ecovillage.

THE UNIVERSE IS A LIVING ORGANISM

The root scripture of Hinduism is the Vedas, meaning “sacred knowledge.” The universe, immeasurably vast, comes from a single divine Source and is animated and directed by countless powers known as devas or “gods.”

The completed universe is imaged as a living organism, a vast ecosystem, in which each part is inextricably related to the life of the whole. And the whole is indeed alive: it is in constant process and movement, growing and decaying. There is no such thing as objectified “nature” or lifeless “elements,” for everything belongs to the living pattern of the whole... These are the images of a biological worldview, grounded in the Vedas.

— *Diana Eck, “Ganga: The Goddess in Hindu Sacred Geography” in Devi: Goddesses of India, p. 141.*

PEACE TO ALL LIVING BEINGS

A famous Sanskrit prayer, the Śānti Mantra of the Yajur Veda (36:17) invokes the blessings of peace on the whole cosmos and all its living beings:

To the heavens be peace, to the sky and the earth,
To the waters be peace, to plants and all trees,
To the Gods be peace, to Brahman be peace,
To all men be peace, again and again —
peace also to me!

— *Yajur Veda 36:17, Raimundo Panikkar, The Vedic Experience: Mantramāñjarī, An Anthology of the Vedas for Modern Man and Contemporary Celebration, p. 306.*

TO THE WATERS, WHO ARE GODDESSES

They who have the ocean as their eldest flow out of the sea, purifying themselves, never resting. Indra, the bull with the thunderbolt, opened a way for them – let the waters, who are goddesses, help me here and now.

The waters of the sky or those that flow, those that are dug out or those that arise by themselves, those pure and clear waters that seek the ocean as their goal — let the waters, who are goddesses, help me here and now.

Those in whose midst King Varuna moves, looking down upon the truth and falsehood of people, those pure and clear waters that drip honey — let the waters, who are goddesses, help me here and now.

Those among whom King Varuna, and Soma, and all the gods drink in ecstasy the exhilarating nourishment, those into whom Agni Of-all-men entered — let the waters, who are goddesses, help me here and now.

— *Rig Veda 7.49, The Rig Veda, p. 232.*



Chamundeshwari Temple in the city of Mysore in Karnataka, India.
Photo by Akshat Vats.

THE HYMN TO THE EARTH

Truth, strength, artistry, ferocity, dedication, fervor, effulgence,
and sacrifice
Are the attributes among human beings that sustain the Earth.
Drawing upon Mother Earth's feminine power,
these attributes have been and continue to be all that will be
with us.
May the world Mother provide us with a wide and limitless
domain for our livelihood. (1)

The Earth is adorned with many hills, plains, and slopes.
She bears plants with medicinal properties.
May no person oppress her;
and may she spread prosperity for us all around. (2)

Upon her be the oceans, many rivers, and other bodies of
water.
Her agricultural fields produce grain.
All those that live, move, and breathe, depend upon the Earth;
may the Land confer upon us riches. (3)

O Earth,
Sacred are your hills, snowy mountains, and deep forests.
The soil of your Land is brown, black, and red.
Earth, you are protected by Indra.
May I stand on the Earth unconquered, unharmed, uncrushed.
May you be fertile, arable, and sustainer of all. (11)

O Mother Earth!
You are the world for us and we are your children.
Empower us to speak in one accord.
steer us to live in peace and harmony,
and guide us in our behavior
so that we have cordial and gracious relationships with other
people. (16)

O Mother Earth!
You care for people who belong to different races,
practice various religions and spiritual beliefs,
and speak different languages...
may you bless us all in a thousand-fold manner.
Please do not become outraged by our destructive tendencies.
(45)

O Primeval Mother!
You are the wish fulfilling cow.
You are borderless.
You are the world-mother of all beings.
You are the provider of all things in life. (61)

—*Selections from In Praise of Mother Earth:*
The Prthivi Sūkta of the Atharva Veda.

THE CHIPKO MOVEMENT

What do the forests bear?
Soil, water, and pure air.

— *Song of Women of the Chipko Movement*



Photo courtesy of *Waging Nonviolence*.

The Chipko movement grew out of Gandhian nonviolent social action or satyagraha, “truth-force.” After Indian independence, Mira Behn and Sarala Behn, English women who had been close co-workers of Mahatma Gandhi, settled in different areas of the Himalayas. As they worked for village development, they identified growing environmental problems. They were joined by Gandhian activists Sunderlal Bahuguna, Chandi Prasad Bhatt, and others who formed the Uttarakhand region Sarvodaya “upliftment of all” movement in the 1960s, applying the Gandhian principle of swadeshi, or “self-reliance.” Concern became acute about the effects of commercial logging by outside contractors and destruction of local livelihoods, cultures, and ecosystems. “Chipko” means to “cling to” or “hug.” Organized resistance grew and the first vigil to guard the trees took place in 1971.

The Chipko movement is noted for extensive participation by women

and women leaders such as Gaura Devi. In March 1974 Gaura Devi confronted loggers, saying “Brothers! This forest is the source of our livelihood. If you destroy it, the mountain will come tumbling down onto our village. This forest nurtures us like a mother; you will only be able to use your axes on it if you shoot me first.” Chipko women advocate for forests as self-renewing life-support systems rather than economic resources, fusing their practical expertise with scientific knowledge. As Bahuguna said, “Ecology is permanent economy.” Chipko workers also began reforestation projects. The movement spread through the Himalayan region and then to other parts of India, adapting its methods to other cultural and ecological contexts.

— *Vandana Shiva, Staying Alive: Women Ecology and Development*, pp. 67-82 and *Ecology and the Politics of Survival: Conflicts over Natural Resources in India, Ch. 4* and Pankaj Jain, *Dharma and Ecology of Hindu Communities: Sustenance and Sustainability, Ch. 4*.

NAVDANYA WORKING FOR EARTH DEMOCRACY

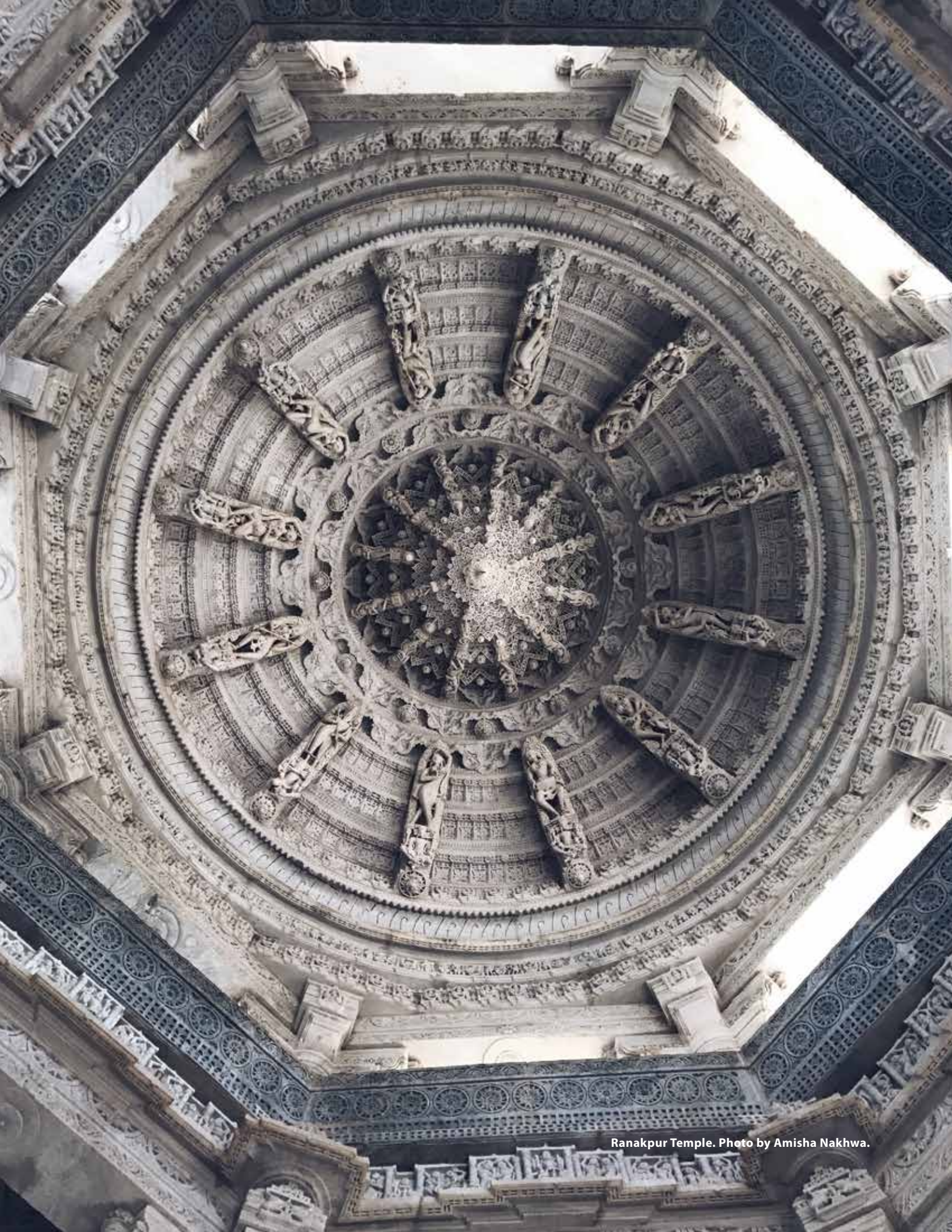
Grounded in Hindu principles upheld by science, Navdanya (“the gift of nine seeds”) promotes “nonviolent agriculture in harmony with nature and our fellow beings.” The organization supports seed preservation, soil health, and food sovereignty and opposes the commodification of nature, including genetic patenting.

The liberation of the Earth, the liberation of women, the liberation of all humanity is the next step of freedom we need to work for, and it's the next step of peace that we need to create.” Earth democracy is an alternative worldview in which humans are embedded in the Earth family; connected to each other through love and compassion, not hatred and violence, and ecological responsibility and economic justice replaces greed, consumerism, and competition as objectives of human life.

— *Vandana Shiva, founder, Research Foundation for Science, Technology and Ecology, <http://www.navdanya.org/site/>*



Courtesy of greensgrow.org.



Ranakpur Temple. Photo by Amisha Nakhwa.

The Jain Religion



Digamber Jain nuns at the Jain temple in Ajmer, Rajasthan, India. Photo by Daniel J. Rao/shutterstock.com.

The Jain ecological philosophy is virtually synonymous with the principle of ahimsa (nonviolence) which runs through the tradition like a golden thread.

Ahimsa is a principle that Jains teach and practice not only towards human beings but towards all nature. It is an unequivocal teaching that is at once ancient and contemporary.

There is nothing so small as the atom nor any element so vast as space. Similarly, there is no human quality more subtle than nonviolence and no virtue of spirit greater than reverence for life.

The teaching of ahimsa refers not only to physical acts of violence but also to violence in the hearts and minds of human beings, their lack of concern and compassion for their fellow humans and for the natural world. Ancient Jain texts explain that violence (himsa) is not defined by actual harm, for this may be unintentional. It is the intention to harm, the absence of compassion, that makes an action violent. Without violent thought there could be no violent actions.

Jain cosmology recognizes the fundamental natural phenomenon of symbiosis or mutual dependence. All aspects of nature belong together and are bound in a physical as well as metaphysical relationship. Life is viewed as a gift of togetherness, accommodation, and assistance in a universe teeming with interdependent constituents.

—The Jain Declaration on Nature: Dr. L. M. Singhvi, prepared for the Institute on Jainology and presented on the occasion of the entry of the Jain faith into the Network on Conservation and Religion, London 1990.

(See Palmer and Findlay, Faith in Conservation).

Ahimsā – “non-harming or nonviolence – is the central principle of the ancient Jain religion. It is the avoidance of violence in thought, word, and deed, not only to human beings but to all of nature. It sees life as pervading even the most tiny and microscopic forms and what may be deemed non-living by others. Nonviolence positively expressed is reverence for life with love, compassion, and empathy for all living beings at every step of daily life.

The Jain religion is the path of the Jinas or “Victors,” who showed the way to liberation from suffering and repeated rebirth determined by karma. According to Jain tradition, Mahāvīra, who lived in north India 2,500 years ago, was the 24th and most recent of the Jinas. The Jain religion is known not only for its teaching of nonviolence, but also for the asceticism of its monks and nuns, who observe rigorous disciplines. It was a strong influence on Gandhi, and today awareness of the Jain teaching of nonviolence and its implications for protecting nature is widespread.



Jains wear masks to fulfill their vows to never knowingly take the life of a sentient creature, no matter how small. Courtesy of Jainpedia.org.

THE HEART OF THE JAIN RELIGION: NONVIOLENCE

Ahimsa Parmo Dharma Nonviolence is the Supreme Dharma

All the Venerable Ones of the past, present, and future discourse, counsel, proclaim, propound, and prescribe thus in unison: do not injure, abuse, oppress, enslave, insult, torment, torture, or kill any creature or living being.

— *Ācārāṅga Sūtra*, 1.4.2, Jaina Sutras, p. 36.

Know other creatures’ love for life, for they are like you.
Kill them not; save their life from fear and enmity.
All creatures desire to live, not to die.
Hence to kill is to sin.
A godly man does not kill.
Therefore, do not yourself kill, consciously or unconsciously,
living organisms which move or move not, nor cause slaughter
of them.

He who looks on the creatures of the earth, big and small, as his own self, comprehends this immense world.
Among the careless, he who restrains is enlightened.

One who neglects or disregards the existence of earth, air, fire, water and vegetation disregards his own existence, which is entwined with them.

— *Mahāvīra*, as quoted by L. M. Singhvi, “*The Jain Declaration on Nature*”
in Jainism and Ecology: Nonviolence in the Web of Life.

May I always have a friendly feeling toward all living beings of the world and may the stream of compassion always flow from my heart toward distressed and afflicted living beings.

— *A Jain prayer*, in Source Book for the Community of Earth’s Religions, p. 64.

NATURE SHOULD NOT BE SEEN IN TERMS OF HUMAN USE AND CONSUMPTION SHOULD BE RESTRAINED

A monk or nun, seeing big trees in parks, on hills, or in woods, should not speak about them in this way: “These trees are fit for palaces, gates, houses, beeches, bolts, buckets, stools, trays, ploughs, machines, poles, the nave of a wheel, seat, beds, cars, sheds...

A monk or nun, seeing big trees in parks, on hills, or in woods, should speak about them in this way: These trees are noble, high and round, big, they have many branches, they are very magnificent, very beautiful, very fine, very handsome...

— *Ācārāṅga Sūtra* II.4.2.

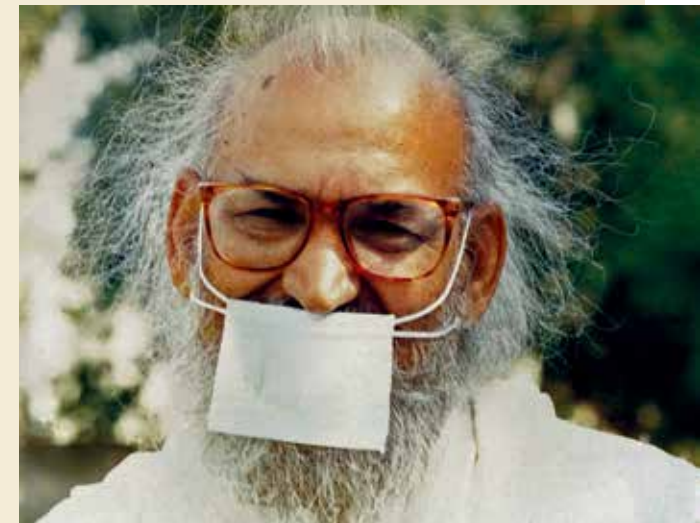
In their use of Earth’s resources Jains take their cues from “the bee that sucks honey in the blossoms of a tree without hurting the blossom, and strengthens itself.” Wants should be reduced, desires curbed, and consumption levels kept within reasonable limits. Using any resource beyond one’s needs and misuse of any part of nature is considered a form of theft. Indeed, the Jain faith goes one radical step further and declares unequivocally that waste and creating pollution are acts of violence.

—L. M. Singhvi, “*The Jain Declaration on Nature*”

THE JAIN RELIGION IS NOT HUMAN-CENTERED OR “ANTHROPOCENTRIC”

The concept of universal interdependence underpins the Jain theory of knowledge, known as *anekāntavāda* or the doctrine of manifold aspects. *Anekāntavāda* describes the world as a multifaceted, everchanging reality with an infinity of viewpoints depending on the time, place, nature, and state of the one who is the viewer and that which is viewed. This leads to the doctrine of *syādvāda* or relativity, which states that truth is relative to different viewpoints (*nayas*). What is true from one point of view is open to question from another. Absolute truth cannot be grasped from any particular viewpoint alone because absolute truth is the sum total of all the different viewpoints that make up the universe. Because it is rooted in the doctrines of *anekāntavāda* and *syādvāda*, Jainism does not look upon the universe from an anthropocentric, ethnocentric, or egocentric viewpoint. It takes into account the viewpoints of other species, other communities and nations, and other human beings.

— L. M. Singhvi, from “*The Jain Declaration on Nature*”



Courtesy of Bawa Jain.

NONVIOLENCE IS THE HIGHEST RELIGIOUS DUTY

We are connected consciously and unconsciously with all living beings – angels, bugs, grass, birds, etc. We all come from the same source and just as one has to soften the land before planting seeds, we must soften our hearts and minds completely before feelings of friendship can grow within ourselves.

—Acharya Sushil Kumar

More than “the absence of violence,” for contemporary Jains, *ahimsā* includes activism in matters such as peace, the environment, animal welfare, and the alleviation of poverty. Jain ashrams promote international non-violence, peace, and harmony, spreading the message of *ahimsā* and *anekanta-vada* (the belief that no one has a monopoly on the truth), both in the East and West.

—Jainpedia (<http://jainpedia.org/>)

Chaumukha Jain Temple at Ranakpur, India.
Photo by Nagarjun Kandukuru,
creativecommons.org/licenses/by/2.0/deed.





Paro Taktsang Monastery in Bhutan. Photo by Avinash Gatreddi/shutterstock.com.

Buddhism

In the words of the Buddha Himself: “Because the cause was there, the consequences followed; because the cause is there, the effects will follow.” These few words present the interrelationship between cause (karma) and its effects. It goes a step further and shows that happiness and suffering do not simply come about by chance or irrelevant causes. There is a natural relationship between a cause and its resulting consequences in the physical world. In the life of sentient beings, too, including animals, there is a similar relationship of positive causes bringing about happiness and negative actions causing negative consequences. Therefore, a human undertaking motivated by a healthy and positive attitude constitutes one of the most important causes of happiness, while undertakings generated through ignorance and negative attitude bring about suffering and misery. And this positive human attitude is, in the final analysis, rooted in a genuine and unselfish compassion and loving kindness that seeks to bring about light and happiness for all sentient beings. Hence Buddhism is a religion of love, understanding, and compassion and is committed to the ideal of nonviolence. As such, it also attaches great importance to wildlife and the protection of the environment on which every being in this world depends for survival.

The simple underlying reason why beings other than humans need to be taken into account is that, like human beings, they too are sensitive to happiness and suffering...many have held up usefulness to human beings as the sole criterion for the evaluation of an animal’s life. Upon closer examination, one discovers that this mode of evaluation of another’s life and right to existence has also been largely responsible for human indifference, as well as cruelty to animals, not to speak of violence in today’s world...We should therefore be wary of justifying the right of any species to survive solely on the basis of its usefulness to human beings.

We regard our survival as an undeniable right. As coinhabitants of this planet, other species, too, have the right of survival...let us share the conviction that conservation of the environment, the restoration of the imbalance caused by our negligence in the past, be implemented with courage and determination.

— The Buddhist Declaration on Nature: The Venerable Lungrug Nomgayal, Abbot, Gyuto Tantric University, Assisi 1986

THE KHORYUG ECO-MONASTIC MOVEMENT

The clothes we wear, the food we eat, even the air we breathe, all come from the environment. None of us are truly independent. Our responsibility is to take what scientists teach us to heart, so we actually transform our way of life. Live simply. Act with compassion. Protect the Earth. Our future depends on it.

—Ogyen Trinley Dorje, Gyalwang Karmapa

With more than 50 member monasteries and nunneries in India, Nepal, Bhutan, and South India, Khoryug is a network of Buddhist centers in the Himalayas working to protect the Himalayan environment by fostering compassion towards Earth and all living beings on the planet.

Founded in 2009, Khoryug recognizes that the environmental crisis is “not just a political or scientific problem, but also a moral and ethical one that Buddhists must address.” The Khoryug movement bases its work on the belief that actions “must flow from our aspiration to benefit all sentient beings and safeguard our mother Earth, and that this positive change in our societies must begin with ourselves first.” Khoryug develops partnerships with community organizations in order to take practical steps to sustain and improve the environment. Its projects include cleaning local areas; planting trees; and raising awareness about environmental protection through service, stewardship, and reverence for nature.

LOVINGKINDNESS MEDITATION

The central ethical principle of Buddhism is compassion and lovingkindness towards all sentient beings. A meditation such as the following may be chanted or remembered several times a day by many Buddhists to cultivate these qualities.

May all beings be happy and secure;
May they be inwardly happy!

Whatever living beings there are
Whether frail or firm, without omission,
Those that are long or those that are large,
Middling, short, fine, or gross...

Whether they are seen or unseen,
Whether they dwell far or near,
Whether they have come to be or will come to be,
May all beings be inwardly happy!

Just as a mother would protect her son,
her only son, with her life,
so one should develop toward all beings
a state of mind without boundaries.

And toward the whole world
one should develop loving-kindness,
a state of mind without boundaries —
above, below, and across —
unconfined, without enmity, without adversaries.

— From the Metta Sutta or “Sutra on Loving-Kindness” in The Suttanipāta:
An Ancient Collection of the Buddha’s Discourses Together with
Its Commentaries, pp. 179-80.

COLD MOUNTAIN

Bird-song drowns me in feeling.
Back to my shack of straw to sleep.
Cherry-branches burn with crimson flower,
Willow-boughs delicately trail.
Morning sun flares between blue peaks,
Bright clouds soak in green ponds.
Who guessed I’d leave that dusty world,
Climbing the south slope of Cold Mountain?

I’m on the trail to Cold Mountain.
Cold Mountain trail never ends.
Long clefts thick with rock and stones,
Wide streams buried in dense grass.
Slippery moss, but there’s been no rain,
Pine trees sigh, but there’s no wind.
Who can leap the world’s net,
Sit here in the white clouds with me?

—Han-shan, Tang Dynasty
Translated by A. S. Cline.

FROM THE LOTUS SUTRA

The all-compassionate presence of the Buddha in the world is compared to abundant rain that brings life to all universally and without preference.

What falls from the cloud
is water of a single flavor,
but the plants and trees, thickets and groves,
each accept the moisture that is appropriate to its portion.
All the various trees,
whether superior, middling or inferior,
Take what is fitting for large or small
and each is enabled to sprout and grow.
Root, stem, limb, leaf,
The glow and hue of flower and fruit —
one rain extends to them
And all are able to become fresh and glossy
Whether their allotment
Of substance, form and nature is large or small,
The moistening they receive is one,
But each flourishes in its own way.

The Buddha is like this
when he appears in the world,
comparable to a great cloud
that covers all things everywhere.

— Burton Watson, tr., The Lotus Sutra. pp. 101-102.



Bhutanese painted thangka of the Jātakas, 18th-19th Century, Phajoding Gonpa, Thimphu, Bhutan. Photo in the public domain.



Courtesy of buddhistpeacefellowship.org.

THE ORDINATION OF TREES

In the early 1990s “ecology monks” in Thailand’s environmental movement began to wrap orange cloth around trees in a ceremony modeled on the ordination of a Buddhist monk, with full use of Buddhist symbols and participation by local villagers. Ordination makes the tree sacred and draws attention to the importance of trees and the urgent need to prevent deforestation. Many ordained trees bear a sign “To destroy the forest is to destroy life.” The tree ordination movement has spread from Thailand to other countries including Cambodia, Laos, and Sri Lanka. As many as 1,000 trees have been ordained in one ceremony.

A major aim of Buddhism is to relieve suffering, the root causes of which are greed, ignorance, and hatred. The monks see the destruction of the forests, pollution of the air and water, and other environmental problems as ultimately caused by people acting through these evils, motivated by economic gain and the material benefits of development, industrialization, and consumerism. As monks, they believe it is their duty to take action against these evils.

— Susan M. Darlington, “The ordination of a tree: The Buddhist ecology movement in Thailand,” Ethnology Vol. 37, No. 1, p. 1.

THE COSMOS IS A COOPERATIVE

The entire cosmos is a cooperative. The sun, moon, and stars live together as a cooperative. The same is true for humans and animals, trees, and the Earth. When we can realize that the world is a mutual, interdependent, cooperative enterprise — then we can build a noble environment. If our lives are not based on this truth, then we shall perish.

— Buddhadāsa Bhikkhu, as quoted by Donald K. Swearer, “The Hermeneutics of Buddhist Ecology,” in Buddhism and Ecology: The Interconnection of Dharma and Deeds, p. 29.



Yangmaiyoung Mountain. Photo by V. Nattapoom /shutterstock.com.

THE BUDDHA TOUCHES EARTH

When he was about to attain his full enlightenment, Prince Siddhartha Gautama was attacked by the demon king Māra and his armies. Māra challenged him on whether he had the right to attempt the highest spiritual goal. “Who is your witness?” he demanded. Siddhartha stretched out his right hand and touched the Earth, saying “Are you my witness?” and the Earth thundered with a roar, “I am your witness!” Defeated, Māra and his armies withdrew. Seated under the Tree of Enlightenment, Siddhartha became the Buddha.

The image of the Buddha in the “Earth-witnessing” posture (bhūmi-sparśa) is one of the best known. It is significant for many who feel that today Earth is bearing witness to her suffering and we are called to overcome the forces of delusion.



Photo by Eric Prouzet.



San Jose Gurdwara Solar Panels. Photo by Meeka Studio.

The Sikh Religion

We are called to the vision of Guru Nanak, which is a World Society comprising God-conscious human beings who have realized God. To these spiritual beings the earth and the universe are sacred; all life is unity, and their mission is the spiritualization of all.

Guru Nanak in his philosophy states that the reality that humans create around themselves is a reflection of their inner state. The current instability of the natural system of the earth—the external environment of human beings—is only a reflection of the instability and pain within humans. The increasing barrenness of the earth’s terrain is a reflection of the emptiness within humans.

This environmental crisis cries out for an immediate and urgent solution. It requires going back to the basic question of the purpose of human beings in this universe and an understanding of ourselves and God’s creation.

The solution to problems manifest in our world lies in prayer and in accepting God’s hukam. It is difficult to translate certain Sikh concepts accurately. Hukam is one such concept—it may be best described as a combination of God’s will, order, and system. With an attitude of humility, and surrender to the Divine Spirit, conscientious human beings can seek to redress the current crises of the environment and of social justice. In the Sikh Way this is done through the guidance of the Guru, who is the Divine Master and messenger of God.

— Compiled under the guidance of Sri Singh Sahib Manjit Singh, the
Jathedar of Anandapur, one of the five spiritual and temporal heads of
The Sikh Religion, and Sri Akhal Takhat Sahib, his deputy.
(See Palmer and Findlay, Faith in Conservation.)

The Sikh religion was founded in the late 15th century in the Punjab by Guru Nanak (1469-1539) and takes its name from the word “sikh” meaning “disciple.” It is founded on faith in one Supreme Being and meditation on the divine Name with devotion, while living a householder life of virtue, honest work, and selfless service while seeking to establish justice in the world. Sikhism, as it is also called, affirms the unity of humanity and the equality of all people. The line of the Sikh Gurus was ended by the tenth and last Guru, Guru Gobind Singh (1666-1708), after whom Sikhs take as the Guru their holy scripture, the Sri Guru Granth Sahib.

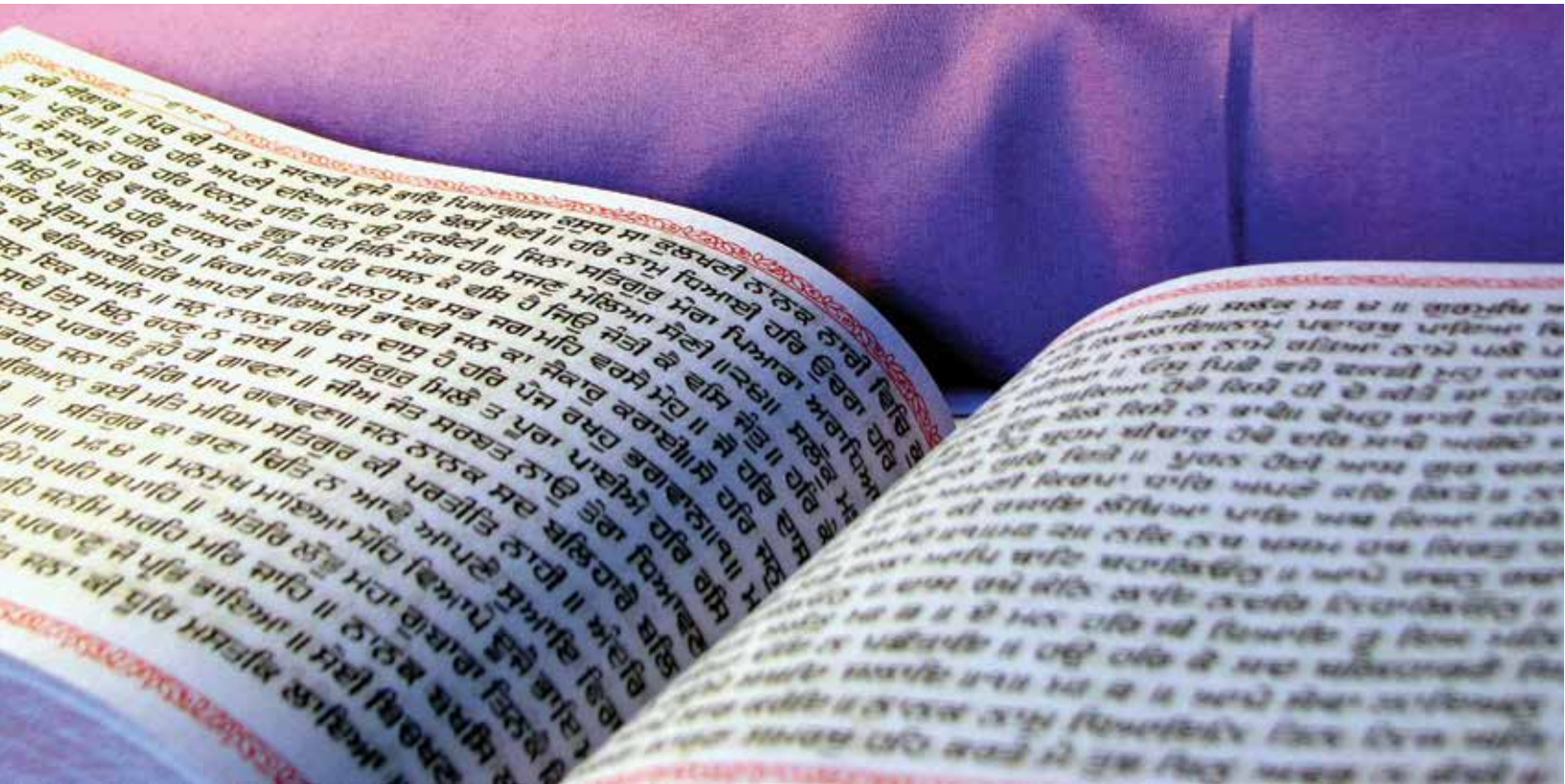


Photo by Jasleen Kaur.

THE SRI GURU GRANTH SAHIB SAYS

Air is the guru; Water the father; and Earth the great mother. Day and night are two male and female nurses in whose lap the entire world plays.

— Epilogue to the Japji or Morning Prayer, by Guru Nanak. www.sikhs.org.

You Yourself created the Universe, and You are pleased. You Yourself are the air, water and fire; You Yourself unite in Union. You Yourself are the moon, the sun, the most perfect of the perfect. You Yourself are spiritual wisdom, meditation, and the Guru...

You Yourself are the bumble bee, the flower, the fruit and the tree. You Yourself are the water, the desert, the ocean and the pool. You Yourself are the great fish, the tortoise, the Cause of causes; Your form cannot be known.

Men, trees, sacred shrine of pilgrimage, banks of sacred rivers, clouds, fields, islands, continents, worlds, solar systems and universes; the four courses of creation – born of eggs, born of the womb, born of the earth and born of sweat; oceans, mountains and all beings —zi O Nanak, He alone knows their condition.

O Nanak, having created the living beings, He cherishes them all. The Creator who created the creation takes care of it as well. He, the Creator who formed the world, cares for it.

— Guru Nanak, Sri Guru Granth Sahib, p. 1020 and p. 467. www.sikhs.org.

Upon that cosmic plate of the sky, the sun and the moon are the lamps. The stars and their orbs are the studded pearls. The fragrance of sandalwood in the air is the temple incense, and the wind is the fan. All the plants of the world are the altar flowers in offering to You, O Luminous Lord. What a beautiful Aartee – lamp-lit worship service – this is! O Destroyer of Fear, this is Your Ceremony of Light. The Unstruck Sound-current of the Shabad is the vibration of the temple drums. You have thousands of eyes, and yet You have no eyes. You have thousands of forms, and yet You do not have even one. You have thousands of Lotus Feet, and yet You do not have even one foot. You have no nose, but you have thousands of noses. This Play of Yours entrances me. Amongst all is the Light – You are that Light. By this Illumination, that Light is radiant within all. Through the Guru’s Teachings, the Light shines forth. That which is pleasing to Him is the lamp-lit worship service. My mind is enticed by the honey-sweet Lotus Feet of the Lord. Day and night, I thirst for them. Bestow the Water of Your Mercy upon Nanak, the thirsty song-bird, so that he may come to dwell in Your Name.

— Guru Nanak, Sri Guru Granth Sahib, p. 13. www.sikhs.org.

THE SIKH RELIGION AND THE ENVIRONMENT

The Sikh scripture declares that the purpose of human beings is to achieve a blissful state and be in harmony with all creation... In Sikh beliefs, a concern for the environment is part of an integrated approach to life and nature. As all creation has the same origin and end, humans must have consciousness of their place in creation and their relationship with the rest of creation. Humans should conduct themselves through life with love, compassion and justice. Becoming one and being in harmony with God implies that humans endeavor to live in harmony with all of God’s creation... The emphasis is on mastery over the self and the discovery of the self; not mastery over nature, external forms and beings. Sikhism teaches against a life of conspicuous, wasteful consumption... The Gurus taught humans to be aware of and respect the dignity in all life, whether human or not. Such a respect for life can only be fostered where one can first recognize the Divine spark within oneself, see it in others, cherish it, nurture and fulfill it.

— “Environmental Theology in Sikhism,” www.ecosikh.org.

TREES GREENING THE GURDWARA

A Sikh place of worship, where the Sri Guru Granth Sahib is enshrined, is called a Gurdwara. A grassroots movement is underway around the world, in which Sikhs are “greening” their gurdwaras through increased energy efficiency, switching to renewable energy, water conservation, waste reduction and recycling, tree-planting and landscaping, and eating organic and healthy food, which they may grow in a gurdwara garden.



Courtesy of ecosikh.org.

ONE MILLION TREES

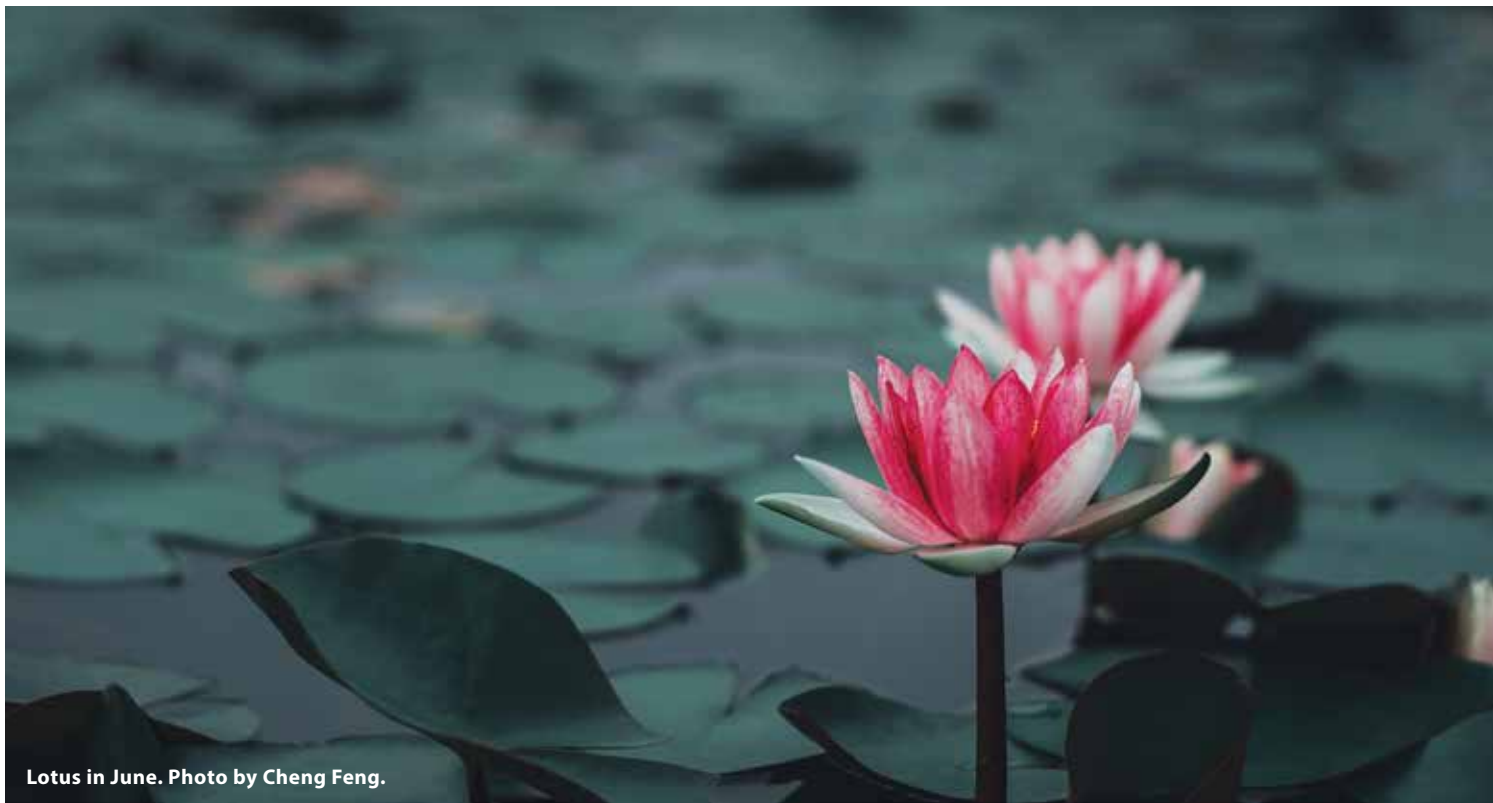
To celebrate the 550th birth anniversary of Guru Nanak in November 2019, Sikhs around the world planted one million trees “as a gift to the entire planet.” A commitment was made to plant 550 trees in 1,820 locations globally as “Guru Nanak Sacred Groves.” Many of these have already been planted in Punjab, the birthplace of Guru Nanak and homeland of the Sikh Religion. The initiative has adopted the “Miyawaki technique” of recreating native forests, including micro-forests, developed by Japanese botanist Akira Miyawaki. For more information, visit <http://www.ecosikh.org/250-days-60-guru-nanak-sacred-forests-2/>, and visit afforestt.com to learn about the Miyawaki technique.



Langar lunch prepared by Toronto’s Sikh community for the Parliament of the World’s Religions. Photo by Will Pearson.



Statue of Confucius in China. Photo by Erika Wittlieb.



Lotus in June. Photo by Cheng Feng.

Confucianism

Confucianism sees its primary role to be the promotion of education designed to enable people to become truly human. Its purpose is the cultivation of a virtuous, responsible and caring person. Learning to be genuinely and fully human is an end in itself. Simultaneously it is also a dynamic and transformative process of self-realization, social engagement and cultural creativity... This process is set within the greater context of humanity and Heaven... Confucianism sees humankind to have a deep and cosmic significance. This significance manifests itself in partnership with both Heaven and Earth, forming the classic Chinese trinity of Heaven, Earth and Humankind, together manifesting the true embodiment of nature itself.

Confucians know that the earth is alive. We observe its presence, appreciate its beauty and participate in its creativity. We therefore share its richness and fecundity with all life on the “Blue Planet”... However, humanity has repeatedly abused this beautiful gift by exploiting it recklessly, ignoring the Confucian notion of balance and harmony... This world is a precious heritage passed on to us from our ancestors and it is a resource

entrusted to us by numerous generations yet to come... The sense of “awe and reverence before the universe” is prompted by our aspiration to respond to the ultimate reality that makes our lives purposeful and meaningful. Whether we come from a creationist or evolutionist perspective, we are indebted to “Heaven, Earth and the myriad things” for our existence. To repay this debt we cultivate ourselves so as to attain our full humaneness amidst the wonder of existence.

— Confucian Statement on Ecology: Professor Tu Weiming for the International Confucian Ecological Association, on the occasion of Confucianism joining the Alliance of Religion and Conservation in 2013.

As education and literacy spread in China and scholars became influential as ministers of state, philosophers also began to flourish. In the late sixth century B.C.E., two of the greatest philosophers of all time emerged in China: Laozi, the founder of Daoism, and Confucius, whose philosophy and religion came to dominate China for more than two millennia.

The founder of the Confucian tradition was the sage-teacher K'ung Fu-tzu (551-479 B.C.E.), whose name was Latinized as Confucius by Jesuit missionaries. Born into a time of rapid social change, Confucius devoted his life to reestablishing order. This involved a program embracing moral, political, and spiritual components. His principal teaching in the *Analects* emphasizes the practice of moral virtues, especially humaneness (*jen*), sincerity (*cheng*), and filiality (*hsiao*).

Confucian thought was further developed in the writing of Mencius (372-289 B.C.E.) and Hsun-tzu (298-238 B.C.E.). A Neo-Confucian revival in the 11th and 12th centuries led to a synthesis of the earlier teachings. The major Neo-Confucian thinker Chu Hsi (1130-1200), designated four texts as containing the central ideas of Confucian thought: the *Great Learning*, the *Doctrine of the Mean*, the *Analects*, and *Mencius*. These texts and Chu Hsi's commentaries became the basis of the Chinese civil examination system, which endured for nearly 600 years. Neo-Confucian thought and its practice of self-cultivation spread to Korea, Japan, and Vietnam. Today, China once again looks to its Confucian tradition as a unique cultural inheritance.

Kung Tzu asked:

“Is there any one word that can serve as a principle for the conduct of life?”

Confucius said:

“Perhaps the word “reciprocity” — do not do to others what you would not want others to do to you.

—Confucius, *The Analects*, XV:23.

THE TRIAD

The Doctrine of the Mean describes the power of sincerity that emanates outward from the human heart to the cosmos itself. When people cultivate their authentic nature, they are said to affect the rejuvenating forces in the natural world. In realizing one's authentic self, a person forms a triad with Heaven and Earth.

Only people who possess absolute sincerity can give full development to their nature. Able to give full development to their own nature, they can give full development to the nature of all beings. Able to give full development to the nature of all beings, they can assist the transforming and nourishing powers of Heaven and Earth. Capable of assisting the transforming and nourishing powers of Heaven and Earth, they may, with Heaven and Earth, form a triad.

—*The Doctrine of the Mean (Chung Yung)*, from *The Book of Ritual (Li Chi)*

Wm. Theodore de Bary, et al., *Sources of Chinese Tradition*.



Wooded Mountains at Dusk (dated 1666). Courtesy of the Metropolitan Museum of Art.

IF YOU DO NOT INTERFERE...

In the Confucian tradition, Mencius, a disciple of the grandson of Confucius, ranks second in importance to Confucius. Mencius's book focuses on the innate goodness of humans and emphasizes the seeds of virtue that need to be cultivated through education. Mencius was a strong advocate of a human government that allowed both the people and the land to flourish.

If you do not interfere with the busy seasons in the fields, then there will be more grain than the people can eat; if you do not allow nets with too fine a mesh to be used in large ponds, then there will be more fish and turtles than they can eat; if hatchets and axes are permitted in the forests on the hills only in the proper seasons, then there will be more timber than they can use; then in the support of their parents when alive and in the mourning of them when dead, they will be able to have no regrets over anything left undone.

—Mencius, *D.C. Lau*, tr.

Like Mencius, Wang Yang-ming (1472-1529) emphasized the innate goodness of the human mind and heart. He underscored the feeling of commiseration in the human that would naturally flourish in the practice of humaneness (jen) extended to other humans and toward all living and nonliving things.

The great person regards Heaven and Earth and the myriad things as one body. He regards the world as one family and the country as one person. Therefore, when he sees a child about to fall into a well, he cannot help a feeling of alarm and commiseration. This shows that his humanity (*jen*) forms one body with the child. It may be objected that the child belongs to the same species [as he]. Yet when he observes the pitiful cries and frightened appearance of birds and animals [about to be slaughtered], he cannot help feeling an “inability to bear” their suffering. This shows that his humanity forms one body with birds and animals. It may be objected that birds and animals are sentient beings [as he is]. But when he sees plants broken and destroyed, he cannot help a feeling of pity. This shows that his humanity forms one body with plants. It may be said that plants are living things [as he is]. Yet even when he sees tiles and stones shattered and crushed he cannot help a feeling of regret. This shows that his humanity forms one body with tiles and stones.

—Wang Yang-ming, *Inquiry on the Great Learning* (16th century) in

Wm. Theodore de Bary, et al., *Sources of Chinese Tradition*.

HUMANS CAN MAKE THE WAY GREAT

The most comprehensive virtue in the Confucian tradition is jen or humaneness. As comprehensive compassion it is like a vital energy that nourishes the life force in all things.

The dynamism and adaptability of humanity enable us to enter into a variety of reciprocal relationships within our environment and to form an intricate network of communication with Heaven, Earth, and the myriad things. Nothing in the cosmos lies outside the orbit of human sensitivity. The human ability to respond helps us to interact sympathetically with nature rather than try and dominate it.

—Tu Weiming, *Commonality and Centrality:*

An Essay on Confucian Religiosity.

Humaneness as the principle of love is comparable to a tree and a spring of water.

It is like the will to grow, like the seeds of peaches and apricots.

It is like the vital force of spring.

For humaneness, as constituting the Way, consists in the fact that the mind of Heaven and Earth to produce things is present everywhere.

—Chu Hsi on humaneness (*jen*), 12th century, in Wm. Theodore de Bary, et al.,

Sources of Chinese Tradition.

KINSHIP

Describing the essential kinship of all being with Heaven and Earth and suggesting that compassion is the highest expression of that kinship, this inscription on the western wall of Chang Tsai's study was enormously influential in Neo-Confucian thought.

Heaven is my father and Earth my mother and even such a small creature as I finds an intimate place in their midst. Therefore, that which extends throughout the universe I regard as my body and that which directs the universe I regard as my nature. All people are my brothers and sisters, and all things are my companions.

—Western Inscription, Chang Tsai (1020-1077)

Wm. Theodore de Bary, et al., *Sources of Chinese Tradition*.



Photo by Ewan Hutchinson.

Daoism

There are four main principles that should guide the relationship between humanity and nature:

1. In the Dao De Jing (Tao Te Ching), the basic classic of Daoism, there is this verse: “Humanity follows the Earth, the Earth follows Heaven, Heaven follows the Dao, and the Dao follows what is natural.” This means that the whole of humanity should attach great importance to the Earth and should obey its rule of movement...
2. In Daoism, everything is composed of two opposite forces known as Yin and Yang. Yin represents the female, the cold, the soft and so forth; Yang represents the male, the hot, the hard and so on. The two forces are in constant struggle within everything. When they reach harmony, the energy of life is created. From this we can see how important harmony is to nature.
3. People should take into full consideration the limits of nature’s sustaining power, so that when they pursue their own development, they have a correct standard of success. If anything runs counter to the harmony and balance of nature, even if it is of great immediate interest and profit, people should restrain themselves from doing it.
4. Daoism has a unique sense of value in that it judges affluence by the number of different species. If all things in the universe grow well, then a society is a community of affluence. If not, this kingdom is on the decline.

— The Daoist Faith Statement: The Chinese Daoist Association.
(See Palmer and Findlay, Faith in Conservation.)

Daoism has existed as a tradition in China for at least 2,500 years. It takes its name from the Dao or “The Way,” as described in the Dao De Jing, “The Classic of the Way and Its Power,” attributed to the legendary Laozi, which means simply “the Old Master.” This work of great depth and beauty is one of the most translated books in the world. Its influence in China and beyond is deeply embedded in spirituality, philosophy, and popular culture. Profound insights on the great Way of Nature are also expressed in the second Daoist classic, by Zhuangzi (Chuang Tzu), who is thought to have lived in the 4th century B.C.E, perhaps about two centuries after Laozi.

The Way is the origin of all things — the Mother of Heaven and Earth. It is also the right pattern and the spontaneous, effective functioning of everything in nature. The Dao nourishes life and the balance of Yin and Yang. A person with full knowledge of the Dao is a Sage or enlightened person. Daoism gives the highest importance to living in accord with the order of nature and the virtues of simplicity, restraint, and humility. Daoists today seek to apply their ancient value system to engage contemporary environmental problems.

WHAT IS THE DAO?

Chapter 25
Something unformed and complete
Before heaven and earth were born,
Solitary and silent,
Stands alone and unchanging,
Pervading all things without limit.
It is like the mother of all under heaven,
But I don’t know its name —

Better call it Dao,
Better call it great.

Chapter 52
The world has a source: the world’s mother.

Once you have the mother,
You know the children.
Once you know the children,
Return to the mother.

Chapter 34
Great Dao overflows
To the left
To the right.

All beings owe their life to it
And do not depart from it.
It acts without a name.
It clothes and nourishes all beings
But does not become their master...

Chapter 35
Look —
You won’t see it.
Listen —
You won’t hear it.
Use it —
You will never use it up.

ACTING LIKE THE DAO

Chapter 29
Trying to control the world?
I see you won’t succeed.

The world is spiritual vessel
And cannot be controlled.

Those who control, fail.
Those who grasp, lose.

Chapter 78
Nothing in the world is soft and weak as water.
But when attacking the hard and strong
Nothing can conquer so easily.

Weak overcomes strong,
Soft overcomes hard.

Everyone knows this,
No one attains it.

Chapter 7
Heaven is long, Earth enduring.

Long and enduring
Because they do not exist for themselves,

Therefore the Sage
Steps back, but is always in front.
Stays outside, but is always within.

No self-interest?
Self is fulfilled.

Chapter 16
Understanding the ordinary:
Enlightenment.
Not understanding the ordinary:
Blindness creates evil.

Understanding the ordinary:
Mind opens.

Mind opening leads to compassion,
Compassion to nobility,
Nobility to heavenliness,
Heavenliness to Dao.

Chapter 25
Humans follow earth
Earth follows heaven
Heaven follows DAO.

Dao follows its own nature.

— Selections from Lao-tzu. Dao De Jing.



The Daoist philosopher Liezi. Painting by Zhang Lu, early 16th Century. Photo in the public domain.

ENVIRONMENTAL PROTECTION IN THE CHINESE DAOIST COMMUNITY

Developed by local Daoist communities, the proposal below is subsequent to the China Daoist Ecology Protection Eight-Year Plan 2010-2017, which was launched in 2009. The Daoist Ecological Temple Network (DETN) has now spread to 28 provinces, with 200 member temples. The Daoist community and local Daoist temples and associations are initiating the following specific actions:

1) Ecological Demonstration Sites and Educational Programmes

Create ecological model demonstration sites and educational programmes; Daoist temples in the network will serve as demonstration sites for best environmental practices by taking these steps:

- Promote energy efficiency and the use of renewable energies such as solar and biomass
- Collect and recycle rainwater, improve drainage and sewage systems and adopt water-saving practices while promoting water saving in the Daoist community and wider society
- Plant trees in temple grounds
- Adopt ecologically positive waste and recycling practices
- Encourage Daoist followers to adopt green low-carbon life-styles in food, energy consumption, waste and travel

2) Environmental Protection

Actively participate in programmes to address climate change and assist the local government and the public in addressing climate change in such key areas as agriculture, forestry, and water resources

Protect the ecosystems and natural landscapes around Daoist temples, sacred mountains, and holy sites, helping local authorities to effectively protect rare and endangered wildlife, ancient trees, famous trees, and natural habitats.

Promote the construction of beautiful ecological villages and work with the local tourist departments and the agricultural sectors for the development of organic Chinese medicine nurseries and green tourism to help protect the local environment, as well as to reduce poverty.

3) Protection of Wildlife

Chinese medicine shall not use endangered animal parts which are forbidden by the government. Daoists should advocate the use of herbs as much as possible and avoid as much as possible the use of animal parts for medicine. The Daoist community encourages temples to train Daoist doctors and believers accordingly and resist the illegal wildlife trade. The following should not be used: pangolin, rhino horn, ivory, and ivory products.



Daoist monastery in the Wudang Mountains, China. Courtesy of Seth Kramer.

Mercy release of animals should be rational and scientific, avoiding harm to the released animals or release of invasive species; believers should avoid mercy release when uncertain of the ecological consequences and replace mercy release with other forms of charity.

4) Collaboration with All Parties

Actively assist relevant government departments and the business community in promoting ecological ethics, and put ecological values into action.

Strengthen international exchanges promoting dialogue about environmental protection and exchanges with countries around the world in the field of ecological civilization; strengthen cooperation with international environmental protection agencies in advancing ecological protection.

Establish Daoist ecological volunteer groups. Where possible, temples will set up Daoist ecological volunteer groups among believers to participate in environmental awareness campaigns and education.

For more information, visit “Proposal of the Seven-Year Plan (2019 to 2025) for Environmental Protection in the Chinese Daoist Community,”
[www. arcworld.org](http://www.arcworld.org).

Shinto

In the beginning of the universe there appeared various Kami, or deities, from the chaos. A pair of male and female deities appeared at the end and gave birth first to the islands, their natural environment, and then to several more deities who became ancestors of the Japanese. The ancient Japanese considered that all things of this world have their own spirituality, as they were born from the divine couple. Therefore, the relationship between the natural environment of this world and people is that of blood kin, like the bond between brother and sister. Shinto regards that the land, its nature, and all creatures including humans are children of Kami. Accordingly, all things existing on this earth have the possibility of becoming Kami.

An agricultural society based on rice cultivation like that of Japan cannot exist without unification and harmony among all things on this earth: mountains, rivers, the sun, rain, animals, and plants, not to mention cooperation among people... This gave rise to the spirit of revering various Kami, the land, nature, people, and, on top of that, the spirit of appreciation of harmony among all these aspects of Nature.

Environmental issues depend on our self-awareness of the problems and our determination to take responsibility... Shinto suggests that we should shift our point of view and look at our environment with the spirit of “reverence and gratitude,” that is, with the spirit of parental care for children or with the spirit of brotherhood.

—Prepared by the Jinja Honcho, the representative body of all Shinto Shrines in Japan. (See Palmer and Findlay, Faith in Conservation.)

Shinto or “Way of the Kami” is the indigenous religion of Japan. The kami, “deities” or “gods” in English, are spiritual beings who have existed since the beginning of the universe. “Shinto” means to live in harmony with the kami. There are kami of Heaven, of Earth, and myriad other spiritual beings, including ancestors. Human beings, as well as all of nature, are the children and descendants of the kami, and thus we all have divinity within us. We can access this inner radiance and establish harmony through practices of purification, which include keeping the outer environment free from pollution. In Shinto, great importance is given to purity, sincerity, harmony, and gratitude.

In earthly nature, the kami include rain, wind, thunder, rivers, the ocean, and the power of growth and fertility. Kami are felt to be present in things that inspire awe and wonder, such as sacred mountains like Mount Fuji, waterfalls, certain caves and rocks, and great aged trees.



Floating Torii Gate. Photo by Adrien Lemaire.

In each and every new leaf,
I see the kami of spring.

— Kyoshi Takahama (1874-1959)*

Only a common mountain I’ve known since long ago,
but with autumn I am filled with awe to think
the kami must be living there!

— Takuboku Ishikawa (1886-1912)*

**As quoted in “The Shinto View of Nature and a Proposal Regarding Environmental Problems” in Tokyo: Jinja Honcho: The Association of Shinto Shrines.*

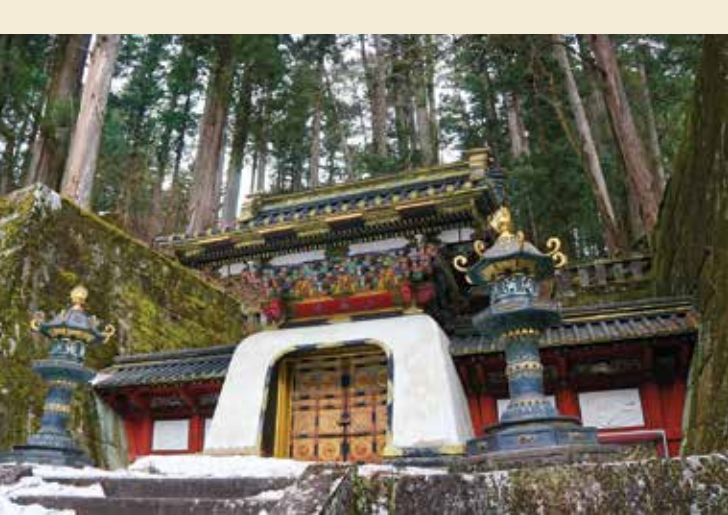


Photo by Inspired by Maps/shutterstock.com.

THE SHINTO SHRINE
AND SACRED FORESTS

The earliest Shinto shrines did not have permanent buildings, but were spaces in the natural world set off for a limited time. A sakaki or other evergreen tree or a natural stone or boulder would be set up in a space considered to be sacred to mark a temporary space for worship. According to Shinto scholar Hirai Naofusa, this might be “at the foot of an imposing mountain overlooking the community, beside a clear stream, or in a forest, and the kami’s presence was invoked there for the duration of the worship, after which it was sent off again.” The elaborate forms of Shinto architecture that we see today later evolved over centuries. The shrine area was protected, and as a great many Shinto shrines are in forests, trees would be preserved, whether large forests or a small group of trees. In recent decades, the environmental significance of this practice has been recognized as a way of preserving or restoring ecosystems and fostering environmental consciousness.

— “The History of Shrines,” in Encyclopedia of Shinto,
Institute for Japanese Culture and Classics.

FROM A SHINTO PRAYER

All people are embodiment of the kami, having received the gift of birth and growth.
Heaven and Earth were brought to life by the kami...
The foundation of the soul and of the kami resides in our hearts...
Our five senses shall know vitality and peace;
Thence we shall know our common root with the kami of Heaven and Earth.
As we realize our common root with the kami of Heaven and Earth,
Thence we shall be united with the spirit of a myriad of sources throughout Nature.
As we are united with the spirit of a myriad of sources throughout Nature,
Thence there will be no aspiration beyond our grasp.
With humble soul, trust in the way of the kami and fulfill life’s purpose with sincerity.
Faith is as eternal as Heaven and Earth.
Restore us to our original brightness, and
Grant us strength that we may overcome life’s difficulties and live in harmony
with the divine way of Great Nature.

— Shinto Norito: A Book of Prayers in
the Tradition of the Tsubaki Grand Shrine, pp. 53-59.

MOUNT FUJI

Lo! There towers the lofty peak of Fuji
From between Kai and wave-washed Suruga.
The clouds of heaven dare not cross it,
Nor the birds of the air soar above it.
The snows quench the burning fires,
The fires consume the falling snow.
It baffles the tongue, it cannot be named.
It is a kami mysterious.

The lake called Sé is enbomed in it,
The river we cross, the Fuji, is its torrent.

In the land of Yamato, the Land of the Rising Sun,
It is our treasure, our tutelary kami.
It never tires our eyes to look up
To the lofty peak of Fuji!

— Takahashi no Mushimaro (7th century), from The Manyōshū: The Nippon
Gakujutsu Shinkōkai translation of One Thousand Poems, p. 215.

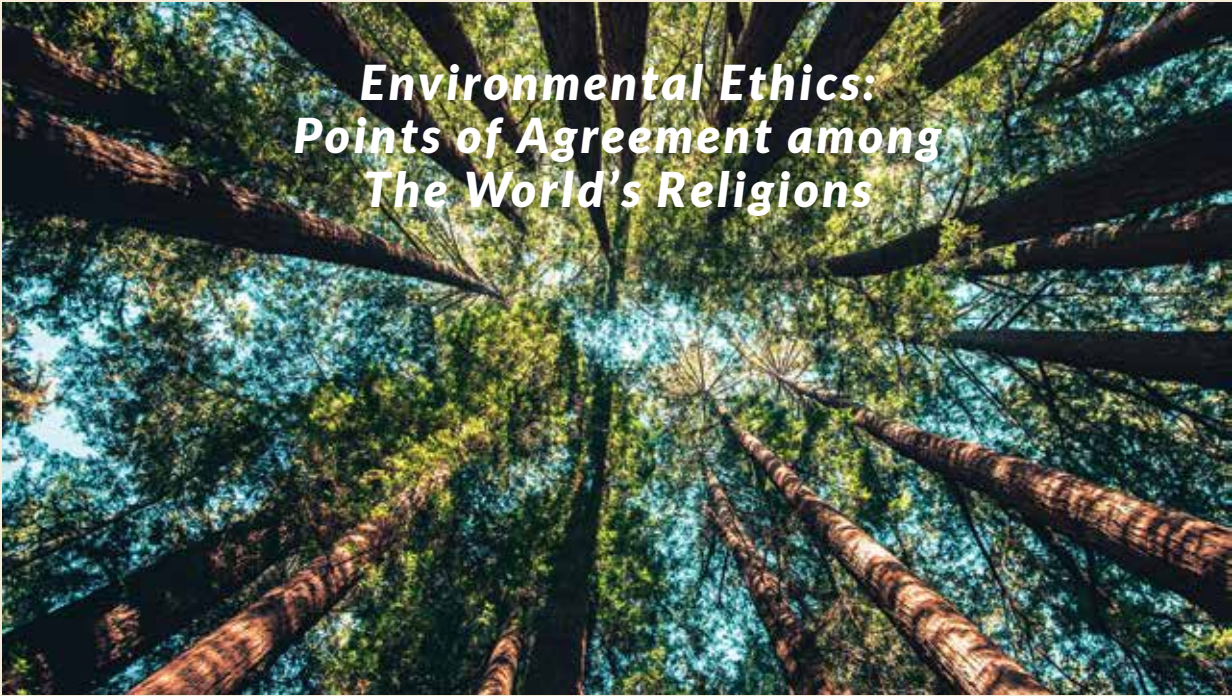


Photo by Casey Horner.

The teachings and traditions of the world’s religions share the following principles about our ethical relationship toward Earth’s environment:

- The natural world has value in itself and does not exist solely to serve human needs.
- There is a significant continuity of being between human and non-human living beings, even though humans do have a distinctive role. This continuity can be felt and experienced.
- Non-human living beings are morally significant, in the eyes of God and/or in the cosmic order. They have their own unique relations to God, and their own places in the cosmic order.
- The dependence of human life on the natural world can and should be acknowledged in ritual and other expressions of appreciation and gratitude.
- Moral norms such as justice, compassion and reciprocity apply (in appropriate ways) both to human beings and to non-human beings. The wellbeing of humans and the wellbeing of non-human beings are inseparably connected.
- There are legitimate and illegitimate uses of nature.
- Greed and destructiveness are condemned. Restraint and protection are commended.
- Human beings are obliged to be aware and responsible in living in harmony with the natural world, and should follow the specific practices for this prescribed by their traditions.

—From M. Naimir-Fuller, I. Özdemir, and Fr. J. Brinkman, A Discussion Note prepared for the Second International Seminar on Environment, Religion, and Culture in the Context of the 2030 Agenda for Sustainable Development, UNEP 2016, p. 7, and K. P. Pedersen, “Environmental ethics in interreligious perspectives,” in Explorations in Global Ethics: Comparative religious ethics and interreligious dialogue, pp. 253-290.



*We live on a globe and if we keep gobbling up whatever
is in front of us, eventually we come to our back door.*
—Michael E. Soulé

Courtesy of NASA.

Earth

No major natural system on our planet is unchanged by human actions. Even as human choices dominate, simplify, and weaken our planet's natural systems, we are accelerating our demands on them, as well as increasing stress on our political and social systems. Since the original publication of this book, both the pace of these changes and their magnitude have escalated. Everything that we now know about the impact of our lives on Earth leaves no doubt about the ill-considered consequences of our actions as individuals, institutions, and societies.

The human population is projected to grow to almost 10 billion over the next three decades, putting still more pressure on natural resources and ecosystems throughout the world. With 3.4 billion more mouths to feed and the growing desire for meat and dairy in developing countries, global demand for food is expected to increase by 59% – 98% percent by 2050. This means that agriculture around the world must step up production and generate higher yields. But the impacts of climate change — higher temperatures, extreme weather, droughts, ocean acidification, and sea level rise — threaten to decrease the quantity and jeopardize the quality of our food supplies.

We depend on the planet for all our needs. It provides the natural resources — the food, fiber, and minerals to shelter us, sustain us, and power our economies — and all the basic ecosystem services — clean water, clean air, and productive land for healthy life. The nutrients and other elements necessary for all life on Earth move through a closed planetary system of biogeochemical pathways that are increasingly affected by human actions.

We are destroying natural resources by overfishing our oceans, overharvesting our forests, and depleting wildlife. We are damaging basic ecosystem services by adding toxic substances to the environment, and introducing exotic species to new habitats. We are drawing down Earth's capital, rather than living on the interest it generates for us, and we are only beginning to discover the complex consequences of the changes we are causing.

Levels of human-caused greenhouse gas emissions are the highest in history, and continue to escalate, altering the global climate system. Rapid climate changes have had widespread impacts on people and natural systems. Overall warming of the climate system is unequivocal, and many of the changes that are happening as a result are unprecedented, not just over decades, but over millennia. Over the last 40 years, Earth's surface has become successively warmer in each decade than it did during any earlier decade since 1850.



Photo by Patrick Hendry.

UNDERSTANDING CLIMATE CHANGE

Earth's climate is now changing faster than at any point in the history of modern civilization, primarily as a result of human activities.

Thousands of studies conducted by researchers around the world have documented increases in temperature at Earth's surface, as well as in the atmosphere and oceans. Many other aspects of the global climate are changing as well. Human activities, especially emissions of heat-trapping greenhouse gases from fossil fuel combustion, deforestation, and changes in land use, are the primary drivers of the climate changes observed in the industrial era... The atmospheric concentration of carbon dioxide, the largest contributor to human-caused warming, has increased by about 40% over the industrial era. This change has intensified the atmosphere's natural greenhouse effect, driving an increase in global surface temperatures and other widespread changes in Earth's climate that are unprecedented in the history of modern civilization.

—from U. S. Global Change Research Program.
<https://www.globalchange.gov/climate-change>

Impacts of climate change are being felt across all continents and throughout the world's ocean, altering natural processes in every major ecosystem on Earth and disrupting the human societies that depend on them. In many regions, changing precipitation or melting snow and ice are altering hydrological systems, affecting the quantity and quality of water resources. Many terrestrial, freshwater, and marine species have shifted their geographic ranges, seasonal activities, migration patterns, abundances, and species interactions in response to ongoing climate change, causing major changes in their population sizes and detrimental interactions between species.

Climate change will amplify existing risks and create new risks for natural and human systems. These risks are unevenly distributed and are generally greater for disadvantaged people and communities. Rising rates and magnitudes of warming and other changes in the climate system increase the chances of severe, pervasive, and often irreversible impacts. Continued emission of greenhouse gases will cause further warming and long-lasting changes in all parts of the global climate system. Containing or limiting future climate change will require significant and sustained reductions in greenhouse gas emissions.

GLOBAL GREENHOUSE GAS EMISSIONS BY SPECIFIC GAS

- 65% Carbon Dioxide (fossil fuel, industry)**
- 16% Methane**
- 11% Carbon Dioxide (forestry, land use)**
- 6% Nitrous Oxide**
- 2% Fluorinated gases, including Hydrofluorocarbons (HFCs)**

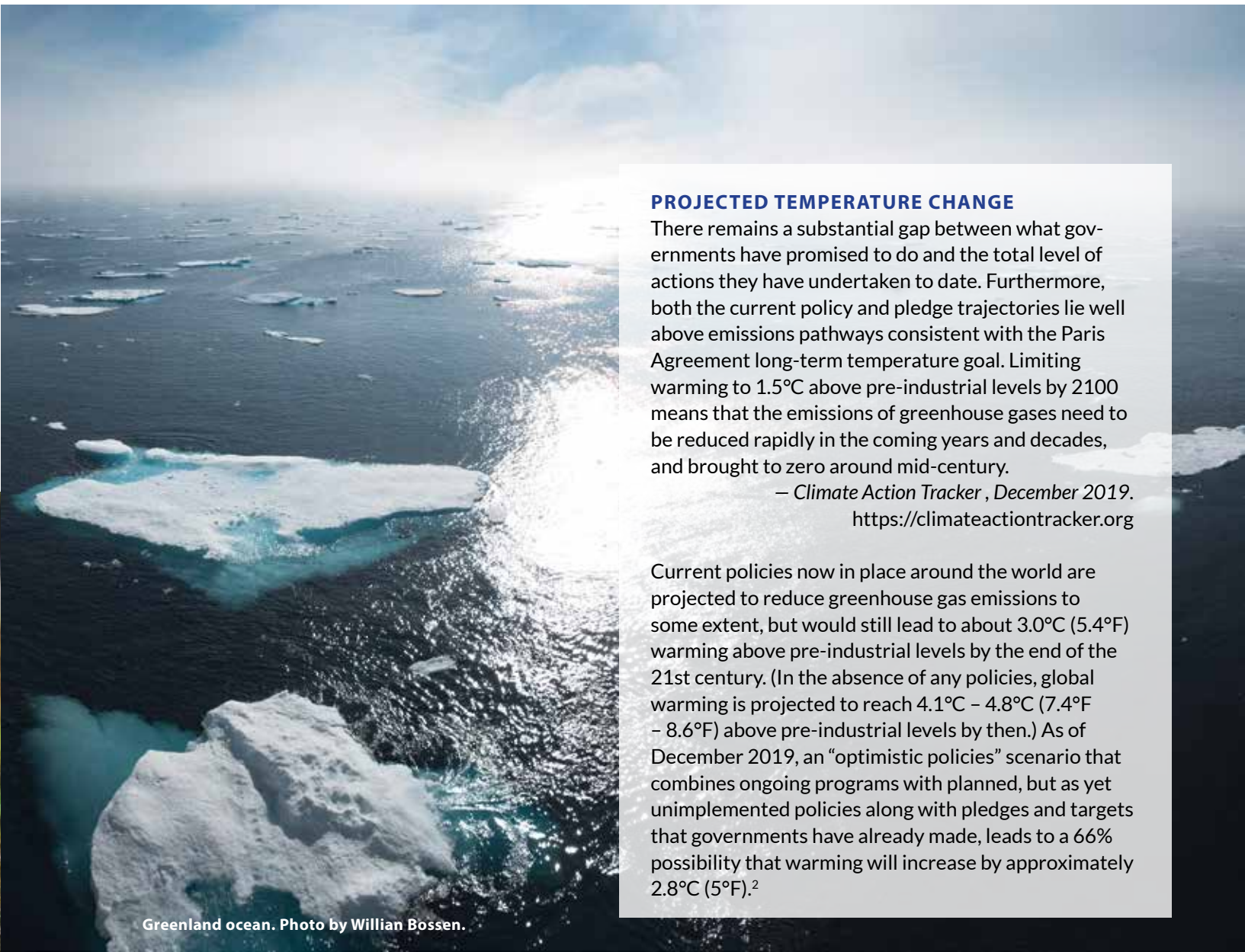
Source: EPA (2019) / IPCC (2014). Photo by Patrick Hendry.

UNEP WORLD ENVIRONMENT DAY

Held annually since 1974 and celebrated every year on June 5, World Environment Day focuses global attention on a pressing environmental issue, raises awareness, and encourages environmental action. The day is an opportunity to reflect on accomplishments and renew our resolve to overcome the environmental challenges facing the world. It has become a vital platform for promoting progress on the environmental dimensions of the Sustainable Development Goals (SDGs). Governments, major corporations, non-governmental organizations, local communities, celebrities, and citizens throughout the world take part in national and international celebrations to champion environmental causes. <https://www.worldenvironmentday.global>.



Chiag Mai, Pa Daet, Thailand. Photo by Abigail Keenan.



Greenland ocean. Photo by Willian Bossen.

PROJECTED TEMPERATURE CHANGE

There remains a substantial gap between what governments have promised to do and the total level of actions they have undertaken to date. Furthermore, both the current policy and pledge trajectories lie well above emissions pathways consistent with the Paris Agreement long-term temperature goal. Limiting warming to 1.5°C above pre-industrial levels by 2100 means that the emissions of greenhouse gases need to be reduced rapidly in the coming years and decades, and brought to zero around mid-century.

– Climate Action Tracker, December 2019. <https://climateactiontracker.org>

Current policies now in place around the world are projected to reduce greenhouse gas emissions to some extent, but would still lead to about 3.0°C (5.4°F) warming above pre-industrial levels by the end of the 21st century. (In the absence of any policies, global warming is projected to reach 4.1°C – 4.8°C (7.4°F – 8.6°F) above pre-industrial levels by then.) As of December 2019, an “optimistic policies” scenario that combines ongoing programs with planned, but as yet unimplemented policies along with pledges and targets that governments have already made, leads to a 66% possibility that warming will increase by approximately 2.8°C (5°F).²

GETTING ACTIVE, NOT ANXIOUS

Champions of the Earth

The Champions of the Earth prize (<https://www.unenvironment.org/championsofearth/>) is the United Nations’ flagship global environment award. Established in 2005 and awarded annually to outstanding leaders from government, civil society, and the private sector, it recognizes trailblazers – “from grassroots champions and corporate leaders to political pioneers” – who are working to protect our planet for the next generation. Recipients of its sister award, Young Champions of the Earth (<https://www.unenvironment.org/youngchampions/>), are selected for their potential to create future impact. It celebrates outstanding young environmental leaders

between the ages of 18 and 30 who have the courage to carve their place in a new and greener economy, and become a generation of change-makers and thought-leaders resolved to build a brighter world. Since its launch in April 2017, Young Champions



of the Earth has recognized dozens of outstanding young environmental leaders – from captains of industry, to grassroots activists and pioneering scientists, to dynamic artists.

Photo courtesy of The European Parliament.



Photo by Strauss Western.

Land and Terrestrial Ecosystems

Earth's six major terrestrial ecosystems are its tundra, taiga (boreal forests), temperate forests, tropical rain forests, grasslands, and deserts. Of these, deserts — along with dry salt flats, beaches, sand dunes, and exposed rocks — take up about one-fifth (19%) of the total land surface of our planet. Another tenth (10%) is covered by glaciers. The remaining 71% (roughly 104 million km²) is considered “habitable land,” fully half of which (51 million km²) is now dedicated to agriculture, both as pasture for livestock and cropland for farming. The rest consists of forests (39 million km²) and shrub and grassland ecosystems (12 million km²). Less than 1% of Earth's surface is covered by freshwater; the remaining 1% is occupied by cities, towns, villages, roads, and other human infrastructure.³

Human wellbeing is grounded in our relationship to land. Land provides the physical foundation for our lives. It is the source of much of our food and fiber, as well as freshwater, minerals, and fossil energy.⁴ We depend on land for terrestrial ecosystem functions and services, including nutrient cycling and oxygen production; crop pollination; regulation of floods, soil erosion, and disease outbreaks. It serves as a repository for biodiversity and genetic resources, and provides cultural, spiritual, and recreational benefits that are essential to humanity.

Wherever land on our planet is flat enough, we inhabit it and appropriate its productivity. People are currently using one quarter to one third of the land's potential net primary productivity⁵ for food, animal feed, fiber, timber, and energy. These human activities directly affect more than 70% of the planet's ice-free land surface.

The annual economic value of the world's terrestrial ecosystem services is approximately equal to the annual global Gross Domestic Product (the total value of goods produced and services provided in the entire world every year).⁶



Courtesy of WorldBeeProject.org.

WHAT IS AN ECOSYSTEM?

Ecosystems are interconnected communities of plants, animals, and other living (biotic) organisms and the nonliving (abiotic) parts of the environment, such as climate and landforms. The biotic and abiotic parts of an environment are linked together by nutrient cycles and energy flows. Terrestrial ecosystems exist on land; aquatic ecosystems include both freshwater and marine ecosystems. Specific environments and their locations, such as freshwater lakes, saltwater marshes, forests, prairies, etc., determine which animals and plants live in a given ecosystem.⁷



Courtesy of Pheasantbranch.org.



GLOBAL LAND USE FOR FOOD PRODUCTION

EARTH'S SURFACE

29% Land (71% Water)

Habitable Land 71% (Glaciers 10%, Barren 19%)

Agriculture 50% (Forest and Shrub 48%)*

Livestock 77%, Crops 23%

GLOBAL CALORIE SUPPLY

Plant-based food 82%, Meat and Dairy 18%

GLOBAL PROTEIN SUPPLY

Plant-based food 63%, Meat and Dairy 37%

**1% Urban + 1% Surface Freshwater*

*Data source: UN Food and Agriculture Organization.
<https://ourworldindata.org/agricultural-land-by-global-diets>*

A farm in Sidemen, Bali. Photo by Niklass Weiss.

UNEP CLIMATE ACTION

UNEP's Climate Action Programme (<https://www.unenvironment.org/explore-topics/climate-change>) supports the transition to a low-carbon, sustainable future by promoting decarbonization in the six sectors that together have the potential to control the growing climate emergency: energy, industry, agriculture and food, forests and land use, transport, and buildings and cities. Our work includes strategic communication, advocacy, and education. Projects and campaigns range from changing public attitudes and mobilizing the financial sector in support of renewable energy use to

advocating for more energy efficient behavior change. We encourage countries to adapt and be resilient to climate change through science, policy, technology, and finance, and are working to implement the Paris Agreement, the world's roadmap for tackling climate change. We bring science to policymakers, play a leading role in transformative global partnerships, and help countries develop national plans to cut greenhouse gas emissions, including finance models to accelerate the transition to a green economy and new investment opportunities to reduce greenhouse gas emissions from deforestation and forest degradation.

LAND USE AND CLIMATE CHANGE

The relationship between land use and the climate involves many factors. Land use practices are an important driver of climate change, altering the shape and character of land cover, which affects the global concentration of greenhouse gases. At the same time, the changing climate itself can cause changes in land use and cover, as farmers begin to shift from their traditional crops to others that will bring greater economic return under the new conditions. Higher temperatures affect vegetation cover and the amount of water needed for irrigation. Research about the connections between climate and land use is ongoing.

Currently, around 25% of greenhouse gas emissions are caused by the land use decisions we make. In addition, study after study reveals that human demands are pushing the limits of terrestrial capacity. Projected increases in population and income by 2050, combined with changes in consumption patterns, will further increase demand for food, feed, and water, causing significant additional impacts on the climate.

Land surface temperature is projected to rise over the 21st century under all science-based greenhouse gas emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. It is virtually certain that there will be more frequent hot and fewer cold temperature extremes over most land areas on daily and seasonal timescales, along with increasingly severe droughts. These changes will lead directly to loss of natural ecosystems (e.g., forests, savannahs, natural grasslands, and wetlands), declining biodiversity, and loss of agricultural productivity.

FOREST LANDS

Forest ecosystems supply fuel, food, and sources of medicine for two of every seven humans, and support more than 75% of the world's terrestrial biodiversity. Forested watersheds provide 75% of the Earth's freshwater.⁸ They are vital components of the self-regulating processes that recycle Earth's finite and essential resources, including oxygen, carbon, and nitrogen. They also cool the air around themselves as they conduct moisture from the soil and release it to the atmosphere as water vapor.

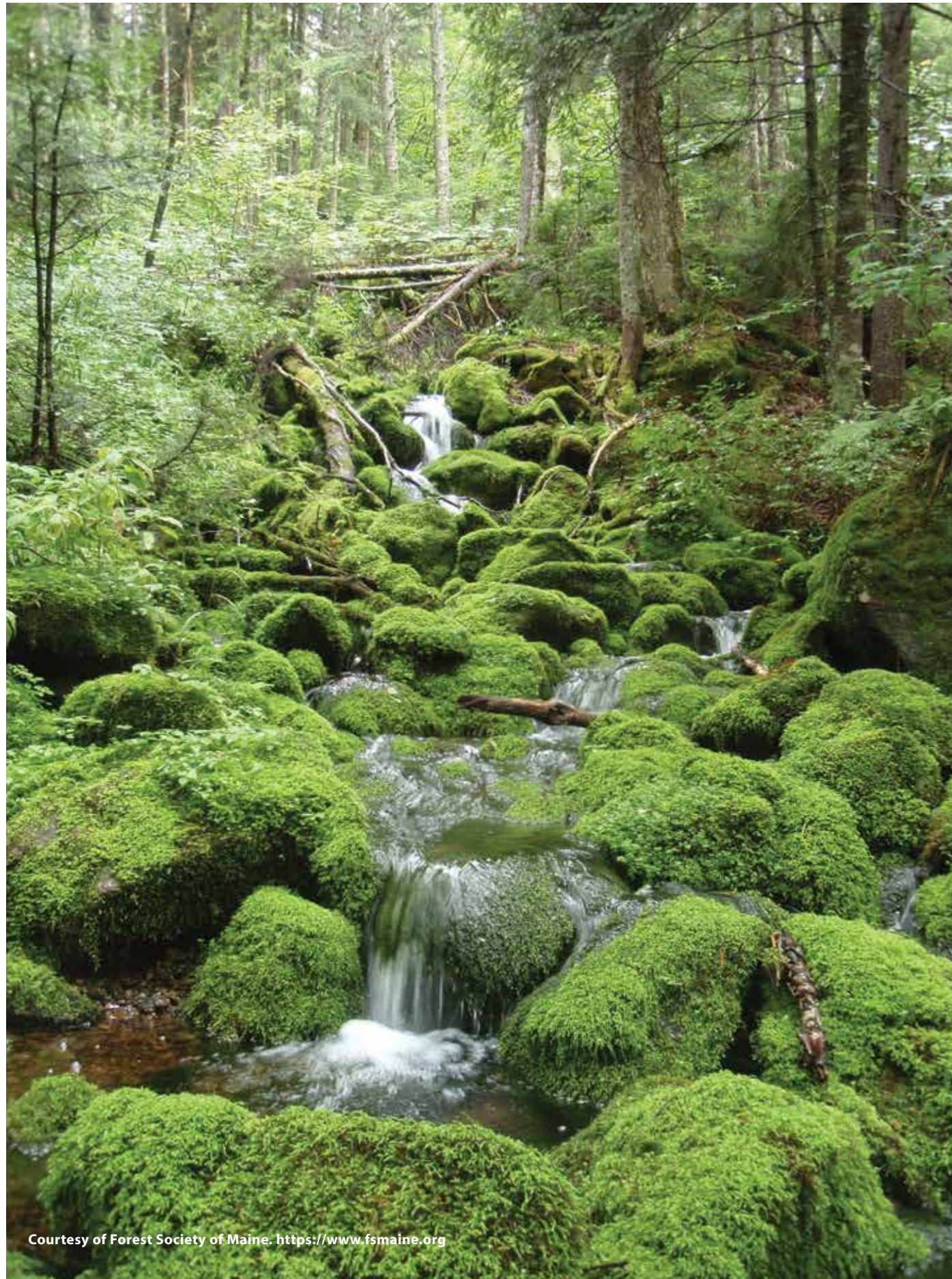
Each year, forests absorb about a quarter of all human-produced greenhouse gases. There is more carbon stored in forests than in all readily accessible fossil fuel reserves, but forest clearcutting, overuse, and degradation account for one-sixth of our annual global carbon emissions.⁹

Forests provide formal employment to at least 50,000,000 people and livelihoods to many more. Closed canopy forests are home to more than 400 million people, including many Indigenous Peoples, who have stewarded them for millennia and possess internationally recognized rights to lands and resources. As some of the last intact, undisturbed places on Earth, forests also support wildlife seen nowhere else on the planet.

Forests still cover around 37% of Earth's land area, but deforestation has affected more than 500,000 square miles of forests since 1990.¹⁰ Although the net rate of forest loss globally has declined since 1990, many critical ecosystems, especially in Latin America, Southern Africa, and Asia continue to lose area to human activities.¹¹ Rainforests, especially in the Amazon Basin and Asia, as well as in the temperate areas of North America, are severely threatened. Greenhouse gas emissions associated with deforestation account for about 20% of human-caused emissions.



Klamath National Forest, Yreka, United States. Photo by Matt Howard.



Courtesy of Forest Society of Maine. <https://www.fsmaine.org>



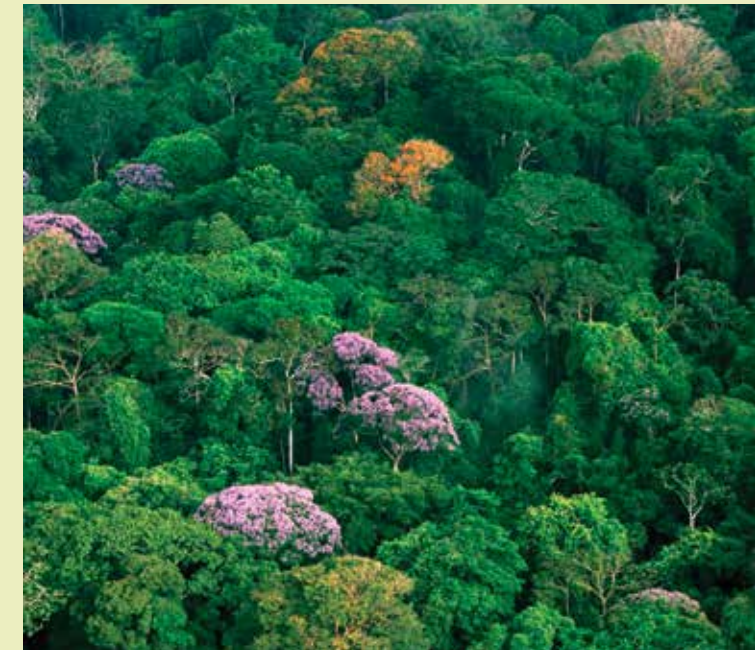
UN staff planting trees at the Gulele Botanical Garden in Addis Ababa, Ethiopia. Photo by Martha Mogus.

UNEP ECOSYSTEM MANAGEMENT

Integrated ecosystem management uses social, environmental, and economic perspectives in order to meet both ecological and human needs.

UNEP's Ecosystem Management Programme (<https://unenvironment.org/explore-topics/ecosystems>) works with communities, businesses, and governments around the world to promote a transition away from narrow, single-goal approaches and towards holistic and collaborative ecosystem management, helping ensure that ecosystems are able to meet multiple objectives — from provision of food, water, and energy to biodiversity protection and job creation. The programme fosters the transition to integrated ecosystem management by strengthening six key building blocks to meet both current and future needs:

1. Essential infrastructure to guarantee the long-term health and functioning of ecosystems;
2. Integration of the socioeconomic values of ecosystems into decision-making;
3. Collaboration across sectors to reconcile competing demands on ecosystems;
4. Public sector economic decision-making that supports healthy and productive ecosystems;
5. Inclusion of ecosystem health and productivity in private sector business decisions; and
6. Equipping future decision-makers with the knowledge to sustain human wellbeing in harmony with nature.



Tropical Forest Canopy in Panama. Photo by Christian Ziegler. Courtesy of si.edu.

INTERFAITH RAINFOREST INITIATIVE

The Interfaith Rainforest Initiative (<https://www.interfaithrainforest.org>) is an international, multi-faith alliance that works to bring moral urgency and faith-based leadership to global efforts to end tropical deforestation. It provides a platform for religious leaders to work hand-in-hand with Indigenous Peoples, governments, civil society organizations, and businesses on actions that protect rainforests and safeguard the Indigenous Peoples that serve as their guardians.



Red-eyed tree frog. Photo by Zdenek Machacek.



Ocean

The ocean provides essential life support for our planet. It contains about 97% of the water on Earth, covers 71% of the planet’s surface, and is the source of almost all the water that falls on land. It has a major influence on weather patterns and global climate conditions and dominates the global carbon cycle, holding 50 times more carbon than the atmosphere. Its countless forms of microscopic plant life annually generate half of the oxygen that exists in the atmosphere, and it is home to more than 90% of the world’s biodiversity.¹²

Directly or indirectly, all people depend on the ocean. Human communities in coastal environments and on small islands (including Small Island Developing States) are particularly vulnerable to ocean-related changes, such as sea level rise and extreme tides, as well as major ocean storms. The low-lying coastal zone is currently home to around 680 million people (nearly 10% of the global population in 2010), a total projected to reach more than one billion by 2050.¹³ About 300 million people’s lives and livelihoods are increasingly at risk as a result of coastal habitat loss, including extensive losses of coral reefs, tidal wetlands, and seagrass meadows.

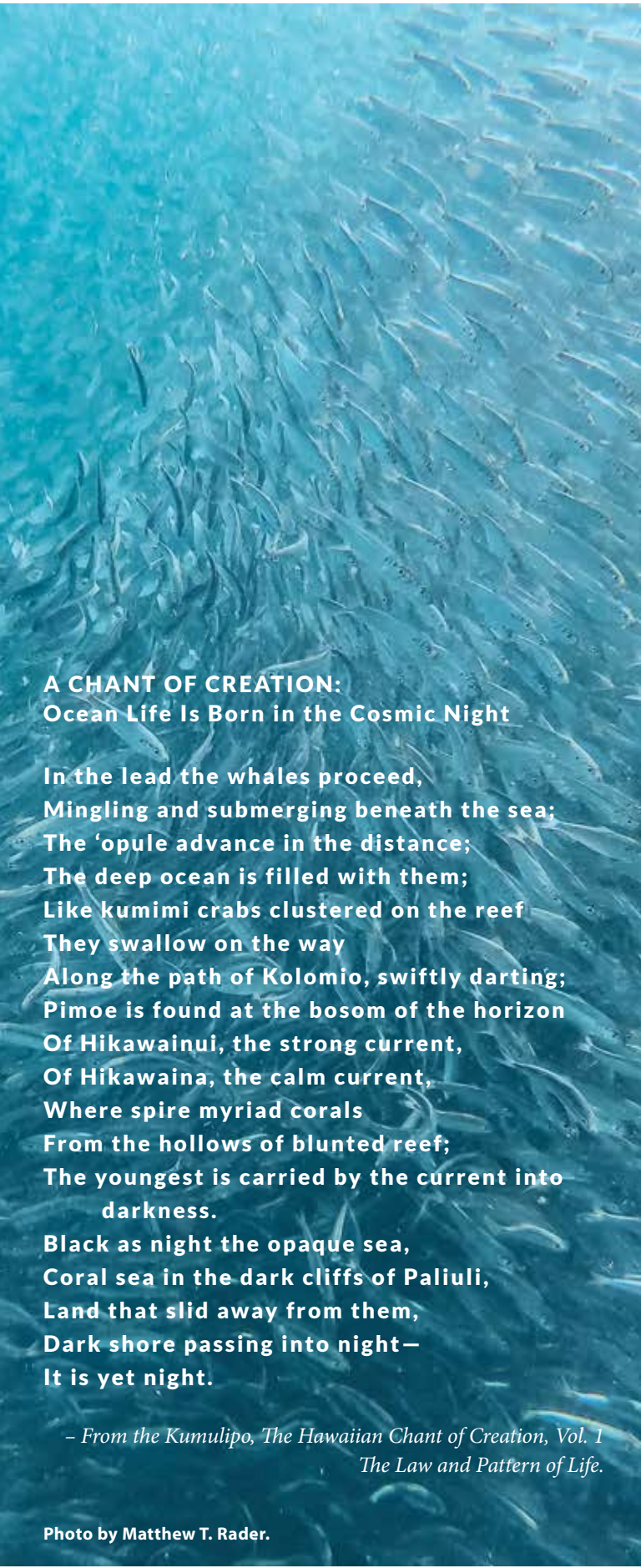
WILD OCEAN FISHERIES

“Fish accounts for 17% of all animal protein consumed in the world; at 26%, this share is even higher in the poorest and least developed countries. Nearly 60 million people work in fisheries and aquaculture, and it is estimated that 200 million jobs are directly or indirectly connected with the fisheries sector.”

— Mukhisa Kituyi, Secretary-General of UNCTAD and Peter Thomson, United Nations Special Envoy for the Ocean, July, 2018

The ocean produces protein for three billion people, but the world’s fisheries are reaching the limit of the number of wild fish that can be taken without causing their populations to collapse. Nearly 90% of the world’s marine fish stocks are now either fully exploited, overexploited, or depleted. Over 50% are being fished at maximum sustainable levels and a third of the world’s commercial marine fish species are being caught at unsustainable levels. Industrial fishing is underway in over half of the world’s ocean, and it is estimated that as much as a third of this catch is illegal or unreported.¹⁴

Facing page: Photo by Ivan Zhirnov.



A CHANT OF CREATION: Ocean Life Is Born in the Cosmic Night

In the lead the whales proceed,
Mingling and submerging beneath the sea;
The ‘opule advance in the distance;
The deep ocean is filled with them;
Like kumimi crabs clustered on the reef
They swallow on the way
Along the path of Kolomio, swiftly darting;
Pimoe is found at the bosom of the horizon
Of Hikawainui, the strong current,
Of Hikawaina, the calm current,
Where spire myriad corals
From the hollows of blunted reef;
The youngest is carried by the current into
darkness.
Black as night the opaque sea,
Coral sea in the dark cliffs of Paliuli,
Land that slid away from them,
Dark shore passing into night—
It is yet night.

– From the Kumulipo, The Hawaiian Chant of Creation, Vol. 1
The Law and Pattern of Life.

Photo by Matthew T. Rader.



Plastic Ocean. Courtesy of NRDC.org.

UNEP CLEAN SEAS CAMPAIGN: TURNING THE TIDE ON PLASTIC

UNEP's Clean Seas campaign (<https://cleanseas.org>) engages governments, civil society, the private sector, and individuals around the world to "turn the tide on plastic" by addressing the root causes of the marine plastic pollution problem. To date, 60 countries, covering 60% of the world's coastlines, have made commitments to work towards Clean Seas, and over

100,000 individuals have pledged to reduce their plastic footprint. Through public calls to action, Clean Seas encourages all people to reduce consumption of single-use plastic; reuse plastic products, and improve management of plastic waste. Challenging the perception that plastic is a truly disposable material, Clean Seas is raising awareness of unnecessary plastic in all sectors – from the cosmetics industry to tourism.

MICROPLASTIC POLLUTION

The global release of primary microplastics into the ocean is estimated at 1.5 million tons per year, the world per capita equivalent of 212 grams—approximately one empty conventional plastic grocery bag thrown into the ocean per person/per week worldwide.

— from *Primary Plastics in the Ocean*, IUCN, 2017, p.5.

More than 10 million tons of plastic pollution enters the ocean every year, including pieces of plastic that are less than five millimeters in length (about the size of a sesame seed), called "microplastics."¹⁵

Microplastics are formed in the industrial production of microbeads used in health, beauty, and cleaning products, and when larger pieces of plastic trash degrade into smaller and smaller fragments. Marine animals and seabirds ingest microplastics, mistaking them for food. Microplastics have entered the marine food chain this way, even reaching the people who consume seafood, and researchers are working to understand the toxic effects of microplastics, both on marine ecosystems and on human health.

CLIMATE CHANGE AT SEA: HEAT + ACID

<https://oceanservice.noaa.gov/facts/acidification.html>

As atmospheric carbon dioxide increases and ocean temperatures rise, seawater also becomes more acidic. Warming temperatures and increasing acidity are threatening the life cycle, migratory patterns, and survival of an ever-growing number of marine species, transforming food chains from the bottom up. In addition, many species of fish and other marine life are moving poleward in search of cooler waters, changing the global fishing industry and impacting the people who depend on — or want to — consume fish for food.

Ocean acidification happens when increasing amounts of carbon dioxide from the atmosphere are absorbed into the seawater, making it more acidic and damaging the ability of shell-forming species to survive. Greater acidity in the water causes a range of far-reaching changes in the marine environment, reducing growth and reproduction and limiting the food available to fish and other marine species. Since the beginning of the industrial era in the mid-18th century, the ocean's uptake of carbon dioxide has caused a 26% increase in acidity (corresponding to a significant drop in the pH of ocean water).¹⁶

Temperature changes also have the potential to alter major ocean currents. Because ocean temperatures drive global atmospheric circulation, these changes are shifting weather patterns all over the world. Scientists have found that higher ocean surface temperatures make rainfall more variable, and thus less predictable, from year to year.

When rainstorms stall over land for long periods of time, they increase the risk of flooding. Research shows a clear connection between warmer temperatures and slower-moving hurricanes. From 1949 to 2016, the movement of tropical cyclones slowed by 10% globally and the speed of North Atlantic hurricanes over land areas slowed down by 20%. Projected increases in tropical cyclone intensity and precipitation will further magnify the impacts of extreme sea levels and coastal hazards. By 2050, extreme sea level events that were historically rare (happening once every hundred years in the recent past) are projected to occur at least once per year at many locations, especially in tropical regions.

CORAL REEFS AND MARINE BIODIVERSITY

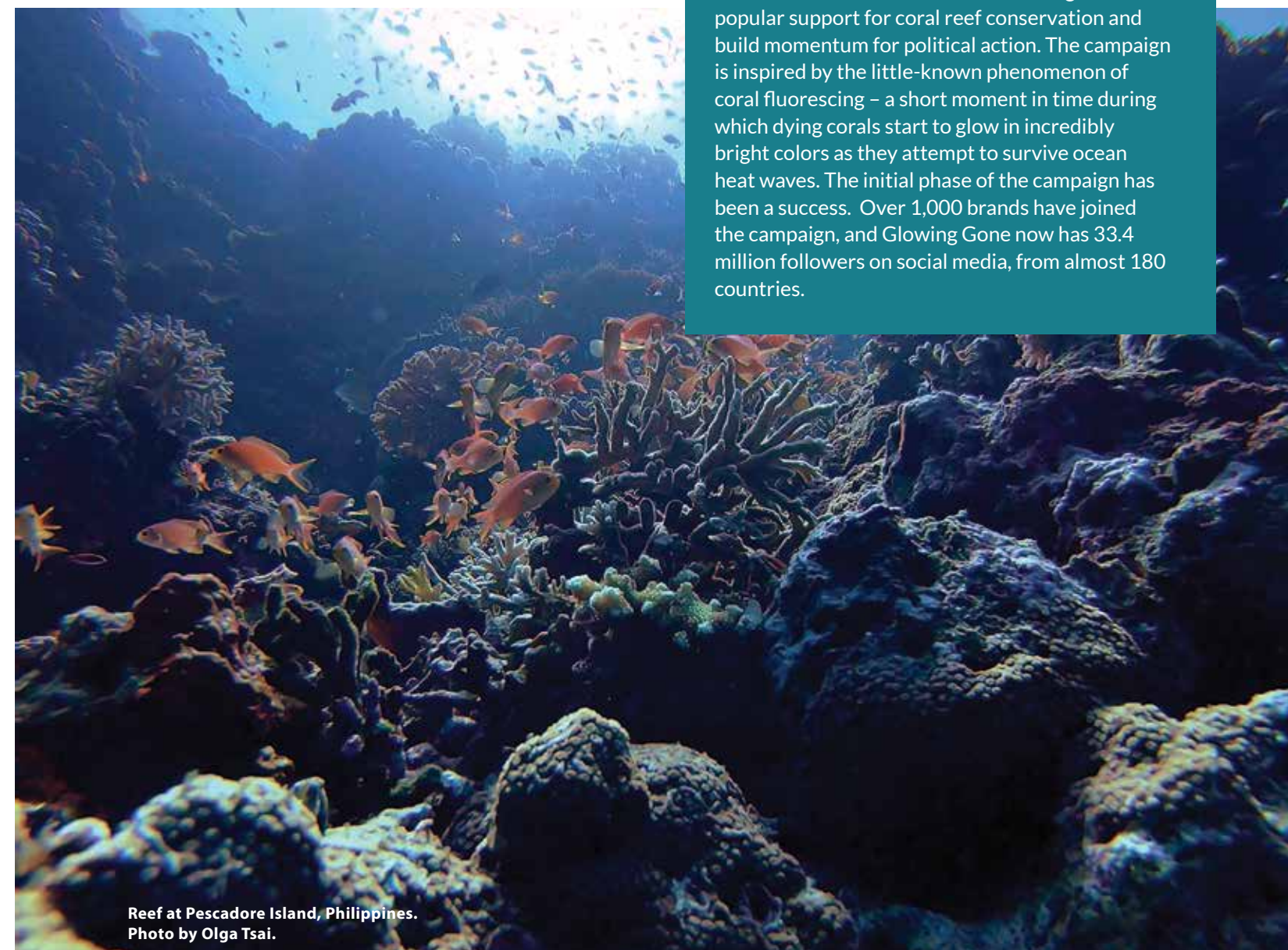
Coral reefs are among the most biologically diverse and productive ecosystems on the planet and are home to more than a quarter of all known species of marine life.

Marine heatwaves and ocean acidification have caused large-scale and increasingly frequent coral bleaching events and disease outbreaks that threaten the survival of coral reef ecosystems. As temperatures rise, mass coral bleaching events and infectious disease outbreaks are becoming more frequent.¹⁷ Further threats to coral reef ecosystems are coming from sea level rise, changing ocean circulation, increased intensity of tropical storms, overfishing, and land-based pollution.

UNEP CAMPAIGN:

GLOWING GONE (<https://www.glowing.org>)

The gap between the speed and scale of the global coral reef crisis and the action needed to prevent the loss of this vastly important ecosystem is immense and urgent. In 2019, UNEP, in partnership with The Ocean Agency, launched the Glowing Gone communications campaign to engage creative businesses and their networks to generate popular support for coral reef conservation and build momentum for political action. The campaign is inspired by the little-known phenomenon of coral fluorescing – a short moment in time during which dying corals start to glow in incredibly bright colors as they attempt to survive ocean heat waves. The initial phase of the campaign has been a success. Over 1,000 brands have joined the campaign, and Glowing Gone now has 33.4 million followers on social media, from almost 180 countries.



Reef at Pescadore Island, Philippines.
Photo by Olga Tsai.



Waterfall in Asia. Photo by Oliver Sjostrom.

Water

Although almost 71% of our planet is covered by water, only 2.5% of it is fresh water, and much of that is inaccessible.¹⁸ The rest is either too salty, frozen, or bound up in rock and soil for us to use. Humans are now the primary consumers of more than half of the fresh water in the world.

Direct human water consumption is around 9,100 km³ per year (approximately twice the volume of Lake Michigan in the United States). The way we manage water leads to additional consumption through evaporation into the atmosphere. When this is taken into account, total human impact on the water supply grows to an annual total of approximately 10,700 cubic km³.

Water use has been increasing worldwide by about 1% per year since the 1980s, driven by a combination of population growth, socioeconomic development, and changing consumption patterns. Global water demand is expected to continue increasing at a similar rate until 2050, leading to an increase of 20% to 30% above the current level of water use, mainly due to rising demand in the industrial and domestic sectors. The United Nations projects that water usage will grow at about twice the rate of population growth through 2050. Water is necessary for the production of energy, particularly for electricity, and global energy demand is conservatively projected to increase by 50% by 2050.¹⁹

Around 40% of the human population already suffers chronic water scarcity, and 800 million of us lack basic drinking water service.²⁰ As demand exceeds supply, conflict over water use will increase. For example, water is necessary for production of both food and energy, and demand for both is growing rapidly. Worldwide, irrigation accounts for close to 70% of annual water withdrawals. Demand for food is projected to increase 60% - 100% by 2050.²¹ Countries that import beef, chicken, and other water-intensive products may be using these imports to reduce and shift their own water demand at home. Chronic and severe water shortages bring renewed focus on “shared (transboundary) water” sources, such as rivers and aquifers, leading to transboundary freshwater disputes.²²

CLIMATE CHANGE AND WATER

Climate change impacts Earth’s water in complex ways. Warming of the planet is altering nearly every stage in the world’s water cycles. Effects on water resources from human-caused climate change include shifts in precipitation patterns (such as overall declines in rainfall, often accompanied by torrential deluges of short duration, especially in the mid-latitude regions, and changes in snowfall and snowmelt dynamics in higher latitudes), increased water losses from more evaporation driven by rising temperatures, and degradation in water quality. All these changes put pressure on drinking water supplies, food production, property values, and public budgets. Besides causing shifts in the water cycle itself, climate change is altering how we use water and how much of it we need. Higher temperatures and evaporation rates are increasing demand for water in many areas of the world.

THE WATER FOOTPRINT: *Hidden water in everyday products*

It may not be visible, but millions of gallons of virtual water go into making consumer goods. Manufacturing everyday materials like paper, plastic, metal, and fabric takes water – a lot of it. Knowing how much water it takes to make the raw materials and products we use and consume is an important first step towards water conservation and using water more productively.

Water that is not felt or seen – known as virtual water – is required for almost every step in the production processes for many different raw materials and finished products. The water footprint of a product is calculated by adding up all of the water required for each step of the production process.



Water Footprint of Common Consumer Items (gallons)

Item	Water Footprint
Car	13,737 – 21,926
Leather shoes	3,626
Smart phone	3,190
Cotton bed sheet	2,839
Jeans	2,108
T-shirt	659

—From *Water Footprint Calculator*.
<https://www.watercalculator.org>

Today over two billion people live in countries experiencing high water stress, and about four billion people experience severe water scarcity during at least one month of the year. Stress levels will continue to increase as demand for water grows and the effects of climate change intensify.

Projections that combine population growth and climate change show that changes in water supply, demand, and quality will have significant impacts on water infrastructure, increasing the need for more investment. Even in a developed country like the United States, an estimated 1.6 million Americans do not have regular access to safe drinking water. Researchers have found that because of climate change, aging infrastructure, and other factors, up to 40.9 million American households may not be able to afford water and wastewater services by 2022, and nearly half of the 204 freshwater basins in the United States may not be able to meet their monthly water demand.



Freshwater swamp forest in Bangladesh. Photo by Toriqul Islam.

FRESHWATER WETLANDS

Freshwater wetlands connect the planet’s land and water ecosystems; they are transition zones where the flow of water, the cycling of nutrients, and the energy of the sun meet to create habitat that supports more than 125,500 freshwater-dependent species. Wetland ecosystems provide essential services to human society, improving water quality in rivers and streams, and helping to minimize floods by acting like sponges that absorb and store excess rainfall, creating refuges for wildlife and supplying water for communities and livestock.

Wetlands, including peatlands, are some of the largest carbon reservoirs on Earth (estimated to store more than one-third of the world’s terrestrial carbon) and they can play an important role in our approach to climate change adaptation by capturing and storing carbon to reduce atmospheric greenhouse gases. They also buffer and provide resilience to effects of climate change such as flooding, storm surge, and coastal inundation. But wetlands are themselves increasingly threatened by increased temperatures; changes in precipitation; and more frequent or intense droughts, storms, and floods that are the result of the changing climate. Wetland loss or destruction often also causes major releases of greenhouse gases to the atmosphere.



Cryosphere

The cryosphere consists of all the frozen components of Earth's surface. Around 10% of Earth's land area is frozen or covered in ice. Over the last several decades, warming temperatures on the planet have caused widespread shrinking of the cryosphere, with reductions in snow cover and loss of mass in ice sheets and glaciers, thawing permafrost, and declines in the extent and thickness of sea ice.²³

Since the mid-20th century, the shrinking cryosphere in the Arctic and high mountain areas has negatively impacted food security, water resources, water quality, livelihoods, health and wellbeing, infrastructure, transportation, tourism, and recreation, as well as human cultures and communities, particularly for Indigenous Peoples. The costs and impacts of these changes have been unequally distributed across populations and regions. Global-scale loss in the size of glaciers, permafrost thaw, decline in snow cover, and decrease in the extent of Arctic sea ice are projected to continue in the near-term (2031–2050) as a result of surface air temperature increases, with unavoidable local consequences for river runoff and other hazards.

CLIMATE CHANGE AND ICE

The Arctic has warmed at more than twice the global average, causing sea ice north of the Arctic Circle to melt faster than scientists had initially projected. The change can be measured in square kilometers of ice cover, known as the sea ice extent. At the end of summer, the time when Arctic sea ice extent reaches its annual minimum, the area covered by Arctic sea ice in 2019 shrank to its second-lowest level since satellite monitoring began in 1979.

Loss of Arctic sea ice is a two-fold problem. Ice helps cool Earth by reflecting solar energy back into space, so less ice means less reflected solar energy and less cooling. Instead, the darker, ice-free water absorbs more energy, becoming warmer and melting still more ice. The consequences of losing sea ice are global, not only from more and faster heating, but from potential disruption to large-scale features of our weather, such as the Northern Winter Polar Vortex, the Jet Stream, and major ocean currents.

Facing page: Glacier calving. Photo by Jens Johnsson.



Aerial view of a heavily crevassed glacier. Courtesy of NOAA.

GLOBAL ICE VIEWER

<https://climate.nasa.gov/interactives/global-ice-viewer/#/>

This online graphic illustrates the effects of climate change on all the major components of Earth's cryosphere. In the past, as winter snowpack melts in spring, it slowly adds fresh water to rivers and streams and helps to replenish drinking water supplies. However, as air temperatures increase beyond former levels, many areas are receiving more of their precipitation as rain, rather than snow. This means less water is being stored as snowpack for later use. In addition, the rain actually accelerates the melting of snow already on the ground. Less snowpack leads to drier conditions later in the year, which impacts regions that rely on snow-melt to refill their drinking water supplies.

SEA LEVEL RISE

There are two primary causes of global mean sea level rise — added water from melting ice sheets and glaciers, and the expansion of sea water as it warms. The melting of Antarctica’s ice sheet is currently responsible for 20 to 25 percent of global sea level rise.

—NASA Global Climate Change/Vital Signs of the Planet
https://climate.nasa.gov/climate_resources/125/infographic-sea-level-rise/

Global sea level has risen by about 8 inches since reliable record keeping began in 1880 and continues to rise at an increasing rate. By the end of the 21st century, researchers predict it is very likely that over 95% of the ocean will sustain a rise in sea level by an average of one meter. About 70% of the world’s coastlines are projected to experience a sea level change within approximately 20% of this average, jeopardizing ecosystems and coastal communities around the world.

The impacts of sea level rise on coastal ecosystems include habitat contraction, a geographical shift of species populations, and loss of biodiversity and ecosystem function, including declines in agricultural production.

For example, in Asia, where much of the region’s rice is grown in coastal areas and low-lying deltas, rising seas will disrupt production, and, as saltwater that moves further inland, it will reduce crop yields there as well. Vegetated coastal ecosystems protect the coastline from storms and erosion and help buffer the impacts of sea level rise. But nearly 50% of coastal wetlands have been lost over the last century, as a result of sea level rise combined with the impacts of localized human pressures, warming, and more extreme climate events.

“Global sea level is projected to rise another 1 to 4 feet by 2100. In the next several decades, storm surges and high tides could combine with sea level rise and land subsidence to further increase flooding in many regions. Sea level rise will continue past 2100 because the oceans take a very long time to respond to warmer conditions at Earth’s surface. Ocean waters will therefore continue to warm and sea level will continue to rise for many centuries at rates equal to or higher than those of the current century.”²⁴



Erosion from sea level rise damage in Hoi An, Vietnam.
Photo by Xuan Huong Ho.

PERMAFROST

Ground that stays completely frozen—32°F (0°C) or colder—for at least two years in a row is called permafrost. Found in polar regions and areas with high mountains, permafrost lies underneath approximately a quarter of all the land in the Northern Hemisphere. Increasing global temperatures and loss of sea ice in coastal regions are causing frozen permafrost to thaw, making Earth’s climate heat up even further by releasing massive amounts of methane, an extremely potent greenhouse gas, along with carbon dioxide that had been stored as carbon in the frozen ground for millennia. People in many northern settlements live directly on permafrost.²⁵ As it thaws, houses, roads, and other infrastructure in their communities are disappearing.



Photo courtesy of Rice University.

A LETTER TO THE FUTURE

In August 2019, Iceland marked the loss of Ok, the first major glacier there to disappear as result of climate change. Scientists and government officials placed a memorial on the rock that remained, with a message to future generations:

Ok is the first Icelandic glacier to lose its status as a glacier. In the next 200 years all our glaciers are expected to follow the same path. This monument is to acknowledge that we know what is happening and what needs to be done. Only you know if we did it.

Biodiversity

Biodiversity supports everything in nature that we need to survive: food, clean water, medicine, and shelter.
—World Wildlife Fund, 2018

Earth is home to all life as we know it. Thus far, scientists have identified close to two million species, but estimates total at least eight million or more.²⁶ The variability within and among the planet’s millions of species is called biodiversity. All the species and the terrestrial and aquatic ecosystems they inhabit and influence make up the biosphere, the planet’s envelope of life.

Earth’s biodiversity is an integral part of essential ecosystem resilience and has a direct role in control of climate and disease; nutrient cycling and crop pollination; soil fertility and stability; and our supply of oxygen, fresh water, food, and medicines. Apart from the support services biodiversity provides to society, it is a living record of the planet’s evolutionary history and a source of spiritual value, reverence, and inspiration for people throughout the world.

Earth’s biosphere is a complex and dynamic system that evolved over billions of years; today it is undergoing rapid change because of human actions and choices.



Limpopo Province, South Africa. Photo by Geran de Klerk.

BIODIVERSITY AND CLIMATE CHANGE

Approximately half of the known species in the biosphere are currently threatened with extinction. To a large extent, this is happening because of increasing rates of habitat conversion (wetland loss, deforestation, and coastal development) for human use, direct human exploitation of wildlife, and pollution, particularly in the form of rapid climate change.

Most plants, and many animals, cannot shift their geographical ranges sufficiently fast to keep up with the escalating rate of climate change that is occurring now, much less at the rate it is projected to continue beyond the 21st century.

In the ocean, numerous marine species have shifted their geographical ranges and seasonal behavior in response to ocean warming, habitat loss, food depletion, and changes in ocean chemistry, including decreasing levels of dissolved oxygen in the water. This has caused major shifts in species composition, distribution, and abundance, along with changes in the overall productivity of ecosystems, from the equator to the poles.

Since 1970, there has been an overall average 60% decline in the world’s populations of mammals, fish, birds, reptiles, and amphibians, an extinction rate that is many times greater than the natural rate at which species become extinct over time. Overfishing, poaching, deforestation, water pollution, and human-caused climate change are threatening biodiversity in ecosystems everywhere, “from the most exotic locales to our own backyards.”²⁷



Jaguar. Courtesy of nationalgeographic.org.



Grevy's zebra. Courtesy of awf.org.

THE EXTINCTION CRISIS

Overexploitation, habitat destruction, climate change, and pollution are driving species to extinction at unprecedented rates.²⁸

- Up to 30,000 species become extinct each year — approximately three every hour.
- All the species of great apes and 50% of all primate species are threatened with extinction.
- Three of the world’s eight tiger subspecies became extinct in the past 60 years; the remaining five are all endangered.
- Humans have already caused the extinction of 20 percent of known birds species.
- Twelve percent of mammal species, 12 % of bird species, 31 % of reptile species, 30 % of amphibian species, and 37 % of fish species are facing extinction.
- The majority (70% - 90%) of tropical coral reefs are endangered.



Papahānaumokuākea Marine National Monument. Photo by James Watt/NOAA.



Caribou migration in Arctic Alaska. Photo by Kyle Joy. Courtesy of U. S. National Park Service.

UNEP:WILD FOR LIFE

The Wild for Life Campaign (<https://wildfor.life>) is the United Nations’ voice on wildlife crime — raising awareness, sharing knowledge, mobilizing public support for stronger legislation, and prompting changes in behavior to prevent and reduce demand for illegal wildlife products. Illegal trade in wildlife is a massive, multibillion-dollar market driven by international criminal networks and exacerbated by a nexus of poverty and corruption. Wildlife trade is a crime that, when combined with other threats like habitat loss and climate change, can drive thousands of species to the brink of extinction, lead to ecosystem breakdown, and spread disease and invasive species. Working with UNDP (the United Nations Development Programme), UNO-DC (the United Nations Office on Drugs and

Crime), and CITES (the Convention on International Trade in Endangered Species), UNEP has led the Wild for Life campaign since 2016. Reaching audiences in eight languages, it urges them to protect 25 CITES-listed endangered marine and terrestrial wildlife species. Working through high-profile social media influencers to bring the urgency, scale, and significance of wildlife trafficking to a global audience, its community of over 60,000 champions continues to grow. In 2019, Wild for Life had close to one billion followers, with nearly ten million social media interactions. Several species in the Wild for Life campaign — including elephants, rhinos, pangolins, helmeted hornbills, rosewood, and mako sharks — have received greater protection, both from CITES and through more rigorous legislation.



Photo by Charles Ray.

Atmosphere

The atmosphere is an envelope of gases that separates Earth’s land and water from the rest of the universe. Compared to the size of Earth, this envelope is very thin, about the equivalent of a piece of paper laid over a beach ball.²⁹ Only about 100 miles thick, it traps enough of the sun’s energy to make Earth habitable for humans. Concentrated densely at the Earth’s surface, the atmosphere thins rapidly with altitude.

Composed of a mix of several different gases in differing amounts, the atmosphere’s most abundant gas is nitrogen (78%); oxygen is second (21%) and argon third (0.9%). The quantity of these gases in the atmosphere is essentially constant. The atmosphere also contains other gases in smaller amounts, including water vapor, carbon dioxide and other greenhouse gases, and microparticles of other pollutants. The quantities of carbon dioxide, other greenhouse gases, and other pollutants in the atmosphere are growing at an increasing rate, which is driving changes in Earth’s climate.

CLIMATE CHANGE AND AIR

Before the Industrial Revolution in the mid-18th century and the start of large-scale burning of coal to power steam engines, humans did not emit significant amounts of greenhouse gases. Anthropogenic greenhouse gas emissions have increased significantly since the pre-industrial era, however, as a result of both economic growth and the increasing human population. People have burned more and more coal and other fossil fuels, and engineered new chemicals that, along with carbon dioxide, artificially increase the atmosphere’s greenhouse effect and cause global temperatures to rise. In 2017, the most recent year with complete data, new worldwide emissions from all human sources of greenhouse gases equaled 50,820 million metric tons of carbon dioxide, or more than 1,600 tons every second.³⁰

Emissions are higher now than ever before in human history, resulting in atmospheric concentrations of carbon dioxide, methane, and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been found throughout the climate system.³¹

AIR POLLUTION

Air pollution is one of the greatest environmental threats to human health. An estimated seven million people die from air pollution every year. Urban air pollution is increasing by 8% every five years, and 97% of cities in low- and middle-income countries with more than 100,000 inhabitants do not meet World Health Organization (WHO) air quality guidelines. The World Bank estimates that air pollution exacts an annual toll of US\$ five trillion in health and welfare costs and US\$ 225 billion in lost income.



Macau, China. Photo by Macau Photo Agency.



Photo by joiseyshowaa.

UNEP CAMPAIGN: *Breathe Life* <https://www.breathelife2030.org>

UNEP's BreatheLife campaign raises awareness of air pollution impacts and solutions, catalysing a global effort to enable people to improve air quality to ensure a healthy atmosphere and a thriving planet. Consisting of a network of 76 cities and a total of 295 million citizens, Breathe Life works with the Climate and Clean Air Coalition, WHO, and the World Bank, providing a high-level political platform for leaders in assisting and encouraging countries to respond to air pollution and climate challenges. The campaign works with BreatheLife cities that have world-leading air quality policies and regulations, creating regional hubs to disseminate best practices, technical advice, and capacity building support to neighbouring cities. Campaign partners also provide local, national, and regional level guidance and technical support to track and monitor clean air actions.

UNEP CAMPAIGN: *Beat Air Pollution*

In 2019, UNEP and China co-hosted World Environment Day with Beat Air Pollution (<https://www.unenvironment.org/beatpollution/>) as its theme. The campaign highlighted the rising threat of air pollution, promoted solutions, and mobilized scores of individuals in governments and the private sector to join the effort. Beat Air Pollution uses stories to communicate its messages through digital, media, and direct outreach. Messages revolve around causes, consequences, and air pollution solutions, empowering audiences and inviting them to take action. Beat Air Pollution's core goal is to ensure that 50% of the global population lives in places that meet WHO air quality guidelines. This can only be achieved when policies at national, regional, and city levels are enacted and implemented.

People

In 2000, there were approximately 6,100,000,000 people on Earth. The human population currently stands at about 7,800,000,000 and continues to grow, increasing the pressure on natural resources and ecosystems everywhere on the planet. To survive, each of the 7.8 billion people alive today must have direct access to at least 1,400 calories and four pounds of water every day.³²

The assets of the richest 300 people in the world currently exceed the combined wealth of the poorest 40% of the total human population.³³ Among the 2.8 billion poorest of these, the vast majority are women and children. Two billion of them go to bed hungry each night, and most are functionally illiterate. There are more people today who cannot read or write, and more people malnourished, than all the people who were alive in the world just a century ago. Three-quarters of the environment on land and about two-thirds of the marine environment have been profoundly altered by human actions.

The world's human population is expected to grow to almost 10 billion (10,000,000,000) by 2050.³⁴ Of the four souls born each second, three will be born in a city within a country whose governing systems are already lacking the capacity to provide for basic human needs, systematically address major problems, and protect human liberty.

THE GREENHOUSE EFFECT

The greenhouse effect is the way in which heat is trapped close to the surface of Earth by "greenhouse gases." These heat-trapping gases can be thought of as a blanket wrapped around the Earth, which keeps it toastier than it would be without them. Greenhouse gases include carbon dioxide, methane, and nitrous oxides. Greenhouse gases arise naturally, and are part of the make-up of our atmosphere... Part of what makes Earth so amenable is the naturally-arising greenhouse effect, which keeps the planet at a friendly 15 °C (59 °F) on average. But in the last century or so, humans have been interfering with the energy balance of the planet, mainly through the burning of fossil fuels that give off additional carbon dioxide into the air. The level of carbon dioxide in Earth's atmosphere has been rising consistently for decades and traps extra heat near the surface of Earth, causing temperatures to rise.

—From "What is the Greenhouse Effect,"
NASA Global Climate Change.

<https://climate.nasa.gov/faq/19/what-is-the-greenhouse-effect/>



WATCH HUMAN POPULATION THROUGH TIME
<https://amnh.org/explore/videos/humans/human-population-through-time>

"It took 200,000 years for our human population to reach 1 billion—and only 200 years to reach 7 billion. But growth has begun slowing, as women have fewer babies on average. When will our global population peak?"

Photo by Toa Heftiba.



Courtesy of UNICEFUSA.org.

CLIMATE CHANGE AND PEOPLE
Food Scarcity

Changes in extreme weather and climate events have been occurring on a global scale since the middle of the twentieth century, including an increase in the frequency of heat waves and the intensity of daily temperature extremes. For the first time in history, however, scientists have recently detected the “fingerprint” of human-caused climate change on daily weather patterns at the global scale.³⁵ Recent heat waves, droughts, floods, hurricanes, cyclones, and wildfires are increasingly impacting human lives and the ecosystems that support them.

Eighty percent of the world’s crops are rain-fed, so most farmers depend on predictable weather patterns in order to produce their crops. Rainfall patterns around the world are changing as global temperatures increase, however, and extreme precipitation events, which are becoming more common, can directly damage crops and decrease yields. Increased flooding and sea level rise can drown crops and transport sewage, manure, and pollutants from roads and farms into the food chain. The World Health Organization estimates that foodborne illness sickens some 600 million people annually worldwide, killing 420,000.³⁶ Studies suggest that climate change could worsen many of the major kinds of foodborne illness, even in developed countries.

At the same time, hotter weather causes faster evaporation, resulting in more droughts and water shortages—so there will be less water for irrigation just when it is needed most.

UNEP: CHEMICALS AND CHEMICAL WASTE

UNEP’S Chemicals and Waste Programme (<https://unenvironment.org/explore-topics/chemicals-waste>) works to improve air quality and the management of chemicals and waste. Integrating sound management within national and sector-based policies, legislation, and action plans — as well as in fiscal and institutional frameworks — the programme provides products and scientific assessments to raise awareness and help inform decision-making about chemical hazards. We assist countries in developing waste prevention and management strategies and adoption of practices, technologies, and incentives to reduce air pollution. We work with partners to combat marine litter and stop discharge of plastic debris to the ocean. We continue to strengthen international cooperation for chemical safety, waste management, and pollution prevention, supporting a post-2020 framework for sound management of chemicals and waste within the context of the 2030 Agenda (<https://sdgs.un.org>).



El Fasher, North Darfur. Photo by Albert Gonzalez Farran.

About 10 percent of the crops grown in the world’s major food production regions are irrigated with groundwater that is non-renewable. In other words, aquifers are being drained faster than they are refilling.

Climate change is projected to slow economic growth, make poverty reduction more difficult, further erode food security, and prolong existing poverty traps and create new ones, particularly in urban areas and emerging hotspots of hunger. Tropical regions and poor populations will face the most risks. Children, pregnant women, the elderly, low-income communities, and those with weakened immune systems or chronic medical conditions will be most susceptible to the changes in food access, safety, and nutrition.

Human Health

The connection between climate change and health has become better understood in recent decades. Climate change is expected to lead to increases in ill-health in many regions, especially in developing countries with low income. By 2100, the combination of high temperature and humidity for parts of the year is likely to compromise common human activities, including growing food and working outdoors, by increasing air pollution levels from wildfires and smog. Warming water will increase the frequency and reach of red tides and other harmful algal blooms that sicken and kill both marine organisms and people. Diseases such as malaria, Zika virus, West Nile virus, and Lyme disease are spreading to new areas throughout the world.³⁷ The 2020 COVID-19 pandemic is a tragic example of the scale and speed with which disease can spread through the environment and overwhelm vulnerable populations.

COVID-19

It is clear that the origin of the present coronavirus – as with its predecessors like SARS and MERS and analogously the outbreak of Ebola – has to do with human interference in the intricate balance of natural ecosystems through wildlife trading; deforestation linked to mining, logging, animal husbandry, etc.; and the consequent destruction of local biodiversity. With the rapid destruction of Earth’s life-sustaining ecosystems, we increase the danger of the risk of the evolution of ever-newer, and possibly deadlier, human-adapted viruses in the future. The COVID-19 virus, and other deadly zoonotic viruses of the recent past like Ebola in Western Africa or Nipah in East and later South Asia, are a clarion call to humanity to realize that we humans cannot exist and flourish if we destroy the very ecosystems that sustain us and the rest of the fabric of life. There is a clear link between the wellbeing of humans, other living beings, and ecosystems, which we can ignore only to our peril.

— *Seven Reflections on the Coronavirus Emergency from an Ecological Perspective. Fr. Jostrom Isaac Kureethadam SDB, Coordinator of the Sector on Ecology in the Vatican Dicastery for Promoting Integral Human Development. April 2020.*

UNEP: DISASTERS AND CONFLICTS

<https://www.unenvironment.org/explore-topics/disasters-conflicts>

From mass migration to war, natural disasters to catastrophic industrial accidents, the environment lies at the very heart of some of the most complex and pressing issues of our time. Not only do conflicts and disasters destroy ecosystems, devastating the lives of some of the most vulnerable people on the planet, but the environment can also trigger widespread catastrophe: climate change can drive mass migration; battles over natural resources can plunge countries into prolonged war and a fragile environment can increase the risk and severity of natural disasters. With the twin stresses of population growth and unsustainable consumption, it has never been more important that the world ensures that the environment is a central part of efforts to prevent and respond to conflicts and disasters. By addressing environmental degradation and improving resource management, the UNEP Disasters and Conflicts Programme is working to build more resilient and peaceful societies.



Courtesy of <https://refugeesmigrants.un.org/>.

Refugees

Millions of people are expected to be displaced by the climate crisis as sea levels rise, swaths of land become uninhabitable, and natural disasters become more severe and frequent. In a 2018 report, the World Bank predicted that 143 million people in South Asia, Latin America, and Sub-Saharan Africa are at risk of becoming climate migrants.³⁸ The rate of such displacements is projected to increase. Populations that lack the resources for planned migration experience greater exposure to extreme weather events, particularly in developing countries with low incomes. Climate change can also indirectly increase risks of violent conflicts by amplifying well-documented drivers of these conflicts, such as poverty and economic shocks.

THE FIFTH DIRECTIVE
COMMITMENT TO A CULTURE OF
SUSTAINABILITY AND CARE FOR EARTH

Numberless men and women of all regions and religions strive to lead lives in a spirit of mutual harmony, interdependence, and respect for the Earth, its living beings, and ecosystems.

Nevertheless, in most parts of the world, pollution contaminates the soil, air, and water; deforestation and over-reliance on fossil fuels contribute to climate change; habitats are destroyed and species are fished or hunted to extinction. Overexploitation and unjust use of natural resources increase conflict and poverty among people and harm other forms of life. Too often, the poorest populations, though they have the smallest impact, bear the brunt of the damage done to the planet’s atmosphere, land, and oceans.

a) In the religious, spiritual, and cultural traditions of humankind we find the directive: You shall not be greedy! Or in positive terms: Remember the good of all! Let us reflect anew on the consequences of this directive: We should help provide – to the best of our ability – for the needs and wellbeing of others, including today’s and tomorrow’s children. Earth, with its finite resources, is shared by our one human family. It sustains us and many forms of life, and calls for our respect and care. Many religious, spiritual, and cultural traditions place us within the interdependent web of life; at the same time, they accord us a distinctive role and affirm that our gifts of knowledge and of craft place upon us the obligation to use these gifts wisely to foster the common good.

b) All of us have the responsibility to minimize, as much as we can, our impact on Earth, to refrain from treating living beings and the environment as mere things for personal use and enjoyment, and to consider the effects of our actions on future generations. Caring and prudent use of resources is based on fairness in consumption and takes into account limits on what ecosystems can bear. Wherever heedless domination by human beings over Earth and other living beings is taught, wherever abuse of the environment is tolerated, and wherever development surpasses sustainable limits, we have the duty to speak up, to change our practices, and to moderate our lifestyles.

c) Young people should be encouraged to appreciate that a good life is not a life of outsized consumption or amassing material possessions. A good life strikes a balance between one’s needs, the needs of others, and the health of the planet. Education about the environment and sustainable living should become part of school curricula in every country of the world.

d) To be authentically human in the spirit of our religious, spiritual, and cultural traditions, means the following: Our relationship with each other and with the larger living world should be based on respect, care, and gratitude. All traditions teach that Earth is a source of wonder and wisdom. Its vitality, diversity, and beauty are held in trust for everyone, including those who will come after us. The global environmental crisis is urgent and is deepening. The planet and its countless forms of life are in danger. Time is running out. We must act with love and compassion — and with justice and fairness — for the flourishing of the whole Earth community.

—from “Towards a Global Ethic,” Parliament of the World’s Religions, 2018.

In July 2018, the Trustees of the Parliament of the World’s Religions approved the expansion of the Global Ethic to include a Fifth Directive that defines a commitment to a culture of care for Earth.

CONCLUSION
OUR SHARED FUTURE

Each day we live, we take from and give back to the world around us. We can choose what we take and what we give back.

All too often our gifts back are laden with poisons and destructive consequences, shaped more by our ignorance or greed than by knowledge or wisdom. Ignorance, however, is a voluntary misfortune. Living in our times means that we are to be judged not by our intentions, but by the consequences of our actions. We are the first generation of humans to have the knowledge, technology, and wealth to create societies that are sustainable and just. With that opportunity comes responsibility.

To realize our opportunity we have to choose responsibility — not just say we choose it — but commit to developing the capacity — at every level — to understand the material, physical, and moral consequences of the choices we make.

The Faith Traditions offer us the moral guidance to restructure “right and wrong,” both in terms of the wellbeing of our planet and justice for all. From a scientific perspective, we have a growing capacity to comprehend the full consequence of our choices. From an economic perspective, we can no longer say we cannot afford sustainability, and we can clearly see that unsustainable choices lead to impoverishment, ecological disaster, and moral bankruptcy.

Neither the perspective of faith nor of science will allow us to claim innocence about the consequences of our actions.

In 1995, the Parliament of the World’s Religions offered the world a declaration expressing the ethical commitments held in common by the world’s religious, spiritual, and cultural traditions. The initial declaration, “Towards a Global Ethic,” calls for a change of consciousness and articulates four ethical directives that describe a commitment to a culture of respect for life, economic justice, truth and compassion, and women’s rights. In 2018, the Parliament added a further component to the core values and principles in the Global Ethic — a fifth directive that describes its commitment to sustainability and care for Earth.

The simplest truth of this Ethic is that we can choose to cherish or destroy our world. That is the core meaning of living in the Anthropocene. This book is but an introduction to that reality. Our choices will determine the future of our planet. Therein lies the hope and the danger of this time in the history of the world.

Reconciling our existence with the wellbeing of all starts with acknowledging the patterns of behavior individually and societally that are inconsistent with our values. Achieving reconciliation with the rest of the living world requires change.

Our faiths call us to be warriors for the sustainability and wellbeing of our world. The challenge is enormous, but it does not have to be daunting. No one can do all that must be done, but everyone can do something. One is not responsible for what one truly cannot do alone, but all of us are responsible for what we do together. Accomplishing what is needed starts with each of us doing what we can.

We can pay attention to the signals that our world and our fellow humans are sending every day. We can begin by accepting responsibility for all the by-products of what we consume as we live, by contributing to a clean energy revolution, by respecting and cherishing life in all its forms, by living in a way that accepts that all humans have an equal right to the bounty of creation and equal responsibility for the wellbeing of our world. In doing so, we can grant all life the respect and dignity we claim for ourselves.

Do all you can with what you have in the time you have in the place you are.

—N’kosi Johnson

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3 <https://ourworldindata.org/land-use>

4 IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems. <https://www.ipcc.ch/srccl/>

5 Primary production is the formation of chemical energy in organic compounds by living biological organisms (primarily vascular plants and algae); the net amount of solar energy converted to plant organic matter through photosynthesis.

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23 IPCC Oceans and Cryosphere: {2.2, 3.2, 3.3, 3.4, Figures SPM.1, SPM.2}

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28 Center for Biological Diversity. https://www.biologicaldiversity.org/programs/biodiversity/elements_of_biodiversity/extinction_crisis/

29 <https://climate.ncsu.edu/edu/Composition>

30 Carbon dioxide (CO2) is responsible for about three-quarters of global warming. Given this dominant role, scientists simplify things by rendering all other heat-trapping gases into terms of carbon-dioxide equivalent (CO2e) when tracking cumulative emissions. Each of the other gases has a “global warming potential,” or a measure of how much heat it absorbs, expressed in relation to CO2, and CO2 itself has a global warming potential of 1. Adding these together, gives a worldwide CO2e total of all greenhouse gases released each year.

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WEBSITES AND RESOURCES

United Nations Environment Programme

Responsible for coordinating the United Nation's environmental activities and assisting developing countries in implementing environmentally sound policies and practices, the United Nations Environment Programme (UNEP) sets the global environmental agenda, promotes the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment. UNEP's mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations. Working across seven broad thematic areas: climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency, and environment under review, UNEP maintains a consistent commitment to sustainability. UNEP's Faith for Earth Initiative is working to unite faith-based organizations and religious institutions around the world to focus on environmental issues. Information and resources about all of UNEP's programs is available online at <https://www.unenvironment.org/>.

Yale Forum on Religion and Ecology

The website of the Forum on Religion and Ecology contains a wealth of varied resources – news of events and programs, selected media coverage, formal statements by the world's faiths, information on engaged projects worldwide and abundant materials for teaching courses on religion and ecology and academic research. These include original overview essays by scholars on each tradition, sacred texts of the world's religions, annotated bibliographies, and a rich collection of multimedia resources. The website also has a section on the global climate emergency with a comprehensive collection of statements on climate change by religious and interfaith groups. It also has a sections on the encyclical of Pope Francis *Laudato Si'* and a link to the Emmy Award winning film, *Journey of the Universe*. <https://fore.yale.edu>

The Parliament of the World' Religions Climate Commitments Project

In 2019, the Parliament of the World's Religions launched the Climate Commitments Project (CCP), to provide a way to coordinate and strengthen religiously and spiritually grounded climate commitments around the world. We know that organizations making these commitments have the potential to change individual and institutional behavior. The CCP assists its partners by mapping existing campaigns, sharing resources and information, and creating methodologies for tracking and measuring collective impact. Many organizations are building these commitments within their communities. We are building tools to support them by leveraging the Parliament's extensive global network. The CCP connects and amplifies climate commitment campaigns, helping their leaders to change behaviors, lifestyles, and policies more effectively, and ultimately leading to greater carbon reductions. Join us at <https://parliamentofreligions.org/project-home/climate-commitments-project>.

The following list is a cross-section of faith-based environmental organizations and several sources of information about changing global environmental conditions. The list focuses on national-level and international organizations from a range of traditions, regions, and fields of study, and is by no means exhaustive.

African Wildlife Foundation (AWF)

Working to protecting Africa's most threatened species: “Africa has evolved into a dynamic and rapidly growing continent. A deep understanding of and connection with the aspirations and mindsets driving change on the continent is essential for success in achieving our mission of ensuring wildlife and wild lands thrive in modern Africa.” <https://www.awf.org>

A Rocha

A Christian organization engaging communities in nature conservation (the name means “the Rock” in Portuguese), with national organizations and associated programs in 20 countries; programs include ecological monitoring and research, preserving and restoring habitats, education, and community outreach. www.arocha.org

Asian Indigenous Peoples Pact (AIPPI)

A regional coalition with about 50 member groups throughout Asia, AIPP works to protect the integrity of the environment and enhance sustainable resource management systems of Indigenous Peoples, including their traditional knowledge, food security, and biodiversity. <https://aippnet.org>

Australian Religious Response to Climate Change

A multi-faith, member-based organization of people across Australia who are committed to take action on climate change, with both individual and organizational members. <https://www.arrcc.org.au>

Bhumi Global

A worldwide Hindu response to the environmental issues facing our planet, programs include the Green Temple and Compassionate Living initiatives; Hindu Environment Week; and major environmental and multi-faith events, consultations, and training days in India, Africa, the USA, and Europe. <http://www.bhumiglobal.org>

Brahma Kumaris Environmental Initiative

Environmental programs of the Brahma Kumaris World Spiritual Organization include yogic sustainable farming, promotion of clean energy, waste and plastic reduction, and a series of publications on climate change. <https://eco.brahmakumaris.org>

Blessed Tomorrow

A U. S.-based coalition of religious leaders and 15 religious and interfaith groups working with faith leaders to reach 100% clean energy, prepare for a changing climate, and engage their communities. <https://blessedtomorrow.org/>

Catholic Youth Network for Environmental Sustainability in Africa (CYNESA)

A platform for all young Catholics in Africa, with programs on education, networking, advocacy, and supporting local action plans. <http://cynesa.org>

Center for Biological Diversity

Working with science, law, and creative media, with a focus on protecting the lands, waters, and climate that species need to survive. “We want those who come after us to inherit a world where the wild is still alive.” <https://www.biologicaldiversity.org>

Center for Climate Change Communication

Based in the U. S. at George Mason University, the Center “develops and applies social science insights to help society make informed decisions that will stabilize the earth's life-sustaining climate, and prevent further harm from climate change.” <https://www.climatechangecommunication.org>

Center for Earth Ethics (CCE)

Located at Union Theological Seminary, CCE's four Core Program areas are Eco-ministry, Environmental Justice and Civic Engagement, Original Care-takers, and Sustainability and Global Affairs, seeking to establish an ethic in which value is measured according to the sustained wellbeing of all people and our planet. <https://centerforearthethics.org>

The Coalition on the Environment and Jewish Life (COEJL)

A U. S.-based network of Jewish leaders, institutions, and individuals mobilizing the Jewish community for stewardship and protection of Earth through outreach, action, and Jewish learning.
<http://www.coejl.net>

Creation Justice Ministries

A coalition of several dozen Christian denominations in the U. S., with many ecumenical and interfaith partners. Campaigns include youth involvement, water issues, sustainable energy, land and water conservation, climate change, and environmental health and toxins.
<https://www.creationjustice.org>

EcoJesuit

EcoJesuit is the global ecology network of all Jesuit institutions partnering with other faith groups, civil society, the scientific community, and Indigenous Peoples. Program areas include research on environmental justice, sustainable agriculture, the Amazon, water issues, and promoting the agenda of the encyclical of Pope Francis Laudato Si’
<https://www.ecojesuit.com>

EcoSikh

Works internationally to connect Sikh values, beliefs, and institutions to environmental issues, drawing on the rich heritage of Sikh reverence for the natural world; programs include planting of “sacred forests” internationally, Green Gurdwaras, community education, and Sikh Environment Day.
<http://www.ecosikh.org>

European Christian Environmental Network

Fosters joint action by Christian churches in Europe to care for creation.
<https://www.ecen.org>

The Evangelical Environmental Network (EEN)

A U. S.-based ministry that publishes materials to equip and inspire individuals, families, and churches and seeks to educate and mobilize Christians to make a difference in their churches and communities and speak out on national and international policies.
www.creationcare.org

Faith & the Common Good (FCG)

A Canadian national interfaith network working with over 800 congregations, dedicated to assisting and inspiring religious and spiritual groups of all backgrounds through education, capacity building, and collective action; working with environmental, municipal, and Indigenous and community partners.
<https://www.faithcommongood.org>

Global Catholic Climate Movement (GCCM)

With more than 900 member organizations, GCCM fosters care for our common home with the encyclical of Pope Francis Laudato Si’ as its founding document; programs include international campaigns, local education and parish greening, resource development, the Season of Creation, and a network of “Laudato Si’ Animators.”
<https://catholicclimatemovement.global>

Green Anglicans

An initiative of the Anglican Church of Southern Africa’s Environmental Network (ACSA-EN) that inspires and offers resources to Anglicans in the spirituality of Care for Creation, inspires and equips churches and dioceses for practical action, promotes individual environmental practices, and engages in prophetic advocacy.
<http://www.greenanglicans.org>

Green Muslims

“Green Muslims” is the name adopted by over a dozen separate and independent local organizations in the U. S. seeking to raise environmental consciousness and promote ecologically positive practices inspired by Qu’ranic teachings in the Muslim community. For an example of the kinds of programs and overall approach, see:
<https://www.greenmuslims.org>

GreenFaith

Programs include trainings for local faith communities of different traditions, resources on environmental teachings and for worship, the GreenFaith Fellows program, local GreenFaith Circles, the Living the Change lifestyle commitments initiative, and campaign organization and mobilization in connection with demonstrations and international meetings.
<https://greenfaith.org>

Hazon: The Jewish Lab for Sustainability

Creates educational materials, resources for rabbis, training in sustainable agriculture, and sustainability programs for Jewish institutions; holds immersive experiential learning programs and partners with other Jewish groups in the U. S. and beyond.
<https://hazon.org>

Indigenous Environmental Network (IEN)

An Indigenous People’s environmental justice movement working at local, national, and international levels on a range of issues including coal, oil, and uranium extraction; toxic pollution; water protection; biodiversity; and moving to a regenerative economy.
<https://www.ienearth.org/about/>

Indigenous Peoples of Africa Coordinating Committee (IPACC)

A coalition of 135 organizations in 21 African countries; IPACC’s environment and climate justice priorities include supporting an African approach to climate adaptation that draws together science, Indigenous knowledge, and decision-making; Indigenous engagement in UN treaty bodies on the environment; and conservation of African forests and biodiversity.
<https://www.ipacc.org.za>

Interfaith Center for Sustainable Development (ICSD)

Programs of current focus are the Faith Inspired Renewable Energy Project and the Seminary Faith and Ecology Project; based in Jerusalem, ICSD is engaged in Africa, the Middle East, North America, and Europe.
<https://www.interfaithsustain.com/>

Interfaith Center on Corporate Responsibility (ICCR)

A U. S.-based coalition of over 300 global institutional investors using shareholder advocacy to press companies on environmental, social, and governmental issues; priorities include climate change and water rights.
<https://www.iccr.org>

Interfaith Power & Light: A Religious Response to Global Warming (IPL)

With affiliates in 40 of the U. S. states, IPL helps congregations of diverse faiths reduce their carbon footprint, develops training and worship resources, and advocates with local and federal government for climate policy and legislation.
<https://www.interfaithpowerandlight.org>

Interfaith Rainforest Initiative

The Interfaith Rainforest Initiative brings the commitment, influence, and moral authority of religions to efforts to protect the world’s rainforests and the Indigenous Peoples that serve as their guardians.
<https://www.interfaithrainforest.org>

International Network of Engaged Buddhists (INEB)

A network in more than 25 countries across Asia, Europe, North America, and Australia, integrating the practice of Buddhism with social action for a peaceful, just, and healthy planet; climate change is a main mission area of INEB.
<http://inebnetwork.org>

International Society of Krishna Consciousness (ISKCON) Eco-Villages

Also known as the Hare Krishna Movement, ISKCON’s environmental values are part of the Vaishnava tradition; these are especially manifested in approximately 60 Eco-Villages or “Farming Communities” globally (for a list see: <http://centers.iskcondesiretree.com/farm-and-rural-communities/>)
<https://www.iskcon.org/eco-villages/>

International Union for Conservation of Nature (IUCN)

Composed of both government and civil society organizations, IUCN harnesses the experience, resources, and reach of its more than 1,400 Member organizations and the input of more than 15,000 experts, making it a global authority on the status of the natural world and the measures needed to safeguard it.
<https://www.iucn.org>

Islamic Foundation for Ecology and Environmental Sciences

Based in the UK, IFEES seeks to maintain Earth as a healthy habitat for all living beings; promoting mass awareness through research, production of teaching materials, training, and project development; working internationally; and inviting collaborators of all persuasions.
www.ifees.org.uk

Islamic Society of North America (ISNA), ISNA Green Initiative

Raises awareness of environmental and climate change issues through a variety of educational means; promotes the practice of a “Green Ramadan,” reducing waste and harm to the environment; develops standards for greening existing mosques and constructing eco-friendly new mosques; and advocates for environmental justice.
<https://isna.net/the-green-masjid-project/>

Jewish Ecological Coalition (JECO)

Based in Australia, JECO creates educational and training resources, organizes forums, promotes networking, and provides international links, cooperating with other traditions and organizations on sustainable living and climate change.
<https://www.jeco.org.au/>

Jo-Jikum

“Jo-jikum” means “your home” or “your place” in Marshallese and is an initiative in the Marshall Islands focused on developing youth leadership and empowerment, digital story-telling that impacts the climate movement, climate justice, and waste management.
www.jojikum.org

NASA Global Climate Change: Vital Signs of the Planet

Up-to-date facts, articles, and interactive resources about the changing global climate.
<https://climate.nasa.gov>

National Religious Partnership for the Environment

A U. S.-based alliance of diverse faith institutions reaching 160,000 congregations through its four founding partners: The Coalition on the Environment and Jewish Life (COEJL), Evangelical Environmental Network, the National Council of Churches of Christ in the USA (through Creation Justice Ministries), and the U. S. Conference of Catholic Bishops.
<http://www.nrpe.org>

NOAA National Ocean Service

An agency within the U. S. National Oceanographic and Atmospheric Administration that provides facts, data, tools, and services covering a range of topics about coastal ecosystems and economies.
<https://oceanservice.noaa.gov/facts/>

Seed Indigenous Youth Climate Network

Australia’s first Indigenous youth climate network, building a movement of Aboriginal and Torres Strait Islander young people for climate justice with the Australian Youth Climate Coalition.
www.seedmob.org.au

Southern African Faith Communities’ Environment Institute (SAFCEI)

A multi-faith organization supporting faith leaders and their communities with education for local communities, working for energy justice, promoting a rights of nature approach to food sovereignty and climate change, and offering advocacy and program organization training for faith leaders.
<https://safcei.org>

Tzu Chi Foundation

The Buddhist Tzu Chi Foundation is a worldwide spiritual and humanitarian relief organization with headquarters in Taiwan; as part of its mission it promotes environmental protection through vegetarianism, energy conservation, and avoiding the use of plastic and reducing waste.
<http://tw.tzuchi.org/>

Union of Concerned Scientists (UCS)

A national nonprofit organization in the U. S. using rigorous, independent science that combines technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.
<https://www.ucsusa.org>

United Religions Initiative (URI)

A global interfaith network in over 100 countries with more than 1,000 Cooperation Circles; of these, more than 300 have an environmental focus. <https://uri.org/who-we-are/cooperation-circles>

World Council of Churches (WCC), Care for Creation and Climate Justice

The WCC is world’s largest Christian ecumenical organization, with 350 member churches in more than 100 countries; environmental issues have been part of its mission since the 1970s.
<https://www.oikoumene.org/en/what-we-do/climate-change>

World Resources Institute (WRI)

A global research organization with offices in over 60 countries, WRI works closely with government leaders, focusing critical issues at the intersection of environment and development.
<https://www.wri.org>

World Wildlife Fund (WWF)

Collaborating with people in more than 100 countries to conserve nature and reduce the most pressing threats to the diversity of life on Earth through solutions that protect communities, wildlife, and the places in which they live.
<https://www.worldwildlife.org>

Young Evangelicals for Climate Action (YECA)

A national U. S. initiative bringing young evangelical Christians together to unite their voices and take collective action to mobilize the younger generation of evangelicals, influence senior evangelical leaders, and hold political leaders accountable.
<https://yecaction.org>

Type Fonts

The fonts used in *Faith for Earth* are Minion, for the text, and Lato, for the headers. Minion is a serif typeface released in 1990 by Adobe Systems. Designed by Robert Slimbach, it is inspired by late Renaissance-era type and intended for body text and extended reading. Lato is a sans serif typeface family started in the summer of 2010 by Warsaw-based designer Łukasz Dziedzic (“Lato” means “Summer” in Polish). In December 2010 the Lato family was published under the Open Font License by his foundry tyPoland, with support from Google.

Printing

Faith for Earth has been printed by J. S. McCarthy Printers, Augusta, Maine USA, using 10% post-consumer recycled paper. Printing powered by 100% certified wind energy. J. S. McCarthy is recognized among the U. S. Environmental Protection Agency’s Top 20 Green Power Printers.



