

Resource Guide on Rainforest Protection

for Religious Communities



INTERFAITH
RAINFOREST
INITIATIVE

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FOREWORD

There is a moral and spiritual imperative that exists across faiths to protect the Earth and to care for creation. The responsibility to safeguard nature and our planet is as old as our faiths themselves, codified and captured in our sacred texts and spiritual traditions. Now more than ever, as the impacts of environmental neglect push us toward a global tipping point, we must bring this shared moral responsibility to the fore.

Nowhere is this more urgent than in the effort to halt the destruction of our planet's rainforests. This must be an hour of conscience and conviction for spiritual leaders and faith communities around the world, as we face unprecedented losses of these magnificent ecosystems. Despite an international call to halt deforestation, we continue to destroy an Austria-sized area of rainforests annually. This relentless forest loss undermines poverty reduction and sustainable development, hastens climate change, drives species extinction and, as the COVID-19 crisis has revealed, greatly increases the risk of global pandemics.

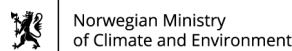
As members of the Interfaith Rainforest Initiative, we believe that such destruction is a moral, spiritual and social justice issue. Our faiths compel us to incorporate ecological care into our religious practices for the sake of the planet, and to bring our influence and outreach to bear in the defense of nature and its most vulnerable peoples. The International Rainforest Initiative is an international alliance that provides a platform for faith communities to work in tandem with indigenous peoples, governments, NGOs, and businesses to inform and inspire our congregations to act for the protection of rainforests and the rights of those that serve as their guardians.

This *Resource Guide* offers religious and faith communities information on the current deforestation crisis, spiritual perspectives on the vital role of tropical forests in the world’s biological and spiritual ecology, and suggestions for actions that people and institutions of faith can take to address the global deforestation crisis.

Achieving the speed and scale of change needed to halt and ultimately reverse deforestation will require a shift in our values and our relationship with nature. We believe faith communities can model this change. The moral teachings of all the great faiths are teachings of stewardship, responsibility, compassion, awareness, and respect—precisely the set of values essential for protecting and sustaining rainforests, and for fostering sustainable development more widely.

Protecting our remaining rainforests is an issue that urgently needs the spiritual resources and the unparalleled influence of the world’s religious leaders and faith communities. The window for action is small and now is the time to affirm that rainforests are a vital aspect of the sacredness of nature, and to mobilize the broadest possible support for their protection.

This affirmation is all the more powerful when the collective family of faiths proclaims it with one voice, asserting a shared set of values on environmental stewardship. The Interfaith Rainforest Initiative is committed to amplifying this shared call to stewardship in the belief that action to protect, restore and sustainably manage rainforests will produce benefits that ultimately reach far beyond the forest’s edge, catalyzing sustainable development, food and health security, equality, peace and human rights more widely.



INTRODUCTION

Tropical forests sustain all life on our planet. They are an irreplaceable gift, exhibiting nature in its most vibrant and exquisite beauty. They provide millions of people with food, shelter, livelihoods, medicine and clean water. They protect us from disease, and harbor unique and irreplaceable biodiversity. They are also the most promising and cost-effective climate solution we have, as trees remove harmful carbon from the atmosphere and store it in their trunks and branches more cheaply and safely than any other known technology. These same forests are home to indigenous peoples and forest communities whose unique knowledge, cultures and languages have evolved alongside the forests and who have served as their guardians for generations.

Unfortunately, we are losing tropical forests at a perilous rate, putting these biological and cultural treasures at grave risk. Each year, an area of tropical rainforests the size of Austria is destroyed, despite a global commitment to end this pattern of destruction. Fires, extractive industries, and especially conversion of forest land to agriculture—both for global commodities like beef, soy, palm oil, and pulp, and for small-scale farming—are the proximate causes of this continuing deforestation.

These destructive forces are exacerbated by corruption, weak governance, inefficient land use and unsustainable patterns of consumption. Rainforest loss at this scale erodes the indispensable contribution these forests make to sustainable development and the international effort to combat climate change. It also greatly increases the risk of pandemics, as humans and wildlife mix in the forest fragments that remain, allowing diseases like COVID-19 and SARS to jump from animal populations to humans.

As the impacts of generations of environmental neglect are felt ever more directly by societies around the world, environmental protection is increasingly being understood as a moral, spiritual and social justice issue. In response, religious leaders from across faiths are calling on believers to incorporate ecological respect and care of nature into their religious practice. While the impact of this faith-led activism has been prominent in the social justice and climate change spheres, it has been less visible in the specific context of rainforest protection.

This *Resource Guide on Rainforest Protection for Religious Communities* aims to inspire religious leaders and faith communities to take up the cause of tropical forests and to equip these communities with the information and tools they need to serve as effective advocates for this cause. It is meant to complement the other educational materials available from the Interfaith Rainforest Initiative, including issue primers, country fact sheets, and faith toolkits available at <https://www.interfaithrainforest.org/>.

Chapter 1 of the Resource Guide provides factual background information on tropical forests: the value they provide in terms of sustainable development, climate change mitigation, disease regulation, and biodiversity; drivers and trends in deforestation; and the leadership of and challenges faced by indigenous peoples who have lived in harmony with these forests for generations and in many cases act as a last line of defense in protecting these precious resources from destruction.

Chapter 2 of the Resource Guide presents perspectives from 10 different religious traditions on the imperative to protect rainforests. These individually authored pieces identify the spiritual basis for valuing and safeguarding rainforests in the context of each faith's religious principles, including the principles of environmental and social justice, and the links to climate change and indigenous peoples' rights.

Chapter 3 of the Resource Guide identifies a variety of ways that religious communities can get involved in rainforest protection. It outlines some of the entry-points for religious leaders and practitioners to engage with forest protection in a hands-on way.

International momentum to protect tropical rainforests is growing, and a broad coalition of governments, businesses, indigenous peoples, scientists, NGOs and civil society partners are working to halt deforestation around the world. But the speed and scale of the change required is such that current efforts will not adequately address the destruction of rainforests. Urgent action is needed to enhance current efforts by bringing the moral, ethical and spiritual dimension of humanity to bear on this issue.

Our hope is that this Resource Guide inspires and helps equip faith leaders and communities to take their seat at the table alongside the broader partnership of forest advocates, bringing fresh wisdom, insights and influence to this urgent issue.



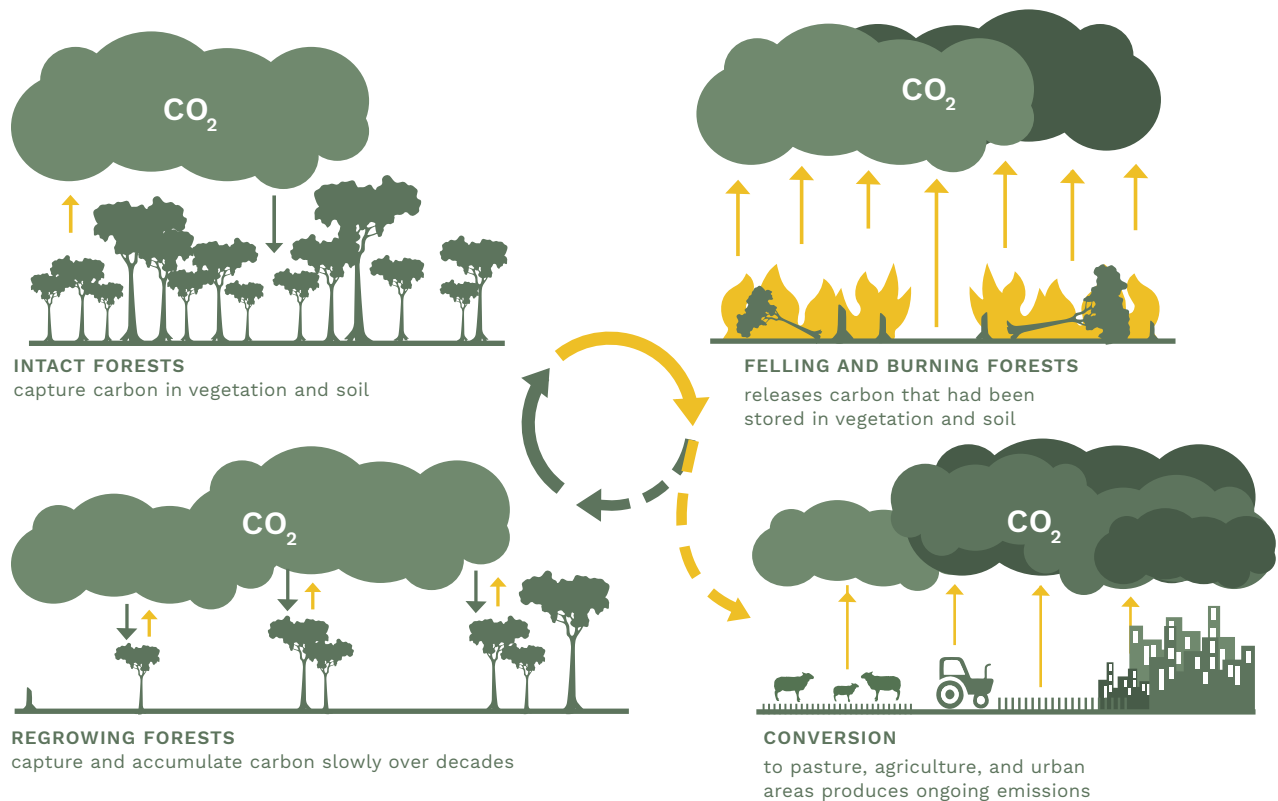
CHAPTER 1

UNDERSTANDING THE CAUSES AND CONSEQUENCES OF TROPICAL DEFORESTATION

TROPICAL FORESTS AND CLIMATE CHANGE

Greenhouse gases, such as carbon dioxide and methane that occur naturally in the Earth's atmosphere, trap heat from the sun and warm the Earth to a temperature that allows the Earth to sustain life. However, as more and more greenhouse gases are produced by human activities, like the burning of fossil fuels, this natural effect is amplified, and the Earth's temperature rises. This human-driven temperature increase alters climate patterns across the world, and so it is referred to as climate change. The impacts of climate change hit developing countries and poor and marginalized communities especially hard.

NATURAL FORESTS CAPTURE CO₂; DEFORESTATION RELEASES CO₂



Source: Center for Global Development.

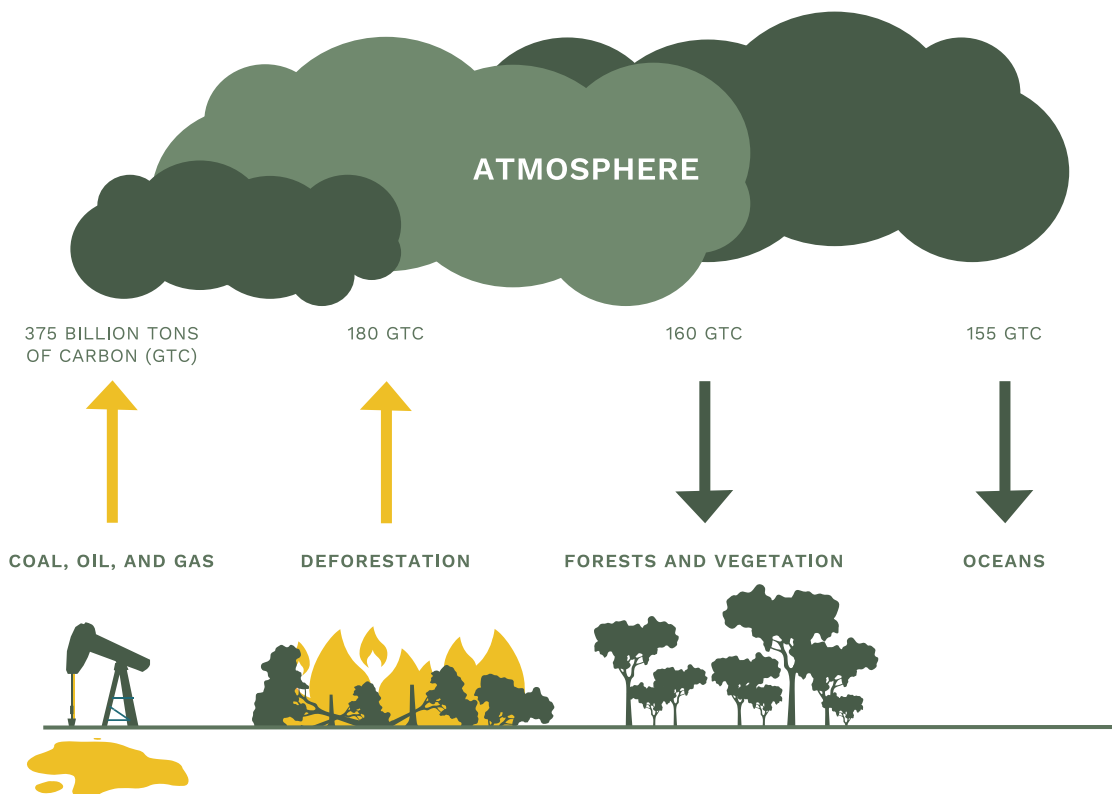
While the role of fossil fuels in driving climate change is generally well known, the role that forests—in particular tropical forests—play in regulating our climate is less well known. Less than half of the carbon dioxide emitted by burning fossil fuels actually accumulates in the atmosphere. Just over a quarter of that carbon goes into the oceans where it dissolves in seawater, increases

the acidity of the ocean and interferes with the marine life that billions of people depend on for food. The remaining quarter or so of carbon emissions that don't go into the atmosphere or the ocean are absorbed by forests and other vegetation, through the natural process of photosynthesis in which trees and plants take up carbon from the atmosphere and store it in their trunks, branches and leaves. Unlike either the atmosphere or the oceans, forests are a good destination for excess carbon. In fact, they function as a safe and natural carbon capture and storage system.

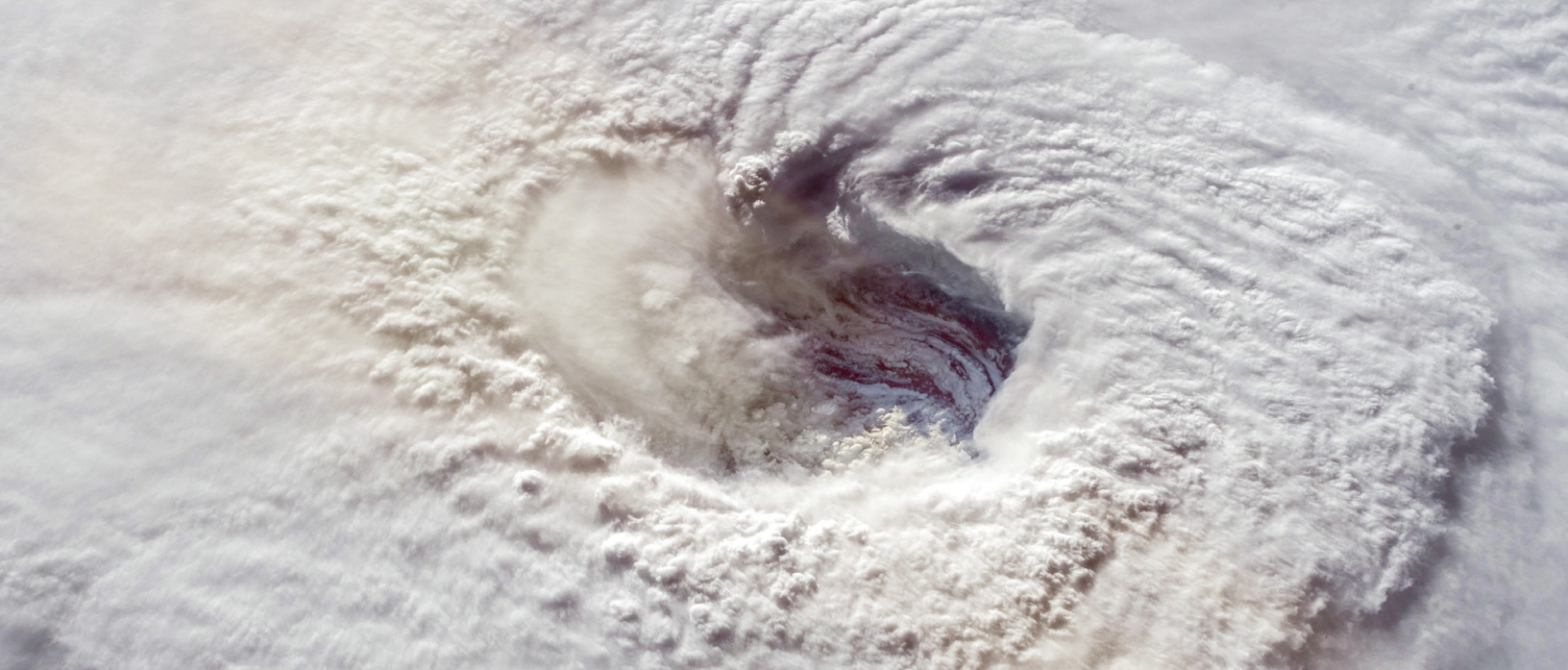
When forests are burned or cleared to be turned into cropland or pasture, carbon dioxide in the atmosphere rises through three different pathways: i) when forests are cleared, they stop absorbing carbon from the atmosphere, and an important carbon “sink” is lost; ii) the massive stock of carbon that had accumulated over decades or centuries in forest trees and soil is rapidly released back into the atmosphere; and iii) the land uses that replace forests after deforestation, such as growing crops, grazing animals, and mining, all tend to emit large amounts of greenhouse gases.

Every year, the world loses an area of tropical forests the size of Austria, emitting huge amounts of carbon. Estimates of the amount of emissions released each year from tropical deforestation vary from nearly equaling the emissions of China (on the high end) to equaling the emissions of India (on the low end). The median estimate is around five billion tons of carbon dioxide every year—higher than the emissions of the entire European Union.

SINCE 1750, DEFORESTATION HAS BEEN RESPONSIBLE FOR ONE-THIRD OF EMISSIONS; FORESTS HAVE BEEN RESPONSIBLE FOR HALF OF NATURAL UPTAKE



Source: Ciais et al. 2013



Tropical deforestation and degradation contribute about 16-19 percent of global greenhouse gas emissions, or 8 percent once the regrowth of forests is accounted for. However, halting and reversing tropical deforestation and degradation have the potential to reduce global greenhouse gas emissions by up to 30 percent. This is because halting and reversing deforestation would not only avoid the emissions of greenhouse gases that are caused when forests are burned or cleared, but would also result in additional absorption of carbon as tropical forests are allowed to regrow.

Every future climate scenario that climate scientists have examined shows that it won't be enough to simply reduce our emissions if we are to meet our global climate goals and avoid catastrophic climate change. We will also need to remove carbon that is already in the atmosphere. Forests are currently the only safe and natural mechanism available to us that can do this at a large scale. Put simply, if we are to have any chance of avoiding catastrophic climate change, deforestation must stop.

Even though we know tropical deforestation needs to be halted and reversed if we are to avoid catastrophic climate change, satellite imagery shows that tropical forest loss is occurring today at an accelerating annual rate. Without urgent action, by 2050 the world will lose an area of tropical forests about the size of India. The longer we wait before reversing current deforestation trends, the more the capacity of the remaining forests to serve as a natural carbon capture and storage system is eroded. And as climate change progresses, even intact forests will be damaged by more frequent and severe droughts and fires. Such damage could tip forests from being a large part of the solution to being a larger part of the problem. The window of opportunity is closing.

TROPICAL FORESTS AND SUSTAINABLE DEVELOPMENT

Tropical forests provide a multitude of services to humanity beyond regulating our climate. Across the tropics, intact forests provide services to people in the form of water, energy, agriculture, health, and protection from natural disasters. The myth that forests are a necessary casualty of economic development and food security is remarkably persistent, when in fact, converting forests to other land uses eliminates opportunities for income generation, threatens important sectors of the economy, and undermines sustainable development.



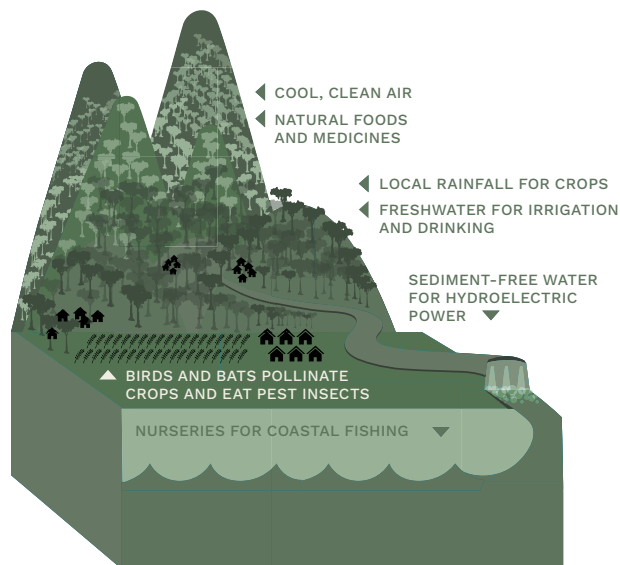
Forests protect upland watersheds that are a source of clean drinking water for citizens of major cities in the tropics. Forest plants are used in hundreds of natural medicines. And forest birds and bats in Indonesia provide free natural pest control to nearby cacao farmers, increasing their yields by nearly half. Conversely, deforestation puts lives at risk. Deforestation in the Amazon is associated with local spikes in malaria. Coastlines in South Asia that have been stripped of their mangrove forests are more exposed to the full force of storms and tsunamis. And every year, hundreds of thousands of people in Southeast Asia and elsewhere die prematurely from breathing smoke and haze from forest fires. Tropical forests contribute to the achievement of the United Nations Sustainable Development Goals (SDGs) related to agriculture (Goal 2), health (Goal 3), clean water and sanitation (Goal 6), energy (Goal 7), safety from disasters (Goal 11), and resilience to the impacts of climate change (Goal 13), in addition to the conservation of land-based ecosystems and biodiversity (Goal 15).

By preventing sedimentation and filtering out pollutants, forests help maintain clean supplies of water. By maintaining local and regional weather patterns, they also help ensure that water supply is steady and reliable. Cities as diverse as Bogota, Harare, New York City, Quito, and Singapore have set aside protected areas in upland watersheds to preserve the quality of their water supplies. In fact, about one-third of the world's hundred largest cities obtain a significant portion of their drinking water from protected areas. People's dependence on water goes far beyond quenching thirst. Every kilogram of food is grown with water, whether from rainfall, surface water, groundwater, or irrigation. Water is essential to cooking and cleaning, nourishment, and sanitation. It is fundamental to health and provides a major source of electricity.

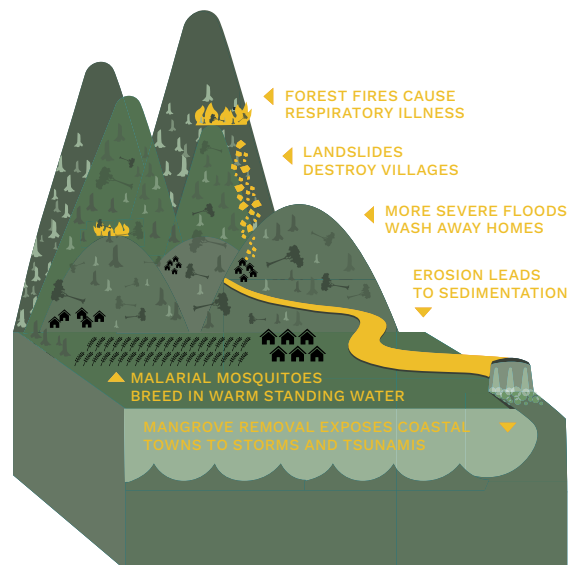
Far from an inconvenience getting in the way of grazing or cropland, tropical forests make substantial and largely unrecognized contributions to agricultural production and food security. As well as providing clean water for irrigation and influencing the weather patterns that make land suitable for farming, they provide habitat for the bees, birds and bats that pollinate crops and control pests in farmland. What's more, they directly provide a cornucopia of edible plants and animals that are an important source of nutrients and provide a safety net for forest communities

FORESTED LANDSCAPES PROVIDE SERVICES; DEFORESTATION PUTS LIVES AT RISK

INTACT FORESTS



DEFORESTATION



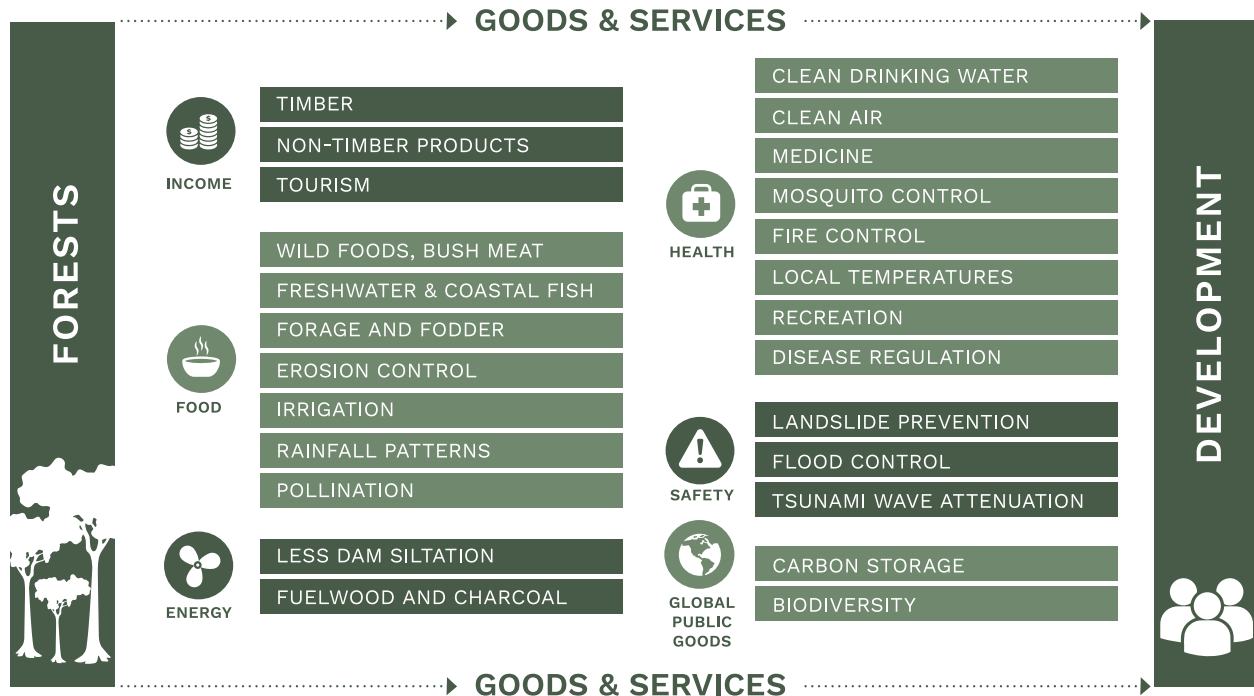
Source: Center for Global Development

when crop yields are low. Forest foods account for nearly one-third of the income households living in and around forests derive from forest products, second only to the income they get from wood fuels. Forest cover also contributes to the health of inland fisheries that nourish millions.

Beyond their dietary contribution, tropical forests make important contributions to health as the source of thousands of medicines, of both the traditional and modern pharmaceutical varieties. By contrast, deforestation is linked with increased transmission of many diseases from wildlife to humans, since human-animal interactions increase in areas of forest loss and fragmentation. Diseases that jump from animals to humans—known as zoonotic diseases—are estimated to be responsible for 60 percent of all infectious diseases and some 75 percent of newly emerging infectious diseases. These include a host of diseases that have significantly impacted global health, including COVID-19, SARS, Ebola, zika, malaria, dengue, West Nile virus, and HIV-AIDS. Indeed, the COVID-19 crisis and the potential for future pandemics are closely tied to tropical deforestation, habitat loss, and ecosystem decline.

Deforestation is also associated with increased air pollution and its negative health effects. The smoke from forest fires associated with land clearing releases heavy metals, carcinogens, ultrafine particulates and ozone-producing compounds, among other harmful substances. Air pollution caused by forest fires is responsible for hundreds of thousands of premature deaths every year, and results in increased cardiorespiratory ailments as well.

Forests are protective green infrastructure that can prevent damage from small disasters and lessen the impacts of larger ones, including landslides, floods, storm surges, and tsunami waves. They limit landslides by shielding soil from the damaging impact of heavy rains and anchoring soil in place, acting as a brake. They mitigate flooding by pumping water into the air through



Source: Center for Global Development

evapotranspiration and into the ground through root systems, so less runs off as surface flow. Mangroves and coastal forests reduce the impact of waves from peak tides, storm surges, and even extreme wind-driven waves from tropical cyclones, by helping to dissipate tidal and wave energy, and trapping sediments to increase coastal elevation.

In the coming decades, climate change will bring hotter temperatures, increased stress on water and crop production, larger storms, melting glaciers, and rising seas. In this future, many of the services provided by tropical forests will become even more important. Conserving and restoring forests is a type of “ecosystem-based adaptation”—an important component of the package of measures people must take to adapt to the effects of climate change.

TROPICAL FORESTS AND BIODIVERSITY

Tropical forests are extraordinarily rich in biodiversity at every level: from genes, through the great variety of species of animals and plants, to the many different types of forest ecosystem. Indeed forests are some of the most biodiverse habitats to be found on Earth, harboring over half the world’s species. Only some of these have been named and catalogued already; expeditions to unexplored areas of tropical rainforest almost always reveal undescribed species—plants and animals that are “new to science,” but not new to these age-old ecosystems.

Why such diversity? Different theories abound, but rainforests’ warm, moist climate (providing plenty of energy and food) and their long history as centers of evolution are surely contributing factors. The exceptional richness of tropical forest life comprises trees, vines, understory shrubs and herbaceous plants, many invertebrates (e.g., beetles, butterflies and moths, dragonflies,

spiders) and of course the vertebrate fauna: birds, amphibians, reptiles, mammals and marsupials. The vertebrates include some of the most iconic rainforest animals, such as the Anaconda, Great Hornbill and King Colobus monkey. But the hidden biodiversity of tropical forests is not to be ignored: there are uncountable microorganisms (fungi, bacteria, and algae to name three groups) in the leaf litter and soil. Biodiversity is surely everywhere to be found.

There can be more tree species in half a square kilometer of untouched rainforest than in the whole of Europe and North America combined. Such a variety of tree life creates a myriad of niches suiting the different animals and plants: sources of food, structures for movement and support (including for vines and plants, such as some orchids, that grow on tree branches), places to hide, rest, breed and rear young. Forest complexity is a driver of diversification of the whole fauna and flora. Even the clutter represented by branches and leaves diversifies the local fauna of bats, each with their different wingspans and foraging strategies. The trees and other plant life also shape the local climate, or “microclimate,” in many different ways, again favoring the particular needs of species in and below the canopy.

If forests are important for biodiversity, so too is the biodiversity important for the health and vitality of the forest, and therefore the wellbeing of forest-dependent people, and all society.



Forest-dwelling animals provide functions that are vital for keeping forests productive. They help maintain and regulate key processes associated with regeneration and carbon storage, for example seed dispersal, pollination, and enriching the organic soils. Large predators control the abundance of plant-eating prey, thereby regulating the level of browsing or grazing, and maintaining the quantity of plant matter in the forest. Large fruit-eating animals from forests are important for carbon storage in forests, because they disperse the large seeds of carbon-dense trees. Over-hunting such animals for wild meat causes what has been termed ‘empty forest syndrome’: forests that appear to be intact but have been emptied of large animals and, with them, many of the underlying ecological processes that maintain forests and their functions, such as carbon storage.

The loss of plants and animals from the rainforest draws down that rich resource of life which provides people with their nutrient-rich food, timber for their buildings and furniture, and medicines. Biodiversity ensures that there is a natural redundancy of roles: if one species is lost, there is another to take its place. As the biodiversity decreases, so does the resilience of forests and their people, resulting in many unanticipated effects. For example, scientists have found a clear link between biodiversity loss and increased disease outbreaks, as the balance between pathogens and disease hosts in the forest ecosystem changes.

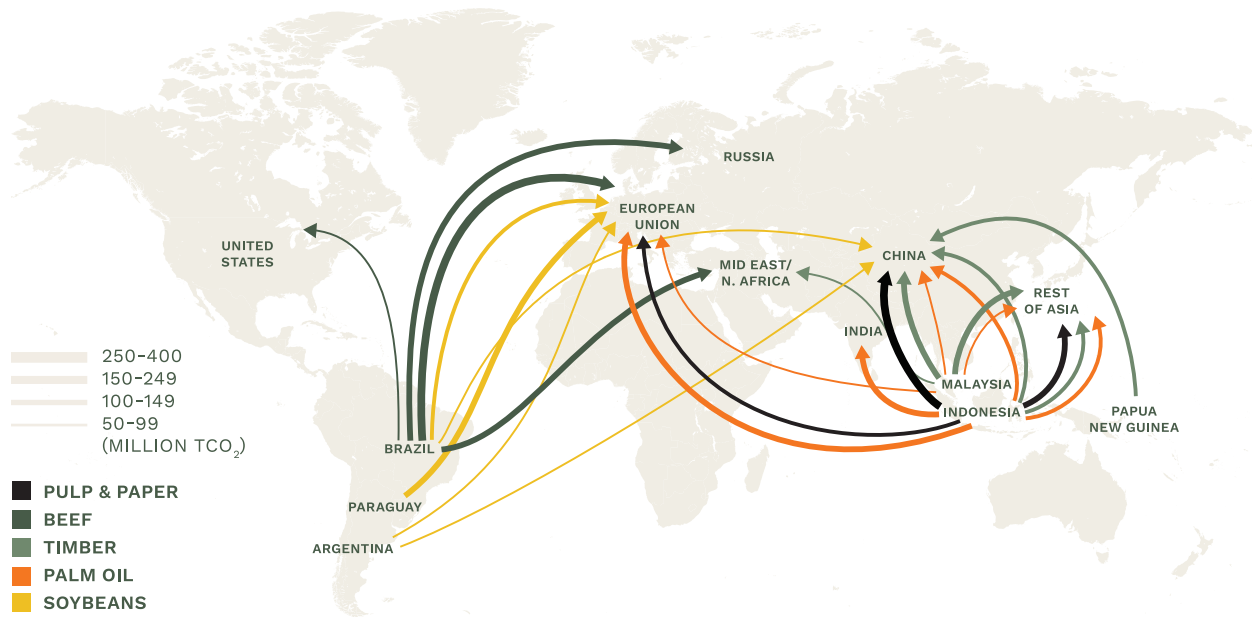
Some people try to put a price on that erosion of “natural capital” and the “ecosystem services” that it provides. For example, forest biodiversity has measurable economic value for tourism: a mountain gorilla can indirectly generate US\$3.2 million over its lifetime.² This is often the kind of language and thinking that can speak powerfully to governments and businesses.

However, biodiversity is of more than just functional importance. Apart its visible “use values,” biodiversity has intrinsic worth. Indeed, most biodiversity can be seen in this light and appreciated for its inherent values of beauty and complexity. It is important in its own right as a unique expression of the remarkable processes of evolutionary biology. In this context, it inspires wonder and awe, and for some it evokes reverence for a Creator.

This intrinsic value defies measurement or even description, but it is inherently understood and recognized, especially in the spiritualities of indigenous peoples and the faith systems of global religions. Faith communities can help give expression to why forest biodiversity is so important to steward and preserve; their experiences and voices need to be heard. Not least by the wider,

2 <https://www.wwf.org.uk/wildlife/mountain-gorillas>

EMISSIONS FROM DEFORESTATION ARE EMBODIED IN GLOBALLY TRADED COMMODITIES



CO₂ EMISSIONS EMBODIED IN COMMODITIES TRADED ACROSS CONTINENTS FOR SELECTED PRODUCER COUNTRIES, 2000-2009

FIGURE DOES NOT DEPICT LARGE FLOWS OF EMISSIONS EMBODIED IN SOYBEANS EXPORTED FROM PARAGUAY AND BOLIVIA TO THE REST OF LATIN AMERICA, NOR SMALLER FLOWS EMBODIED IN SOYBEANS EXPORTED FROM PARAGUAY TO THE REST OF THE WORLD, AND IN BEEF EXPORTED FROM BRAZIL TO THE REST OF LATIN AMERICA. "RUSSIA" INCLUDES OTHER COUNTRIES OF THE FORMER SOVIET UNION.

Source: Persson et al. 2014

largely secular, conservation movement worldwide, which can sometimes struggle to put into words the motivation behind its mission and connect to audiences with whom the language of ecosystem services fails to resonate.

Direct forest loss is clearly a threat to the biodiversity living within. However, there are other threats to these plants and animals too. Fragmentation of what forest remains compromises the dispersal of organisms, genetic exchange and overall population viability. Over-harvesting of forest plants and animals is rife, such as the illegal harvesting of rosewood in Madagascar, or the poaching of pangolins in Congolese forests. The human-caused spread of invasive species into forests displaces native flora and fauna. Pollution of water courses imperils life, while the pollution of the atmosphere by greenhouse gases drives what might end up being the gravest threat to forest biodiversity of all: climate change. There is already evidence of the insidious effects of climate change on forests—a challenge to which animals, trees and other plants are struggling to adapt in time.

TRENDS AND DRIVERS OF FOREST LOSS

A logical response to climate change and biodiversity loss would be to preserve and restore forests on a massive scale. Instead, we are still doing the opposite. Every year from 2000 to 2014, the world cleared forest from areas totaling the size of the state of North Dakota, of which half, an area the size of the state of Maine, was in the high-carbon tropics. If current trends persist for the next 35 years, an area of tropical forest about the size of India will be lost by 2050.

DEFORESTATION AND PANDEMICS

Tropical deforestation and the destruction of wildlife habitat create the conditions for the emergence of new diseases to which humans have little resistance, and which can become the basis for pandemics. Human encroachment into tropical forests is leading to animal-human interactions that did not exist previously, enabling pathogens once found only in animals to jump to human hosts.

Deforestation erodes ecosystem services like disease regulation, leads to forest fragmentation and drives biodiversity loss—all associated with greater risk of disease transmission. The global trade in wildlife—much of it illegal—is also bringing people into increasing and direct contact with disease-carrying organisms.

COVID-19, like Ebola, SARS, Avian flu and other recent epidemics, is an infectious disease that originated from animals. The COVID-19 pandemic and the potential for future pandemics are closely tied to tropical deforestation, habitat loss and ecosystem decline, and the many ways that humanity is mismanaging nature.

Indigenous peoples and forest communities are particularly vulnerable to external diseases such as COVID-19, which may be introduced by illegal loggers, miners and others who encroach on their lands. Unfortunately, the risk to indigenous peoples from these sources has increased markedly since the COVID-19 pandemic began. For example, illegal mining and logging operation in the Amazon rainforest have expanded in the absence of active resistance due to the outbreak of COVID-19, with deforestation in the region increasing more than 50 percent during the four month of 2020 compared to the previous year. In April alone, as COVID-19 isolation measures came into force in the Amazon region, deforestation increased 64 percent compared to April 2019. This reflects the weakness of enforcement measures in many deforestation hot spots around the world.

Stopping tropical deforestation, conserving biodiversity, and better regulating the wildlife trade are necessary steps to reduce disease risk and future pandemics.

Examples of Infectious Diseases Passed From Animals to Humans

COVID-19

Ebola

Lyme Disease

SARS (Sudden Acute Respiratory Syndrome)

MERS (Middle East Respiratory Syndrome)

Dengue

Malaria

Avian Flu

West Nile Virus

HIV-AIDS

Zika

Swine Flu

Rift Valley Fever

Rabies

In addition to full deforestation, the world's forests also suffer from forest degradation, where forests are left standing, but they are depleted by logging, fuelwood extraction, fires and grazing, which wear down carbon stocks faster than they can naturally recover. As well as causing climate emissions, forest degradation can be a precursor to outright deforestation.

Just over half of tropical deforestation between 2001 and 2012 occurred in Latin America. Almost one-third occurred in Asia and just under one-fifth took place in Africa. Due to its carbon-dense peat soils, more emissions from deforestation came from Asia than from any other continent.

Analysis of forest loss reveals a complex range of drivers that vary by region. A generation ago, conventional wisdom supported the view that poor people were the primary agents of deforestation. Over the past thirty years, however, our understanding of the causes of forest loss has changed, and our ability to attribute deforestation to various direct and indirect causes has improved. In tropical countries, especially in those with the highest rates of forest loss, a large share of deforestation is now known to be caused by large-scale commercial agriculture responding to demand for globally traded commodities like beef, soy, palm oil and pulp and paper. But other drivers, such as illegal logging, and conversion of forest to small-scale subsistence agriculture, are still significant.

In Latin America, about half of deforestation is driven by commercial agriculture, especially beef and soy production. Expanding cattle pastures to produce beef has been the primary cause of deforestation in the Amazon rainforest and the Chaco region of Paraguay, while clearing new areas to plant soybeans has been the leading cause of deforestation in the Chaco region of Argentina and a significant contributor to the loss of dry forests in the Cerrado region of Brazil. Subsistence agriculture accounts for about a third of Latin America's deforestation, while mining, infrastructure development, and urban expansion are responsible for the remainder.

In Southeast Asia, where logging and clearing for tree crops including rubber, coffee, and cacao have all contributed to deforestation, land-use change until recently has been dominated by the conversion of forests to commercial-scale, fast-growing pulpwood plantations to feed the paper industry, and oil palm plantations, particularly in Indonesia. However, as policy changes begin to rein





in the conversion of primary forest to commercial plantations, conversion to subsistence farming has grown in importance, accounting for a quarter of forest loss in Indonesia from 2014–2016.

Compared with deforestation on other continents, that in Africa is driven less by export crops and more by small-scale farming of staple crops and livestock. In the Congo Basin, where deforestation rates remain comparatively low, forest loss is currently driven by a mixture of localized, small-scale activities, including agriculture, fuelwood and charcoal collection, and informal timber extraction; but development of large-scale plantations looms on the horizon.

In total, half of the emissions from tropical deforestation and peat conversion from 2001–2012 came from just two countries—Indonesia and Brazil. The next seven combined (Malaysia, Democratic Republic of Congo, Bolivia, Colombia, Peru, Mexico, and Cambodia) accounted for another 27 percent.

Just four commodities (beef, soy, palm oil, and wood products) in eight countries were responsible for one-third of all tropical deforestation from 2000 to 2009. This concentration of emissions makes it tempting to focus policy and finance efforts on a few countries and supply chains. But broad participation by many tropical countries in forest conservation efforts is important to prevent “leakage” of deforestation activities from one forest to another. As Indonesia takes steps toward growing oil palm without clearing new forests, for example, efforts are needed to ensure oil palm expansion doesn’t simply relocate into forests in other countries.

Monitoring Forest Loss

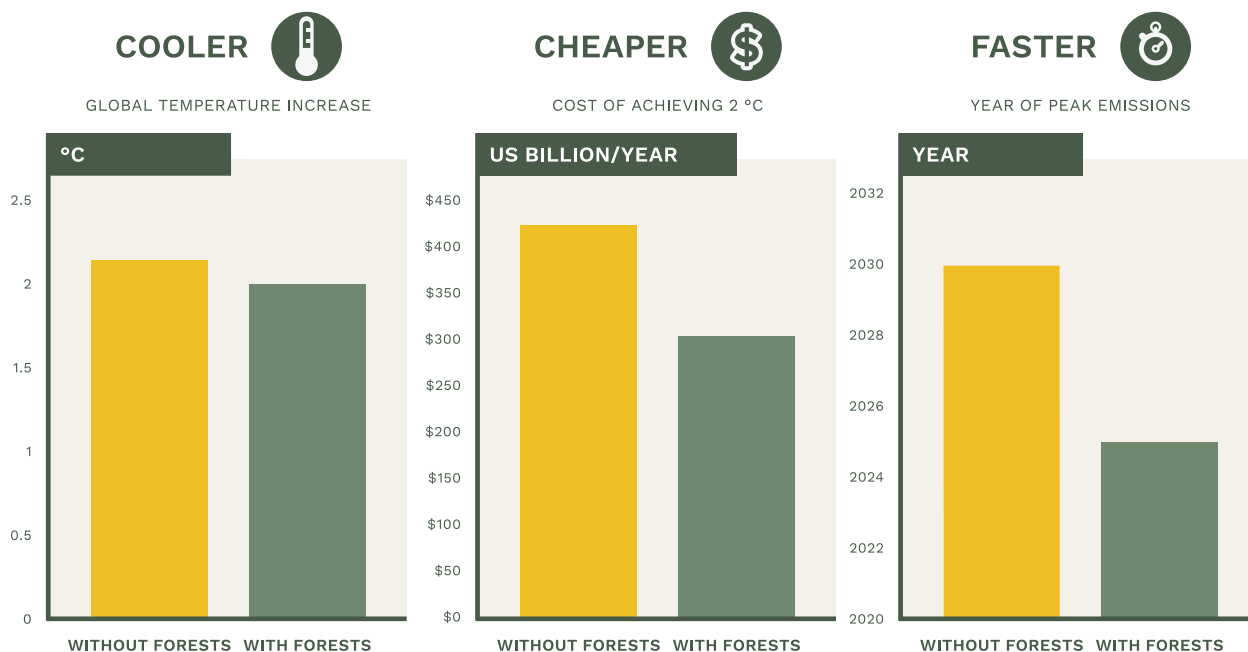
The last decade has seen remarkable advances in the technologies used to track deforestation. Improvements in the spatial resolution of remote sensing data and satellite imagery enable precise measurement of deforestation rates, drivers of deforestation, and emissions avoided by reduced deforestation, almost in real time. Improvements in drone technology have enabled forest managers—including indigenous peoples and forest communities—to monitor their forests and spot and document illegal activity much more efficiently than they could previously. And increased accessibility of drone, camera and mobile technology are ushering in a new era of crowd-sourced forest monitoring. Together, these advances are increasing the transparency of forest-related information and decision-making and shedding light on deforestation threats and hotspots that previously went undetected.

INDIGENOUS PEOPLES AND FOREST COMMUNITIES

Humanity’s spiritual connection to the Earth, to nature and to forests is celebrated and reflected in the core beliefs and teachings of many faiths. But perhaps none have been as closely shaped by forest ecosystems as the cultures and spiritualities of indigenous peoples and forest communities, whose cultures and practices evolved in an intimate interaction with tropical forests, and for whom those forests are the foundation of their spiritual lives, traditions, stories and ways of life. Given how closely intertwined indigenous cultures, belief systems and livelihoods are with forest ecosystems, and the vast stores of local and traditional knowledge indigenous peoples hold, it should come as no surprise to learn that these communities are the most effective stewards of tropical forests, a role they have played for generations and whose effectiveness is confirmed by scientific studies.

Indigenous peoples make a globally significant contribution to preventing deforestation and mitigating climate change by preventing forest loss and degradation within the lands they use and manage. In the Brazilian Amazon, for example, indigenous community forests have been found to store 36 percent more carbon than other forests, as a result of indigenous management practices and conservation efforts. Between 2000 and 2012, emissions from deforestation in the Brazilian Amazon were 27 times higher outside of indigenous lands than within them. Despite making up only about 5 percent of the world’s population, indigenous peoples protect nearly 80 percent of the world’s biodiversity, as their territories and lands tend to coincide with highly biodiverse areas, and the lands they manage harbor almost a quarter of the carbon stored in tropical and subtropical forests.

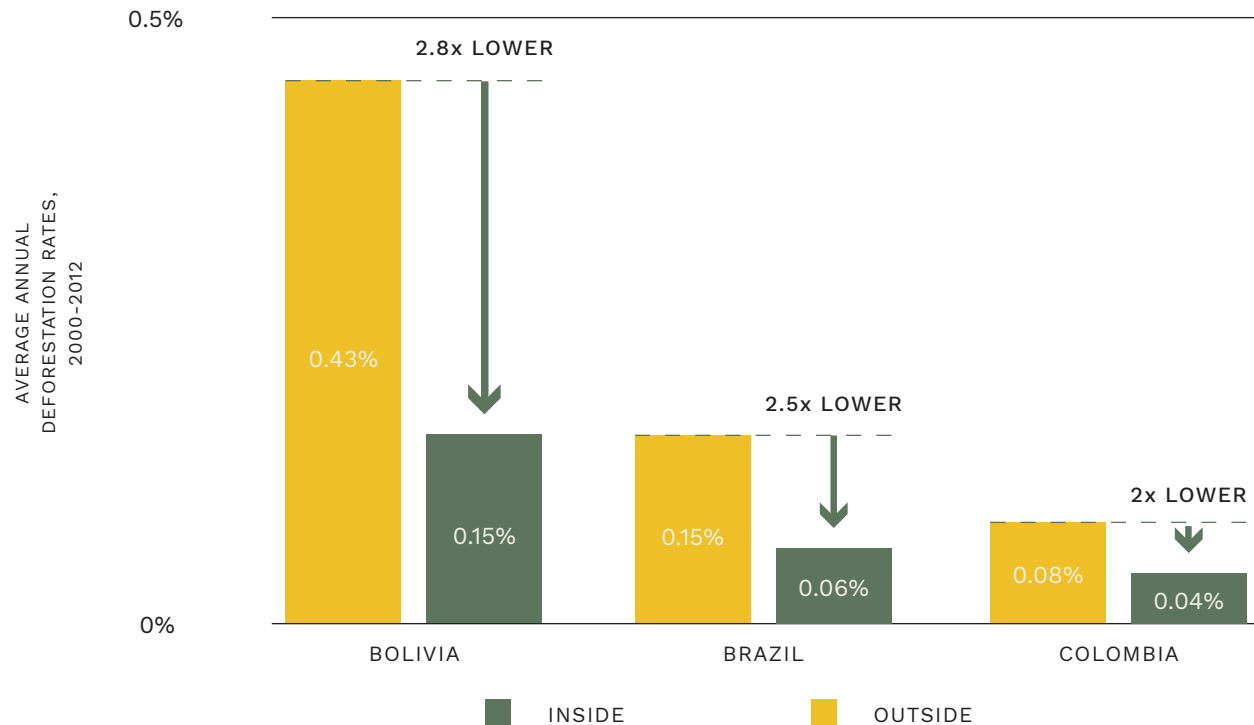
BY REDUCING TROPICAL DEFORESTATION, A COOLER CLIMATE CAN BE ACHIEVED MORE CHEAPLY AND QUICKLY



“WITH FORESTS” REFERS TO EMISSION REDUCTIONS FROM GROSS TROPICAL FOREST COVER LOSS AND PEAT CONVERSION; DOES NOT INCLUDE EMISSION REDUCTIONS FROM FOREST DEGRADATION OR FOREST REGROWTH

Source: Center for Global Development

DEFORESTATION RATES INSIDE LEGALLY-RECOGNIZED INDIGENOUS LANDS ARE 2-3 TIMES LOWER THAN IN SIMILAR AREAS THAT ARE NOT REGISTERED TO INDIGENOUS PEOPLES



Source: World Resources Institute. 2016. Why Invest In Indigenous Lands? <https://www.wri.org/resources/data-visualizations/why-invest-indigenous-land>.

By conserving and sustainably managing their lands, indigenous peoples provide an invaluable service to all of humanity, safeguarding the climate and other environmental benefits that we all depend on. But, sadly, this service is provided at great struggle and real personal cost to indigenous peoples.

Although indigenous peoples and local communities historically use and manage more than 60 percent of the world’s lands and forests, governments only recognize their rights over a fraction of that area—about 25 percent of the world’s land. The inadequate recognition and protection of indigenous peoples’ rights puts forests at risk and often leads to conflict and deforestation. In fact, scientific studies show that where indigenous and community rights over forests are secure, there is greater reduction in deforestation than under other management regimes. Secure forest rights and land tenure for indigenous and local communities is an effective climate solution—and one of the least expensive options.

A variety of international instruments, such as the United Nations Declaration on the Rights of Indigenous Peoples and the International Labour Organization Convention 169, grant indigenous peoples rights to own, use and control their land and natural resources, and the right to Free, Prior and Informed Consent (FPIC), which allows them “to give or withhold consent to a project that may affect them or their territories.” But even when land rights are granted to indigenous peoples, they are frequently violated and unenforced, leaving indigenous peoples and their lands vulnerable to incursions by outside interests, including illegal logging and mining, infrastructure projects and agricultural expansion.

Recognizing the many parallels between the theologies and tenets of the major world religions and the spiritualities and cultures of indigenous peoples when it comes to honoring and respecting the natural world, religious leaders and people of faith can use their influence to help draw the world's attention to the challenges indigenous peoples face. At the same time, they can amplify the pleas of indigenous peoples for their rights to be recognized and respected, and stand alongside them as allies when they face threats and violence for protecting the precious gift of creation.

INTERNATIONAL EFFORTS TO COMBAT DEFORESTATION

As tropical forests have come to be recognized as a key part of the solutions to the global crises of climate change and biodiversity loss, tropical forest countries and partners including donor governments, companies, NGOs and indigenous peoples, have developed various mechanisms and commitments to try to ensure their protection.

Under the United Nations Framework Convention on Climate Change, the REDD+ mechanism was developed to provide a framework through which wealthy countries would reward tropical countries for conserving their forests. REDD+ (which stands for *Reducing Emissions from Deforestation and Forest Degradation in Developing Countries*) is intended to provide financial incentives for developing countries to reduce emissions from deforestation and forest degradation, to sustainably manage their forests and to conserve and enhance forests carbon stocks, all while providing sustainable development benefits to participating communities. In 2013, the international community achieved political consensus on REDD+ and adopted a rulebook for managing risks; this was subsequently included in the 2015 Paris Agreement. As such, industrialized countries no longer have a reason to delay mobilizing the finance needed to move forward, and indeed, bilateral REDD+ agreements are in place in some key tropical forest countries.

The 2015 Paris Agreement on Climate Change, which saw nations commit “to limit global warming to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C degrees” by 2030, recognizes the critical role of REDD+ in achieving this goal. The importance of protecting tropical forests is also recognized in many of the ‘Nationally Determined Contributions’ (NDCs) pledged by countries in response to the Paris Agreement. These



are national plans devised by each country outlining how they intend to meet their climate change mitigation and adaptation goals. Although most major tropical forest countries have included action to protect forests in their NDCs, many are not explicit about what actions they will take, and the overall level of ambition will need to be increased in future iterations of NDCs if the full potential of forests as a climate solutions is to be realized.

Numerous other global agreements recognize the value of forests for sustainable development, biodiversity and the climate. The Aichi Targets (2010) agreed under the United Nations Convention on Biological Diversity seek to halve the loss of forests and other natural habitats by 2020. The New York Declaration on Forests (2014) saw national and subnational governments, companies, indigenous peoples and NGOs collectively agree to halve the loss of natural forests by 2020, and to end it by 2030. The UN Sustainable Development Goals (2015) target the conservation, restoration and sustainable use of terrestrial ecosystems by 2020 and include forest area as a key indicator of success.

In the private sector, more and more consumer goods companies and banks are committing to eliminate deforestation from their supply chains or investment portfolios, under pressure from NGOs. As of September 2017, more than 470 food and agriculture companies had pledged to eliminate deforestation from their supply chains.³

Despite this multitude of agreements and commitments, there is no clear evidence that these well-intentioned initiatives are having their desired impact, and tropical forests continue to be lost at an alarming rate. As the target year for many of these commitments, 2020 represents a landmark year for reflecting on progress so far and re-galvanizing international efforts. 2020 will see an anticipated New Deal for Nature and People to replace the Convention on Biological Diversity's 2020 Aichi Targets. Meanwhile, the Paris Agreement of the UNFCCC will begin to be implemented in full, and the UN Decade on Ecosystem Restoration 2021-2030 will be launched as a means to reinforce ambitious worldwide commitments to restore degraded landscapes.

Will we achieve in the next decade the sustainable pathway that was so elusive in the last? Recent years have shown that agreements and commitments alone are insufficient. Governments, the private sector and civil society organizations will continue to have vital parts to play, but the place of worship rather than the market place is where hearts and minds are won over, and where interventions to protect tropical forests can make a dramatic difference. Religious leaders are uniquely positioned to inspire action for the protection of tropical rainforests. The influence and inspirational power of religious leaders and faith-based communities could provide the turning point that the world's forests so urgently need.

3 <https://climatefocus.com/sites/default/files/20171106%20ISU%20Background%20Paper.pdf>



CHAPTER 2

THE SPIRITUAL IMPERATIVE TO PROTECT RAINFORESTS AND THEIR PEOPLES: PERSPECTIVES FROM TEN RELIGIOUS TRADITIONS

A BAHÁ'Í PERSPECTIVE

Bani Dugal

The grandeur and diversity of the natural world are reflections of the majesty and bounty of God. The Baha'i writings say that: *"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."* (Tablets of Bahá'u'lláh, Lawh-i Hikmat).

"...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." (Utterances of 'Abdu'l-Bahá, Star of the West, No. 17, 1916, p.139)

Rainforests, so rich in their biodiversity and critical to the life of the world, must be protected. They are a divine trust for which we are all responsible.



Baha'i teachings repeatedly affirm the harmony of science and religion, and state that human beings have an obligation to care for nature:

“The elements and lower organisms are synchronized in the great plan of life. Shall man, infinitely above them in degree, be antagonistic and a destroyer of that perfection?” (‘Abdu’l-Bahá, *The Promulgation of Universal Peace*).

In order to properly preserve our rainforests, individuals, institutions and communities must draw insights from the inherited knowledge of humanity—including the knowledge and experience of indigenous peoples.

Current patterns of consumption in numerous nations cannot be sustained by a closed planetary system. Increasing demand for limited resources has contributed significantly to the destruction of half of the world’s rainforests in just one century. Baha'is believe in upholding sacred values of stewardship, selflessness, moderation, and trustworthiness—vital in promoting healthy relationships with the natural world. A commitment to spiritual principles can foster attitudes, approaches, and aspirations which can facilitate the discovery and implementation of long-lasting measures to help preserve our rainforests.

Baha'u'llah says:

“Ye are all the leaves of one tree and the drops of one ocean,” (*Tablets of Bahá'u'lláh, Bisharat*) and *“He Who is your Lord, the All-Merciful, cherisheth in His heart the desire of beholding the entire human race as one soul and one body”* (*Bahá'u'lláh, The Summons of the Lord of Hosts*).

We must all set aside partisan disputations and pursue united action that is informed by the best available scientific evidence and grounded in spiritual principles. Contention and disunity paralyze will and volition, and dim people’s hopes that change is possible. Religious communities can help foster hope and consensus around shared ethics and values and thus protect the rainforests.

Baha'is are working within their indigenous communities to learn about and revive sustainable agricultural practices. Much of this knowledge had been discarded in favor of more “efficient” practices that have pillaged our rainforests. These communities are learning that when their traditional practices are upheld, in harmony with insights from modern science, agricultural practices can be coherent with stewardship and conservation. Science and religion together provide the fundamental organizing principles by which humanity can address the vital issues confronting it.

“Material civilization is like the body. No matter how infinitely graceful, elegant and beautiful it may be, it is dead. Divine civilization is like the spirit, and the body gets its life from the spirit, otherwise it becomes a corpse.” (*Selections from the Writings of ‘Abdu’l-Bahá, p. 303, 1978*)

When the material and spiritual dimensions of existence are both tended to, our rainforests can flourish once more.

A BUDDHIST PERSPECTIVE

Sulak Sivaraksa



Forests have played a role in Buddhist life and practices over millennia. History provides many examples of this. Queen Māyā of Sakya gave birth to Prince Siddhatta Gotama, the Buddha, under a sal tree⁴ in a garden in Lumbini, Nepal. The Buddha spent extended time in forests around South Asia. He was enlightened under a sacred fig tree, passed away and ascended in the Sala Grove which was rich with sal trees in the vicinity of Kusinara (now Kushinigar, India).

The Buddha's teachings were anchored in a principle that materialism would not bring happiness, and that attachment to material objects is a characteristic of human suffering. The Buddha identified three fundamental unwholesome roots (akusala-mūla), known in Mahayana Buddhism as the three poisons: *lōbha* (greed), *dōsa* (hatred) and *mōha* (delusion) which are also at the center of the environmental crisis. The crisis we are facing now is fundamentally spiritual in nature. We mistakenly believe that material acquisition will bring fulfillment. This false belief drives our desire to accumulate material wealth at the expense of nature. However, the wealth acquired cannot fulfill the feeling of what is lacking in our lives. The sense of lack will disappear only when we attain inner peace and live in harmony with the natural world.

In ancient Buddhist scriptures such as Dhammapada and Vanaropa Sutta, the importance of living in harmony with nature, planting trees, and the merits of those who protect the trees are stressed: *“As the bee derives honey from the flower without harming its colour or fragrance, so should the wise interact with their surroundings.”* – (Dhammapada 49)

The crisis we are facing now is fundamentally spiritual in nature. We mistakenly believe that material acquisition will bring fulfillment.

4 Some sources say it was an ashoka tree (saraca asoca).

“One day a deity asked the Buddha, “Whose merit grows day and night, who is the righteous, virtuous person that goes to the realm of bliss?” Answered the Buddha, the merit of those people who plant groves, parks, build bridges, make ponds, dwelling places, etc. grows day and night, and such religious persons go to heaven.” – (Discourse on the Merit Gained in Planting Groves, Vanaropa Sutta)

Buddhist monks in Southeast Asia have engaged their theological teachings and traditions to stop rapid deforestation in the region. In the 1990s, Buddhist monks in Thailand began to raise public awareness about forest conservation. The most visible manifestation of an ecological dhamma was the practice of ordaining trees in Thailand. To this day, Thai people will not cut forests near the forest monasteries. Under the monastic rules, monks themselves are prohibited from cutting living plants; and villagers respect forests as a place of monastic refuge and conservation. Buddhist practice is often quite localized and community-based with some of the challenges to the environment shaped by policy-makers and political decisions. In Sri Lanka, Buddhist leaders have engaged directly with the Parliament and the Presidency to develop a new village of sustainability.

Buddhism is a doctrine of liberation that offers solutions, and practical measures for seeing the consequences of our actions, mastering our own desires, and developing a more sustainable, generous and mindful approach to life on Earth. Buddhism teaches in a practical way that purifying the mind and acting for the greater good by reducing harm and suffering is what gives us a sense of peace and satisfaction in life. According to Buddhism, we all need to live the “right way,” which means respecting ourselves and our planet. In this way we are happier, the rain forest is happier, and the world will breathe more easily.



A CHRISTIAN PERSPECTIVE

His Eminence, Metropolitan Emmanuel of France

All major branches of the Christian family are unified in their conviction that the Earth belongs to God, and that humanity is responsible for Earth's care. This fundamental Christian teaching has clear and compelling implications for the protection of tropical rainforests, and for their indigenous guardians. The Encyclical of the Holy and Great Council of the Orthodox Church, convened in Crete in June 2016, sets forth the religious dimensions of the ecological crisis, describing these as:



“spiritual and ethical, inhering within the heart of each man. This crisis has become more acute in recent centuries on account of the various divisions provoked by human passions—such as greed, avarice, egotism and the insatiable desire for more—and by their consequences for the planet, as with climate change, which now threatens to a large extent the natural environment, our common ‘home.’” (par.14).

We should recognize the spiritual dimension of the environmental crisis. Are we not misled by seeing ourselves as masters and possessors of nature, a nature that has the sole and only purpose to serve us? The World Evangelical Alliance (WEA), looking into the Scriptures, sees the presence and Lordship of Jesus Christ deeply embedded in the Bible's perspective on the environment. The WEA observes that according to the Scriptures, all Christian traditions confess the world as God's creation, in which life thrives and one can sense the divine (Genesis 1:1-2:25). In Christ, the fullness of God was pleased and, through Christ, God was reconciled to all things in heaven and on earth (Colossians 1:19-20). Therefore, all Christians believe that we are an integral part of this good creation and recognize that the destinies of nature and humanity are intimately interrelated. Although we were authorized to exercise dominion (Genesis 1:26), the biblical texts teach us that God, through Christ, has given us the “faithful and prudent” (Luke 12:42) stewardship of creation: *“We are also commanded to care for the earth and all its creatures, because the earth belongs to God, not to us. We do this for the sake of the Lord Jesus Christ who is the Creator, Owner, Sustainer, Redeemer and Heir of all creation.”*⁵

The brief, yet powerful statement found in Genesis 1:11 corresponds to the majesty of creation as understood by all the branches of the Christian family: “Then God said: ‘Let the earth bring forth vegetation: plants yielding seed, and fruit trees of every kind on earth that bear fruit with the seed in it.’” Even the humblest and lowliest manifestations of God's created world comprise the most fundamental elements of life and the most precious aspects of natural beauty.

5 World Evangelical Alliance, Summary of Climate Change References in Creation Care Documents, Part IIB, ‘For the World We Serve: The Cape Town Call to Action,’ [Web](#).

The World Council of Churches, an extended network of the world's Protestant Christians, affirms that:

“Creation is intrinsically good. Most of the time, creation cares for us, and not we for creation—as our Indigenous brothers and sisters remind us. ‘When the bow is in the clouds, I will see it and remember the everlasting covenant between God and every living creature of all flesh that is on the earth’ (Genesis 9:16). It is time to reintegrate ourselves into this covenant.”⁶

In recent years, Christian eco-theology has affirmed the sacred gift of vegetation and forests in more specific ways. Theologians have recognized that for all people of the world, plants are the center and source of life. Plants allow us to breathe, to live, to flourish, and to dream. For many, including indigenous peoples, plants provide the basis of spiritual and cultural life. By allowing overgrazing or promoting deforestation, we disturb the balance of the plant world. Whether by excessive irrigation or urban sprawl, we interrupt the magnificent epic of the natural world. Pope Francis speaks to this eloquently in his 2015 encyclical, *Laudato Si'*:

“The loss of forests and woodlands entails the loss of species which may constitute extremely important resources in the future...It is not enough, however, to think of different species merely as potential “resources” to be exploited, while overlooking the fact that they have value in themselves. Each year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost forever. The great majority become extinct for reasons related to human activity...We have no such right.”

Despite centuries of violent mistreatment, Christian communities have begun the long, necessary work of affirming the rights of Indigenous peoples and recognizing them as the world's most skillful and effective protectors of forests and biodiversity, guardians of the very mystery of life. H.A.H. Ecumenical Patriarch Bartholomew once wrote:

“Indigenous peoples throughout the world are the stewards and guardians not only of the forests and the seas, as well as of a vast store of knowledge about the natural world, which they regard as the library of life.”

Christianity teaches that, in a very distinctive way, God's Earth unites us all, before and beyond any doctrinal, political, racial or other difference. We may or may not share religious convictions, ethnicity or culture, but we do share an experience of Earth in the air we breathe, the water we drink, the ground we tread. Because this all belongs to God, we are called to reverence and respect, care and protection, humility and gratitude in the face of such an awe-inspiring, life-giving gift.

6 World Council of Churches, 'Roadmap for Congregations, Communities and Churches for an Economy of Life and Ecological Justice,' [Web](#).

A CONFUCIAN PERSPECTIVE

Mary Evelyn Tucker, Yale University, and Anna Sun, Kenyon College and Harvard Divinity School

The dynamic and holistic perspective of the Confucian worldview provides a context for appreciating the interconnectedness of all life forms and the sacredness of this intricate web of life.⁷ Moreover, the Confucian understanding of the vital forces underlying cosmic processes offers a basis for reverencing nature. This is because nature cannot be thought of as composed of inert, dead matter. Rather, all life forms share the element of *qi* or material force. This shared psycho-physical entity becomes the basis for establishing a reciprocity between the human and non-human worlds. From this perspective, forests are traditionally considered special places of interconnected life forms. Thus, they need to be protected and managed for a larger common good.

In this same vein, in terms of self-cultivation and the nurturing of virtue for the common good, the Confucian tradition provides a broad framework for harmonizing human life with the natural world. It does this in its understanding of the human as a child of the Cosmos (Heaven) and of Nature (Earth).

This is illustrated by the 11th century Neo-Confucian scholar, Zhang Zai, in his often quoted essay, The Western Inscription:

*“Heaven is my father and Earth is my mother, and even such small creatures as I find an intimate place in their midst. Therefore that which fills the universe I regard as my body and that which directs the universe I consider as my nature. All people are my brothers and sisters, and all things are my companions.”*⁸

This illustrates the important sense of kinship with all life that was key to the Neo-Confucian tradition. This was further expanded by Wang Yangming in the 15th century stating that:

*“...when we see plants broken and destroyed, we cannot help a feeling of pity. This shows that our humanity forms one body with plants. It may be said that plants are living things as we are...”*⁹

They are living things because they share the same *qi*, life force. Moreover, for Wang Yangming, the innate knowing of humans was a basis for appropriate action in the world. As Tu Weiming observes:

*“sustainable and harmonious relationship between the human species and nature is not merely an abstract ideal, but a concrete guide for practical living.”*¹⁰



7 See Mary Evelyn Tucker and John Berthrong, ed. *Confucianism and Ecology*. (Cambridge: Harvard University Press, 1998) This was part of the Harvard conference series and edited volumes on Religions of the World and Ecology.

8 Wm. Theodore de Bary and Irene Bloom, *Sources of Chinese Tradition* (New York: Columbia University Press, 1999), p. 683.

9 Tu Weiming, “The Ecological Turn in New Confucian Humanism,” in *Confucian Spirituality*. Vol 2. Tu Weiming and Mary Evelyn Tucker, eds. (New York: Crossroad Publishing, 2004), p. 493.

10 Tu Weiming, International Confucian Ecological Alliance, *Confucian Statement on the Protection of the Planet*. 2014.

Thus, cosmology and ethics, nature and virtue, knowledge and action are intimately linked for Confucians across the Asian world. From this perspective, Confucians traditionally aimed to promote flourishing social relations, effective educational systems, sustainable agricultural and forest systems, and humane political governance within the context of the life-giving Earth processes. It is clear, however, that these were aspirational ideals that were not always realized in practice.

Qi or Ch'i

Confucians have a term to describe the vibrancy and aliveness of the Earth and universe: *qi*. This is translated in a variety of ways as material force, matter energy, or vital force. It expresses the understanding that the universe is alive with vitality and resonates with life. What is noteworthy about this perspective is that *qi* is a unified field embracing both matter and energy. *Qi* courses through the universe from the smallest particles of matter to mountains and rocks, plants and flowers, forests and groves, animals and birds, fish and insects. All the elements—air, earth, fire, and water—are composed of *qi*. Humans, too, are alive with *qi*.

In other words, *qi* moves through nature, fills the elements of reality, and dynamizes the human body-mind. It is the single unifying force of all that is. It does not posit a dichotomy between nature and spirit, body and mind, matter and energy. *Qi* is the vital reality of the entire universe. Thus, forests are special places where *qi* resides with all the biodiversity of life they contain. This perspective of *qi* as vital force has many similarities with the worldviews of Indigenous peoples, which also view the Earth as alive and thus something to protect.

Self-Cultivation

For the Confucians, self-cultivation, then, does not lead toward transcendent bliss or otherworldly salvation or even personal enlightenment. Rather, the goal is to move toward participation in the social, political, ecological, and cosmological order of things. The continuity of self, society, nature, and cosmos is paramount in the Confucian worldview.

Thus, personal self-cultivation is always aimed at preparing the individual to contribute more fully to the needs of the world. For Confucians this implies a primacy of continual study and learning to serve society. Education is at the heart of self-cultivation. This is not simply book learning or scholarship for the sake of careerism. It is rather education that leads oneself out of oneself into responsibility for the world at large.

More than anything, then, the role of the human is to discover one's place in the larger community of life. And this community is one of ever expanding and intricately connected concentric circles of family, school, society, politics, nature, and the universe. Humans are embedded in a web of relationships. A person fulfills one's role by cultivating inner spontaneities so that one can be more responsive to each of these communities. This includes responsibility for nature and for healthy forests for the life of the community.

11 Wm. Theodore de Bary, *Sources of Chinese Tradition* (New York: Columbia University Press, 1960), p. 466.

For the Confucians this is set within the context of an organic, dynamic, holistic universe that is alive with *qi*. Finding one's role is realizing how humans complete the great triad of Heaven and Earth. As humans rediscover their cosmological being in the macrocosm of things, their role in the microcosm of their daily lives will become more fulfilling and co-creative. The pace and rhythm of human life is intended to be responsive to the rhythms of the day, the changes of the seasons, and the movements of the stars. The continuity of human beings with the life of the Earth and universe enlivens and enriches daily activities. By becoming attuned to the patterns of change and continuity in the natural world, humans find their niche.¹¹

Humans thus participate in the transforming and nourishing powers of all life. In so doing they will cultivate the land appropriately, preserve forests, nurture other life forms, regulate social relations adeptly, honor political commitments for the common good, and thus participate in the great transformation of Earth processes. This is the aspirational worldview of Confucianism that may assist in the preservation of our planet's magnificent and complex rainforests.



—
Qi moves through nature,
fills the elements of reality,
and dynamizes the human
body-mind.

A DAOIST PERSPECTIVE

Ms. Claudia He Yun

According to the Daoist classic Huainanzi (Chinese: 《淮南子》), in the center of our world stood a giant forest called Jianmu (English: Established Tree; Chinese: 《建木》):

“Jianmu lives in a place called Duguang... It is so thick that in the middle of the day no sunshine could get through its leaves. It is so dense, when one calls, there is no echo. It stands in the center of heaven and earth.”

Chapter on Geography, Huannanzi Chinese:《淮南子·地形篇》

Jianmu not only keeps heaven and earth in place, it also serves as a connection between the two, so celestial beings could use it as a gateway for travel between the two worlds (Shanhaijing Chinese: 《山海经》). Now, our ancestors had no way of knowing where the rainforest is, but doesn't the depiction of Jianmu sound just like it? Not only is it thick and dense, it serves as an essential gateway between heaven and earth, without which water and carbon will not be able to complete their cycles.

Trees are also intimately connected to our very existence. In ancient China and in some Daoist communities today, a person would adopt a tree according to the will of the Tree God, which is reflected in his/her birth sign. The person then asks the Tree God to protect the life tree so he/she lives a long and healthy life. But if the Tree God cuts the tree down, the person will die. Today we no longer call trees our “God.” We call them our “carbon sink.” What we've forgotten, however, is that the rainforest has existed long before us, and will continue to exist long after we are gone. This practice reminds us we are not the protector of trees, the trees protect us and give us life. The trees have their own intrinsic value to exist, which is beyond our power (as reflected in the Tree God).

Zhengao (Chinese:《真诰》) recorded a story of a Daoist who prayed to a dead tree every dusk and dawn for 28 years. One day the dead tree suddenly came to life: leaves became lustrous and the tree sap was sweet as honey. The Daoist drank the sap and immediately he became an immortal. Baopuzi (Chinese:《抱朴子》) recorded another lovely story about a big tree called Yunyang (English: Sun-cloud) who lives on a mountain. If a person gets lost in the mountain and calls out Yunyang's name correctly, then he/she will find the way.

Could the rainforest also teach us the way out of this entanglement of global problems to a more beautiful, sustainable and compassionate world?



A HINDU PERSPECTIVE

Anantanand Rambachan

The Tirupati Tirumala temple in Andhra Pradesh, one of the largest Hindu temples in India, and one of the most-visited sacred sites in the world, publicizes its tree protection initiative with the Sanskrit slogan, “*Vriksho rakshati rakshatah*”: “*Trees when protected, protect us.*” The temple also distributes saplings as *prasada*, that is, sacred gifts from the divine. Traditionally, *prasada* is an edible item shared after Hindu worship. The tree-protection initiative of the Tirupati temple highlights core Hindu teachings concerning the value of our world’s rainforests and the urgency of their protection.



Hindu traditions regard all of nature, indeed all of creation, as sacred. The one divine being is the source of everything that exists and is present equally in everything. Several Hindu texts specifically describe trees and forests as emerging from the divine.

“From Him emerge the oceans and mountains; from Him the rivers, in their diverse forms, flow; from him spring all trees and their sap, by virtue of which He abides in everything as the inmost self (Mundaka Upanishad 2.1.9).

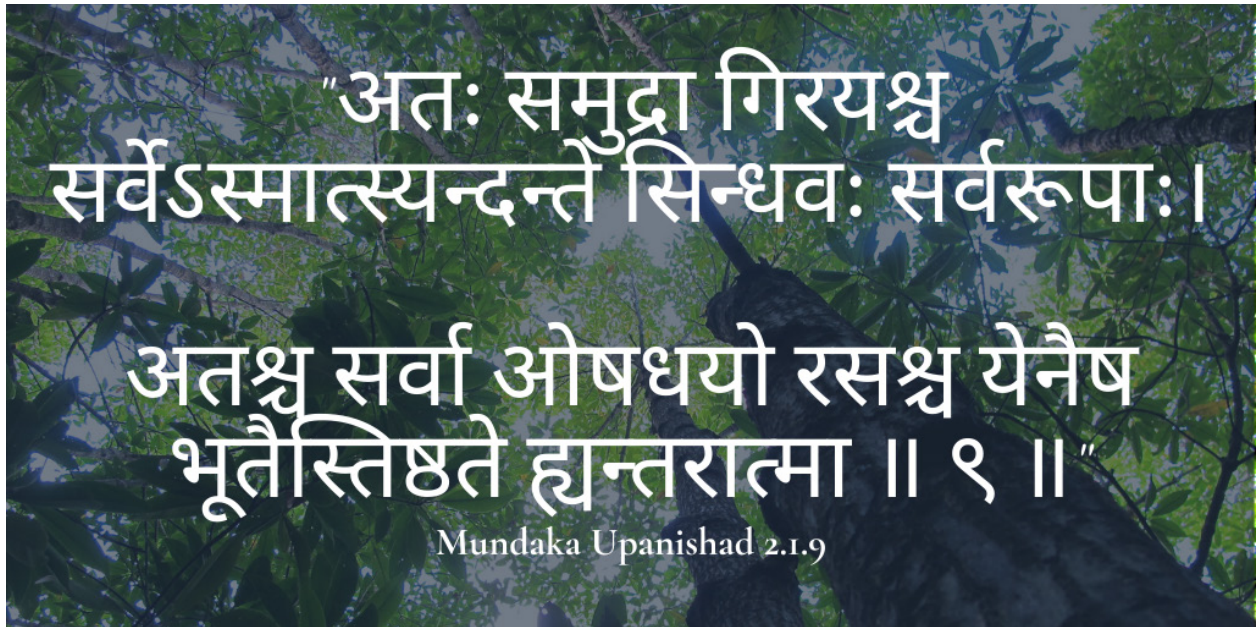
As a consequence of this divine immanence, Hindu traditions invite us to see and regard the entire universe as the form of God. Mundaka Upanishad (2.1.4) describes the moon and sun as his eyes, the directions as his ears, the wind as his breath, the earth as his feet and the entire creation as his heart. We are asked to contemplate nature with reverence and as having its own integrity. The value of nature is not merely instrumental to human needs or greed. Such reverence also

Hindu traditions regard all of nature, indeed all of creation, as sacred. The one divine being is the source of everything that exists and is present equally in everything.

requires us to practice *ahimsa* (non-injury). That includes also our rainforests. *Ahimsa* is regarded as the highest virtue and is essential for the preservation of the biodiversity in our rainforests. Destruction of our rainforests violates both their sacred character as well as the necessity to practice non-injury.

Hindu teachings about the importance of protecting the rainforests are not limited to the theology of their sacred value and the ethics of non-violence. The unity of creation that has its source in the divine and which is pervaded by the divine implies a deep interconnectedness and interdependence. The same truth is implied by understanding the world to be the body of the divine. Like a body, the whole is interrelated and interdependent. Hindu traditions emphasize that our bodies are inseparable from and deeply connected to the natural world. The wind that is described as the breath of God is our breath. Through science, we understand the indispensability of our rainforests for the health of our planet's atmosphere, climate and to its overall flourishing. The core Hindu teaching on the unity of existence is also a warning that in destroying the rainforests, we destroy ourselves.

The Bhagavadgita calls upon us repeatedly to commit ourselves to work for the flourishing of all (*lokasangraha*). We pray daily in the Hindu tradition for the peace of our forests (*vanaspatayah shantih*). Our prayerful hope and work require urgent commitment to protect the world's rainforests that are indispensable to the flourishing of diverse species, human communities, sustainable development and the overall health of our planet. *Lokasangraha* is a fundamental Hindu obligation. The protection of our rainforests is a Hindu religious obligation (*dharma*) when we understand that the goal of *lokasangraha* is impossible without flourishing rainforests.



AN ISLAMIC PERSPECTIVE

Mustafa Ceric, Ph.D. Grand Mufti Emeritus of Bosnia

God Almighty tells us in the Holy Qur'an (Al-Anbiyā' 21: 30-31):

“The heavens and the earth were a joined entity, and God separated them and made from water every living thing. And God set on the earth mountains standing firm, lest it should shake with them, and God made therein broad highways (between mountains) for them to pass through: that they may receive Guidance.”



Here is the key. We need forests because we need air, water and food. Humans can live about forty days without food, about three days without water, but only about eight minutes without air. Thus, cutting the trees of forests, we are cutting our own umbilical cord while in the very stomach of mother earth. We should know that without this vital string, we cannot survive. Indeed, we are a like a fetus dependent on it for our survival in the womb of Mother Earth. It is because of that that the health of Mother Earth must be taken care of. It is because of that that the forests must be protected for the good health of humanity: the forests provide clean air, clean water and clean food. Indeed, the forests dictate weather patterns for the whole of planet earth and act as the planet's lungs.

Islam teaches us that the massive cutting of trees and plants is sinful. Instead, we should protect and increase the number of trees and plants on earth. It is said that God will reward planting trees and plants. Prophet Muhammad, a.s., urged Muslims to take care of Earth's flora. In one of his sayings (Ḥadīth) he said:



“If any Muslim plants a plant and a human being or an animal eats of it, he will be rewarded as if he had given that much in charity.” (Sahih Bukhari Vol. 8, Book 73, No. 41). And he said: “Even if the Last Hour on earth is about to occur while one of you was holding a palm shoot, let him take advantage of one second before the Last Hour to plant it.” (Sahih Al- Jami’ Al-Saghir, No.1424).

And this Islamic tradition stipulates how we should behave toward a tree and trees of forests: *“Whoever cuts a tree here should plant a new tree instead.”* Yes, indeed, whoever cuts a forest here and there should plant a new forest instead. We all know by now that forests cover one third of the Earth’s land mass, performing vital functions around the world. Around 1.6 billion people—including more than 2,000 indigenous cultures—depend on forests for their livelihood. Forests are the most biologically diverse ecosystems on land, home to more than 80 percent of the terrestrial species of animals, plants and insects. They also provide shelter, jobs and security for forest-dependent communities. Yet despite all of these priceless ecological, economic, social and health benefits, global deforestation continues at an alarming rate: 13 million hectares of forest are destroyed annually. Deforestation accounts for 12 to 20 percent of the global greenhouse gas emissions that contribute to climate change.

Therefore, it is time for the faith-based communities around the world to raise their voices against deforestation. The faith-based communities must stand up together for the protection of the forests and their peoples as a moral imperative. As we have it in the Holy Qur’an:

“[Since they have become oblivious of moral conscience,] corruption has appeared on land and in the sea as an outcome of what men’s hands have wrought (Al-Rum, 41).”



A JEWISH PERSPECTIVE

Rabbi Sir David Rosen

An ancient Jewish homily (Ecclesiastes Rabbah 7 Section 28) tells us that “when the Holy One Blessed Be He created the first human being, He took that person around all the trees in the Garden of Eden and said:

“See my works, how fine and excellent they are, which I have created for you. Think upon this and do not corrupt or destroy my world; for if you corrupt it there is no one to set it right after you.”

This of course is in keeping with the text in the Book of Genesis (2:15) that describes God as having put the human person in the garden “to work and preserve it”.

It is notable that this homily, which teaches the importance of human responsibility for our environment, focuses upon the trees of the Garden of Eden, highlighting the key role that forests play in our ecosystem. This, of course, is especially the case concerning the rainforests, whose wellbeing has truly global ramifications.

While the recognition that our environment is the Divine Creation should itself prevent us from any wanton destruction and waste, Jewish Tradition derives the specific prohibition against such from Deuteronomy Chapter 20, Verse 19, which forbids cutting down fruit trees to make weapons for war.



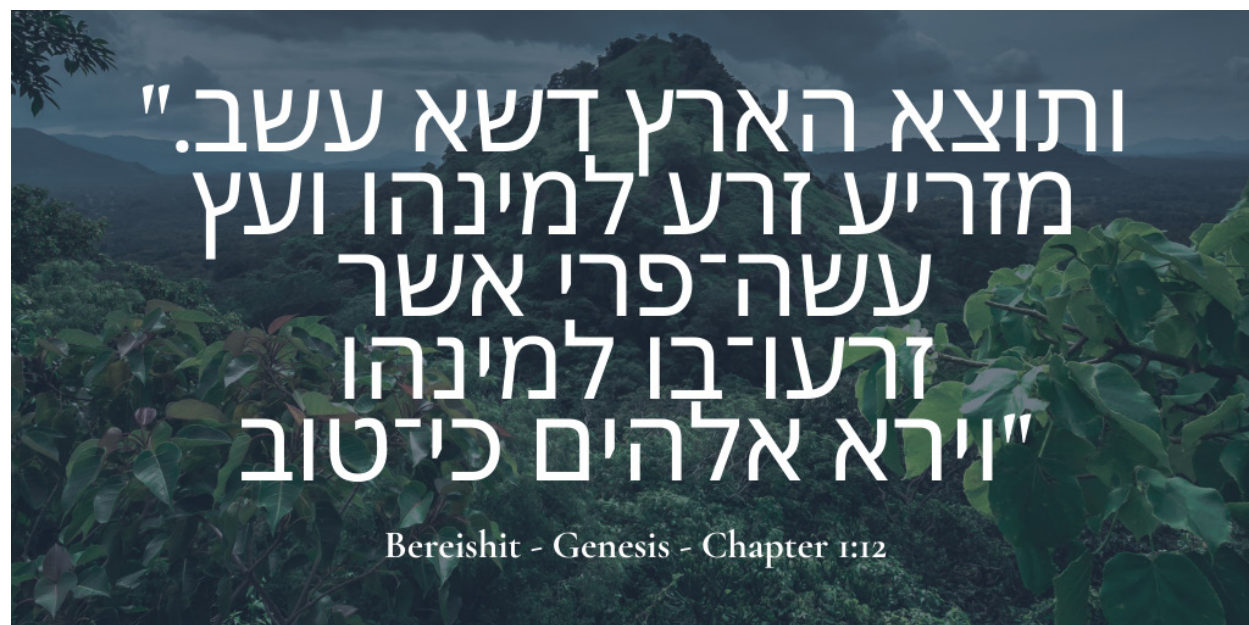
The sages of the Talmud draw an a fortiori conclusion that if in a situation of war where human life is in danger, it is prohibited to cut down a fruit tree; under normal conditions the idea of destroying anything that provides sustenance is even greater. The Talmud extends this idea to any wanton destruction, waste, pollution, and even to over ostentation and over indulgence.

Yet today, it is precisely an overindulgent and wasteful lifestyle that is actually threatening the trees, the rainforests themselves. As a result, not only are the communities themselves living in and around the rainforests in danger, but our whole globe is imperiled.

This link between our moral conduct and the environment that is highlighted in the twenty sixth chapter of Leviticus, can be seen today more than ever before. Human avarice, unbridled hubris, insensitivity and lack of responsibility towards others and towards our environment, have polluted and destroyed much of our natural resources, interfered with the climate as a whole jeopardizing our forests, rains and harvests; threatening indigenous communities, exacerbating conflict and war, and threatening the very future of sentient life on the planet.

As the above homily affirms, it is we who have the responsibility to care for the trees, for the forests, for our environment—there is none other to put it right.

The situation of the world's rainforests is not just paradigmatic of this challenge, it is key to preventing global disaster. By preserving the welfare of the trees and reversing the destructive trend, we can help guarantee the wellbeing of communities and our environment for the posterity of our planet that we are mandated to preserve and sustain.



A SHINTO PERSPECTIVE

Professor Minoru Sonoda; Member of the Board, RfP Japan; Chief Priest, Chichibu Grand Shrine; Honorary Professor of Kyoto University



Currently, there are some 80,000 Shinto shrines in Japan, each dedicated to the guardian deity (kami) of each respective community. Local residents observe rituals of their respective shrines, which are legally designated as religious corporations. Almost all these shrines retain forests in their precincts. The forests, known as chinju-no-mori or the sacred forests of village shrines, are carefully maintained by local residents. This is because since ancient times the Japanese people have believed that deities dwell in deep, lush green forests.

Since ancient times inhabitants of the Japanese archipelago have grown and preserved forests with special care. In Japanese Shinto mythology, there are stories of tree planting. For instance, one of the powerful deities, known as Susanowo, turned his own hair and beard into trees; he also told his divine children to plant trees across the country.

It is the belief that all things—both living and non-living—have spiritual lives.

Accordingly, Shinto shrines represent Japanese inherent religious culture, and their sacred forests symbolize the abundant natural blessings of the mountains, rivers, and the sea. Under the pretext of humanism, we have begun to exploit various life forms and other natural objects on the Earth, regarding them as mere materials and a means to satisfy our desire. This attitude, however, has led to serious environmental destruction. In consideration of the present environmental crisis, I cannot but believe that it is the mission of religious leaders to remind people of the existence of the spiritual side of all things in the universe, and to inspire people to protect the natural environment that provides habitats for diverse ecosystems, so as to ensure coexistence of all living things.

It is the belief that all things—
both living and non-living—
have spiritual lives.

A SIKH PERSPECTIVE

Bhai Sahib Mohinder Singh Ahluwalia

This year marks 550 years since the founding of the Sikh dharam, or faith, by Guru Nanak Dev Ji. This provides an impetus for Sikhs to look afresh at their heritage, which links every person's spiritual flourishing to our collective social and environmental flourishing. As citizens of the planet as well as Sikh faith practitioners, we must be aware that humanity itself has arrived at a critical juncture in history. Since the Second World War, the planet's rainforests, which have majestically sustained the earth's ecosystems for so many millions of years, have been reduced to half. In ending one world war, we unleashed a relentless global war on nature and permitted the destruction of its painstakingly intricate web of life.



Deforestation now represents one of the most dangerous threats to our planet. Our scientific knowledge on this subject is clear. Environmental campaigning is now more than a fringe movement and is influencing policy change. Yet beyond our technical awareness and secular solution-building, the question remains as to how we can mobilize the inward gear-change that is needed to foster a shared culture of using the earth's resources with respect and reverence. In this, the world's faith traditions and indigenous communities provide vital illumination, inspiration and direction. There is untapped scope for them to also move from the fringes to be better recognized and included as a positive voice and force for change.

Dharam is the indigenous word that Sikhs use for 'faith'. Unlike 'faith', it does not separate the 'religious' from the 'secular'. Rather, it reflects a holistic approach to living every aspect of our lives – personally, locally and globally – in a way that is guided by spiritual wisdom and virtues. This approach is based on seeing God as dwelling in creation itself and pervading nature, so that every aspect of creation is seen as interconnected and interdependent, threaded through with God's divine presence:

"Aape bhaar atthaareh banaspat, aape hi phal laae... Jan Nanak vadiaaee aakhai har karte kee, jis no til na tamaae."

"The Creator pervades the intricate diversity of nature and makes it bear fruit...Guru Nanak speaks in awe of God's magnificence—the Creator who has no greed at all." (Sri Guru Granth Sahib Ji, p. 554.)

In the opening Sikh morning prayer, the Earth, spinning in the cosmos, is viewed as a dharamsal, a sacred place of worship. The prayer concludes by describing the Earth as our 'Great Mother' (*Mata dharat mahat*). This means we are to treat the planet with loving reverence. Moreover, because the soul, we are informed, may pass through a continuum of 8.4 million life forms on its journey of transmigration, Sikh teachings encourage us to feel an underlying kinship with the non-human world:

“Kai janam saakh kar upaaya, lakh chauraasee joan parmaay.”

“Oh soul, as you wandered through the 8.4 million life forms, remember that in some existences, you may have stood as a tree or plant, growing branches and leaves.” (Sri Guru Granth Sahib Ji, p. 554)

We are also urged to recognize the capabilities and responsibilities blessed to humans, who enjoy the privilege of having the Earth’s resources at their disposal. With this honored status comes the responsibility of learning to live ‘in God’s image’, by strengthening inner virtues and overcoming inner vices. Indeed, Guru Nanak’s very arrival in the world is understood to have come from a cry, or pukaar, from the world burdened by the weight of human selfishness, greed and exploitation. Where there is no greed, as the first quote above suggests, there is wellbeing and abundance.

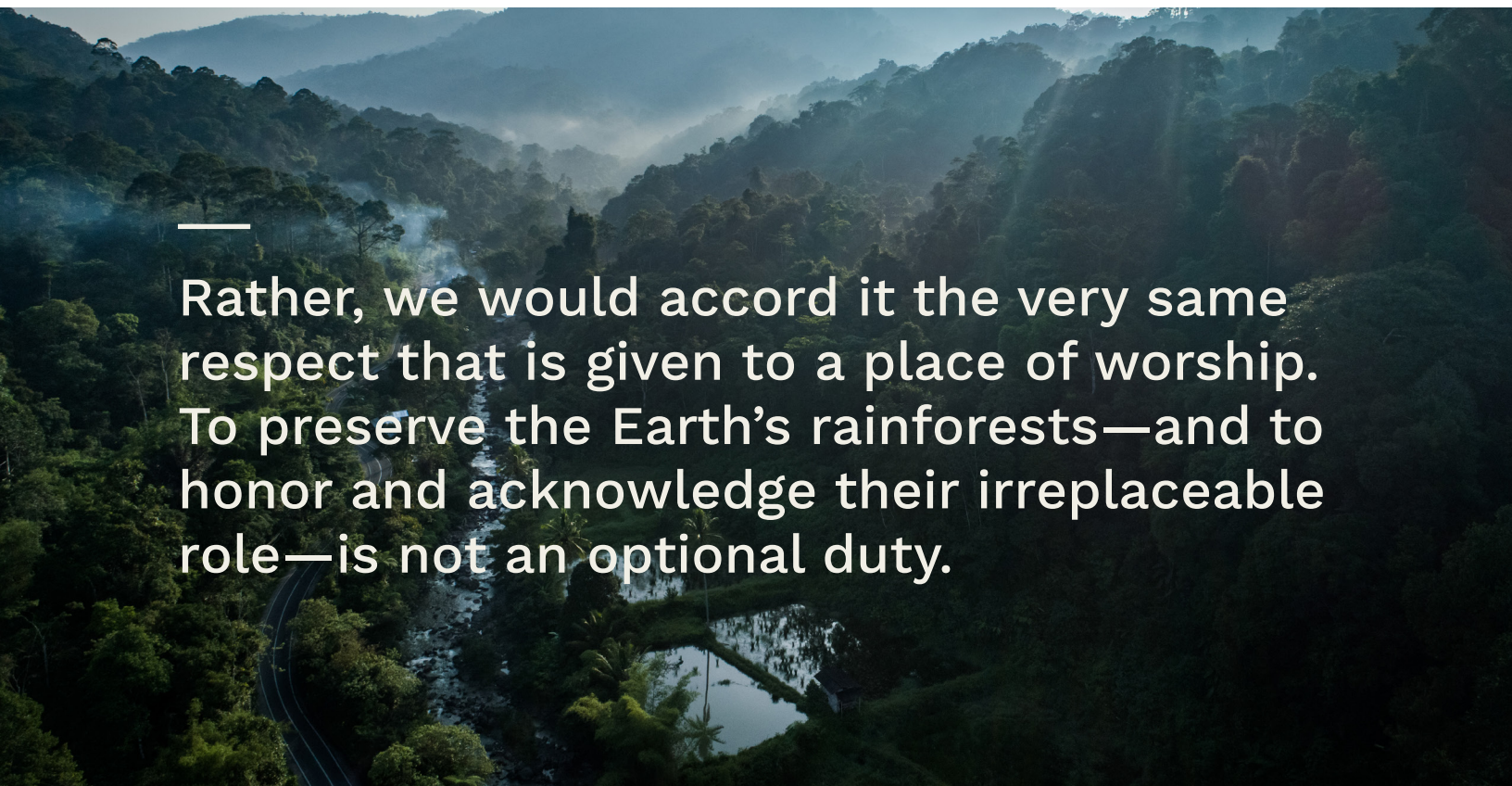
As we contemplate the threat which looms over the rainforests, and recall Sikh lyrical, scriptural teachings, we are reminded of the imagery of greenery which recurs in the sacred verses. As humans, may we respond more wholeheartedly to those messages, which awaken us to see God’s all-pervading presence in the world and inspire us to honor all of nature:

“Ban tin parbat hai paarbraham, jaisee aagya tesa karam.”

“God is all-pervasive in the flora, mountains and forests; in this magnificent divine play, everything acts according to its divinely ordained role.” (Sri Guru Granth Sahib Ji, p. 293.)

By seeing the Earth itself as an awe-inspiring sacred space, we would not irreverently violate it. Rather, we would accord it the very same respect that is given to a place of worship. To preserve the Earth’s rainforests—and to honor and acknowledge their irreplaceable role—is not an optional duty. By seeing this as a religious responsibility as well as a secular one, may we unlock our own inner reserves of love and devotion, so they may flow into, and energize, our critically needed initiatives and endeavors to protect and save the sacred rainforests.

Rather, we would accord it the very same respect that is given to a place of worship. To preserve the Earth’s rainforests—and to honor and acknowledge their irreplaceable role—is not an optional duty.



CHAPTER 3

HOW RELIGIOUS COMMUNITIES CAN GET INVOLVED

THE ROLE OF RELIGIOUS BELIEVERS

Every sector of society has a role to play in protecting our magnificent rainforests. This is particularly true as current efforts by governments and businesses fall short of what is needed, and forest destruction continues at unacceptable rates. In considering the role religious practitioners and communities can play, it is important to acknowledge that ending deforestation is feasible and within reach. We know what is needed, and the economic, environmental and social justice case for protecting forests is clearer than ever. It now comes down to uniting all segments of society behind calls for concrete and courageous action, and high levels of ambition around national and international targets on forest protection and climate action.

Here religious practitioners and communities have a unique role to play. We can raise the issue of ending tropical deforestation to the level of urgent moral imperative and high spiritual priority. The ethical case for caring for the planet is deeply rooted in all of the world's religious traditions, and now is the time to reinvigorate and mobilize our respective spiritual resources, our influence, and our moral authority to collectively make the case that rainforests are a sacred trust and that tropical deforestation is a sanctity of life issue: it is wrong and it must stop.

Religious believers and spiritual communities can get involved in protecting rainforests and supporting indigenous peoples in several ways, ranging from personal choices and religious community action to education, economic advocacy, and coordinated political initiatives.

PERSONAL CHOICES

While personal choices alone are insufficient to address the systemic, political and institutional challenges of deforestation, each individual has a responsibility to make informed choices about how our consumption patterns are linked to deforestation. Each of us can set a positive example in our personal lives regarding the food we eat and other consumer choices, which together can build the kinds of social virtues that will shift values to end deforestation. Virtues can be infectious, and good habits in one person can lead to their adoption by another. Religious communities are incubators of virtue; our example can pioneer a movement toward greater ecological sensibility.

People of faith can honor the planet and forests by making conscious and informed decisions that signal an awareness of where their consumer goods are sourced and who produces them. When religious believers purchase a good or a service, they should assess the social and environmental implications of this purchase as it relates to forests.

Beef, soy, palm oil and pulp and paper are together responsible for a large share of deforestation globally. A shift toward a plant-based diet and eating less meat, particularly beef, is one of the most powerful personal choices any individual can make in solidarity with rainforests. Indeed,

animal raising is remarkably land-intensive: supplying meat to a global population requires two-thirds of the world's agricultural land, including pastureland and cropland for feed. This extensive area is often taken from forests. In the Amazon, 62 percent of cleared forest land is devoted to animal raising and cattle ranches. Because meat is such a land hog, eliminating or reducing meat from one's diet has a strongly positive impact in reducing deforestation. This large payoff also means that backing away from livestock products even a little—for example, by avoiding beef, or by eliminating meat twice a week—can have a large impact. The World Resources Institute offers a Protein Scorecard that helps to illustrate the gains from eating lower on the food chain.³

As a bonus, reducing meat consumption reduces pressure on a range of agricultural resources beyond forest land. Water use, fertilizer production, and greenhouse gas emissions that drive climate change—each of these declines substantially for every foregone kilo of meat, cheese, and eggs. The resource savings can be meaningful: livestock account for 14 percent of greenhouse gas emissions worldwide, roughly the emissions of the transportation sector.⁴ Thus, those who reduce their intake of meat can count on having a “forests plus” healthy impact on the environment.

Forests can also be helped by reducing food waste. Every wasted plateful of meat or other food represents a squandering of the land that produced it, and a waste of fertilizer, water, and other inputs. Yet an estimated one third of food grown worldwide is wasted, representing a colossal loss of resources and unnecessary use of land, including forested land.⁵ Reducing food waste, therefore, can be a huge help in reducing the pressure to clear forested land. Strategies for reducing waste are straightforward, including planning shopping to avoid overbuying, gauging portion sizes accurately, and making the best use of leftovers.⁶ For religious people in particular, who have long cultivated an ethic of gratitude toward food, it is a short step to instinctively rejecting food waste and developing strong food management habits.

As with food, religious believers can make informed consumer choices around paper and wood products. Consumers can look for products made by companies committed to zero deforestation and ensure that up and down their supply-chains there is no activity that negatively impacts forests. This means choosing paper, wood, and other products made from 100 percent post-consumer content materials and opting for virgin wood products certified by reputable authorities such as the Forest Stewardship Council.

RELIGIOUS COMMUNITY ACTION

Religious practitioners can also help to address deforestation by working with and through their own religious institutions. More than 85 percent of people in the world have a religious affiliation, making the religious public a formidable force for positive social and environmental change when they and their institutions pursue a common goal. Religious institutions and places of worship can incorporate forests into existing communal religious activities and practices, such as liturgies, large prayer gatherings, or celebrations around festivals, feasts, or commemorations. For example, communities that emphasize fasting can include a notion of “fasting for the forest.” Communities that emphasize pilgrimage can encourage “pilgrimages for the forest.” And communities can set aside particular periods to pray for the forests.

A good example of spiritual involvement in stopping deforestation is the “ordination” of trees by Buddhist monks in some Asian countries. In areas where forests are threatened by development activity—for example, in Cambodia, where dam construction threatened a large area of forest—monks have carried out ordination rituals, often on the largest tree in a grove, to endow the forest with a sacred character and to protect it.⁷ Sacred groves in India, Japan, and Thailand serve similar functions, often as a way to slow or stop damaging development plans. In each case, ritual, one of the least tangible sources of religious power, has been used to stop bulldozers in their tracks.

Religious communities, congregations, universities, schools and places of worship can also counter deforestation by protecting trees on religiously owned land. This can involve declaring protected forests, putting in place prohibitions on deforestation or hunting wildlife, or restoring degraded lands. Many of these practices have been adopted by Hindus in India, Christians in Africa, Buddhists in Thailand, and followers of Shinto in Japan. Because places of worship are community gathering spots, they can help to set norms around respecting and protecting forests and biodiversity.

Consider religious conservation practices in Ethiopia, where forested area now covers only 4 percent of the country, down from 45 percent decades ago.⁸ The Ethiopian Orthodox Church, a Christian denomination that traces its lineage to the first century, is credited with saving many of the trees that remain. Its churches have planted more than 1000 “sacred forests,” each averaging a few football fields in size, around its many churches.⁹ The forests are seen as the “clothing” of the churches, serving as community centers, meeting places, schools, and burial grounds, in addition to providing shade for people and habitat for many species.¹⁰ The churches have protected the sacred forests for 1000 years. One scholar, noting that nearly a third of Ethiopia’s population worships at these churches, sees a clear spiritual-conservation connection. “For scientists, it’s important to consider that religious beliefs are often accessible, effective avenues for inspiring local conservation.”¹¹

ECONOMIC ACTION

Land conversion for agriculture, certain extractive industries—mining, commercial logging, oil and gas exploration—and infrastructure projects like dams and roads are some of the primary drivers of deforestation. Religious leaders and institutions have an important role to play in affecting change and reform in how these businesses and development projects operate and can transmit to religious believers that every economic decision constitutes a moral decision. Businesses and investors that work in forest landscapes and that depend on forests for their products have a responsibility to social and environmental stewardship that can and must be guided by the world’s religious communities. Investor movements driven by people of faith can exert shareholder pressure on businesses by insisting that they adopt sustainable practices and respect the forests. Corporations run by people with religious convictions need to hear from religious leaders and places of worship that deforestation undermines the sacredness of creation, and that business practices that destroy forests and biodiversity and that disregard the rights of indigenous peoples and forest communities are in violation of the tenets of their faith.

Part of this is an education function, to have religious believers understand and internalize that deforestation is ultimately bad for economies and bad for business over the long term. There is a pervasive and dangerous narrative in many major forest countries that communities and organizations that stand for forest protection are necessarily at odds with job creation and economic development. But religious leaders can be at the forefront of debunking this myth and pushing for a green development model that values standing forests, wildlife protection, social justice and sustainable economic growth. Forests provide invaluable and often underappreciated ecosystem services, including fresh water, climate stabilization, food security, medicinal plants and goods that are the basis of sustainable livelihoods.

Like individual consumers, companies can seek to ensure that they consume materials whose production did not endanger forests. But their examination is more complicated than that of individuals, because firms must account for deforestation impacts along their entire supply chains. Firms that sell commodities like timber, beef, soy, palm oil and paper have a moral obligation to ensure that these are produced and brought to market in a way that does not fuel deforestation, and has a minimal impact on our climate.

People of faith can exert pressure on businesses to clean up their supply chains by insisting that they adopt sustainable practices and respect the environment, and joining advocacy actions when companies fall short. For example, Greenpeace pressured McDonalds to end its sourcing of soybeans, fed to chickens in Europe to make Chicken McNuggets, from deforested areas of Brazil.¹² Such campaigns would be boosted immeasurably by organized faith involvement, much as faith groups did decades ago in pressuring Nestle to change its policy on persuading mothers in developing countries to use baby formula rather than to breast feed.

To be clear, not all campaigns targeting corporate practices are successful. In 2018, a major Greenpeace report documented that 25 palm oil companies were engaged in deforestation activities, despite extensive promises earlier in the decade not to continue to produce palm oil in ways that promoted deforestation. These companies supply palm oil to more than a dozen name brands—Colgate-Palmolive, General Mills, Hershey, Kellogg, Kraft Heinz, L’Oreal, Mars, Mondelez, Nestlé, PepsiCo, Reckitt Benckiser and Unilever—illustrating how deforestation enters our homes daily, even after firms promise to reform their practices.¹³ For its part, Rainforest Action Network has published a list of leading food companies whose sourcing of inputs is believed to increase deforestation in a campaign they call the “Snack Food 25.”

Companies might also be scrutinized for commitments to “zero deforestation,” but such commitments cannot be taken at face value. According to CDP, which tracks company performance on metrics related to climate, some 450 companies and 50 governments have pledged to end deforestation by 2020, but firms acknowledge that the goal will not be met, and their deforestation promises may not be extended beyond their 2020 expiration date. The lack of performance on such a critical issue suggests that people of faith need to take care in evaluating the seeming goodwill of some firms. And because their performance is not always clear, faith groups should double down on their commitment to ending deforestation by wielding all tools at their disposal.

One of those additional tools is the financial assets and investment portfolios held by faith groups, which gives them substantial power to shape the policies and practices of commercial businesses that operate in forest landscapes. There is great potential for a faith-based movement that encourages divestment from industries that engage in deforestation and investment in renewable energy projects, community-based natural resource management and social enterprises that benefit local people and local economies, not multi-national corporations and their shareholders. Making the moral decision to refuse to fund activities that destroy forests is a powerful and effective avenue to bring about change. There is ample evidence to suggest that divestment from industries that damage the planet and a transition to ethical investing can change behavior and will ultimately encourage other investors to follow suit. The faith-based movement to divest from fossil fuels—from oil, coal and gas companies—provides an instructive example of what is possible when religious institutions take a stand in this regard. The same can be done around ending tropical deforestation.

Indeed, the movement to deny investment funds to companies whose activities lead to deforestation is growing. In 2018, 44 major investment houses, whose collective assets under management total \$6.4 trillion, alerted food companies that to qualify for investment capital they would need to show evidence of due diligence to ensure that the companies' supply chains are not contributing to deforestation.¹⁴ And in 2019, Norway's government pension fund—the world's largest sovereign wealth fund—divested from a range of companies involved in development of palm oil plantations, adding to the market signals that such activities are unacceptable.¹⁵ Religious investors seeking to disentangle their finances from deforestation might find inspiration in these examples of leadership. To move from inspiration to action, faith investors might contact their own portfolio manager or explore Deforestation Free Funds, an online database managed by the activist organizations Friends of the Earth and As You Sow to identify good and harmful funds regarding forests.¹⁶

Those who decide to divest from firms involved in deforestation might consider channeling their newly available funds to investments that can promote sustainable use of forests (or more generally, clean energy), thereby doubling the healing impact of their divestment. To identify such opportunities, investors should consult their portfolio manager or any of several online resources. The Global Impact Investment Network (GIIN) has a searchable database of more than 400 impact investment funds known as Impact Base, many of which focus on clean energy.¹⁷ Also available is the Toniic Directory, a listing of more than 1,500 impact investments that is searchable by impact categories, UN Sustainable Development Goals, impact themes, and geography.¹⁸ And for those needing help in reorienting their portfolios to drive sustainable economic activity, Green America offers a range of options in the domains of financial planners, mutual funds, asset management firms, exchange-traded funds, and certificates of deposit.¹⁹ These resources are excellent entryways for finding impact investment options. The double impact of divestment/investment allows people of faith to wield their wealth powerfully in favor of forest and climate health.

EDUCATION

Religious leaders, including lay people, are often among the most trusted figures in any society, looked to for ethical and spiritual guidance on economic, social and political life. They are also teachers and conduits of education, awareness and learning. This includes eco-theologians and environmental ethicists in colleges and seminaries. These teachers are key actors in the effort to raise awareness about the deforestation crisis, the risks that deforestation poses to progress on climate change, sustainable development, and global health, and the entry points for people of faith to fight for the protection of forests. In this same way, given their role as trustees of morality and virtue, religious institutions and places of worship can be in the vanguard of ecological education. Care for the planet and the moral case for protecting rainforests can become a vital part of the curriculum in churches, mosques, synagogues, and temples.

One of the best ways for religious leaders to take action on forest protection is to use their influence and authority to relay information and resources on the deforestation crisis to those in their congregation. This is a spiritual calling of the highest order. Formal or informal educational programs on rainforests, climate change and the rights of indigenous peoples can be instituted at places of worship, theological training centers, and affiliated schools. In this way, it becomes possible for teachings on the importance of rainforests—and the urgent need to protect them—to be transmitted through each religious tradition and become widely known, disseminated and understood by religious believers. Many educational resources exist on the topic of forests, biodiversity, climate change, and health. This Resource Guide and other educational tools developed by the Interfaith Rainforest Initiative can be a starting point for theological curricula on this issue

Some of the most powerful lessons to be taken from forests are not the intellectual learning regarding forest loss rates and numbers of displaced native peoples (important as these are), but the heart learning that teaches appreciation of forests in their spiritual fullness. Attitudes toward forests and trees could be markedly changed for western audiences if forests were viewed primarily as a gift, rather than resources. Indigenous traditions have much to teach in this regard. Consider the Tlingit people of Alaska, who use the bark of trees to make clothing. They approach the bark with a sense of reverence: before peeling it back, they say a prayer of thanks to the tree spirits and promise to use only as much as they need. Gratitude and sufficiency are familiar concepts to people of many faiths; it is not a stretch to imagine applying these attitudes widely in our use of paper, wood, and other forest products. Such a shift could be transformational. The casual consumption that characterizes market economies could shift to one of awe and care, with salutary impacts on forests worldwide.

Various religious traditions inculcate a sense of appreciation of forests by bringing sacredness to their approach to trees. Hindus often light a lamp or place a holy basil plant in front of several sacred trees.²⁰ Other Asian traditions, as noted earlier, are explicit about giving trees and forests a sacred status, especially around places of worship. Such practices might be adopted more widely. Nature-centered prayers and meditations can also be found in Western traditions, such as the Kabbalistic tradition of Judaism, the Franciscan traditions of Christianity, and the Sufi traditions of Islam. From a Christian and Jewish perspective, education on forests might begin with a review of

“Preserving our Forest Heritage: A Declaration on Forest Conservation for the 21st Century,” put out by the Religious Campaign for Forest Conservation.²¹

POLITICAL ACTION

Ending deforestation comes down to mobilizing sufficient political will. Until now, globally and in major rainforest countries, the enforcement of laws and policies around forest protection have been largely insufficient to stop the destruction. Religious believers, leaders and places of worship can help to influence public debate and public policies on forests and the rights of indigenous peoples, making them moral issues that demand a moral response from elected officials. Halting and reversing deforestation will require the cultivation of new public virtues and a seismic shift in values and the way that we as a human family understand and manage forests. Outdated models of consumption and development need to be replaced with an ethic of stewardship and care for our common home that is grounded in a willingness to work in partnership with actors across all segments of society, notably including indigenous peoples and forest communities.

Mobilizing political will to confront the drivers of deforestation requires political advocacy by religious leaders, institutions and places of worship. Many religious leaders are uniquely positioned to lobby governments at local, regional, national and global levels and other decision-making bodies that determine the policies and practices that govern forests and the rights of their guardians. Advocacy can take various forms, ranging from quiet diplomacy and back-channel meetings to more public statements, campaigns, petitions and demonstrations around the moral and spiritual responsibility to protect forests. To be effective, coordination across sectors is critical, to ensure that advocacy by religious believers is bolstering and advancing efforts already underway by the broader coalition of indigenous peoples, NGOs, multilateral organizations, and grassroots activists working to end deforestation.

Religious groups would do well to generate support for the United Nations’ six “global forest goals,” one of which is to turn the corner on deforestation and achieve a 3 percent increase in forest cover by 2030.²² The goals also cover eradicating extreme poverty in forested areas, increasing forest protected areas worldwide, and adopting governance initiatives to harmonize forest policies and increase their effectiveness. The various goals and targets are consistent with the UN’s Sustainable Development Goals, the Paris Agreement on climate change, and other international agreements of interest to many faith groups. Because the goals are voluntary for every UN member state, faith groups could play a helpful role by generating the domestic political support needed to encourage member state governments to fulfill the agreement.²³

At the national level, advocacy by religious leaders and organizations must focus on both adopting new laws and targets around the protection of forests and the rights of indigenous peoples, but also on upholding and enforcing existing laws and policy frameworks. In many rainforest countries, laws and policies are already in place to protect forests and the rights of forest communities, but they require enforcement, regulation and the right financial incentives. Cracking down on corruption is essential to stop illegal logging and the development of organized crime.



Religious leaders and communities have a role in holding political leaders accountable for past commitments, and encouraging greater ambition to new commitments over time.

This is especially true as countries reopen and rebuild their economies in the aftermath of the COVID-19 pandemic. How political leaders decide to stimulate the economy in response to the COVID crisis will determine whether we amplify or mitigate the forces responsible for tropical deforestation. If these “recovery packages” relax environmental laws and promote the resumption of current practices unchanged, forest conditions will continue to deteriorate. Rather, these stimulus plans should be designed to “build back better,” with strong incentives for industries to shift to sustainable, low-carbon practices, redirecting harmful subsidies when possible. Religious leaders and their communities can call on policymakers to summon the courage to make their economic packages truly transformative “recovery plans” that invest in people and nature rather than repeat unsustainable patterns.

In wealthier countries, religious believers and institutions must also stand up for global solidarity with their brothers and sisters in rainforest countries by urging their governments to participate in so-called “payment for ecosystem services” models such as *REDD+* (*Reducing Emissions from Deforestation and Forest Degradation*). They can also work to ensure that when their governments undertake new development projects, they uphold the principle of *Free, Prior and Informed Consent (FPIC)*, whereby the indigenous peoples and forest communities that will be impacted by the project must give their consent before the project can proceed. This is not aid and it is not charity—it is a moral obligation and a duty of justice to protect the sacred trust of rainforests.

Protecting forests also requires protection of the rights of indigenous peoples who have lived in them for centuries and even millennia. Such protection helps to respect the inherent dignity of indigenous people, but it also carries pragmatic importance, because indigenous peoples’ knowledge of forests is invaluable for forest protection. Studies show that when indigenous rights are protected and indigenous people have control over forests, forested areas are much more likely to thrive.

The Six UN Global Forest Goals

In April 2017, the United Nations General Assembly adopted the United Nations Strategic Plan for Forests 2030, which provides a global framework for action at all levels to sustainably manage all types of forests, and to halt deforestation and forest degradation. At the heart of the Strategic Plan are six Global Forest Goals.

- Goal 1** Reverse the loss of forest cover worldwide through sustainable forest management, including protection, restoration, afforestation and reforestation, and increase efforts to prevent forest degradation and contribute to the global effort of addressing climate change.
- Goal 2** Enhance forest-based economic, social and environmental benefits, including by improving the livelihoods of forest-dependent people.
- Goal 3** Increase significantly the area of protected forests worldwide and other areas of sustainably managed forests, as well as the proportion of forest products from sustainably managed forests.
- Goal 4** Mobilize significantly increased, new and additional financial resources from all sources for the implementation of sustainable forest management and strengthen scientific and technical cooperation and partnerships.
- Goal 5** Promote governance frameworks to implement sustainable forest management, including through the United Nations forest instrument, and enhance the contribution of forests to the 2030 Agenda for Sustainable Development.
- Goal 6** Enhance cooperation, coordination, coherence and synergies on forest-related issues at all levels, including within the United Nations system and across member organizations of the Collaborative Partnership on Forests, as well as across sectors and relevant stakeholders.



MULTI-RELIGIOUS COLLABORATION

The gains from deploying religious resources in the fight against deforestation are multiplied when the world's religions stand together. This kind of cooperation can prove more powerful—symbolically and substantively—than unilateral action by individual religious groups. Each religious tradition has wisdom, experience, and resources to bring to the table. Through multi-religious partnership, these distinctive gifts can complement each other so that the whole is greater than the sum of the parts. When religious communities demonstrate the ability to work closely together, they build credibility and trust among the population at large. When they speak with one voice on issues like climate change and rainforest protection, their moral authority is magnified. And they have a greater ability to influence policies, through their influence on individuals and institutions.

Multi-religious collaboration also brings internal gains. It promotes social cohesion by creating dialogue and action among diverse groups and persons, uniting them around a shared priority. It fosters openness and understanding between these diverse groups and people—and this in turn lays the groundwork for peace, human flourishing, and shared well-being. In a world of looming, large-scale challenges, the experience of collaboration among diverse faith and spiritual groups could prove invaluable on a wide range of issues in the decades ahead.



CHAPTER 3 NOTES

- 1 Calculation based on data in FAO, FAOSTAT database, using values for cropland and permanent meadows and pastures, <http://www.fao.org/faostat/en/#home>, accessed 12 July 2019.
- 2 Yale School of Forestry, "Land Use and Agriculture in the Amazon," Global Forest Atlas, <https://globalforestatlas.yale.edu/amazon/land-use>, viewed 12 July 2019.
- 3 Richard Waite and Brian Lipinski, "Two Rules of Thumb to Slash the Environmental Impact of Your Diet," World Resources Institute webpage, 16 October 2017, viewed 12 July 2019.
- 4 Gerber, P.J., Steinfeld, H., Henderson, B., Mottet, A., Opio, C., Dijkman, J., Falcucci, A. & Tempio, G. 2013. Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities. Food and Agriculture Organization of the United Nations (FAO), Rome.
- 5 Brian Lipinski, Craig Hanson, Richard Waite, Tim Searchinger, James Lomax and Lisa Kitinoja, "Reducing Food Loss and Waste," WRI webpage at <https://www.wri.org/publication/reducing-food-loss-and-waste>, viewed 12 July 2019.
- 6 Richard Waite and Brian Lipinski, "Two Rules of Thumb to Slash the Environmental Impact of Your Diet," World Resources Institute webpage, 16 October 2017, viewed 12 July 2019.
- 7 Radio Free Asia, "Monks Hold Ceremony to Protect Cambodian Forest," 22 February 2019, at <https://www.youtube.com/watch?v=aX8lFlmkWFI>, viewed 15 July 2019, and "A Threat to Cambodia's Sacred Forests" New York Times Op-Doc 29 July 2014 at <https://www.youtube.com/watch?v=DSpHq4D4tRQ>, viewed 16 July 2019.
- 8 Sarah Hewitt, "The Sacred Forests of Northern Ethiopia," 21 May 2019, at <http://www.bbc.com/travel/story/20190520-the-sacred-forests-of-northern-ethiopia>, viewed 14 July 2019.
- 9 Sarah Hewitt, "The Sacred Forests of Northern Ethiopia," 21 May 2019, at <http://www.bbc.com/travel/story/20190520-the-sacred-forests-of-northern-ethiopia>, viewed 14 July 2019.
- 10 Sarah Hewitt, "The Sacred Forests of Northern Ethiopia," 21 May 2019, at <http://www.bbc.com/travel/story/20190520-the-sacred-forests-of-northern-ethiopia>, viewed 14 July 2019.
- 11 California Academy of Sciences, "Scientists suggest a "spiritual metric" for protecting global forests," at <https://www.calacademy.org/press/releases/scientists-suggest-a-%E2%80%9Cspiritual-metric%E2%80%9D-for-protecting-global-forests>, viewed 16 July 2019.
- 12 Rolf Skar, "Chicken Nuggets and a Sea Change for Forest Protection," <https://www.greenpeace.org/usa/chicken-nuggets-and-a-sea-change-for-forest-protection/>, viewed 15 July 2019.
- 13 Greenpeace International, "Final Countdown: Now or Never to Reform the Palm Oil Industry," (Amsterdam: Greenpeace International, September 2018).
- 14 Sarah George, "Big-name investors call on food industry to tackle supply chain deforestation," edie website, <https://www.edie.net/news/7/Big-name-investors-call-on-food-industry-to-tackle-deforestation-in-supply-chains/>, viewed 14 July 2019
- 15 Michael Taylor, "Norway's wealth fund ditches 33 palm oil firms over deforestation," Reuters website at <https://www.reuters.com/article/us-norway-pension-palmoil/norways-wealth-fund-ditches-33-palm-oil-firms-over-deforestation-idUSKCN1QH1MR>, viewed 13 July 2019.
- 16 "Deforestation Free Funds," website at <https://deforestationfreefunds.org/funds>, viewed 15 July 2019.
- 17 "ImpactBase" at <https://www.impactbase.org/> viewed 16 July 2019.
- 18 "Toniic Directory," webpage at https://www.toniic.com/toniicd/#_p%7B%22page%22%3A3%2C%22perPage%22%3A100%2C%22sortBy%22%3A%22investment_name%22%2C%22sortOrder%22%3A%22ASC%22%2C%22keywords%22%3A%22%22%2C%22columnFilters%22%3A%7B%7D%2C%22searchActive%22%3Afalse%7D
- 19 "Find Fossil-Free Financial Products & Services," Green America webpage at <https://www.greenamerica.org/fight-dirty-energy-grow-clean-energy/divest-reinvest/find-fossil-free-financial-products-services>, viewed 13 July 2019.
- 20 Margaret D. Lowman and Palatty Allesh Sinu, "Can the Spiritual Values of Forests Inspire Effective Conservation? Bioscience August 2017.
- 21 The Religious Campaign for Forest Conservation, "Preserving Our Forest Heritage: A Declaration on Forest Conservation for the 21st Century," RCFC web page at http://nrccc.org/PDF/Cradle-of-Forestry_Religious-Statement_2000.pdf, viewed 14 July 2019.
- 22 Department of Economic and Social Affairs, "Global Forest Goals and Targets of the UN Strategic Plan for Forests 2030," (New York: United Nations, 2018).
- 23 Department of Economic and Social Affairs, "Global Forest Goals and Targets of the UN Strategic Plan for Forests 2030," (New York: United Nations, 2018).

ABOUT THIS RESOURCE GUIDE

This Resource Guide is part of a series of briefs meant to inform and inspire faith communities to action to help safeguard tropical forests and their inhabitants. Through facts, graphics, analysis, photos, and faith-inspired perspectives, this Resource Guide presents the moral case for conserving and restoring rainforest ecosystems, supported by the latest science and policy insights. It brings together the research and practical tools that faith communities and religious leaders need to better understand the importance of tropical forests, to advocate for their protection, and to raise awareness about the ethical responsibility that exists across faiths to take action to end tropical deforestation. Our hope is that this Resource Guide inspires and helps equip faith leaders and communities to take their seat at the table alongside the broader partnership of forest advocates, bringing fresh wisdom, insights and influence to this urgent issue.

THE INTERFAITH RAINFOREST INITIATIVE

The Interfaith Rainforest Initiative is an international, multi-faith alliance working to bring moral urgency and faith-based leadership to global efforts to end tropical deforestation. It is a platform for religious leaders and faith communities to work hand-in-hand with indigenous peoples, governments, NGOs and businesses on actions that protect rainforest and the rights of those that serve as their guardians. The Initiative believes the time has come for a worldwide movement for the care of tropical forests, one that is grounded in the inherent value of forests, and inspired by the values, ethics, and moral guidance of indigenous peoples and faith communities.

QUESTIONS?

The Interfaith Rainforest Initiative is eager to work with you to protect tropical forests and the rights of indigenous peoples. Contact us at info@interfaithrainforest.org.

PARTNERS

The Interfaith Rainforest Initiative welcomes engagement by all organizations, institutions and individuals of good faith and conscience that are committed to the protection, restoration and sustainable management of rainforests.



