

A G20 Interfaith Forum Policy Brief
POLICY AREA: Planet

Combating Deforestation and Protecting Rainforests: Religious Dimensions

June 19, 2019

Abstract

Protecting rainforests is a critical component of global efforts to halt climate change, prevent environmental destruction, including mass-extinction of species, and protect human rights. Deforestation and degradation of the tropical rainforest undermine one of the Earth's most vital life-support systems; the rainforests play a major role in climate regulation by moving warm and humid air from the tropics towards the Poles, producing rainfall, and distributing it to agricultural regions way beyond the forest areas. Emissions from deforestation and forest degradation in the tropics add up to billions of tons of carbon dioxide each year, and seriously impair the functioning of the only¹ safe and natural carbon capture and storage system ever tested. Standing forests are a cost-effective strategy for combatting climate change. As a major source of protection, food, clean water, and income for communities that live in and around forests, the potential protective roles of indigenous communities deserve special attention.

The moral authority of religious voices can spur global leaders and wide networks of communities and individuals to action in this critical area. Of particular note is the Interfaith Rainforest Initiative (IRI), a multi-faith alliance launched in 2017. A platform for robust partnerships between faith-inspired actors, indigenous peoples, and other sectors including governments, businesses, climate scientists, and civil society, it offers pathways for common efforts amounting to a worldwide campaign – grounded in ethics and values – around ending deforestation and strengthening the efforts to protect the world's remaining, and increasingly endangered, rainforests.

This brief highlights responses and recommendations of major religious communities, and calls for an explicit focus on protection of rainforests by G20 leaders at the 2019 Osaka Summit.

The Challenge

Tropical forest loss is occurring at an accelerating annual rate. Tree cover loss is increasing despite global and national commitments and actions. Forests – and tropical rainforests with their particularly rich biodiversity – have special importance for global ecosystems. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment has established that around 1 million

¹ Intergovernmental Panel on Climate Change (IPCC). *Global Warming of 1.5 degrees C. An IPCC Special Report on the Impacts of Global Warming of 1.5 degrees C above pre-Industrial levels and Related Global Greenhouse Gases Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*. 2018.
https://www.ipcc.ch/site/assets/uploads/2018/10/SR15_SPM_version_stand_alone_LR.pdf.

species face extinction, the highest rate in human history, with significant repercussions for human welfare.² Deforestation contributes directly to the extinction of many species and threatens the welfare and survival of indigenous communities. In 2017 a recorded 15.8 million hectares (39.0 million acres) of tree cover was lost (an area the size of Bangladesh).³ Large-scale deforestation is linked above all to production of globally traded commodities such as beef, soy, palm oil, and pulp and paper; the problem thus should be viewed in conjunction with trade and business patterns and trends. Causes of deforestation vary by region and country but include notably poor governance (and especially corruption), inefficient land use, industrial logging and expansion of large-scale agriculture, and unsustainable consumption patterns.

Deforestation presents human rights challenges. Environmental degradation and a less predictable climate hit poor communities and those excluded from social protection systems particularly hard, limiting their ability to achieve food, energy, and water security. Forest destruction causes income loss, resource scarcity, and health risks for communities that live in and around forests. Indigenous communities are vulnerable to abuse of their basic rights when extractive industries or other economic interest groups want access to their lands or resources. Defending forests and rights have become increasingly dangerous. An average of close to four environmental defenders are killed every week, and indigenous activists make up a disproportionately high percentage of these victims.⁴ Protecting the fundamental rights of the poor and the underprivileged is a critical part of an ethically responsible ecological approach.

Forest destruction is closely linked to climate change, in terms of effects and causation. Protecting forests thus has central importance in efforts to address climate change. Mitigating climate change globally is of paramount importance for the protection of tropical rainforests. Current GHG emission trends will change climate patterns and weaken rainforest ecosystems; after 2050 there will be accelerated savannization of current rainforests, with positive feedback on climate change. In addition to its major role as a climate regulator, forest loss diminishes the earth's natural capacity to absorb carbon emissions. The clearing of forests produces more annual greenhouse (GHG) emissions than all transportation use globally.⁵ Rainforest deforestation induces regional climate changes that affect major food production regions. For example, changes in temperature and to a lesser extent in rainfall in the humid pampas region of Southern South America driven by Chaco and Amazon deforestation have already been observed.

² "IPBES Global Assessment Summary for Policymakers," 2019,

https://www.ipbes.net/sites/default/files/downloads/spm_unedited_advance_for_posting_htn.pdf.

³ Wisse, Mikaela and Elizabeth Dow Goldman, "2017 was the Second-Worst Year on Record for Tropical Tree Cover Loss," World Resources Institute, 2018, <https://www.wri.org/blog/2018/06/2017-was-second-worst-year-record-tropical-tree-cover-loss>.

⁴ "At What Cost? Irresponsible business and the murder of land and environmental defenders in 2017." *Global Witness*, 2018.

https://www.globalwitness.org/documents/19392/Defenders_report_layout_AW2_lowres.pdf .

⁵ "Climate Change 2007: Synthesis Report" *Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC, 2007 https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf.

Three critical rainforest areas need priority focus: the Amazon, the Congo Basin, and South-East Asia, particularly the island of New Guinea and Indonesia. Brazil, which contains nearly two-thirds of the world's largest tropical rainforests, lost the most tropical primary rainforest in 2018 of any country, and has seen a prominent spike in tree cover loss over the past four years, primarily due to political instability, rollbacks of environmental protections, illegal loggers, and other factors (including droughts exacerbated by climate change) that leave forests vulnerable to fires. In Colombia, another country with a high density of Amazon rainforests, the Peace Agreement with FARC in 2016 led to an increase in deforestation activities, illustrating the importance of integrating forest protection into post-conflict development strategies. In the Democratic Republic of the Congo, which contains more than half of the remaining Congo Basin rainforest, forests are threatened by slash-and-burn agricultural and industrial logging. Indonesia has made progress on reversing their tree cover loss rates due to effective policies, religious edicts, educational campaigns, and increased law enforcement, but only the island of New Guinea – shared between Papua New Guinea and Indonesia – still has the majority of its contiguous areas of primary rainforest intact. And continued market demand for biofuels threatens to undermine these precious forests.

Pathways Forward

Protecting existing forests and reducing emissions from tropical deforestation and forest degradation are crucial for broad strategies to achieve climate stability and sustainable development. Protecting rainforests is an important part of international efforts to achieve sustainable development and, rooted in respect for human rights, cultivate long-term progress and growth. Natural climate solutions such as forest conservation offer a powerful and cost-efficient way for countries to “take urgent action to combat climate change and its effects” and achieve Goal 13 and Goal 15, among others, of the Sustainable Development Goals (SDGs). Ending deforestation and allowing degraded forests to recover could provide over one-third of the climate mitigation needed to limit global temperature rise to below 2 degrees Celsius by 2030, a central target of the Paris Agreement.⁶ A sharp focus on mangrove conservation offers a particularly affordable and effective approach to climate change mitigation and adaptation.⁷ Conservation investments overall improve soil productivity, maintain biodiversity, and protect life support systems that provide billions of people with food, clean water, shelter, medicine and livelihoods.

A wealth of data and experience support hope: protection is possible and there are effective tools to support action. Satellite imagery measures forest cover change, and new technologies to assess carbon density make it possible to map and analyze carbon emissions from deforestation with a high degree of accuracy, bolstering the efficacy of planning for protection. The Stern Review on the Economics of Climate Change was

⁶ Bronson W. Griscom, et al., “Natural Climate Solutions,” *Proceedings of the National Academy of Science* 114 (44): 11645-11650, 2017, <https://doi.org/10.1073/pnas.1710465114>.

⁷ Chandra Silori, “Mangroves more Carbon Rich and Important for Climate Change,” RECOFTC, https://archive.recoftc.org/project/grassroots-capacity-building-redd/news-and-features/mangroves-more-carbon-rich-and-important-climate-change?fbclid=IwAR2yIo_b0C02K-maENM7N9uGKcOeya1kCeyLiHJM8rFa2EFfcETpgwSpyEQ.

among the first to recommend reducing deforestation as one of the most cost-effective strategies for reducing emissions. More recent studies affirm that stopping deforestation would be a low-cost and effective solution for climate change mitigation.⁸

Reducing Emissions from Deforestation and Forest Degradation (REDD+), the international framework negotiated under the UN Framework Convention on Climate Change (UNFCCC), was endorsed in the Paris Agreement. REDD+ offers results-based financial incentives for developing countries to reduce emissions from deforestation and invest in sustainable development. Brazil and Indonesia, which together contribute more than 50 percent of carbon emissions from tree cover loss, offer the greatest mitigation opportunity. Some progress has been made, for example in Indonesia, where a national forest moratorium (in effect since 2011 as part of a US\$1 billion Indonesia-Norway REDD+ partnership) and peat drainage moratorium (in effect since 2016) helped contribute to a 60 percent decline in primary forest loss in 2017.⁹

Indigenous communities can be partners in forest protection efforts, especially on projects that affect their lands. In many parts of the world, indigenous communities face increasing pressures to abandon their homelands to make room for industrial agricultural or mining projects. Indigenous and other forest communities outperform other managers of tropical forests with regards to compliance with forest protection laws, and as advocates for increased protections. Investments in securing land rights for indigenous communities can generate significant returns, economically and environmentally, for local communities and the world's climate. Estimates suggest that by giving indigenous groups legal rights to the lands they occupy, Bolivia could avoid 8-12 megatonnes of greenhouse gas emissions each year, equivalent to taking more than 1.7 million vehicles off the road.¹⁰

Changes in lifestyles and greater social will towards education and action need to be part of the solution. A sense of social responsibility on the part of consumers is necessary. Consumer boycotts could force businesses to consider their environmental footprint. Education efforts aimed not only at providing information, but also instilling good habits and cultivating sound virtues can lead to long-term shifts in societal attitudes towards forest protection. Religious leaders and teachings can have a powerful effect on changing attitudes and cultures. Governments can introduce measures to support deforestation-free public procurement and restrict importation of biofuels from palm oil and soy.

Integrated approaches need to link the rainforest challenges to broader efforts to combat poverty, assure dignity to the excluded, and protect nature. Comprehensive solutions that harness the power of community networks, including vast religious networks, to confront

⁸ Ibid.

⁹ Frances Seymour, "Indonesia Reduces Deforestation, Norway to Pay Up," World Resources Institute, 2019. <https://www.wri.org/blog/2019/02/indonesia-reduces-deforestation-norway-pay>.

¹⁰ Katie Reytar and Peter Veit, "5 Maps Show How Important Indigenous Peoples and Local Communities Are to the Environment," World Resources Institute, 2017. <https://www.wri.org/blog/2017/12/5-maps-show-how-important-indigenous-peoples-and-local-communities-are-environment>.

the interlinked environmental and societal crises of deforestation have the best chance of success.

Religious Responses

Religious groups are actively involved in leadership to protect rainforests and advocate for indigenous rights. The Interfaith Rainforest Initiative (IRI), with Religions for Peace as the global interfaith lead, is a major effort of religious leaders to engage actively on rainforest protection. Launched in 2017 at an Oslo meeting of international experts on religion and climate, Christian, Muslim, Jewish, Buddhist, Hindu, and Taoist religious leaders together with indigenous peoples and government, business, and civil society representatives formed a coalition dedicated to making rainforest protection a priority. Brazil, the Democratic Republic of Congo, Indonesia, Columbia, and Peru are all members of IRI. Religious leaders in each of these tropical countries aim to use IRI as a platform to raise awareness, mobilize faith-inspired action, provide organizational support, and advocate for policies that fulfill and expand government commitments to protect rainforests and the rights of indigenous peoples. Other networks of religious communities that focus on forest protection and indigenous rights include GreenFaith, the United Religions Initiative (URI's) Environmental Network, the Red Eclesial Pan-Amazónica (REPAM), and the Southern African Faith Communities' Environment Institute (SAFCEI). These organizations, among many others,¹¹ focus on increasing awareness and action on forest protection within and across faith communities.

Secular/religious partnerships also have significant potential. The Faith for Earth Initiative launched by UN Environment is a primary example of strategic engagement with faith-inspired organizations.¹² The World Wildlife Fund (WWF) Sacred Earth: Faiths for Conservation Program works with religious and faith-inspired actors around the world to cultivate values and lifestyles that are ecologically sustainable and spiritually principled.¹³ The Alliance of Religions and Conservation offers models for positive partnerships between faith groups, conservation organizations, and governments.

Religious wisdom and the language particular to it can inspire people to action. Some of the most important conservation sites are often also sacred sites. Faith-inspired appeals to protect the earth can help build an ethical, values-based case for urgent and concerted action to end deforestation on both a local, communal level and internationally. Practical, large-scale applications of faith-based language to mobilize action on forest protection include a Fatwa issued in 2014 by The Indonesian Council of Ulama requiring the country's majority Muslim population to protect endangered species and maintain balanced ecosystems. Islamic Relief, which has a vast international reach, explicitly includes halting deforestation as part of their Climate Change Policy. *Laudato Si!* (*Praise*

¹¹ "List of Environmental Faith Based Organizations and Resources," United Nations Environment Programme, 2018, https://wedocs.unep.org/bitstream/handle/20.500.11822/25987/Faith_Based_Organizations.pdf?sequence=1&isAllowed=y.

¹² <https://www.unenvironment.org/about-un-environment/faith-earth-initiative>.

¹³ <https://www.worldwildlife.org/initiatives/sacred-earth-faiths-for-conservation>.

Be), issued in 2015 by Pope Francis, has special importance. This encyclical focuses sharply on the impact of human activities on the environment, climate, and rainforests and has sparked numerous conferences and action ideas, including a Special Assembly of the Synod of Bishops for the Pan-Amazon Region, to take place in October 2019 to highlight “New Paths for the Church and for an Integral Ecology.” In March 2019, religious leaders of faith communities worldwide joined the United Nations Environment Assembly for the first time, and called for a stronger representation of values, combined with science, in international conversations related to environmental challenges.

Recommendations

The leadership, vast networks, moral authority, and unparalleled influence of religious leaders offer an important path towards the moral, social, and political consciousness that is essential to assure action on rainforests. There is a solid foundation on which to build.

1) G20 leaders should take global leadership and commit to reform their economic and fiscal policies in order to stop subsidies and other incentives leading to deforestation, and implement economic incentives to protect forests and their ecosystem services. This would be in line with the Aichi target 3 under the Convention on Biological Diversity, and would be a major achievement in the preparations for the global summit at the COP15 in China 2020.

2) The IPBES report released in May 2019 warns that a million species could be extinct if we continue to destroy natural ecosystems as today. Rainforests are the most biodiverse ecosystems on earth, and deforestation is one of the main drivers behind the loss of species. The G20 countries should show global leadership by launching a common commitment to protect intact forest landscapes with the aim of simultaneously reducing greenhouse gas emissions and protect biodiversity.

3) Current deforestation and forest degradation rates undermine the efforts to achieve most of the SDGs, including SDG 2 “Zero hunger”. The G20 leaders should recognize that protecting forests in order to reduce emissions and safeguard biodiversity must be at the core of all the countries’ development strategies.

4) Current Nationally Determined Contributions represent only 20 percent of the emission reduction needed to meet the goals of the Paris Agreement¹⁴. G20 leaders hold the key to unleash higher ambitions for climate action. The UN Climate Action Summit in September and COP25 in December 2019 represent important opportunities for raising global ambitions. The commitment of G20 will be essential. G20 countries should announce significantly higher ambitions to face the threat of climate change at these meetings, including through enhanced Nationally Determined Contributions.

¹⁴ “Emissions Gap Report 2018,” United Nations Environment Programme, 2018, http://wedocs.unep.org/bitstream/handle/20.500.11822/26895/EGR2018_FullReport_EN.pdf?sequence=1&isAllowed=y.

5) G20 leaders should commit to expanding forest climate finance as a cost-effective strategy for meeting climate change mitigation commitments. The ongoing replenishment of the Green Climate Fund represents a key process for the mobilization of climate finance. To be successful, the fund should receive significantly more than a doubling of its current funds. This requires the committed engagement of G20 countries in the replenishment process and a substantial increase in contributions.

6) G20 leaders should take action against companies that do not implement zero deforestation in their supply chains. This can be achieved through public procurement regulations, import regulations, and taxes on products that contribute to forest destruction. Sovereign Wealth Funds and other institutional investors in the G20 area should be told to use their shareholder influence to induce companies to avoid deforestation in their operations and supply chains, and banks should be expected to stop giving loans to activities that destroy rainforests, and use beneficial interest rates to reward companies that contribute to protection and restoration of forests.

7) Rainforest countries among the G20 leaders should develop land-use plans that protect standing forests and prioritize securing land rights for indigenous and other forest communities. Existing and new moratoriums and anti-deforestation policies need the support of G20 leaders.

8) International cooperation to reduce deforestation and protect rainforests is at a major crossroads. 2019 G20 Summit leaders should explicitly commit themselves to an alliance with religious communities towards rainforest action.

References

“At What Cost? Irresponsible business and the murder of land and environmental defenders in 2017.” *Global Witness*. 2018.
file:///C:/Users/refolalo/Downloads/Defenders_report_layout_AW4_update_disclaimer.pdf.

Busch, Jonah and Frances Seymour. *Why Forests? Why Now? The Science, Economics and Politics of Tropical Forests and Climate Change*. Center for Global Development. 2016. <https://www.cgdev.org/sites/default/files/Seymour-Busch-why-forests-why-now-full-book.PDF>.

Butler, Rhett A. “The biggest rainforest news stories in 2018.” *Mongabay News*. 2018. <https://news.mongabay.com/2018/12/the-biggest-rainforest-news-stories-in-2018/>.

Butler, Rhett A. “Storylines to watch in 2019.” *Mongabay News*. 2019. <https://news.mongabay.com/2019/01/rainforests-storylines-to-watch-in-2019/>.

“Climate Webinar Series – Resources.” Joint Learning Initiative on Faith & Local Communities. 2019. <https://jliflc.com/climate/>.

Ding, Helen, Peter Veit et al. "Climate Benefits, Tenure Costs: The Economic Case For Securing Indigenous Land Rights in the Amazon." World Resources Institute. 2016. <https://www.wri.org/publication/climate-benefits-tenure-costs>.

Emont, Jon. "The Nemesis of the Rainforests: Peace." The Wall Street Journal, 2019. <https://www.wsj.com/articles/the-nemesis-of-the-rainforests-peace-11553870016>.

Encyclical Letter. "Laudato Si' of the Holy Father Francis on Care for Our Common Home." The Holy See. 2015.

http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.

"Environmental Network." United Religions Initiative. 2019. <https://uri.org/what-we-do/global-program/environmental-network>.

"Fact Sheet: About REDD+." UN-REDD Programme Collaborative Workspace. 2019. <https://www.unredd.net/about/what-is-redd-plus.html>

"Forests provide a critical short-term solution to climate change." UN Environment. 2018.

<https://www.unenvironment.org/news-and-stories/story/forests-provide-critical-short-term-solution-climate-change>.

"Forests: A Natural Solution to Climate Change, Critical for a Sustainable Future." UN Environment. 2018. <https://www.unenvironment.org/news-and-stories/story/forests-natural-solution-climate-change-crucial-sustainable-future>.

Gaworecki, Mike. "'Saving the rainforest 2.0': New report makes recommendations for improving forest protection." *Mongabay*. 2018.

<https://news.mongabay.com/2018/07/saving-the-rainforest-2-0-new-report-makes-recommendations-for-improving-forest-protection/>.

Global Forest Watch. 2019. <https://www.globalforestwatch.org/dashboards/global>.

Griscom, Bronson W., Justin Adams, Peter W. Ellis, Richard A. Houghton, Guy Lomax, Daniela A. Miteva, William H. Schlesinger, et al. "Natural Climate Solutions."

Proceedings of the National Academy of Science 114 (44): 11645-11650. 2017. <https://doi.org/10.1073/pnas.1710465114>.

Guidos, Rhina. "In battle for Amazon, church officials unite with indigenous communities." The Forum on Religion and Ecology at Yale. 2019.

<http://fore.yale.edu/news/item/in-battle-for-amazon-church-officials-unite-with-indigenous-communities/>.

“Harnessing the Moral Authority of the World’s Religions To Save Rainforests.” *UN Environment*. 2018. <https://www.unenvironment.org/news-and-stories/story/harnessing-moral-authority-worlds-religions-save-rainforests>.

Hasegawa, Kaitlyn. “Press Release: Religions for Peace Joins with Religious and Indigenous Leaders on Initiative to End Tropical deforestation in Colombia.” Religions for Peace, 2018. <https://rfp.org/religious-and-indigenous-leaders-join-forces-on-initiative-to-end-tropical-deforestation-in-colombia/>.

Ikala, Alain E., Claire Halleux, et al. “Tracking Deforestation in DRC’s Forest Concessions is Complicated.” World Resources Institute. 2018. <https://www.wri.org/blog/2018/08/tracking-deforestation-drcs-forest-concessions-complicated>.

Interfaith Rainforest Initiative. 2019. <https://www.interfaithrainforest.org/>.

“Interreligious Engaged Projects.” The Forum on Religion and Ecology at Yale. 2019. <http://fore.yale.edu/religion/interreligious/>.

IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp. https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf.

Laurance, Bill and Penny van Oosterzee. “How Indonesia’s Election Puts Global Biodiversity at Stake with an Impending War On Palm Oil.” *The Conversation*. 2019. <http://theconversation.com/how-indonesias-election-puts-global-biodiversity-at-stake-with-an-impending-war-on-palm-oil-115468>.

Media Release. “Nature’s Dangerous Decline ‘Unprecedented’ Species Extinction Rates ‘Accelerating’.” IPBES. 2019. <https://www.ipbes.net/news/Media-Release-Global-Assessment>.

Minnemeyer, Susan, Nancy Harris and Octavia Payne. “Conserving Forests Could Cut Carbon Emissions as Much as Getting Rid of Every Car on Earth.” World Resources Institute. 2017. <https://www.wri.org/blog/2017/11/conserving-forests-could-cut-carbon-emissions-much-getting-rid-every-car-earth>.

Mollins, Julie. “Religious Leaders in Columbia and Peru Urge Protection of Rainforests.” Landscape News, 2019. <https://news.globallandscapesforum.org/32163/religious-leaders-in-colombia-and-peru-urge-protection-of-rainforests/>.

Nongoy, Fransiska. "Indonesia President Approves Two-Year Extension of Forest Moratorium." *Reuters*. 2017.
<https://www.reuters.com/article/us-indonesia-environment-forests/indonesia-president-approves-two-year-extension-of-forest-moratorium-idUSKBN18K0CV>.

Nzwili, Fredrick. "Faith Activists Urge UN Environment Assembly to Address Human Side of Climate Change." *National Catholic Reporter*. 2019.
<https://www.ncronline.org/news/environment/faith-activists-urge-un-environment-assembly-address-human-side-climate-change>.

"Pope Francis in Amazonia, the Periphery of the Peripheries." *Red Eclesial Pan-Amazonica*. 2018.
<http://redamazonica.org/en/2018/01/pope-francis-in-amazonia-the-periphery-of-the-peripheries/>.

REDD+ Web Platform. United Nations Framework Convention on Climate Change. 2019.
<https://redd.unfccc.int/>.

Reytar, Katie and Peter Veit. "5 Maps Show How Important Indigenous Peoples and Local Communities Are to the Environment." World Resources Institute. 2017.
<https://www.wri.org/blog/2017/12/5-maps-show-how-important-indigenous-peoples-and-local-communities-are-environment>.

"Sacred Earth: Faiths for Conservation." World Wildlife Fund. 2019.
<https://www.worldwildlife.org/initiatives/sacred-earth-faiths-for-conservation>.

"Saving the Rainforest 2.0: Next steps and better solutions for efforts to protect the rainforest." Rainforest Foundation Norway. 2018.
http://d5i6is0eze552.cloudfront.net/documents/Publikasjoner/Andre-rapporter/Saving-the-rainforest-2_0_2018_web-ID-53224.pdf?mtime=20180627145854.

"SDG Indicators: Global Indicator Framework for the Sustainable Development Goals and Targets of the 2030 Agenda for Sustainable Development." United Nations. 2017.
<https://unstats.un.org/sdgs/indicators/indicators-list/>.

Silori, Chandra. "Mangroves more Carbon Rich and Important for Climate Change." RECOFTC. 2019. https://archive.recoftc.org/project/grassroots-capacity-building-redd/news-and-features/mangroves-more-carbon-rich-and-important-climate-change?fbclid=IwAR2yIo_b0C02K-maENM7N9uGKcOeya1kCeyLiHJM8rFa2EFlcETpgwSpyEQ.

Stern, Nicholas. *The Economics of Climate Change: The Stern Review*. 2006.
http://mudancasclimaticas.cptec.inpe.br/~rmclima/pdfs/destaques/sternreview_report_complete.pdf.

Stubbley, Peter. "Enough Rainforest to Fill 30 Football Pitches Destroyed Every Minute Last Year." *The Independent*. 2019.

https://www.independent.co.uk/environment/tropical-rainforest-lost-destroyed-football-pitches-every-minute-a8886911.html?utm_medium=Social&utm_source=Facebook&fbclid=IwAR2ag2hv4tFv mkhfU3sa5XN2ukw1C108ES4XRqQYP7KdW8araOSNzOHodPQ#Echobox=1556380525.

Stolle, Fred and Beth Gingold. "Indonesia's Ambitious Forest Moratorium Moves Forward." World Resources Institute. 2011.

<https://www.wri.org/blog/2011/06/indonesia-s-ambitious-forest-moratorium-moves-forward>.

Seymour, Frances. "Indonesia Reduces Deforestation, Norway to Pay Up." World Resources Institute. 2019. <https://www.wri.org/blog/2019/02/indonesia-reduces-deforestation-norway-pay>.

"Together Across Faiths, Taking Action on Climate Change." World Wildlife Fund. 2015.

<https://www.worldwildlife.org/press-releases/together-across-faiths-taking-action-on-climate-change>.

Weisse, Mikaela and Elizabeth Dow Goldman. "2017 Was the Second-Worst Year on Record for Tropical Tree Cover Loss." World Resources Institute. 2018.

<https://www.wri.org/blog/2018/06/2017-was-second-worst-year-record-tropical-tree-cover-loss>.