

Environmental Year-In-Review

Rainforest Trust

2017



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Rainforest Trust

Rainforest Trust is a leading international conservation organization that has been steadfast in its mission for 30 years to save endangered species through the purchase and protection of imperiled tropical habitats in partnership with local partners and communities. Since its founding in 1988, Rainforest Trust has helped protect 18 million acres of rainforest and other tropical habitats in more than 125 projects sites around the world. Presently, Rainforest Trust is working to establish a network of over 190 protected areas toward its goal of strategically protecting 50 million acres by 2020. Rainforest Trust has a 4-star rating from Charity Navigator, and 100 percent of project gifts directly fund vital conservation action.

To learn more about our amazing work, please visit:

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Exec. Summary: Orangutan © Richard Parsons

Back: Mt. Rano from the Crater Rim © Andrew Cox

EDITORIAL



At Rainforest Trust, everyday we strive to protect tropical habitats and the threatened species and communities that depend upon them. As an organization, we are most concerned with the current species extinction and global climate change, both of which have drastic implications for our planet. We believe that protecting natural habitats, especially those in the world's tropical regions, will have the greatest impact on species conservation and ecosystem benefits to humans, while also providing our most cost efficient tool in the fight against both the causes of and impacts from climate change.

As forests are lost, the carbon that is stored in the plants is released back to the atmosphere. Deforestation is such a significant contributor to global climate change that it is responsible for nearly the same amount of annual emissions as the entire world's transportation sector. Did you know that purchasing and protecting natural habitats, especially our planet's "lungs" (tropical forests), is drastically cheaper than reducing all other forms of emissions? Moreover recent projections have determined that halting deforestation and allowing degraded forests to regrow could actually mitigate 50 percent of all greenhouse gas emissions. And as the proverbial cherry on top -- protecting natural lands magnifies our reach by protecting the homes of thousands of species and communities. Animals, People, Planet -- all through one impactful action!

While we focus our work on the part of the world that has the greatest biodiversity, we respect and care for all of our entire precious planet, with its amazing diversity of habitats and species. As an organization of scientists and environmental experts, our message of protecting our precious planet needs to be applied at both global and local levels if we really want to make a difference.

As our first annual Environmental Year-In-Review - a "State of the Planet" - we highlight the issues we see as having the greatest impact for Americans, whether the event happens on US soil or not. And we hope our 2018 Resolutions will help to inspire hope and action!

A handwritten signature in black ink, appearing to read "Paul Salaman".

Dr. Paul Salaman
CEO Rainforest Trust



EXECUTIVE SUMMARY

After yet another year of record extreme weather in the United States, coupled with significant changes to federal government policies and ongoing massive loss of tropical forests, Rainforest Trust believes that now more than ever an Environmental Year-in-Review is necessary to help raise awareness on these issues. As the very first Environmental Review, Rainforest Trust identified this year's top five environmental impacts affecting Americans. From withdrawing from the Paris Agreement to continuing our unsustainable fossil fuel dependency, there was a lot of depressing news to consider. But this is not the entire picture. People and communities are coming together stronger than ever, and that provides a lot of hope. Rainforest Trust wanted to channel this hope within this report, so it also created its top five Environmental Resolutions for 2018. From staying positive to saving natural habitats, there is something for everyone who wants to be more environmentally conscious in the new year.

IMPACTS

There were no lack of environmental impacts this year from which to choose. From another year of record extreme weather to changes in United States policies, it was a tough year for people who care for our planet. After much deliberation, Rainforest Trust came up with its top five environmental impacts, three of which are more like categories than singular events. Together, the five encompass the difficulties we as a community of concerned citizens faced and will most likely continue to encounter in the coming years, if serious measures are not taken by each and every one of us. Here are the top five environmental impacts of 2017, and what they mean for us and our planet:

Rainforest Trust's Top 5 Environmental Impacts:

1) Paris Agreement Withdrawal

History was made in December 2015 when the world's nations came together in Paris for the United Nations Framework Convention on Climate Change's (UNFCCC) 21st meeting of the annual Conference of Parties (COP21). During that meeting, 195 countries, including the United States, adopted the first-ever universal, legally binding global climate agreement¹. In the two years since, many nations have begun developing and implementing plans to reduce carbon emissions. However, a year and a half later, the United States government announced that it would withdraw, and then submitted its official withdraw documents on August 4, 2017². Also during this year, the only two nations to have not previously agreed to the Paris Accord – war-ravaged Syria and Nicaragua – have now joined, leaving the United States as the only nation not included. By withdrawing from the accord, the United States federal government will now be left out of the most important international environmental conversation currently taking place. Luckily, the American people, and our local and state governments, have stepped up and are maintaining commitments already made or are signing on to new ones. Despite these tremendous grassroots efforts, the need for federal government support is imperative if the United States wants to maintain its position as a leader on global climate change and the new renewable energy technology revolution currently taking place across the world.

¹ European Commission, Climate Action,

https://ec.europa.eu/clima/policies/international/negotiations/paris_en

² Reuters, *U.S. submits formal notice of withdrawal from Paris climate pact*, Valerie Volcovici;

<https://www.reuters.com/article/us-un-climate-usa-paris/u-s-submits-formal-notice-of-withdrawal-from-paris-climate-pact-idUSKBN1AK2FM>

2) Record-Breaking Extreme Weather

Over the last several years, global average temperatures have been reaching new records, and 2017 is no different. In fact, it is shaping up to be the third warmest year on record, according to the National Oceanic and Atmospheric Administration (NOAA)³. But it is the trend of the last three years that shows the most concern as 2014, 2015 and 2016 have each set new record global temperatures for warmth. As global temperatures continue to rise, we continue to have increased likelihood of extreme weather events, and 2017 was an exceptional year for record-breaking extreme weather. There was the record-breaking hurricane season in the United States, with three category 4 or larger storms – Harvey in Houston, Irma in South Florida and Maria in Puerto Rico – hitting U.S. land in one season for the first time. Although exact numbers have not yet been released (NOAA will release them in their fourth quarter assessment due out January 8), estimates for damages from hurricanes range from just over \$200 billion to nearly \$500 billion⁴. Despite where the final number falls within this range, it will be the costliest hurricane season in recorded history. Moreover, this year wasn't just a bad year for hurricanes. There were also record-breaking heat waves across the western United States, droughts, flooding, tornadoes and wildfires (Please see map on page 7). At least 282 people⁵ lost their lives due to extreme weather in the United States, although this number could be much higher since an accurate death toll is difficult to determine out of Puerto Rico, where recovery is ongoing. Without taking immediate action to mitigate the causes, these extreme weather patterns will only continue.

3) Massive Loss of Tropical Forests

Nearly 25 million acres⁶ of tropical forest, an area almost as large as the state of Virginia, were deforested in 2017. This has tremendous implications for the ecosystem services these “lungs” of the Earth provide, including climatic regulation, clean water and air, food and medicine. It also directly impacts the wildlife that call these places home and the communities that rely on these forests for their livelihoods. Human-induced habitat loss is the leading cause of species extinction, which is occurring so quickly that many species of flora and fauna are going extinct before they can even be

³ NOAA National Centers for Environmental Information (NCEI), *Global Climate Report -- October 2017*, <https://www.ncdc.noaa.gov/sotc/global/201710/supplemental/page-1>

⁴ CNN, *Hurricane season is finally ending*, Madison Park and Michael Guy, November 30, 2017; <http://www.cnn.com/2017/11/30/weather/hurricane-season-2017-recap/index.html>

⁵ NOAA National Centers for Environmental Information (NCEI) *U.S. Billion-Dollar Weather and Climate Disasters* (2017). <https://www.ncdc.noaa.gov/billions/>

⁶ Global Forest Watch

discovered. The leading causes of deforestation are clearing forested land for agriculture – particularly for oil palm plantations and cattle grazing – extensive logging, mining operations and infrastructure development (such as roads, dams and urban sprawl). These threats to rainforests are growing at a stunning pace! As the human population continues to grow over the coming decades, a balance between growth and development with protection of natural landscapes is necessary to maintain proper function of the Earth’s natural systems. As our tropical forests continue to dwindle in size, regulation of these essential services like fresh air and clean water will not only become more difficult to sustain, but will also become more costly.

4) Overtaken Wildlife and Habitat Protections

As of December 15, there are a total of 60⁷ environmental rules and regulations that are facing significant changes under the current U.S. presidential administration. Many of these changes are to wildlife and habitat protections, two things Rainforest Trust takes very seriously in its work to safeguard biodiversity. These changes include removing protections for whales and sea turtles, no longer listing Grizzly Bears as Endangered on the U.S. Endangered Species Act and lifting the hunting ban on wolves and bears in Alaska. Rollbacks are also in progress for wetland and tributary protections, in addition to the status of 10 National Monuments and 12 marine areas. At the beginning of this month, it was announced that Bear Ears National Monument in Utah would be reduced by roughly 85 percent⁸. There are also international wildlife protections that at risk, with an announcement in November of possibly reversing the ban on U.S. import of elephant trophies from Zambia and Zimbabwe. Rolling back wildlife and habitat protections is a slippery slope that can end up leaving our most endangered animals and landscapes open to loss and degradation.

5) Unsustainable Fossil Fuel Dependency

Both the Keystone XL pipeline and the Dakota Access Pipeline were approved despite massive and lengthy protests – furthering our dependence on fossil fuels. On November 16, the Keystone XL pipeline had its largest oil spill yet

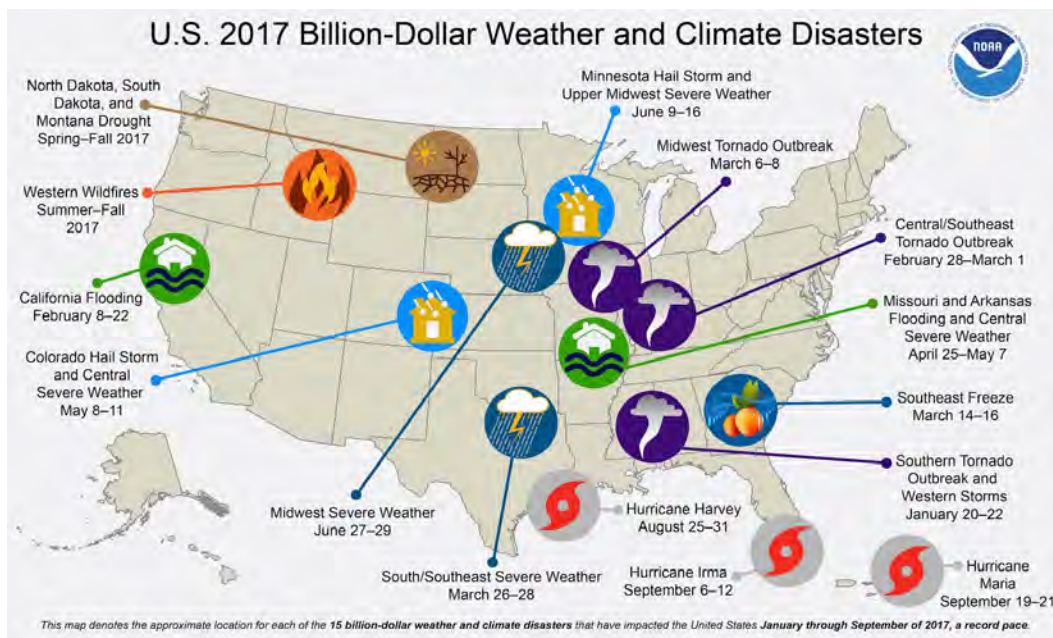
⁷ The New York Times, *60 Environmental Rules on the Way Out Under Trump*, Nadja Popovich, Livia Albeck-Ripka and Kendra Pierre-Louis;

<https://www.nytimes.com/interactive/2017/10/05/climate/trump-environment-rules-reversed.html>

⁸ The Washington Post, *Trump shrinks two huge national monuments in Utah, drawing praise and protests*, Josh Dawsey and Juliet Eilperin;

https://www.washingtonpost.com/politics/trump-scales-back-two-huge-national-monuments-in-utah-drawing-praise-and-protests/2017/12/04/758c85c6-d908-11e7-b1a8-62589434a581_story.html?utm_term=.9b3a3a709c74

at 210,000 gallons⁹. Offshore drilling bans for the Atlantic and Arctic have also been overturned, while rollbacks are in progress for several other fossil fuel related rules such as exploratory drilling in the Arctic National Wildlife Refuge, regulations on drilling in some national parks and fracking regulations on public lands¹⁰. Furthering our dependency on fossil fuels is completely unsustainable. Not only are these substances finite resources, but the production and use of them is severely detrimental to our planet's wellbeing. We also have viable alternatives in solar and wind energy. In fact, the United States solar energy industry is booming, supplying more jobs to our economy than the coal industry¹¹. Also, due to its exponential growth, prices for solar have dropped drastically (70 percent since 2010¹²), making it much more cost efficient.



SOLUTIONS

Focusing exclusively on all the negative environmental impacts affecting the world this year can feel as if the problems we face are insurmountable. But Rainforest Trust simply won't accept that the causes are irreversible, and that is why it developed solutions that are easily doable and have a positive impact on the environment. Here are the top five environmental resolutions for 2018, presented

⁹ CNN, *Keystone Pipeline leaks 210,000 gallons of oil in South Dakota*, Mayra Cuevas and Steve Almasy; <http://www.cnn.com/2017/11/16/us/keystone-pipeline-leak/index.html>

¹⁰ The New York Times, *60 Environmental Rules on the Way Out Under Trump*, Nadja Popovich, Livia Albeck-Ripka and Kendra Pierre-Louis; <https://www.nytimes.com/interactive/2017/10/05/climate/trump-environment-rules-reversed.html>

¹¹ Department of Energy, *2017 U.S. Energy and Employment Report*, https://energy.gov/sites/prod/files/2017/01/f34/2017%20US%20Energy%20and%20Jobs%20Report_0.pdf

¹² Solar Energy Industries Association, *Solar Industry Data*, <https://www.seia.org/solar-industry-data>

as New Year's goals to encourage people to take impactful measures to improve their environmental footprint.

Rainforest Trust's Top 5 Environmental Resolutions:

1) Save Natural Habitats

Saving the natural habitats of our precious planet is without a doubt the most impactful and cost efficient act people can undertake for protecting our environment. Natural habitats can take millennia to form and provide our planet with vital services like clean water, fresh air and are homes for thousands of threatened species. We can protect these areas locally by planting and nurturing trees, growing a bee friendly garden with native plants (you can even include fresh fruit and vegetables for your family) or volunteering with a local park cleanup crew. We can also act globally and help protect the tropical forests that hold incredible levels of biodiversity and play a major role in regulating our planet's climate. When it comes to protecting the lungs of our planet, for only \$2, Rainforest Trust is able to safeguard an acre of vital tropical wildlife habitat. That's less than the average cost for a cup of coffee. Saving tropical forests saves habitat for iconic and threatened animals such as Red Pandas, elephants and tigers, as well as all the plants and creatures that are less well-known and even those we haven't yet discovered. It also supports local communities that depend on the forests for their way of life. And, it helps in the fight against climate change, protecting our beautiful planet for generations to come.

2) Know Your Product Source

Do you know where your latest purchase came from? We all have power over businesses through our purchases, and when we research our products and make decisions based upon environmental sustainability, we can influence businesses to move toward better quality and environmentally safer production. Some items to avoid are obvious – like illegal and exotic wildlife and plants, or animal parts such as elephant ivory, rhino horns, shark fins, tiger bones and animal furs. Others might not be as blatant and may take some more research, such as where and how clothing is made. Making an effort to buy local, sustainable products and food can also go a long way in reducing the carbon footprint of production by reducing transportation needs, and products made in the U.S. are also subject to environmental standards under the Clean Air Act and Clean Water Act, among others.

3) Get Creative With Consumption

Consumption is a required aspect of our daily lives, but that doesn't mean we should do it without a lot of thought. Much like knowing our product sources, being creative with our consumption can lead to large reductions in waste. Simple things like using cloth bags when shopping, refusing plastic straws at restaurants and using reusable water bottles (to save money and the environment) would significantly reduce much of the plastic waste we have choking our beautiful beaches and waterways. For example, according to the Plastic Pollution Coalition, we use some 500 million¹³ plastic straws in America each day! Other ways to be creative include buying slightly used items instead of brand new (which saves on manufacturing, shipping and packaging), donating still usable but unwanted items, being creative and crafty by transforming something old into something new and recycling as much of our trash as we can (focusing on our plastic items that are not biodegradable). Every time and every way we reduce our consumption footprint, we are helping save natural habitats from destruction and waste.

4) Go Outdoors

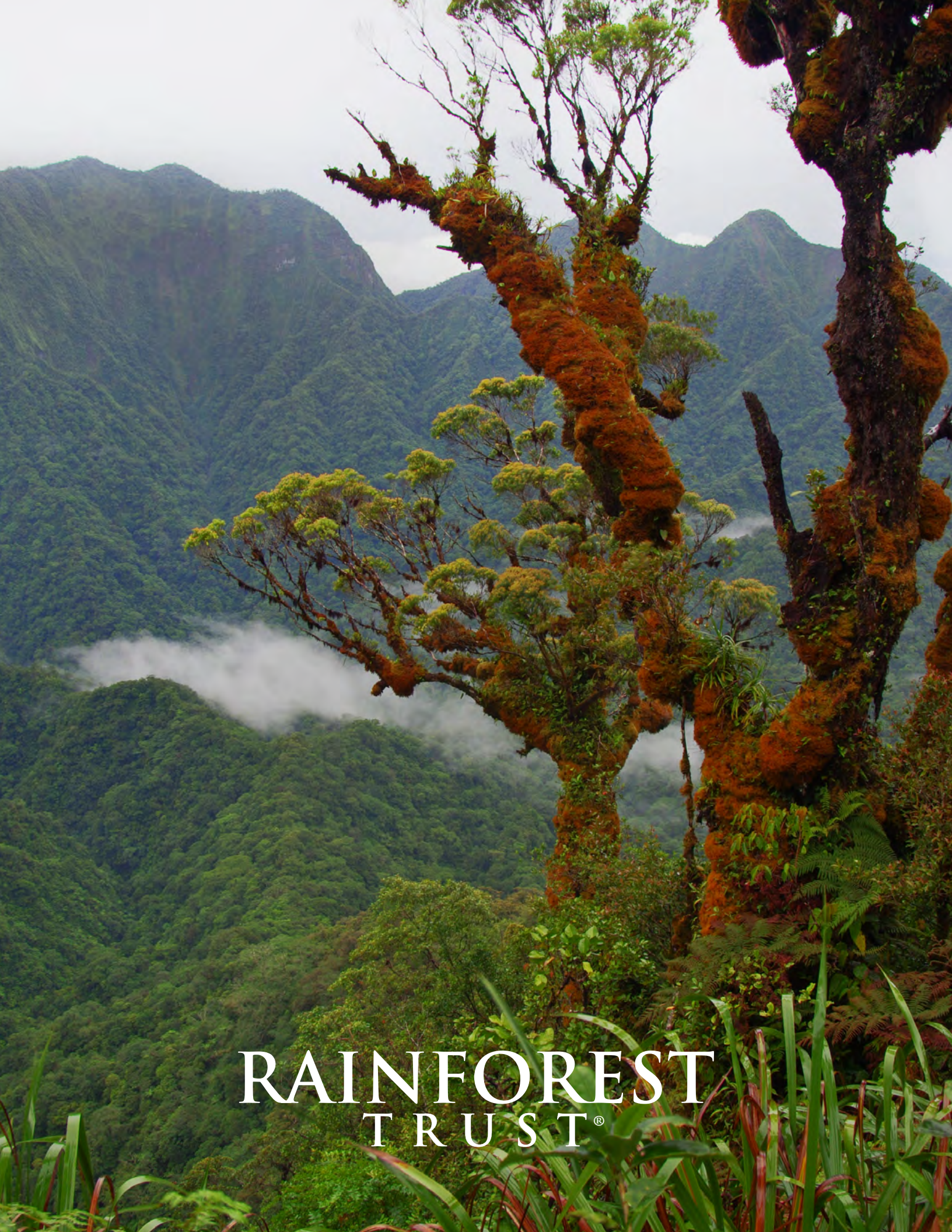
One thing that we tend to forget when discussing environmental protection is that our natural landscapes are inspiring and need to be protected for human enjoyment as well. Spending quality time outdoors has many proven benefits to our health and wellbeing¹⁴, and at Rainforest Trust, it is believed that it also will help people cultivate an appreciation for nature that will guide decisions and choices moving forward. Great activities that can be done even in urban settings include taking a walk in a park, taking friends birdwatching and joining a nature club. Eco-friendly tourism can also be beneficial to the long-term support of the environment if properly regulated, as well as for local people and economies.

5) Stay Positive

Despite the tremendous environmental impacts we faced in 2017, hope is not lost. There are many things we can all do to protect our environment, and even small actions can have a big impact. For example, protecting even just a few acres of vital habitat can make a huge difference to endangered species. Keeping a positive outlook on the state of our planet can help inspire each of us to take positive actions toward a healthier world!

¹³ Plastic Pollution Coalition, *The Last Plastic Straw*,
<http://www.plasticpollutioncoalition.org/no-straw-please/>

¹⁴ Harvard Medical School, *A prescription for better health: go alfresco*, Harvard Health Letter;
https://www.health.harvard.edu/newsletter_article/a-prescription-for-better-health-go-alfresco



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