



NGO SUSTAINABILITY

GLOBAL WARNING

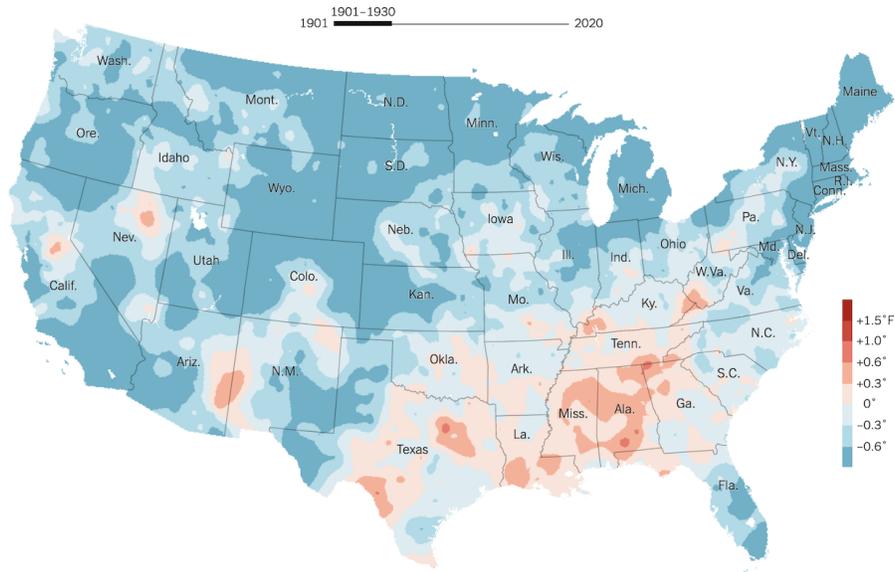
PROMOTING SUSTAINABLE LIVING AND RENEWABLE ENERGY FOR THE FUTURE OF OUR PLANET

ngosustainability@gmail.com | unnegosustainability.org

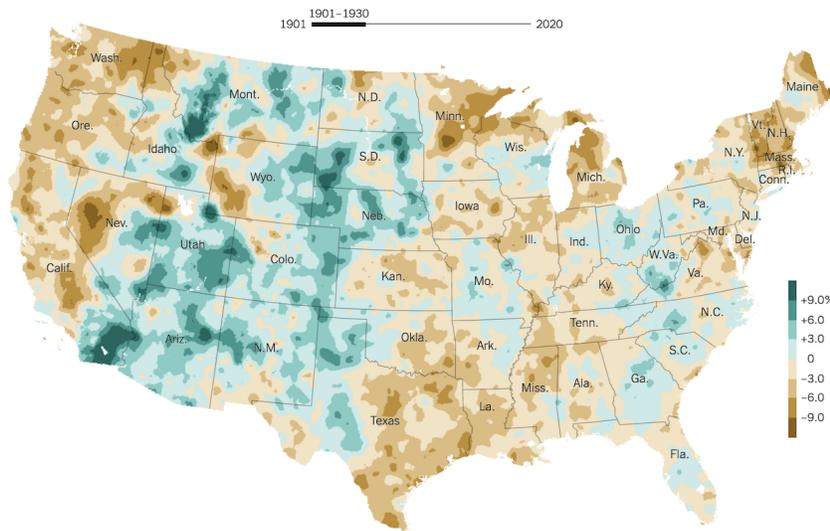
NO. 122 | JUNE 18, 2021

“It is something we are facing already...really we need to do something.” - New York Times

30-year temperatures compared with 20th century average



30-year precipitation compared with 20th century average



Internships Lead to Job Opportunities

A Chance Meeting at NGO Sustainability Would Come Full Circle. Back in 2019, what now seems like an eternity ago, Muzna (a graduate student from Pakistan) was interning at NGO Sustainability where Melissa had interned the year before. In a brief meeting among some of the then-current and previous interns, Melissa shared with the group her experience entering grad school and the impact that Roma & NGO Sustainability had on her journey there. Little did they know, that connection would come full circle, bringing Muzna and Melissa to work and live together one year later.



Muzna and Melissa

At the close of the 2020 school year, Melissa and Muzna were both graduating from their graduate programs; Melissa with a Master of Science from the ESTEEM program at Notre Dame and Muzna with a Master of Science from the University of Michigan. The turbulence of the pandemic, as we all know, rippled through every sphere of our society, having a unique impact on the youth entering the work field for the first time. By chance, Melissa and Muzna, who had not seen each other since the summer they met, were both presented with a special internship opportunity brought to them by none other than Roma Stibravy, President of NGO Sustainability. One of the organization's board members was looking for help in opening renewable energy operations in New York State.

Mel and Muz, as they referred to themselves, packed their bags and moved to Saratoga Springs, New York for the next 4 months to join a young renewable energy company focused on community solar projects. The company, a subsidiary of CAERO Group, involved an international team of experts developing 5MW solar farms in upstate New York. The process of developing solar farms in various districts is an expansive process that includes contacting legislators, researching policies, and evaluating land—things Mel and Muz were tasked with as the Young Renewable Energy Leaders of the company. These community solar projects are part of a mosaic of efforts that fall within New York's goal of reaching 70% renewable energy by 2030. For Mel and Muz it was exhilarating to be at the forefront of making history and helping reduce carbon emissions in meeting New York State's goals.

As their internship came to a close, and the pandemic raged on, Mel and Muz both felt the need to return to their family homes. Muz finally returned to her home country of Pakistan as a Sustainable Development and Renewable Energy Specialist and had a joyous reunion with her family after years apart while she studied in the states. Mel returned to her hometown of Norwalk, Connecticut where now works remotely as a Renewable Energy Associate for Atlas Renewable Power, a company based in San Francisco, California, providing utility-scale renewable energy project development and consulting services.

These women are part of the next generation of leaders at the center of the global shift towards climate change initiatives spearheaded by the combined effort of organizations like NGO Sustainability.

The American poet Emily Dickinson was a prolific writer whose work became well-known after her death. Thomas Higginson and Mabel Todd, two acquaintances, and writers, edited and published her first collection of poetry in 1890, four years after Ms. Dickinson's death. In 1955, an unedited collection of her poetry was finally published. Her poems explored a myriad of topics, including death, spirituality, and nature, as shown below.

“Nature Is What We See”

“Nature” is what we see—
The Hill—the Afternoon—
Squirrel—Eclipse—the Bumble bee—
Nay—Nature is Heaven—
Nature is what we hear—
The Bobolink—the Sea—
Thunder—the Cricket—
Nay—Nature is Harmony—
Nature is what we know—
Yet have no art to say—
So impotent Our Wisdom is
To her Simplicity.

- Emily Dickinson

“Coral Transplants can Bring Back Bleached Reefs” (Study) *E&E News*
By Valerie Yurk

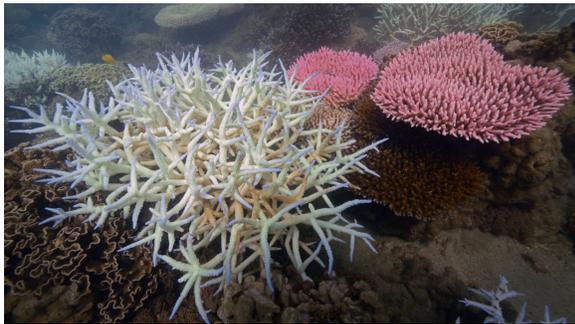


Photo: *Australian Institute of Marine Science/Eric Matson*

Research by Katie Barrott, a biologist at the University of Pennsylvania, has shown that some coral species that survived mass bleaching events are able to thrive after being transported to new environments, giving hope that resilient corals may be able to repopulate bleached reefs. Coral bleaching is caused by abnormally high water temperatures causing corals to release their symbiotic algae, which live inside of the coral and provide them with nutrients. Between 2014 and 2017, around 75% of the world’s tropical reefs underwent bleaching events. Barrott’s team found that two coral species, rice, and finger coral, that survived a 2014-2015 bleaching event in Hawaii were more likely to survive than native corals after being transplanted to a different environment and undergoing heat stress. Although the resilient corals were able to survive, Barrott is still skeptical if the “survivor” corals will be able to adapt and withstand other environmental stressors in their new habitat.

[Full article](#)

“Island in Russia’s Far East Launches Zero Emissions Experiment”
Earth Island Journal
By Aleksei Duel

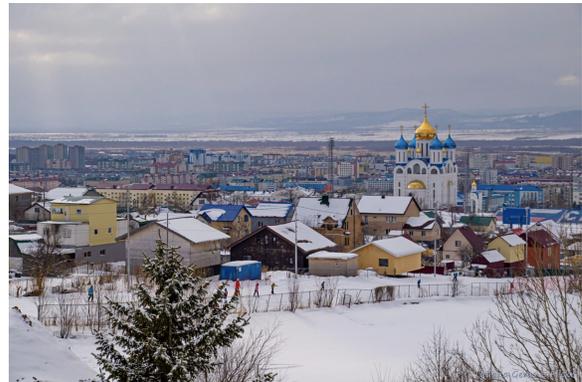


Photo: *Tatters / Flickr*

Sakhalin Island, a Russian island that has heavily relied on fossil fuels in the past, is now attempting to transition to carbon neutrality by 2025. The regional government and the Russian Ministry of Economic Development are working together to introduce greener technologies, carbon trading, and new policies that encourage the reduction of emissions for both businesses and local residents. These policies include tax breaks for green technologies, a ban on diesel cars, and replacing coal with natural gas. The experiment on the island, if successful, will be reproduced across Russia in an effort to combat the effects of climate change which, if not addressed, will have severe implications for Russia’s infrastructure and economy.

[Full Article](#)

“Declining fish biodiversity in Peruvian Amazon affecting human nutrition”

Mongabay

By Liz Kimbrough



Photo: *Mongabay, Kimbrough*

In Loreto, a remote region of the Peruvian Amazon, local communities rely heavily on freshwater fish species for their diets. As biodiversity declines, these communities face the challenge of replacing the wide range of nutrients that they would normally get from wild fish that are not present in other food sources. There have been discussions of shifting to farmed fish and chicken as a replacement for wild fish. However, farming fish is environmentally damaging and does not adequately replace the nutrients that wild fish provide. Biodiversity plays a critical role in the human diet and its decline must be addressed, particularly in vulnerable regions.

[Full Article](#)

“A Dutch Court Rules That Shell Must Step up its Climate Change Efforts”

The New York Times

By Stanley Reed and Claire Moses



Photo: *Robin Utrecht/EPA, via Shutterstock*

The District Court of The Hague recently ruled that Shell must reduce its emissions by 45% compared to 2019 levels by 2030. The ruling only applies to Shell’s operations in the Netherlands, and the court did not find Shell’s current emissions unlawful. Nonetheless, the surprising victory is expected to inspire other environmental groups to sue Shell and other large corporations around the world. Shell, asserting that its current climate commitments are adequate, will try to appeal the court’s decision.

[Full article](#)

“Biden Finds Fossil Fuels Hard to Quit”

The New York Times

By Lisa Friedman



Photo: *Patrick Endres/ Design Pics Inc., via Alamy*

Despite U.S. President Joseph Biden’s ambitious pledges to cut emissions and tackle climate change, his administration defended a massive new oil drilling operation, the Willow Project, in federal court. The devastating move is a political calculation on Biden’s part to secure the vote of moderate Republican Lisa Murkowski (R. AK) on other legislative parts of his agenda. The Willow Project is projected to generate \$1.2 billion in revenue, 2,000 jobs, and more than 100,000 barrels of oil per day until 2050. But the project is also expected to disrupt caribou migration patterns and intensify the effects of climate change in a region that has already suffered dramatically. The Biden administration has also defended other fossil fuel projects, such as the controversial Dakota Access pipeline and 440 Trump-era oil and gas leases on land that is a critical habitat for wildlife, including the near-threatened sage-grouse.

[Full article](#)

“US Energy Consumption Dropped 7.3 Quads in 2020” *Treehugger*

By Lloyd Alter



Photo: *Getty Images*

The Lawrence Livermore National Laboratory and the Department of Energy produce an annual flow diagram depicting the flow of energy in the United States. Their diagram of 2020 numbers showed a drop of 7.3 quads* since the prior year, a marked difference since one quad is equivalent to the energy in over 8 billion gallons of gasoline. The pandemic was the main reason for the drastic decrease in total energy consumption, which fell from 100.2 to 92.9 quads. This reduction inadvertently matches the annual goal for reducing energy consumption through 2030 in order to slow global warming. To maintain this goal, we need to continue saving a pandemic’s worth of energy every year in this decade.

*Quads are a unit of energy equal to one quadrillion British Thermal Units.

[Full article](#)

“With the World Focused on Reducing Methane Emissions, Even Texas Signals a Crackdown on ‘Flaring’” *Inside Climate News*

News

By Jonathan Moens



Photo: *Spencer Platt/Getty Images*

Texas has historically practiced flaring, the burning of unwanted natural gas from oil wells, which has been largely condoned by state regulators. However, climate activists, local communities, and legislators have recently been focusing on flaring as both flaring and venting emit large quantities of methane. Methane is a greenhouse gas with 86 times the global warming potential of carbon dioxide over its 20 year lifetime. President Biden has pushed for a 40% reduction in methane emissions by 2030 in an effort to reduce global warming.

[*Full article*](#)

“The \$3bn Bargain: How China Dominates Pacific Mining, Logging, and Fishing”

The Guardian

By Josh Nicholas



Photo: *Alessio Bariviera*

China is the largest consumer of natural resources in the Pacific region by both weight and economic value, importing more than the next 10 largest nations combined. Such a high demand for natural resources is threatening regional sustainable investment initiatives as China imports illegally harvested timber, overfishes foreign fisheries, and metal from environmentally damaging mines. China’s lack of environmental laws regulating imports to ensure they were harvested legally or sustainably has exacerbated environmental degradation in developing Pacific countries. China has also increased the amount it invests in resource projects in developing Pacific countries, including several controversial nickel mines in Papua New Guinea.

[*Full article*](#)

“US Approves First Big Offshore Wind Farm in Breakthrough for the Industry”

Earth Island Journal

By Erin Baker & Matthew Lackner



Photo: *Dennis Schroeder / NREL*

After over a decade of planning, on May 1, 2021, the US government approved the Vineyard Wind project. This project will be the first utility-scale wind farm in the US consisting of 62 turbines that will be installed 15 miles off Martha’s Vineyard. It is projected to produce enough clean energy for 400,000 homes. Disagreement occurred during the approval process from the fishing industry and over the uncertainty of how the wind turbines will interact with marine ecosystems. However, as the first large-scale wind farm, this will be a valuable opportunity to learn and inform future projects.

[Full Article](#)

“As contaminated water concerns grow, Massachusetts towns urge the state to stop spraying pesticides in their communities”

Boston Globe

By David Abel



Photo: *David L Rylan/ Globe Staff/ File*

After recently announcing that many towns in Massachusetts are experiencing high levels of toxic chemicals known as PFAS in their water systems, towns are wondering if they should opt out of state-mandated roadside and aerial pesticide spraying. In order to reduce the spread of mosquito-borne illness, the state of Massachusetts began spraying pesticides containing high levels of PFAS. So far, 13 municipalities in Massachusetts have contacted the state with requests to opt-out of the pesticide applications, for the sake of the health of their communities and environment. The pesticide applications began recently in response to Massachusetts’ deadliest year of mosquito-borne illness deaths, with at least 6 deaths being linked to EEE. Ultimately, the state of Massachusetts will make the final decision regarding the approval or denial of whether the municipality can opt-out of the pesticide applications.

[Full article](#)

MEET THE FARMER

By Rob Israel

In 1635, the late ancestors of John and Bonnie Hall moved from England to Westbrook, Connecticut with a couple of cows, and the family has been there ever since. To this day, the Halls still own and farm the same land, called Maple Breeze Farm. Tradition is important to the Halls, which is why they raise the same breed of the cow as their ancestors from 1635, American Milkage Devon. There are currently less than 2,000 Devon's left in America, with 68 calves and cattle residing on the Halls' farm. The once-popular breed was originally brought over from England but has since decreased in popularity due to the lengthy time it takes to mature for butchering. On average, a Devon takes 6-7 years to fully mature, while a genetically modified cow with growth hormones—the meat you would purchase in a supermarket—takes 16 months. In order to further support the American Milkage Devon, John Hall has recently become the president of the American Milkage Devon Cow Association (AMDCA).

The Halls pride themselves on using no pesticides, herbicides, or hormones in their cattle. All of the feed that their cows, pigs, chickens, and ducks consume is grown and harvested by John himself, which mainly consists of hay and greens. Animal products they offer include hamburger patties, sausage links, ribs, hotdogs, pork chops, chicken eggs, and duck eggs, just to name a few. In addition to animal products, the Halls install between 2,000 and 3,000 taps on their maple trees in order to produce syrup which they bottle and sell as well.

Maple Breeze Farm travels to three Connecticut farmers markets per week,



which consist of the Madison, Lyme, and Chester markets. In addition to selling their syrup and animal products at their stand, they also sell goat cheese and milk from Sweet Pea Cheese Farm in North Granby, Connecticut, and 10-15 types of ice cream from TulMeadow Farm in West Simsbury, Connecticut. The best-selling flavors of ice cream (which I have taste-tested and are amazing) include Toasted Almond Crunch and Dark Chocolate Red Raspberry.

The Halls love interacting with their new and old customers at the markets they travel to, and have many of their customer's orders memorized. They pride themselves on educating their customers on the benefits of consuming their sustainably produced products and constantly invite their customers to visit their farms and interact with their livestock. Maple Breeze Farm is located at 563 East Pond Meadow Road in Westbrook, CT, and is open to visitors on Saturdays from the end of October through the end of May.

Recommended Products: Grade A Dark Color Maple Syrup and Toasted Almond Crunch Ice Cream

Each week, our interns and associates at NGO Sustainability choose special topics of interest to report on. We believe our interns should explore issues they are passionate about within the sustainability field and we look forward to sharing some of the most interesting aspects of this work with you. Here is intern Andrew Miller's report on the Montreal Protocol

The Montreal Protocol: From Ozone Depletion to Climate Change

The Montreal Protocol is an international treaty created in 1987 designed to limit the emissions of ozone-depleting substances (ODS) called chlorofluorocarbons (CFCs). CFCs were used for a multitude of purposes, mainly refrigeration and air conditioning because they were cheap and chemically stable. However, their stability allows them to persist for up to a century in the atmosphere, which is catastrophic for the ozone layer. The ozone layer is found in the stratosphere and is essential for all life on earth. Ozone protects the earth's surface from harmful ultraviolet radiation emitted by the sun, which without the protective ozone layer, would increase rates of skin cancer and cataracts in humans, and decrease photosynthetic activity in plants.

In the 1980s, the issue of ozone depletion became increasingly urgent as the emission of CFCs opened a hole in the ozone layer above Antarctica and continued to weaken the ozone layer worldwide. However, the ozone hole stopped growing immediately after CFC emissions began to decline after the implementation of the Montreal Protocol. The Montreal Protocol succeeded in meeting its most ambitious targets of banning CFC production by the year 2000 and subsequently shifted focus to regulate the less potent CFC replacement hydrochlorofluorocarbons (HCFCs). HCFC production was banned in 2001, and the use of recycled HCFCs in 2015. Because of the significant emissions reductions of ODSs, the ozone hole is currently closing and is expected to fully heal by midcentury.

Since the success of the Montreal Protocol in reversing the damage done to the ozone layer, the most recent amendment adopted, the Kigali Amendment, begins to focus the treaty on climate change. The Kigali Amendment was adopted at the 28th Meeting of the Parties (MOP) of the Montreal Protocol in October 2016 and entered into force in January 2019. It aims to reduce emissions of CFC and HCFC substitutes known as hydrofluorocarbons (HFCs). While HFCs—commonly used in refrigeration, insulation, air conditioning, and aerosols—don't degrade the ozone layer, they are potent greenhouse gases with 12,400 times the global warming potential of CO₂. The Kigali Amendment aims to reduce HFC emissions 80% by 2047 and is expected to prevent 0.5°C of global warming by 2100 if successful.

Currently, 170 countries have accepted the Kigali Amendment and 120 countries have ratified it. The United States has yet to accept the amendment even though then-Secretary of State John Kerry, and then Environmental Protection Administrator Gina McCarthy helped negotiate it. However, U.S. President Biden recently signed an executive order directing Secretary of State Antony Blinken to introduce the Kigali Amendment to the U.S. Senate for ratification. If the U.S. succeeds in ratifying the Kigali Amendment, it would be a major accomplishment that could convince other major HFC emitters, like China and India, to quickly follow.

The Montreal Protocol remains the most successful international environmental treaty ever written. Its success in halting and reversing the damage done to the ozone layer likely prevented ecological and public health catastrophes. As the Montreal Protocol continues to combat climate change with the Kigali Amendment, hopefully, the past success of the treaty can be replicated in light of this pressing global challenge.

Each edition of Global Warning will now feature an environmental-themed book review written by our interns.

BOOK REVIEW: “Braiding Sweetgrass”

By: Robin Wall Kimmerer
Andrew Miller

“Braiding Sweetgrass” is a book written by Robin Wall Kimmerer, a professor at State University of New York College of Environmental Science and Forestry and member of the Citizen Potawatomi Nation. Wall Kimmerer works to bridge the divide between Western science and traditional indigenous knowledge by drawing extensively upon personal anecdotes—from her father making offerings to the forest every morning on a childhood camping trip to teaching college students how to properly appreciate nature provides humans in an ecology course.

Throughout the course of the book, Kimmerer emphasizes two values that are central to the indigenous cultures she studies; reciprocity and gratitude.

The most prominent environmental issue Kimmerer discusses in her book is overconsumption, primarily in industrialized Western countries. Overconsumption, and the societal values associated with it, have created a positive feedback loop that is rapidly degrading the environment and our relationship with the natural world. In order to break this loop, Kimmerer urges industrialized societies to incorporate the values of reciprocity and gratitude into their cultures and decision-making. If people learn to show proper gratitude and respect towards the environment, our ethics and honor would prevent us from clear-cutting forests or destroying fisheries.

However, while showing proper gratitude towards the environment could prevent us from inflicting more damage, it won’t do anything to repair the damage we’ve already done— that is where reciprocity comes into play.

Reciprocity, in relation to the environment, is practiced when humans give back to the earth as thanks for the gifts it has given us. Reciprocity is not a one-size-fits-all task. Acts such as ecological restoration, environmental activism, and even passionate scientific research can all be seen as acts of reciprocity.

Throughout her book, Kimmerer draws from the harrowing history of Native American communities during and after the colonization of North America by European settlers. Once Indigenous cultures had been sufficiently repressed through forced assimilation and relocations, the natural resources of North America became depleted as the Europeans didn’t have the same level of respect for and knowledge of the land as many indigenous communities did.

By reincorporating indigenous thought into our decision-making through the practices of both reciprocity and gratitude, Kimmerer hopes that humans will rediscover the ancient appreciation for the land and environment that we all once had and reverse the damage inflicted by Western culture. She concludes by reiterating how generous the earth is in providing natural resources for our survival, and that showing gratitude through giving back to the earth, will not only heal our damaged environment but help us foster a deeper connection with our local areas, becoming indigenous to our land.

Sources:

Wall-Kimmerer, Robin. *Braiding Sweetgrass*. Minneapolis, Milkweed Editions, 2013.

Producer: Roma Stibravy, President
Editors: Clio Bate (Smith College), James Emmenegger (University of Delaware) Andrew Miller (St. Lawrence University), Lara Zullo (McGill University), Rob Israel (Colgate University)
Contributors: NGO Sustainability Interns

BECOME A MEMBER OF NGO SUSTAINABILITY!

unngosustainability.org

CORPORATE SPONSORSHIP ALSO AVAILABLE