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PROMOTING SUSTAINABLE LIVING AND RENEWABLE ENERGY FOR THE FUTURE OF OUR PLANET
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Consultative Status, the United Nations Economic and Social Council (ECOSOC)
Observer Status, United Nations Environment Programme (UNEP)

“The problem is not simply fossil fuel emissions. It’s fossil fuels, period.”
-António Guterres

Governor Jay Inslee

Jay Inslee has been the Governor of Washington State since 2013, and is currently the longest-tenured governor in the country. He began his career in politics working in both the House of Representatives and Congress before being elected the Governor of Washington. Inslee briefly ran for president of the United States in the summer of 2019 leading up to the 2020 election. Governor Inslee believes that climate change is one of the most important issues facing the country today, and made history as one of the first presidential candidates to make climate change their number one priority. As Inslee closes out his final term as governor, he continues to lead Washington toward a cleaner future. He has passed bills that will transition the state to 100% renewable



energy, promote the adoption of electric vehicles, and require zero emissions from all new commercial and residential buildings by the end of the decade. Governor Inslee will leave office as one of the most environmentally conscious politicians in the United States.

“How the Milky Way Was Made” by Natalie Diaz

My river was once unseparated. Was Colorado. Red-
fast flood. Able to take
anything it could wet—in a wild rush—
all the way to Mexico.
Now it is shattered by fifteen dams
over one-thousand four-hundred and fifty miles,
pipes and pumps filling
swimming pools and sprinklers
in Los Angeles and Las Vegas.
To save our fish, we lifted them from our skeletoned river beds,
loosed them in our heavens, set them aster —
‘Achii ‘ahan, Mojave salmon,
Colorado pikeminnow—
Up there they glide, gilled with stars.
You see them now—
god-large, gold-green sides,
moon-white belly and breast—
making their great speeded way across the darkest hours,
rippling the sapphired sky-water into a galaxy road.
The blurred wake they drag as they make their path
through the night sky is called
‘Achii ‘ahan nyuunye—
our words for Milky Way.
Coyote too is up there, crouched in the moon,
after his failed attempt to leap it, fishing net wet
and empty, slung over his back—
a prisoner blue and dreaming
of unzipping the salmon’s silked skins with his teeth.
O, the weakness of any mouth
as it gives itself away to the universe
of a sweet-milk body.
Just as my own mouth is dreamed to thirst
the long desire-ways, the hundred-thousand light year roads
of your throat and thighs.

“Scientists say new epoch marked by human impact — the Anthropocene — began in 1950s”

By: *The Associated Press, NPR*



Photo: Cole Burston/The Canadian Press via AP

A panel of geologists, called the Anthropocene Working Group, has suggested setting a historical marker for the beginning of the Anthropocene at the bottom of Crawford Lake, Canada. The Anthropocene is a new geologic epoch where humanity is the main driver of planetary change, and would mark and end to the Holocene, our current epoch. Sediment layers are incredibly well-preserved at the bottom of Crawford Lake, preserving a very detailed record of environmental change. The current, greater geologic period that the world is in is called the Quaternary period, a period defined by permanent polar ice. Still, scientists have said that may change if global warming melts all of the Earth’s permanent ice.

[Full Article](#)

“EU Parliament passes law to restore degraded natural ecosystems”

By: *Al Jazeera via Reuters*



Photo: Damien Meyer/AFP

In a tight vote of 336-300-13, the European Parliament voted to adopt a proposal to restore one-fifth of Europe’s struggling natural ecosystems. The controversial action exposed divisions on environmental issues among members of parliament (MEPs). Many conservative MEPs pushed hard against the law, citing social and economic consequences that would be counter-productive to the initiative. Those in favor noted that the law does not seek to harm anyone, but rather protect nature and restore Europe’s depleted soils. A host of scientists and activists supported the law throughout its evolution, including Greta Thunberg, the famous Swedish climate activist. The natural restoration law comes at a time when the EU is passing a variety of other pro-environment legislation, including a law to diminish farm pollution and protect pollinators.

[Full Article](#)

“The energy transition is underway. Fossil fuel workers could be left behind”

By: Madeleine Ngo, *The New York Times*



Photo: Maddie McGarvey, *The New York Times*

As coal, oil, and gas plants shut down, skilled workers once making six-figure salaries have been forced to leave their communities, deplete their retirement savings, and take much lower-paying jobs in other industries. Renewable energy sources like solar and wind require less labor, different skill sets, and pay lower wages. The communities in which these plants are located have experienced high unemployment, greater use of Medicare and Medicaid, and a population decline of younger people. The Biden administration has offered a 40% tax credit for renewable energy development in fossil fuel-reliant areas to promote regional growth. Some say this is not enough to attract development in these areas and advocate for direct assistance for laid-off workers.

[Full Article](#)

“Nauru prepares to mine deep seas in big climate controversy”

By: Alexander Kozul-Wright, *Al Jazeera*



Photo: Gustavo Graf/Reuters

The Pacific island of Nauru has become the site of an intense battle over whether or not deep sea mining should be pursued to provide rare earth metals for electrifying the world. Nauru’s government believes these minerals are important for green technology and is attempting to move forward using a legal loophole to grant licenses for mining. However, conservationists, other countries, and some companies are arguing against the practice, citing ecological concerns as mining threatens species and contamination of marine ecosystems. Deep sea mining has become increasingly attractive to much of the world. China has been exploring the deep parts of the ocean for many years and Norway is also prepared to start mining off its coast. With little regulation, Nauru may have the power to start mining operations soon, but the opposition is currently trying to stall any development.

[Full Article](#)

“Tribes object. But a federal ruling approves construction of the largest lithium mine”

By: Kirk Siegler, NPR



Photo: Kirk Siegler/NPR

The largest lithium mine in North America will soon be built on federal land in Nevada after a US appeals court denied the most recent efforts of Native American tribes attempting to prevent its construction. The court decided on Monday, July 17th, that the US government did not violate any environmental protection laws in the process. The land where the mine is set to be built is considered sacred land to many Native people and is still used for rituals and ceremonies. The construction of the mine was approved during the Trump administration but Paiute tribes and environmentalists urged the Biden Administration to stop construction. However, because lithium is a key element in electric car batteries and other sustainable technologies, Biden agreed to continue with the mine. The tribes claim that the government rushed the approval process during Covid-19 and did not address all issues raised by the tribes.

[Full Article](#)

“China rebuffs Kerry’s call for faster climate action”

By: Lisa Friedman, Chris Buckley, and Keith Bradsher, *The New York Times*



Photo: Xie Huanchi/Xinhua

China and the United States concluded their first bilateral climate talks in months without reaching any new agreements. Instead, China declared that it will pursue its climate goals on its own, amid its continued record consumption of coal. China has refused to stop building new coal fired power plants or adjust its goal of peaking its emissions by 2030. But China is well ahead of the US in deploying renewable energy and electric vehicles. Combined, the two countries account for 41% of the world’s annual greenhouse gas emissions. But like many other mutual issues, the climate talks were strained by US-China tensions surrounding other issues, particularly over the fate of Taiwan. American officials remain hopeful that progress can be made on climate change, and that the talks could help stabilize the Sino-American relationship.

[Full Article](#)

“Brazilian leaders praise a 34% drop in the rate of deforestation in the Amazon”

By: Joe Hernandez, *NPR*



Photo: Alan Chaves/AFP via Getty Images

During the first six months of 2023, Brazil’s national government has reported a 34% decrease in the deforestation of the Amazon Rainforest compared to the same time period last year. The drop can be accredited to the policies of President Luiz Inacio Lula da Silva, who pledged to protect the rainforest during his campaign. Increased inspections, international embargoes, and fines imposed by environmental authorities on goods linked to deforestation, are among the many policies employed by da Silva to limit forest loss. The upcoming dry season will likely still bring destructive wildfires, caused by illegal deforestation, that could further threaten the rainforest. The illegal clearing of land for activities like soybean farming and cattle grazing remains the primary cause of deforestation, with a small minority of farmers responsible for most of the destruction.

[Full Article](#)

“As climate shocks multiply, designers seek holy grail: Disaster-proof homes”

By: *Christopher Flavelle, The New York Times*



Photo: Bryan Tarnowski/The New York Times

Geodesic domes and other resilient home designs are gaining popularity among climate-conscious home buyers in the face of increasingly frequent extreme weather events. The domes’ unique design, with aluminum shingles reflecting heat and making it easier to insulate, can make it an attractive choice for those living in areas at risk of wildfires, heat waves, and high winds. These designs offer protection against severe weather events, reducing the risk of property damage, as well as the emotional and financial tolls of disaster. Innovations such as houses made from steel and concrete, hurricane-resistant roofs, and hurricane-resistant windows and doors are being explored to provide added protection. Building with resilience, however, comes at a cost, which can be around 10% higher than conventional construction.

[Full Article](#)

Can Sustainable Aviation Fuel Lead The Way To Net-Zero Airline Emissions By 2050?

Major airline companies around the world are pledging to achieve net-zero carbon emissions by 2050. Commercial aviation, which accounts for 2-3% of global emissions, is difficult to decarbonize, with Sustainable Aviation Fuel (SAF) appearing to be the only viable short-term solution. In February 2023, United Airlines along with JP Morgan Chase, Honeywell, Air Canada, and Boeing started a \$100 million venture capital fund to invest in SAF start-ups. In May 2023, Dutch company SkyNRG announced their plans to build a \$600-800 million SAF plant in Washington state which will be operational by 2028-29 and produce 30 million gallons annually. Despite several new developments, SAF faces many challenges to widespread adoption including limited quantity/scalability, high price, and insufficient government subsidies.

SAF can be made with two processes: alcohol-to-jet and power-to-liquid. Alcohol-to-jet (ATJ), involves the fermentation of organic waste to produce ethanol that is then converted to fuel, and is currently the only process used. The wastes used as a feedstock includes commercial cooking oils, waste animal fats, and agricultural waste, which can produce methane (CH₄) gas. A key limitation of ATJ is that there is a limited supply of feedstocks and the process cannot be easily scaled. Some experts say corn farmers could grow more cover crops, crops planted outside the harvest season used to improve soil quality, which could be used as feedstock. ATJ SAF is blended with conventional jet fuels at up to a 50/50 proportion and can reduce greenhouse gas emissions from aviation by around 50%. The two largest aircraft manufacturers, Boeing and Airbus, plan to make airplanes capable of handling 100% SAF by 2030, though this will require cooperation from engine manufacturers.

A brand-new process, power-to-liquid (PtL), has been developed by Honeywell but has yet to be implemented commercially. PtL combines green hydrogen, made in electrolyzers powered by renewable energy and water, and carbon dioxide to create lower-carbon methanol, which is then turned into fuels including SAF. The economic viability of PtL will be heavily influenced by the cost of the renewable electricity used to make green hydrogen. PtL fuels can reduce greenhouse gas emissions by 88% compared with traditional petroleum-based jet fuel. The first producer, HIF Global, plans to deploy the technology at a facility that will recycle around 2 million tons of captured carbon dioxide from industrial smokestacks to make around 11,000 barrels per day of SAF by 2030.

In May 2023, ATJ fuels cost about \$6.83 a gallon compared to \$2.34 per gallon for conventional kerosene-based jet fuels. The SAF market has strong demand but there is poor pricing visibility because of the small market size and confidential supply agreements. In the United States, tax credits and subsidies for SAF exist at both the federal and state levels, but experts say they are insufficient to encourage mainstream use. At the national level, 2 tax credits were created by President Biden's Inflation Reduction Act, which offer up to \$1.75 per gallon payout depending on the SAF's emissions relative to fossil fuels. Currently, refineries are only able to take advantage of a \$1.25 per gallon payout for a 50% reduction in emissions. In Washington state, the location of the SkyNRG plant, a new bill creates tax credits that will provide subsidies of up to \$2 per gallon for SAF. While a good first step, these subsidies are not enough to encourage airlines to purchase more SAF and convert

existing diesel refineries to produce it. Willie Walsh, the head of the International Air Transport Association (IATA), says “Passengers will have to pay higher fares. We need to be honest with our customers.” He goes on to argue, “Airlines are not in a financial position to absorb that cost, so ultimately it will have to be passed on to consumers.”

Industry experts disagree on whether SAF alone will be enough for the airline industry to reach net-zero carbon emissions by 2050. Skeptical consultants at Bain & Company predict that even with a massive \$1.3 trillion investment, SAF supply will not scale enough (20% of forecasted 2050 demand) nor be cost competitive (2-3x price) to replace conventional jet fuel by 2050. Additionally, all-electric airplanes will not be ready by 2050 and hydrogen-powered airplanes face huge logistical and infrastructure challenges. Bain suggests the way forward is accelerated fleet renewal with more fuel-efficient aircraft, maximum use of SAF, and hybrid-electric aircraft with external electric propulsors. Furthermore, contrails produced by planes trap heat radiating from the earth’s surface, which warms the atmosphere. Making matters worse, planes produce larger and longer lasting contrails when burning SAF compared to traditional jet fuel.

Experts at McKinsey & Company believe net-zero emissions are possible by 2050, but not without major effort and investment. To stay on track, SAF production will need to increase 5-6 times by 2030, requiring 300-400 new plants and the associated upstream infrastructure. McKinsey believes that carbon-neutral growth through 2030 would require \$40-50 billion in SAF investment annually, and about \$175 billion annually would be required through 2050. This sums to an eye-watering \$4 trillion investment by 2050. They also believe that hydrogen and electric aircraft could have a real impact on shorter flights by midcentury provided technological breakthroughs. Additionally, carbon dioxide removal technologies will be essential to reduce residual emissions but cannot replace decarbonization.

Regardless of whether net-zero is achieved by 2050, it is clear that SAF is the leading answer to a greener, if not emission-free, future.

One World One Ocean, California

Introduction

One World One Ocean (OWOO) is a nonprofit organization based in Laguna Beach, California. Their founder, Greg MacGillivray, creates educational films about the importance of ocean conservation. MacGillivray has been creating these films for the past 50 years. He works with IMAX and other outreach programs to educate as many people as possible on the importance of marine conservation, and change society's perception of the ocean. OWOO produces films, documentaries, and online content showcasing the beauty of the ocean, the threats it faces, and the work being done to preserve it.



Mission & Goal

The mission at OWOO is to raise awareness about ocean degradation. The organization encourages people to value the many resources the ocean provides and motivate others to protect them. Through their online presence they provide various options on how to improve ocean health by modifying habits in people's daily lives. These options include buying sustainably harvested seafood, reducing plastic waste, and expanding marine protected areas (MPAs).

OWOO's campaign uses movies, TV, and digital media to illustrate their vision for a healthy ocean. They advocate for policies that will help restore and protect the health of the world's oceans. OWOO collaborates with various partners, including scientists, filmmakers, educators, and other non-profit organizations, to amplify its message and create a broader impact.

Leadership

Greg MacGillivray, the founder of OWOO, has been producing films for over 50 years. He is a part of a team called MacGillivray Freeman, which he started with his partner Jim Freeman. In 1974, they were presented with an opportunity to use a new format called IMAX. Jim died in a helicopter crash 2 days before the team's first IMAX film came out. Since then, they have created 35 IMAX films. Now Greg MacGillivray works with his son Shaun alongside other members of their team to carry on the legacy of MacGillivray Freeman films.

Accomplishments

OWOO has produced films such as Warner Bros. and IMAX's *To the Arctic*, MacGillivray's *Humpback Whales*, and IMAX and MacGillivray Freeman's *Journey to the South Pacific*. These films all portray the beauty and significance of the ocean. Each film is shown in over 200 museum IMAX Theaters, aquariums, and science centers in 32 countries. MacGillivray and Freeman have been nominated for two

academy awards for their films *The Living Sea* and *Dolphins*. They've worked with many famous artists including Meryl Steep, Paul McCartney, Tom Selleck and Cate Blanchett, to name a few.

Assessment

OWOO collaborates with like-minded organizations, institutions, and individuals to advance its mission. Over time it has supported projects and initiatives related to ocean conservation, research, and education. The organization also works with governments, businesses, and local communities to promote sustainable practices and protect vulnerable marine ecosystems. The MacGillivray Freeman legacy is strong, as is their mission to create films that educate and inspire their audiences to advocate for marine conservation.

High Level Political Forum on Sustainable Development

SDG 7

July 12th, 2023

Three NGO Sustainability interns and NGO Sustainability President Roma Stibravy, attended the 2023 High-Level Political Forum (HLPF) on the Sustainable Development Goals (SDGs), at the annual meeting of the UN Economic and Social Council (ECOSOC).

NGO Sustainability's representatives specifically attended a three hour forum on Sustainable Development Goal SDG 7: affordable and clean energy.

Despite the SDG energy target of universal electrification by 2030, almost 700 million people currently lack access to reliable electricity. Four out of five people live in Sub-Saharan Africa, which amounts to roughly 50% of the Sub-Saharan African population. There is a lack of access to affordable cooking devices for daily meal preparation. Unfortunately, there has not been much progress in promoting clean cooking, which causes indoor air pollution, posing an acute risk specifically to women and children.



While the conference served as an important opportunity to share progress and ideas on renewable energy and electrification, significant challenges remain. The private sector needs to invest significantly more capital into developing country energy markets, to promote both renewable energy and universal electrification. As the impacts of climate change intensify, it has never been more important to transition away from fossil fuels, and create a healthier, more resilient society for all.

Producer: Roma Stibravy, President

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