SEALOEarth

Serene Environment And Life On Earth

A world in which all people participate in the stewardship of planet Earth.

SEALOEarth in Special Consultative Status with the United Nations ECOSOC since 2017

NEWSLETTER

Earth Day 2026

"We will explore. We will build... But ultimately, we will always choose Earth. We will always choose each other."

~ Artemis II mission specialist, Christina Koch

Full disk of Earth, as seen from the Orion capsule. Photo credit: Reid Wiseman/NASA

INSIDE

We hope that you will enjoy reading this newsletter

United Nations 11th Multi-stakeholder Forum on Science, Technology and Innovation for the Sustainable Development Goals

UN Headquarters, New York, USA

The forum takes place on 6–7 May 2026 at the United Nations Headquarters under the theme: "*Transformative, equitable and coordinated science, technology and innovation for the 2030 Agenda and a sustainable future for all*."

Convened by H.E. Mr. Chola Milambo (Zambia) and H.E. Mr. Gregor W. Koessler (Austria), it brings together global stakeholders to explore how science, technology, and innovation support the achievement of the Sustainable Development Goals.

DESA USG LI Junhua (right) with the Co-Chairs of the 2026 STI Forum, H.E. Mr. Chola Milambo (middle) and H.E. Mr. Gregor W. Koessler (left). Photo credit: Predrag Vasic, DESA.

The Forum provides a platform to identify and showcase high-impact innovations, address trade-offs, and accelerate inclusion. It highlights practical solutions, good practices, and country-led innovation strategies, including STI for SDG roadmaps and digitalization efforts. Discussions also focus on enabling environments, knowledge sharing, innovative financing, and expanding access to technologies in the public domain, while taking stock of progress and identifying remaining gaps and divides.

Discussions align with the 2026 High-level Political Forum (HLPF) and focus on five SDGs: clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), industry, innovation and infrastructure (SDG 9), sustainable cities and communities (SDG 11), and partnerships for the goals (SDG 17).

SEALOEarth is participating in the Forum, contributing perspectives on ecological responsibility, community engagement, and the integration of human behavior into sustainability efforts.

Bibliography

1. United Nations. Department of Economic and Social Affairs, Sustainable Development. https://sdgs.un.org/tfm/STIForum2026

*****

Celebration of Earth

Westford, Massachusetts, USA

On April 22nd, 2026, the Earth Flag was hoisted at the home of Dr. Chaitanya Hiremath.

Environmental Distinction 2026

Inspiring environmental projects related to fostering biodiversity, strengthening ecosystems, and establishing sustainable practices were invited.

Environmental Award

None

Global Essay Contest 2026

Around the World

In the early 2026 alone, SEALOEarth's global reach included countries such as, Australia, Brazil, Canada, China, Ethiopia, France, Germany, Ghana, India, Indonesia, Iraq, Ireland, Japan, Kenya, New Zealand, Norway, Pakistan, Paraguay, Republic of Korea, Russia, Singapore, Taiwan, United Kingdom, United States of America, Vietnam, among others.

We were delighted to receive essays from 14 countries across the globe. These essays underwent a meticulous blind-scoring process. We are grateful to our International Panel Judges for their time and dedication. The participation of students was encouraged by dedicated teachers from multiple schools.

Essay Contest Awards

"*The planet's blind spots—and why they matter.*"

Junior (ages 14-18)

Emtinan Mohamed, 16 (Sudan)	First Place
Saloni Vengurlekar, 18 (India)	Second Place

Senior (ages 19-25)

Tara Allen, 25 (USA)	First Place

Honorable Mention

Jean Park, 12 (USA)

Minsun Kim, 16 (Taiwan)

Alyssa Nolan, 23 (Canada)

Essay prompt for 2027

"*Innovation vs Impact: Can technology save the planet without destroying it?*"

The deadline is March 1, 2027.

For more information, please visit:
http://sealoearth.org/essaycontest.html

Photo credit: Saloni Vengurlekar

Photo credit: Minsun Kim

Photo credit: Tara Allen

Photo credit: Alyssa Nolan

Earth Day 2026. Photo credit: Dr. Chaitanya Hiremath

The Hidden Fallout: Uranium Mining in Baikenzhe and Its Silent Toll on Local Communities

Kausar Urmat

Kyzylorda, Kazakhstan

I live in the Kyzylorda Region of Kazakhstan, where the land stretches like an endless ocean of gold grass, and life generally moves at a slow, predictable pace. Last semester in geography class, everything changed in a single lesson. My teacher mentioned Baikenzhe, a small village I had never heard of before, as one of the sites where uranium is extracted. He described the mining process—acid solution pumped deep underground to dissolve uranium ore—and then he paused. The room was silent, and I remember wondering how a process so valuable to modern science could be happening practically in our backyard without most of us knowing. That day, I began to question the true cost of innovation.

KATCO - one of the world's leading producers of uranium by ISR Technology. Photo credit: Orano Group.

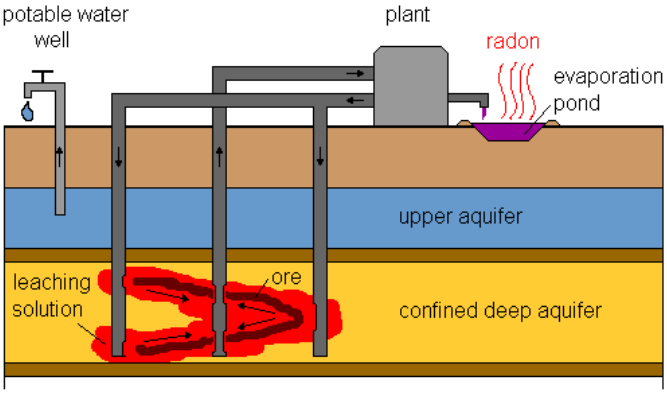
A worker holds an intermediate form of uranium. Photo credit: Pallava Bagla/Corbis News via Getty Images

Kazakhstan holds the world's largest share of uranium production, accounting for over 40% of global output. Yet unlike oil wells or coal mines, uranium extraction sites are seldom featured in maps or news reports. Baikenzhe, with a population of just a few thousand, contributes to this global network through a method called in-situ leaching. Companies pump acidic fluids into underground aquifers to dissolve uranium before pumping the mixture back up. On paper, it's efficient and less visible than open-pit mining. In practice, however, it raises serious concerns.

Stories from the village paint a troubling picture. One farmer described how each morning his well water tastes "bitter and metallic." A schoolteacher mentioned unusually high rates of skin rashes among her students. Elderly residents speak in hushed tones about neighbors diagnosed with chronic coughs or unexplained fatigue. While local health clinics record scattered cases, no comprehensive study has been carried out. Reports from environmental NGOs hint at elevated radiation levels in both soil and groundwater, but their findings remain largely unpublished in mainstream media or governmental records.

This silence around Baikenzhe illustrates a broader "blind spot." When nations debate nuclear energy, conversations focus on reactors, safety protocols, and geopolitical strategy. Rarely do these debates consider the village at the end of the supply chain. International forums debate uranium enrichment but neglect the everyday

consequences for agricultural communities. Local and national news outlets prioritize more sensational stories, leaving those who bear the hidden costs with no platform, no formal grievance process, and often, no legal recourse.



Impacts of Uranium Mining. Photo credit: WISE Uranium Project.

The imbalance between benefit and burden raises important ethical questions. Cities thousands of kilometers away harness power generated by uranium, enjoying lights, healthcare, and industrial growth. Meanwhile, Baikenzhe's residents risk contaminated water, health hazards, and environmental degradation. Who pays for progress? In a fair system, profits would fund rigorous environmental monitoring, healthcare support, and community development. Instead, extraction profits often leave the region, leaving behind only questions and unspoken suffering.

Ghost cities of Kazakhstan. Photo credit: r/UrbanHel.

Addressing this blind spot requires action on several fronts. First, government agencies must commission independent, transparent environmental and health impact studies. Data should be openly shared with villagers in accessible formats. Second, mining companies need stronger accountability, with clear protocols for spill response and long-term remediation. Third, local voices must shape decision-making through community councils with real power to influence permits and safety measures.

Ultimately, Baikenzhe's story is not unique. Across the globe, communities near extractive sites—gold in Ghana, oil in Nigeria, rare earths in China—face similar fates. By recognizing these hidden tolls, we can advocate for global standards that prioritize human health alongside national interests. As a student, I may not rewrite policies overnight, but I can raise questions, share these stories, and work toward change. Our collective future depends on listening to those who live closest to the sources of our modern world.

Bibliography

1. Greenpeace. "Uranium Mining: Poisoning the Planet." Greenpeace International, 2021, https://www.greenpeace.org/international/publication/uranium-mining.

2. International Atomic Energy Agency. "Uranium Production Cycle and the Environment." IAEA, 2022, https://www.iaea.org/topics/uranium-production-cycle.

3. Kazakhstan Ministry of Ecology. "Environmental Impact Reports on Uranium Mines." 2023, https://www.gov.kz/memleket/entities/ecogeo/documents.

4. World Nuclear Association. "Uranium and Nuclear Power in Kazakhstan." 2024, https://world-nuclear.org/information-library/country-profiles/countries-g-n/kazakhstan.aspx.

*****

Bugs Go Silent

Jean Park (12)

New Jersey, USA

Thirty years ago, when my parents would lie in bed as children, they would hear the chirping of crickets, the distinct buzz of cicadas, the noises blending together into a symphony of sounds. In my neighborhood, summer nights are calm and quiet, except, of course, the occasional car down the street. The only time I've ever heard insect noises at night was in a video game! The rapid decline of bugs over the years not only impacts what is heard at night, but also the ecosystems that rely on them to survive through the already crumbling biosphere. Although often dismissed as pests, bugs play a critical role in ecosystems around the world, and the population's shrink poses a serious and underrecognized threat to both the environment and humanity.

To start, the insect population is undergoing a troubling drop as pesticides, habitat destruction, climate change, pollution, and several other factors bring it down. According to the United Nations, the extinction rate among insects is 8 times faster than birds, mammals, and reptiles. Flying insect biomass has fallen by 75% in less than three decades. One third of bug species face extinction within the next few decades. The majority of this decline is caused by neonicotinoids, a type of insecticide used widely on farms. These chemicals contaminate entire plants, including pollen and nectar, which pollinators rely on as vital food sources. Neonicotinoids target the nervous system, even non-lethal doses causing disorientation, paralysis, and difficulty performing tasks crucial to life. Because of their constant presence in water and soil, non-targeted bugs are also exposed to the chemicals long after their application, further contributing to the population's long term decline. Habitat loss is another large influence on the shrinking amount of bugs as a result of the expanding agriculture industry, as well as deforestation and urban development. Climate change has altered the environment in which insects live in as well, disrupting migration patterns, availability of food sources, and presenting mismatched seasonal cues. Several types of pollution also contribute, with light pollution confusing nocturnal insects, and chemical pollution contaminating soil, water, and air.

Deforestation in the Amazon Rainforest, which is home to 10% of all the wildlife species we know about. Photo credit: GRID-Arendal/Flickr.

Not all insects are pests, as many people mistakenly view them. They are the pollinators of 75% of flowering plants and almost 35% of global crops, meaning that the loss of them would devastate these organisms that rely on bugs to pollinate them as well as humans who consume them. They are the prey of birds, fish, bats, and even other insects as a primary food source for these species. The immediate repercussions of the loss of insects would cause them to suffer. They are the drivers of the decomposition of dead organic matter. Species such as flies, ants, and beetles help to return nutrients to the soil and maintain the health of the ecosystem. They can sometimes act

as living natural pesticides. Without ladybugs, lacewings, parasitic wasps, and others of the like, the use of these harmful chemicals would increase, causing further harm to the environment. Additionally, insects aerate soil by burrowing and nesting, which also improves water retention and soil structure. The many jobs of bugs might seem mundane at first glance---after all, most people don't look at a spider in the closet and think "that's my very own free pest control. Yippee!" However, they are crucial to the preservation of ecosystems, even as their importance is overlooked.

Learning from Billions of Years of Evolution. Photo credit: RE:TV

To save such an important collection of species, it is crucial to protect their habitats, decrease reliance on pesticides, educate the public, and take action to restore the damage that has been done to them. Implementing sustainable farming techniques to minimize harm to the natural environment can help, especially reduction of neonicotinoid use. Planting native species such as flowers, trees, or shrubs can provide food and shelter for local insects. Additionally, avoiding broad-spectrum insecticides and instead using organic gardening practices helps as well. Turning off unnecessary outdoor lights at night prevents nocturnal insects from confusion. Try composting to provide a warm, safe habitat for insects to thrive in even in the dead of winter. When tree leaves fall, the decomposing material becomes a crucial habitat for moths, spiders, beetles, and butterflies, meaning that leaving them on the ground is beneficial to the species that live there. Buying organic produce, which is grown without the use of synthetic pesticides, also helps. In the end, it's the little things that matter, even if they don't seem like they do.

To conclude, the disappearance of insects is not the loss of an occasional annoyance, but rather the devastation of ecosystems that revolve around them. The quiet summer nights that once buzzed with life are a warning sign of a much larger environmental collapse driven by human activity and neglect. While insects are often overlooked or misunderstood, their role as pollinators, decomposers, and foundational food sources make them indispensable. This is all part of the blueprint that has created the world as we know it, but we sometimes forget the power of nature's wisdom. Protecting insects means protecting the balance of the natural world itself, because when the bugs go silent, the consequences will be anything but.

Bibliography

1. Saravia, Christian. "Insects Matter. Why Are We Wiping Them Out?" Earth.org, 20 May 2025, earth.org/insects-matter-so-why-are-we-wiping-them-out/. Accessed 26 Jan. 2026.

2. USDA. "The Importance of Pollinators." Usda.gov, 11 Dec. 2024, www.usda.gov/about-usda/general-information/initiatives-and-highlighted-programs/peoples-garden/importance-pollinators. Accessed 26 Jan. 2026.

3. Sustainable Human. "The Forgotten Wisdom of Nature | Janine Benyus." YouTube, 6 June 2022, www.youtube.com/watch?v=JJQySsC5xes. Accessed 1 Mar. 2026.

*****

Are clean-up drives really worth it, or are they just temporary fixes for a much deeper problem?

Saloni Vengurlekar (18)
Navi Mumbai, INDIA

Away from the city, there is a place that looks clean and peaceful from the outside, but it carries deep pain inside, a reality that we cannot ignore. A place where litter travels from irresponsible and unaware hands to water bodies and then settles in the ecosystem. These are “Mangroves,” an ecosystem that is on “Red Alert” today.

Imagine someone threw trash on our faces, and it was not removed for hours; we would not be able to breathe. The roots of mangroves work the same way. Unlike most plants, their roots rise above the ground to absorb oxygen directly from the air. Today, those roots are buried under our plastic, and they are struggling to breathe.

In this era of climate change and deforestation, there are some soldiers who are on a mission to save this beautiful and unique ecosystem. People often call these volunteers “mangrove soldiers.” Proudly, I am a part of this community service. I remember the moment when I first stepped off the road and walked inside. I did not expect that the place, which looked greener from the roadside, was very polluted from the inside. That taught me that visual beauty does not always reflect ecological health.

Navi Mumbai: Environment Life Foundation Marks 200th Week Of Mangroves Clean-Up Drive, Mobilizing 60,000 Volunteers. Photo credit: Raina Assainar/The Free Press Journal.

What struck me even more was the thought that out of the entire city’s population, we were just a handful of volunteers, barely 1% of the people. The remaining 99% have only ever seen this place from the outside, through a car window or while passing by on the road. Places like this are mostly restricted to the general public, which is why people believe that everything is fine in our city.

Mangroves don't make the news. They don't appear in documentaries the way glaciers or rainforests do. They sit quietly behind our cities, and because most people never walk inside them, people never know what's happening inside. That is exactly what makes them a blind spot.

Mangroves. Photo credit: Natural Habitat Adventures, WWF.

Mangroves survive where most plants cannot. Standing in salty water and thick mud, they quietly trap carbon dioxide, helping to slow the damage of climate change. Beneath

their tangled roots, life begins. Young fish find shelter, crabs and shrimps feed and grow, reptiles hunt and nest, and birds gather where food is plentiful. Mangroves are not just trees; they are home to entire coastal ecosystems. In “The Forgotten Wisdom of Nature,” Janine Benyus highlights how natural systems have solved complex problems long before humans. Mangroves are one such example. They protect coastlines, store carbon, and raise entire species, all at once (Benyus).

When we, as mangrove soldiers, enter the mangroves, the voices of a variety of birds welcome us. During the clean-up drive, seeing plastic choking the roots while small baby crabs were roaming on it was heartbreaking. Because of our careless behaviour, we are damaging the homes of species that help to balance our ecosystem.

Most of the litter in mangroves consists of plastic materials because plastic has a lower density and floats easily, allowing it to travel through water bodies. These are the plastics we use in our daily lives. For example, single-use plastics like bottles and packaging and daily-use products like toothbrushes and slippers. Every piece of waste dumped in the wrong place connects to the ocean or flows into drains and water bodies during rain. According to the United Nations Environment Programme, in many countries around the world, drainage water carrying untreated waste flows directly into water bodies, reducing oxygen levels, spreading toxins, and harming aquatic life and coastal areas, where mangroves trap the waste in their roots, causing long-term damage to the ecosystem and the species that depend on it (UNEP).

During clean-up drives, I noticed that the waste trapped in mangroves was not limited to plastic alone. Items like used syringes and medical packaging were also mixed into the litter, which was because of improper management of medical waste from healthcare facilities. Conversations with local waste-management workers and volunteers revealed how the disposal of such waste puts volunteers at risk, causing skin irritation and breathing discomfort, especially while working in dense, poorly ventilated mangrove areas.

After picking up every non-biodegradable item, what remains are small plastics and microplastics, mostly torn parts of packaging like the edges of food wrappers or chocolate packets. These are difficult to collect because they sink into the mud and exist in such large proportions that volunteers cannot retrieve them all. Over time, they mix with the soil and water, entering the food chain through small organisms, making them one of the most dangerous yet invisible forms of pollution in mangrove ecosystems. A 2021 study in the journal Science of the Total Environment found microplastic contamination in mangrove sediments across multiple continents, confirming that this silent threat is global in scale (Zamprogno et al.).

Microplastic pollution of the beaches of Guanabara Bay, Southeast Brazil. Photo credit: CoastalCare.org

The core challenge is that the number of hands picking up litter is far fewer than the number of hands creating it. Clean-up drives alone cannot drive lasting change unless people's mindsets change too. Some people are knowingly careless, believing it is not their responsibility; others are simply unaware of where their litter eventually ends up.

Even today, in several parts of the world, weak environmental regulations and poor enforcement lead to polluted cities and damaged ecosystems. A ban on plastic holds no value without strict enforcement and genuine public participation. Governments need to step in, with real penalties for dumping near coastal areas, with rules that protect mangrove land from being built over, and with waste systems that actually reach these places before the monsoon does it for them.

In everyday life, convenience is chosen over responsibility. Plastic bags and bottles are grabbed without thought, and throwing waste into the nearest drain feels easier than finding a dustbin. In many parts of the world, shopkeepers still offer plastic bags without asking whether they are needed. In such moments, we each have the power to speak up, to request that shopkeepers ask first before offering a bag, and to encourage bringing reusable bags next time. Also, keep the trash with you until you find a proper bin, avoid tearing packaging into small pieces just to open it, and wrap any small plastic fragments inside a larger piece before disposing so that they do not scatter. These are the smallest things you can do, but for nature, they matter.

On the other hand, in many places, access to clean drinking water is limited, making single-use plastic bottles a hygienic necessity. And in many areas, there are simply no dustbins or other waste-disposal options nearby. Observation shows that when an area is clean, people think twice before littering, but when it is already dirty, no one hesitates. This highlights the need not only for individual responsibility but also for better infrastructure that supports sustainable living.

Cities are built to look clean, not to manage waste sustainably. But a clean street does not mean a healthy city; it just means the mess has been pushed somewhere else. During monsoons, floods push even more garbage in. While cities recover quickly, the roots of the mangroves suffocate.

Clean-up drives not only aim to clean the mangroves, but they also have the power to transform mindsets. Every volunteer who joins, even for a single day, will never forget the experience and will think twice before using or discarding plastic. That one person carries this awareness back to their family and friends, and it spreads further than any awareness seminar could.

Mangrove drives have unexpectedly claimed a soft corner in my heart. Without any formal awareness campaign, just by being there, this place has taught me everything. When I walk out of the mangroves with dirty clothes and a bag full of trash, I feel a deep sense of pride. During the drive, my mind lives in the present and is always in quiet conversation with nature. And maybe that is the real answer to the question I started with: clean-up drives are not a permanent fix, but they are the reason some of us finally start to see.

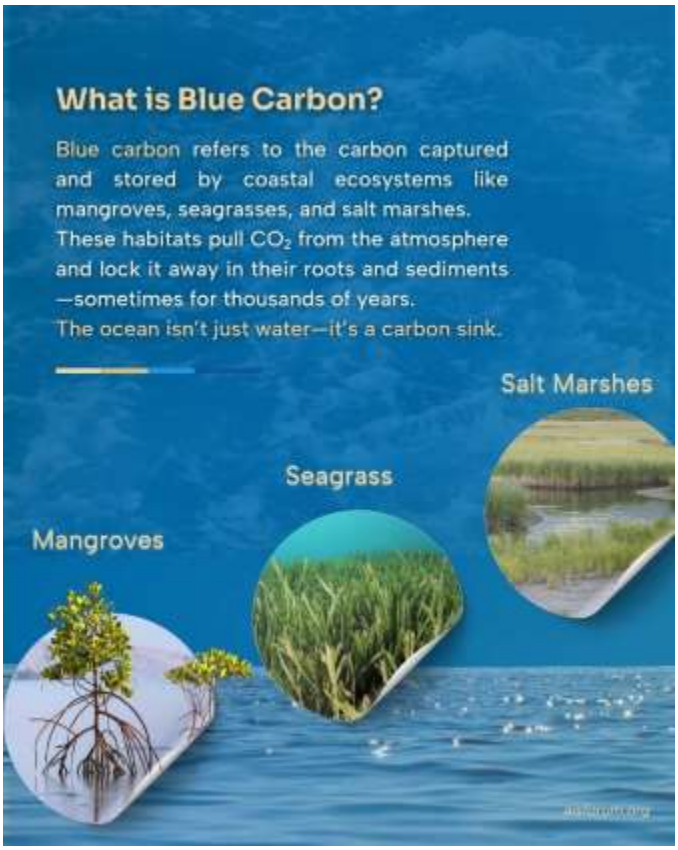
Bibliography

1. Benyus, Janine. "The Forgotten Wisdom of Nature." YouTube, uploaded by Sustainable Human, 2014, https://youtu.be/JJQySsC5xes?si=0QXRovYHDFWyVAr6, Accessed 28 Feb. 2026.

2. United Nations Environment Programme. "Plastic Pollution." UNEP, www.unep.org/plastic-pollution. Accessed 28 Feb. 2026.

3. Zamprogno, Gabriela Carvalho, et al. "Spatial Distribution of Microplastics in the Superficial Sediment of a Mangrove in Southeast Brazil." Science of the Total Environment, vol. 784, 2021, p. 146963, https://doi.org/10.1016/j.scitotenv.2021.146963.

*****



Conservation of the Mangrove Ecosystem. Photo credit: aisforum

When Survival Fuels Climate Change: Energy Poverty as a Global Blind Spot

Emtinan Mohamed (16)
Al Diean, SUDAN

Before sunrise in many Sudanese villages, thin columns of smoke rise from small clay stoves. Women and children walk long distances to collect firewood, not as a cultural tradition, but as a daily necessity for survival. This dependence on traditional biomass is not only a local hardship; it reflects a broader global energy inequality affecting millions across the developing world. Despite technological progress and international climate commitments, access to modern energy remains uneven. According to the International Energy Agency (IEA) and development institutions, hundreds of millions still lack electricity, while billions continue to rely on polluting fuels for cooking, particularly in sub-Saharan Africa (IEA; UNDP). Achieving universal energy access remains a central priority under the United Nations Sustainable Development Goal 7 (United Nations, SDG7), yet progress is insufficient to meet global targets. Energy poverty in Sudan therefore represents more than a national challenge; it exposes a critical blind spot in global climate conversations, where survival needs often collide with environmental sustainability (World Bank).

The smoke rising from early-morning stoves across Sudan is not just a local sight it reflects a widespread energy crisis with global implications. In rural and low-income communities, reliance on firewood and charcoal remains high due to limited access to electricity and clean cooking technologies. This mirrors broader regional inequalities across sub-Saharan Africa, where over 567 million people still lack electricity (IEA). Millions of households depend on polluting fuels not only because of poverty but also due to insufficient infrastructure, high energy costs, and political instability. The consequences extend far beyond energy access alone. Burning biomass in poorly ventilated indoor spaces exposes families to harmful smoke, significantly increasing the risk of respiratory diseases and premature deaths. Women and children are disproportionately affected, spending long hours gathering firewood and cooking, often at the expense of education and economic participation. Additionally, such reliance accelerates deforestation and contributes to carbon emissions, linking local survival strategies to broader environmental challenges (WHO).

A woman prepares a meal at a school. Photo credit: Reuters/File

Energy poverty in Sudan represents a significant blind spot in global climate and development discussions. Of approximately 900 million people worldwide without electricity, 565 million (over 70%) live in sub-Saharan Africa, and nearly 80% of the region s energy consumption comes from inefficient biomass combustion, mainly wood and charcoal (IEA; WWF). This reliance not only threatens human health through indoor air pollution but also accelerates deforestation, greenhouse gas emissions, and habitat loss. Despite the

continent s abundant renewable energy potential, particularly solar, and declining costs of clean energy technologies, many governments and communities still face financial, infrastructural, and policy barriers. Traditional energy access inequalities remain intertwined with global economic systems, market volatility, and uneven international investment. Even as the world advances in clean energy for transportation and industry, basic energy access for billions remains insufficiently addressed, highlighting a blind spot in climate policy and sustainable development priorities (United Nations, SDG7).

Energy poverty in Sudan and sub-Saharan Africa has far-reaching consequences beyond fuel access. Approximately four out of five families in the region still rely on polluting cooking fuels, contributing to over 800,000 premature deaths annually, mostly among women and children (WHO). Beyond the direct health impacts, this reliance reinforces cycles of poverty: women and children spend hours gathering firewood and cooking, limiting opportunities for education, economic participation, and community engagement. The environmental effects are equally significant. Inefficient biomass use accelerates deforestation, contributes to greenhouse gas emissions, and destroys local habitats. The absence of clean cooking solutions perpetuates gender inequality and economic vulnerability, highlighting the intersection between social justice and environmental sustainability.

Benefits of solar mini-grids. Photo credit: WWF

International efforts demonstrate that coordinated policy action and investment can make a measurable difference. The Summit on Clean Cooking in Africa, co-hosted by Tanzania, Norway, the African Development Bank, and the IEA in 2024, mobilized $2.2 billion in financial commitments to expand clean cooking access. Early implementation shows promising results: over 70% of people without access now live in countries with strengthened policy frameworks (IEA; UNDP). These interventions illustrate how targeted strategies can address health, gender, and environmental challenges simultaneously, providing a model for sustainable development in energy-poor regions.

Access to lighting services. Photo credit: WWF

Expanding access to clean energy is essential for addressing health, environmental, and social challenges in Sudan. Solar home systems provide reliable electricity to remote households, enabling students to study at night, clinics to store vaccines, and small businesses to operate efficiently (IRENA). Improved cookstoves are another critical intervention. The IEA reports that efficient stoves can reduce indoor air pollution by up to 50%, cutting fuel consumption and protecting women and children from harmful smoke exposure. These stoves also alleviate the time burden of gathering firewood, allowing women greater participation in education and economic activities (IEA). Financial mechanisms such as micro-financing programs and pay-as-you-go models help low-income households afford solar panels and clean cookstoves, while policy frameworks and international climate funding support governments in scaling up access (World Bank; AfDB).

These interventions demonstrate that sustainable energy access is achievable when technology, finance, and policy work together. By combining solar electrification, clean cooking technologies, and targeted financial support, countries can address health, gender, and environmental inequalities simultaneously. Achieving universal access to affordable, reliable, and sustainable energy by 2030 will not only improve livelihoods but also contribute to climate mitigation and forest preservation, aligning with the United Nations SDG7 (UNDP).

"The climate crisis is a global challenge - and we all need to work together to solve it" - WWF. Photo credit: Karine Aigner / WWF-US

The struggle for clean and reliable energy in Sudan is a call to the world: energy poverty is a blind spot we can no longer ignore. Every investment in solar power, every improved cookstove, and every policy that prioritizes access is a step toward a healthier, more equitable, and sustainable future. This is a global responsibility: governments, civil society, and individuals must act together to close the gap. By confronting energy poverty head-on, we are not only empowering communities today but safeguarding the planet and the rights of future generations. The time to act is now energy access is a cornerstone of human progress, and its absence leaves millions behind (World Bank; IEA; UNDP).

Bibliography

1. AfDB (African Development Bank). Clean Cooking in Africa: Financing and Policy Progress. AfDB, 2024, www.afdb.org/en/topics-and-sectors/initiatives-partnerships/clean-cooking-africa.

2. International Energy Agency. Universal Access to Clean Cooking in Africa: Progress Update and Roadmap to Implementation. IEA, 2025, www.iea.org/reports/universal-access-to-clean-cooking-in-africa.

3. International Energy Agency. Access and Affordability Clean Cooking. IEA, 2025, www.iea.org/topics/access-and-affordability.

4. International Renewable Energy Agency (IRENA). Renewable Energy in Africa: Deployment and Access Update. IRENA, 2024, www.irena.org/publications/2024/Renewable-Energy-in-Africa.

5. United Nations. Goal 7: Ensure Access to Affordable, Reliable, Sustainable and Modern Energy for All. UN.org, 2025, un.org/ar/chronicle/article/20270.

6. World Bank. Energy Access Has Improved, Yet International Financial Support Still Needed to Boost Progress and Address Disparities. World Bank, 25 Jun. 2025, worldbank.org/en/news/press-release/2025/06/25/energy-access-has-improved-yet-international-financial-support-still-needed-to-boost-progress-and-address-disparities.

7. World Health Organization. Basic Energy Access Lags Amid Renewable Opportunities, New Report Shows. WHO, 6 Jun. 2023, who.int/news/item/06-06-2023-basic-energy-access-lags-amid-renewable-opportunities--new-report-shows.

8. WWF. Energy Access in Africa. WWF, 2025, wwf.panda.org/discover/our_focus/climate_and_energy_practice/what_we_do/changing_energy_use/energy_access_africa/.

9. UNDP (United Nations Development Programme). Energy Access and Sustainable Development in Africa. UNDP, 2025, www.undp.org/publications/energy-access-and-sustainable-development-africa.

*****

Sustainable Development Goals (#SDGs). Photo credit: United Nations Development Programme - UNDP

The Cost of Sweetness

Crystal Zheng
Georgia, USA

We often imagine environmental crises in visible forms: smoke rising from factories, plastic piling up in oceans, and ice melting into the sea. These problems feel urgent because we can see them.

Sugar is different. It dissolves. It dissolves not only into our drinks, but also into our bloodstreams, hiding behind words like “energy” and “treat.” It is sweet, ordinary, even comforting. And that is precisely why it may be one of the most overlooked environmental blind spots of our time. I realized this while standing behind the counter of a boba shop.

Matcha Boba Tea. Photo credit: Chopsticks Express.

On a busy afternoon, the line curls toward the door. Orders come rapid-fire: “Brown sugar milk tea, 100% sweetness.” “Matcha latte, extra pearls.” “Fruit tea, half ice, full sugar.” Each drink is assembled with practiced rhythm: tea poured, syrup added, pearls scooped, lid sealed. It feels like craftsmanship, even hospitality. I am giving people something they want.

But no one asks how much sugar is actually inside the drink.

But I see it. I pump it.

Every order begins with the same question, even if it is never spoken aloud: How sweet do you want it? At our shop, the options are 0 percent, 25 percent, 50 percent, 75 percent, and 100 percent. Sometimes even 120 percent. It sounds precise, almost scientific. It creates the illusion of control.

Most people choose 100 percent. It becomes the default, even when we never explicitly say it is. Sometimes I ask, “Do you want full sweetness?” and they nod without thinking. If I ask, “Would you like to adjust the sugar level?” there is often a pause, a moment of uncertainty. Then they say, “Uh… just regular.” Regular means full sugar.

Each serving of syrup is thick and heavy. It feels like something is being added, layer by layer, into a cup that will be finished in ten minutes. Sometimes I catch myself counting: one pump, two, three. By the end, a single drink can easily contain more than 50 grams of sugar, which is the maximum amount the World Health Organization recommends for an entire day (Majkszak). And I am not making just one. I am making dozens, even hundreds.

50g of sugar per day. Photo credit: Mark Davis/Euro News

Yet outside the shop, sugar disappears again into marketing, into culture, and into habit. Unlike plastic waste or carbon emissions, it does not accumulate in landfills or linger in the atmosphere where we can see it. Instead, it accumulates quietly in bodies and communities. This is the blind spot.

Globally, sugarcane is one of the most resource-intensive crops. Producing just one kilogram of cane sugar can require over 1,100 liters of water and generate greenhouse gas emissions (Majkszak). Growing sugarcane uses large amounts of water, often in regions that are already facing shortages. In some countries, wetlands are drained and forests are cleared to make space for large monoculture plantations. Fertilizers and pesticides can run off into nearby rivers, harming ecosystems that communities rely on for food and clean water. The sweetness in a single drink can be traced back to land that has lost its biodiversity and water that has been diverted from already vulnerable populations.

At the same time, sugar's impact on human health is profound. Data shows that sugar contributes around 8 percent of global caloric intake, and its consumption has quadrupled over the past 60 years (Shepon et al.). Rising rates of obesity, type 2 diabetes, and cardiovascular disease are not evenly distributed. They disproportionately affect low-income communities, where cheaper, high-sugar foods are often the most accessible. In these environments, the unhealthy choice often becomes the easiest one. These communities also face structural disadvantages. They often have less influence over the policies that shape their environment and health, and there are real barriers to participation in decision making, including limited access to information and representation (OECD).

Working as a boba barista, I began to see how normalized this cycle is. Customers rarely hesitate to choose "100% sweetness." Anything less can feel like deprivation. Sugar becomes an expectation, tied to celebration, comfort, and identity. Boba itself is a cultural staple, a space for community and connection. People come to boba shops to relax, meet friends, and reward themselves. Questioning the sugar content can feel like questioning the joy it brings.

Yet this is where the blind spot deepens. We have built social rituals around a substance that quietly harms both people and the planet. Sugar becomes a habit, and habits are invisible until we choose to see them. As Jones explains, systems often depend on silence to remain unchanged, and comfort prevents people from questioning them (TED).

How much sugar is really in our favorite drinks? Photo credit: Bodysmart.

Addressing this issue is not as simple as telling people to "drink less sugar." That approach ignores the systems that shape our choices. The idea of being "the domino" helps reframe this problem. One person acts, and others follow (TED). In environmental issues, that domino does not have to be large. It can start small. It can start with noticing.

In a boba shop, being "the domino" is not dramatic. It can be as simple as saying, "Our drinks are pretty sweet. Many people prefer 50 percent." It is the moment someone tries less sugar for the first time. It is the moment a habit shifts, even slightly. Small changes can build on one another. That is how dominoes fall (TED). But individual action alone is not enough. Change must also happen at the system level.

One barrier is the way choices are presented. Default options strongly influence behavior. In many shops, 100 percent sweetness functions as the default, even when it is not explicitly stated. Shifting the default to 50 percent, or offering more unsweetened and naturally flavored options, can guide behavior without removing freedom.

Another barrier is information. Menus display percentages, but they rarely show how much sugar those percentages actually represent. "50 percent" or "100 percent"

sounds precise, but it does not translate into a clear understanding of intake. Without that clarity, it is difficult for people to make informed decisions. Therefore, instead of listing only percentages, boba shops could display the approximate grams of sugar for each drink at different sweetness levels. For example, a menu could state, "100 percent sweetness equals 60 grams of sugar; 50 percent equals 30 grams." When people see that a single drink can exceed the recommended daily amount, it creates awareness without forcing a choice.

The Environmental Toll of Sugar Production. Photo credit: Zindagistevia.

Finally, the issue extends beyond consumption to production. Sugar is not only a health concern but also an environmental one. Supporting more sustainable farming practices, reducing reliance on monocultures, and investing in alternatives can help lessen its environmental impact. Policies that address agricultural runoff, water use, and land management are just as important as those that target consumption.

I still work behind the counter, sealing cups and handing them to waiting customers. But now, I notice the small moments of change. A customer asks for "less sugar." Another tries "0% sweetness" for the first time. These choices are minor, almost invisible, just like sugar itself. Yet they are where larger shifts begin.

The most dangerous environmental problems are not always the ones we can see. Sometimes, they are the ones that dissolve so completely into our daily lives that we forget to question them at all. Sugar is one of them. It slips into everything, into our habits, our routines, and our expectations, until it becomes easy to ignore.

But that is exactly why it matters. We call it sweet, but the cost of sugar is something we can no longer afford to ignore.

Bibliography

1. Majkszak, Ben. "The Environmental Impact of Sugar Reduction." Kerry Health and Nutrition Institute, 4 May 2021, khni.kerry.com/articles/the-environmental-impact-of-sugar-reduction/.

2. OECD. "Environmental Justice." YouTube, 10 July 2024, www.youtube.com/watch?v=sdk2AGO2XBc.

3. Shepon, Alon, et al. "The Environmental and Social Opportunities of Reducing Sugar Intake." Proceedings of the National Academy of Sciences, vol. 121, no. 48, Proceedings of the National Academy of Sciences, Nov. 2024, https://doi.org/10.1073/pnas.2314482121.

4. TED. "Get Comfortable with Being Uncomfortable | Luvvie Ajayi Jones." YouTube, 2 Jan. 2018, www.youtube.com/watch?v=QijH4UAqGD8.

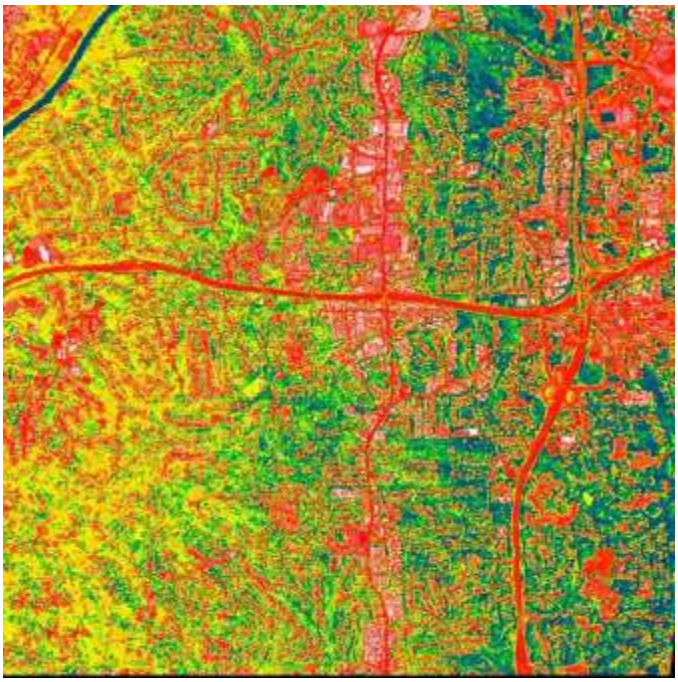
*****

Concrete Inheritance: Urban Heat Islands and Britain's Unequal Exposure to Extreme Heat

Benjamin Pearce (18)
Walsall, UNITED KINGDOM

In July 2022, the United Kingdom crossed an unprecedented threshold, as temperatures in London exceeded 40°C for the first time in recorded history ("Highest Temperatures in London Heathrow History"). The rail lines buckled, wildfires broke out on the urban fringe, and ambulances queued outside overheated hospitals. For a country stereotyped for drizzle and grey skies, the heat felt surreal. Yet the most important detail was not the national record. It was the postcode. Some neighbourhoods were measurably hotter than others with parts of London, Birmingham, and Manchester, having surface temperatures that soared far beyond nearby greener districts. The difference was not accidental. It was structural.

Urban heat islands (UHI) occur when cities become significantly warmer than surrounding rural areas due to dense infrastructure, dark surfaces, and limited vegetation (Gregory and Azarijafari). This is because asphalt and brick absorb solar radiation during the day and release it slowly at night, a process intensified by what scientists describe as low albedo (reflectivity) and high thermal mass. Trees, by contrast, cool air through shade and evapotranspiration, releasing water vapour that reduces ambient temperature. Therefore, when the natural canopy cover in urban areas is removed and replaced with tarmac, heat lingers for longer. According to the UK Met Office, urban centres can experience temperatures up to 8–10°C warmer than surrounding countryside during heatwaves, particularly at night ("Urban Climate Impacts"). Night-time amplification is especially dangerous because the human body cannot recover from daytime heat stress without cooler conditions, increasing the likelihood of health risks.

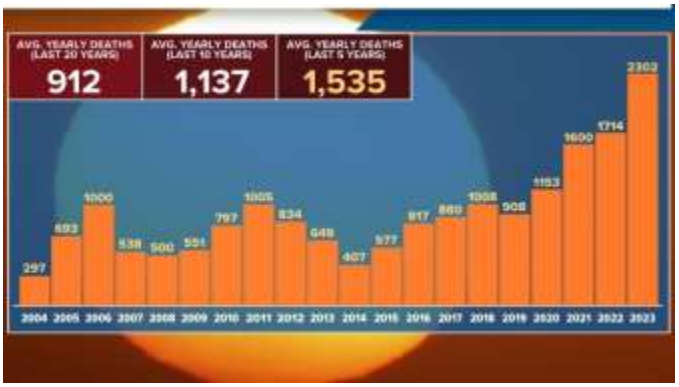


Urban heat island. Photo credit: NASA Kids Science

Urban heat islands are often described as a side effect of climate change, but this framing is incomplete. In Britain, they are also the legacy of post-war planning, road expansion, austerity-driven underinvestment, and uneven access to green space, all of which are influencing urban heat islands.

In addition to this, heat is not merely uncomfortable—it is a public health hazard. The Office for National Statistics reported thousands of excess deaths during the 2022 heatwaves, with older adults disproportionately affected (ONS). Heat exacerbates cardiovascular disease, respiratory illness, and dehydration while also worsening air pollution as higher

temperatures accelerate ground-level ozone formation, compounding asthma risks. Crucially, vulnerability is not distributed evenly. Residents in densely built, lower-income neighbourhoods are more likely to live in poorly insulated housing, lack private gardens, and rely on public transport—exposing them to unshaded pavements and bus stops.



Heat-related deaths have been increasing over the past 20 years. Photo credit: U.S. Centers for Disease Control and Prevention

This pattern reflects what the short film Environmental Justice highlights: environmental burdens are rarely shared equally. Although the term is often associated with industrial pollution, justice applies just as clearly to thermal exposure. In Britain, indices of multiple deprivation correlate strongly with less access to green space as boroughs with lower tree canopy percentages frequently tend to have a lower household income and higher population density.

Scientific studies reinforce this link. Research published on Science Direct examining London's urban heat patterns found that neighbourhoods with less vegetation and higher building density experienced significantly greater heat stress, particularly during night-time periods when cooling is critical (Chan and Liu). The study emphasises that adaptation strategies—such as increasing canopy cover and reflective surfaces—must prioritise vulnerable communities as without targeted intervention, rising temperatures will amplify pre-existing social disparities.

To understand why certain areas lack cooling infrastructure, we must examine planning history. Post-war reconstruction prioritised rapid housing expansion. Concrete estates, high-rise towers, and extensive road networks were constructed to meet urgent demand. While these developments provided necessary housing, they often sacrificed green corridors and tree-lined streets. Over time, maintenance budgets shrank and austerity measures reduced local authority funding for urban forestry and park management, meaning that tree canopy coverage declined in some districts, while wealthier areas maintained private gardens and mature trees.

Janine Benyus, in The Forgotten Wisdom of Nature, argues that natural systems operate through elegant cooling strategies like layered canopies, porous surfaces, and airflow channels that regulate temperature. However, cities largely ignored these principles and instead of mimicking nature's thermodynamic efficiency, urban expansion favoured impermeable surfaces and sealed materials. The result is a built environment that traps and concentrates solar energy rather than diffusing it.

The injustice is subtle but undeniable. Heat exposure in Britain does not carry the same historical narrative of redlining as in the United States, yet class-based spatial inequality has long shaped British cities. This is because lower-income communities are more likely to inhabit high-density estates with minimal tree cover, and are less likely to afford retrofitted insulation or air-conditioning units. If this was not already enough, many rental properties lack effective ventilation meaning that, during extreme heat, these homes become dangerous heat reservoirs.

The issue of neglect around issues of urban heat is due to its invisibility. Floods produce dramatic images of submerged streets and wildfires create mesmerisingly-dangerous spectacles, but heat kills quietly. As Luvvie Ajayi Jones urges in her TED talk, change requires the courage to confront uncomfortable truths. In countries like the UK, it is more comfortable to treat heatwaves as anomalies and temporary disruptions in a temperate climate. Yet climate projections indicate that extreme heat events will become even more of an issue throughout the century, as shown by the fact that every year in Britain is hotter than the last. Pretending that

Britain is immune to thermal risk is not resilience; it is naive denial.

Urban heat islands also undermine ecological stability. Wildlife in urban environments—such as pollinators, birds, and small mammals—experience physiological stress under prolonged high temperatures and elevated surface heat can damage root systems in urban trees, reducing their lifespan and cooling capacity. As heat increases, the urban ecosystem becomes locked in a feedback loop: fewer trees mean higher temperatures, which further strain vegetation.

Critics of greener policies often argue that focusing on urban heat distracts from larger climate mitigation efforts, though this is a false dichotomy. Addressing UHI enhances climate adaptation while supporting mitigation as increasing tree canopy sequesters carbon and cool roofs and reflective pavements reduce energy demand by lowering indoor temperatures, thereby decreasing electricity consumption and associated emissions. If we can begin redesigning cities around sustainability and thermal resilience, it can in turn strengthen our overall climate strategy.

Solutions must be structural, not cosmetic. First, urban forestry targets should prioritise high-deprivation neighbourhoods, with councils mapping canopy gaps against heat vulnerability and allocating resources accordingly rather than distributing tree planting evenly. Second, planning regulations should mandate high-albedo materials for new developments, including cool roofs, permeable pavements, and reflective coatings. Third, retrofitting social housing with improved insulation and passive ventilation systems would reduce indoor heat accumulation. Fourth, green corridors (continuous strips of vegetation connecting parks and waterways) should be integrated into regeneration projects to improve environmental prospects. When used in tandem and on a national scale, these corridors could dramatically improve both airflow and biodiversity.

The most significant issue in tackling the increase in urban heat is the cost involved as these aforementioned implementations are costly and require maintenance, making funding mechanisms critical. National climate adaptation grants must be directed toward local authorities with demonstrable heat vulnerability and investment in urban greening should be framed not as aesthetic enhancement but as public health infrastructure.

Blue-Green Corridors: Integrating Urban Waterways into Climate-Resilient City Design. Photo credit: David/Urban Mission UK

Public awareness also matters. Heat action plans, such as those developed by the UK Health Security Agency, should be communicated clearly to the communities most at risk. Furthermore, while cooling centres, shaded public transport stops, and flexible working policies during extreme heat can reduce immediate harm, emergency responses alone are insufficient as long-term redesign is essential.

The blind spot surrounding urban heat in Britain persists partly because it contradicts national self-image. The stereotype of a cool, rainy island obscures a warming reality. But in 2022, the country was briefly hotter than parts of California. The truth is that the climate is shifting, and our cities, which were designed for a much milder time, are struggling to adapt.

Urban heat islands reveal a truth we would prefer to ignore: environmental risk is built into the landscape. It is encoded in planning decisions, maintenance budgets, and zoning priorities and as climate change accelerates, these encoded inequalities are bound to intensify. The question is not

whether Britain will experience more heatwaves. The question is who will bear the brunt when it does.

If we accept that cities are human creations, then they are also subject to human redesign. Benyus reminds us that nature offers models of efficiency and resilience, and this is true when it comes to urban temperature mitigation as forests cool themselves and wetlands buffer extremes. If we reimagine urban environments through ecological principles like layered shade, permeability, and airflow, we can transform heat traps into livable spaces.

Trees and other plants have a natural cooling effects Photo credit: Gean Lester Bantilan/Architecture.

But transformation requires honesty. As Environmental Justice illustrates, ignoring disproportionate harm directly perpetuates it. The Urban Heat Island Effect must be recognised as a legitimate issue and a direct result of poor urban planning.

In the coming decades, Britain will almost-certainly face rising temperatures with increasing frequency. Children playing on asphalt playgrounds, elderly residents in tower blocks, commuters waiting at treeless bus stops—these are not abstract figures. They are the frontline of climate adaptation. If action remains reactive and evenly spread, inequality will deepen. If it is targeted and evidence-based, cities can become cooler, healthier, and fairer.

The 40°C threshold should not be remembered solely as a record. It should be remembered as a warning. Urban heat islands are the inheritance of past decisions. Whether they remain our future depends on the decisions we make now.

Bibliography

1. Ajayi Jones, Luvvie. “Get Comfortable with Being Uncomfortable.” TED, 2017.

2. Benyus, Janine. “The Forgotten Wisdom of Nature.” TED, 2013.

3. Works CitedChan, Isabelle Y. S., and Anita M. M. Liu. “Effects of Neighborhood Building Density, Height, Greenspace, and Cleanliness on Indoor Environment and Health of Building Occupants.” Building and Environment, vol. 145, Nov. 2018, pp. 213–22, https://doi.org/10.1016/j.buildenv.2018.06.028. Accessed 26 February 2026.

4. Gregory, Jeremy, and Hessam Azarijafari. “Urban Heat Islands.” MIT Climate Portal, MIT, 16 Apr. 2021, climate.mit.edu/explainers/urban-heat-islands.“Highest Temperatures in London Heathrow History.” Extremeweatherwatch.com, 2025, www.extremeweatherwatch.com/cities/london-heathrow/highest-temperatures. Accessed 1 Mar. 2026.ONS.

5. “Excess Mortality during Heat-Periods - Office for National Statistics.” Www.ons.gov.uk, 7 Oct. 2022, www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/excessmortalityduringheatperiods/englandandwales1juneto31august2022.

6. “Urban Climate Impacts.” Met Office, www.metoffice.gov.uk/research/climate/climate-impacts/urban.

*****

The Planet's Blind Spot: Environmental Injustice Explored Through the Case Study of the Korail Slums

Minsun Kim (16)
Taipei, TAIWAN

The world talks about climate change loudly. Whether it be goals of net zero emissions, international conferences, or sustainability campaigns, it is clear that the climate crisis garners worldwide attention. However, other issues closely tied with this are constantly overlooked, and viewed as secondary. One of such is environmental injustice, where thousands of peoples' lives are being crushed by the consequences of an environmental crisis they did not create. This paper aims to explore the blind spot in climate discussion of environmental injustice and the disproportionate consequences that under privileged and marginalized communities are burdened with by observing the case study of life in the Korail slums, connecting it to a broader, global trend, and suggesting possible solutions with real life examples.

Korail, one of the largest informal settlements in Dhaka, Bangladesh, is home to more than 50,000 inhabitants (Naher). Located nearby are the affluent districts of the Gulshan-Banani area. Fully equipped with luxury hotels and upscale living, the prominent lifestyle of abundance in these areas are a stark contrast to the lives of Korail slum residents (Naher). In the Korail slums, most residents live under the poverty line, meaning that basic needs, including food and shelter, are limited and not guaranteed. Furthermore, reliable access to safe water is limited, and basic sanitation is also largely inadequate (Intesar et al.). Healthcare facilities, with residents having to rely on NGOs or small clinics, are hard to come by. This cycle is reinforced by the fact that opportunities for students to gain a quality education inside the slums are scarce (Islam et al.). Thus, formal employment is also largely unavailable or limited, forcing residents to rely on temporary jobs as their source of income (Zaman et al.). However, poor living conditions are not the end of the struggles in Korail. Bangladesh is one of the most vulnerable countries to the growing effects of climate change, which is worsened by the rapid development of major cities, such as Dhaka, and increasing population density, which often lead to the creation of slum residences. These slums, including the Korail slum, are disproportionately affected by extreme weather events, such as increasingly high temperatures and floods (Syed). Most slum residents are not responsible for a large amount of carbon emissions. Most do not own cars, take plane rides, and have limited access to household energy use, such as electricity. Furthermore, because of their limited financial resources, the majority of residents do not partake in much consumption of services. Overall, these people have very low individual carbon footprints, and in essence, this means that slum dwellers in Korail are continuously battered by a vicious cycle of climate change that they had almost no part in creating.

Korail, a city inside a city. Photo credit: The Business Standard.

This phenomenon in the Korail slums is not a fluke or an outlier. Rather, it is an alarming pattern that is being observed around the globe. This is environmental injustice. Environmental justice can be defined as the disproportionate exposure to environmental hazards that is faced by certain

communities, which is often based on aspects such as social status, race, and income. These communities often lack an adequate voice in climate discussions, and there are many barriers against their contribution and active participation in environmental decision making, even though they are commonly amongst the people who are the most directly affected by these policies (OECD). This actively harms human life in these areas, as environmental hazards are known to be causes of disease, disability, and death. Environmental injustice is not a new concept. It was first discussed in the 1980s, when studies found that waste sites in the Southeastern United States were located in poorer areas, where marginalized groups, such as African Americans and Native Americans, were inhabiting. This pattern was also found in New England. However, not all environmental hazards are as obvious as toxic waste sites. Studies observing housing quality inequalities in New York City have found that many bus depots, where pollutants are constantly emitted by resting buses, are located in mostly minority and underprivileged areas. It is also important to recognize that environmental injustice does not occur on its own. It is also connected to a host of more issues connected to poverty, such as limited access to healthcare and absence of stable employment, and taken together, they lead to worse health conditions. Thus, the lack of environmental justice contributes to unequal differences of health across populations, differentiated by factors such as ethnicity, race, and socioeconomic backgrounds (Landrigan et al.).

Vulnerability of Women and Girls to Climate Change. Photo credit: CARE.

There are countless solutions that have been presented to bring the world closer to environmental justice. One of the most prevalent actions taken is reducing the barriers of participation in environmental decision making. This participation can take many forms, including, but not limited to, mandatory public discussion before the issue of environmental policies, dedicated online platforms, and direct community engagement calls (OECD). Another significant solution that is being discussed is the address of the historical roots of environmental injustice. With the argument that this process is essential to effectively treat the cause, rather than the symptoms of environmental injustice gaining more traction, it is often framed as a prerequisite foundation to bring in further meaningful solutions (Carrión et al.). These two solutions are necessary in bringing meaningful structural change on the institutional and governmental scale that will serve to improve the disproportionate impact of climate issues onto certain groups. However, they also often involve a lengthy process of even decades, and require strong political will and a plethora of resources that may not be available in all places, meaning that they cannot bring immediate relief to communities suffering from environmental injustice, such as the residents of the Dhaka slums as mentioned earlier on. Another solution that is being increasingly discussed is the targeted reinvestment in overburdened communities. Advocates of this seek to reverse the long burden of the disproportionate costs of the climate crises by methods such as increasing access to clean water, updating air quality standards, and developing plans to reclaim landfill space (OECD). Furthermore, it is also worth considering the solution of direct home intervention. More specifically, this entails governments or nonprofit organizations providing these communities accessible information on the risks of various environmental hazards, such as ventilation and indoor pollutants, and the distribution of free supplies, including cleaning items, and safety supplies, including smoke detectors. Additionally, demonstrations on the use of these given supplies were also provided (Mankikar et al.). Therefore, direct interventions like these are more effective in providing short-term, immediate help, especially in places like the Dhaka

slums, but they must be accompanied by structural policy changes mentioned beforehand to have a long lasting impact.

Chile: Improve productivity, social protection and boost revenues for a sustainable recovery. Photo credit: OECD

The issue of environmental injustice is one that is frequently overlooked, but it inflicts upon marginalized communities, such as the residents of the Korail slums in Dhaka, Bangladesh, the disproportionate burden of the effects of the climate crisis, carrying significant harm to these communities. To most effectively ameliorate this, interventions that bring immediate relief, such as supplying safety and cleaning materials, must be paired with longer-term institutional changes, including addressing the historical roots of the issue and making the climate decision making process more inclusive. A key demonstration of a meaningful process to better environmental injustice can be found in Chile. The Environmental and Social Recovery Plans were set up for regions most affected by environmental issues and covered air quality standards, monitoring stations, waste management, and various other systems to relieve the burden placed on residents. It also ensured community participation and information access through the Escazú Agreement (OECD). Chile is a key example of what needs to happen in more places, and is proof that long term structural change and short term support can be achieved simultaneously. Though the costs of environmental injustice are borne daily by communities like the residents in the Korail slums, the progress demonstrated by cases such as Chile's offers a crucial reminder that environmental justice is achievable, if faced with strategic actions that prioritize the people.

Bibliography

1. Carrión, Daniel, et al. "Heading Upstream: Strategies to Shift Environmental Justice Research From Disparities to Equity." American Journal of Public Health, vol. 112, no. 1, Jan. 2022, doi.org/10.2105/AJPH.2021.306605.

2. "Environmental Justice." YouTube, uploaded by OECD, 10 Jul. 2024, www.youtube.com/watch?v=sdk2AGO2XBc.

3. Intesar, Anika, and Md Shahin Parvez. "Living with Vulnerability: Triple Burden through the Eyes of Urban Slum Women in Bangladesh." Social Sciences & Humanities Open, vol. 10, 2024, article 101014, doi.org/10.1016/j.ssaho.2024.101014.

4. Islam, Md. Touhidul, et al. "Integration of Technology in Education for Marginalised Children in an Urban Slum of Dhaka City During the Covid-19 Pandemic." EdTech Hub, Nov. 2021, doi.org/10.53832/edtechhub.0063.

5. Landrigan, Philip J., et al. "Environmental Justice and the Health of Children." Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine, vol. 77, no. 2, Mar./Apr. 2010, pp. 178–187, doi.org/10.1002/msj.20173.

6. Mankikar, Deepa, et al. "Evaluation of a Home-Based Environmental and Educational Intervention to Improve Health in Vulnerable Households: Southeastern Pennsylvania Lead and Healthy Homes Program." International Journal of Environmental Research and Public Health, vol. 13, no. 9, 9 Sept. 2016, article 900, doi.org/10.3390/ijerph13090900.

7. Naher, Kamrun. "The Tale of Korail, a City inside a City." The Business Standard, 25 Nov. 2025, www.tbsnews.net/features/panorama/tale-korail-city-inside-city-887291

8. OECD. Environmental Justice: Context, Challenges and National Approaches. OECD Publishing, 2024, doi.org/10.1787/57616eb4-en.\

9. Syed, Md. Abu. Assessing Climate Vulnerability and Resilience among Urban Female Adolescents: A Study in Dhaka's Korail Slum. May 2025, Brac University, Master's thesis, dspace.bracu.ac.bd:8443/xmlui/bitstream/handle/10361/27004/18368001_ARC.pdf.

10. Zaman, Shamrita, et al. Community Profiles of Informal Settlements in Dhaka: Korail, Ershad Nagar, Kallyanpur (Pora Bostee) and Chalantika. International Centre for Climate Change and Development (ICCCAD), 2024, website.icccad.net/wp-content/uploads/2024/02/IUI-Community-Profile-Dhaka_compressed.pdf.

*****

From Pale Dust to the Ukarimu Initiative

Meek Amani (20)

Nairobi, KENYA

The sun rises in the morning with a smile, but the roads in Pipeline, Nairobi, Kenya answer with a cough. Children are rushing to school, touts shouting on buses and everyone getting on with their daily activities. With every step they make off the ground, the earth rises as if it is protesting against the pain being inflicted on it-fine, pale dust, curling around ankles, clinging to school uniforms and slipping silently into lungs in a way we once viewed as normal. No oil spill to point at, no plastics to take photos of, no wild fire to panic over. Just dust. Ordinary, Familiar. Almost innocent. Yet it is a silent killer claiming young lives in pipeline every single day with no big headlines, no alarms, not even a name strong enough to make us flinch. We call it dust and in doing so, we turn our exposure into one of the world's great blind spots-while many keep breathing in the consequences of our neglect, one particle at a time. And yet we still call it normal.

The dust clinging to school uniforms in Pipeline is not an isolated nuisance but a symptom of one of the most overlooked climate crises-often deemed a mere inconvenience, rather than the silent pollutant that it is (Forgotten Pollutant). It is mainly produced by unpaved roads, construction sites and dry soils stripped of vegetation. While global institutions debate carbon emissions and the burning of plastic waste, millions are inhaling particulate matter every day, especially in communities where environmental protection is treated as a luxury. Between 2019 and 2022, the mean annual concentration of PM2.5 in Nairobi was 18.4 g/m, which is 3.7 times higher than the WHO's recommended annual guideline of 5 g/m. In 2021 alone, this level of pollution was estimated to have contributed to between 400 and 1,400 premature adult deaths (World Health Organization). This essay argues that dust is not a minor irritation, but a pollutant that is dangerous enough to threaten both the lives of many generations and the health of the Earth. Treating it as a threat it is may be one of the simplest ways to protect our people and the planet.

Let s pause for a minute, how did we even end up here? Well, dust remains a blind spot because it lacks a spectacle big enough to create attention. It does not explode. It does not burn. It does not smell. It is slow in violence. It spreads until a cough turns into a chronic and breathing begin to require effort, eventually a father can no longer provide. Dust has always existed; it hides behind familiarity making us assume it is harmless. The assumption becomes an excuse for inaction.

Kenya's Air Pollution. Photo credit: Zachary Mayieka/Earth Journalism

The short film The Forgotten Pollutant provides unsettling clarity of how this particle can trigger respiratory problems (The Forgotten Pollutant). So let s dive deeper to understand how these small particles are posing such a threat. Medics define dust not as a single substance but a mixture: soil particles, fragments of construction materials and industrial residues. The finer the particles, the easier it is for them to travel to the lungs, making them the most dangerous. When a community breathes dust every day, the consequences are no longer measured just in hospitals, the school children can no longer pursue their dreams, those touts can no longer raise their

voices, not because they have chosen silence, no-it s just that now it hurts to raise voices. And us who are not hurt are choosing the silence, we are not raising our voices loud enough to speak for them.

Their voices are not heard because dust particles have blurred the equality lines. The exposure to dust is not distributed equally. They concentrate where infrastructure is weak-informal settlements, unpaved roads, bare playing grounds and areas where policies exist on paper but not in practice-left to gather dust along roads they were meant to protect. In wealthier neighborhoods, dust is an enemy that has largely been defeated through, landscaping and enforcement. In poorer ones, that is the least of their problems, they are struggling with limited healthcare, economic insecurity and inadequate housing. Yet ironically, dust keeps shouting in areas where voices are least heard.

This dust shouts in different voices. It is a multifaceted problem, blurring not only our future, but also the ecosystems around us. Trees are complaining, they can no longer make their own food since their stomata are blocked. Aquatic life is also at risk. Dust crosses over from the land into the sea-rain washes it into rivers then large water bodies where they settle as silt. More critically, dust storms are a major contributor of land degradation, making it harder for vegetation to thrive turning fertile land into another victim of the very same dust that starved it.

All hope is not lost. There are existing solutions that can reignite the lively mornings at Pipeline. They are not complicated. We have seen different cities tackle the issue by increasing paving on the roads and planting vegetative buffers on roadsides. We have seen communities rise to the occasion of protecting their own by having tree planting campaigns, maintaining green corridors and restoring degraded land. These examples matter because they prove that dust is a blind spot but not invisible. Once seen and understood by both the people and governments, it becomes very manageable. So yes, we can bring back the tout's voices. And, yes, we can save a generation and another that follows.

School field used as a play area and informal dumpsite. Photo credit: Amani/AEYA

Janine Benyus reminds us that nature has spent billions of years solving problems without poisoning its own systems (Benyus 1997). Restoring vegetation that was once stripped does not require futuristic technology, it requires us to learn from what already works. It begins with creating awareness so that the problem can be recognized and measured because what s seen becomes harder to ignore. I understand that it trickles down to myself as I sit down to reflect through this essay. That's why my friend and I started Ukarimu Initiative - ukarimu meaning kind. We have a vision of greening school spaces in the slums of Nairobi through simple volunteer activities such as planting vegetative covers and creating mass awareness of this blind spot.

I write this hoping it inspires young people across the world, especially Africa, to stand up. To understand that the only way we can fight this blind spot in our community is by doing what little they can where they are. And then, only then will we start a revolution for a dust free earth-where mornings in Pipeline are lively. Where touts can shout. Where school children can breathe dust free air. And where kindness at last has a name.

Bibliography

1. Benyus, Janine M. Biomimicry: Innovation Inspired by Nature. Morrow, 1997.

2. The Forgotten Pollutant. 2020.Youtube, https://www.youtube.com/watch?v=5TNnac9982U

3. World Health Organization. "Age-Standardized Mortality Rate Attributed to Household and Ambient Air Pollution (per 100 000 Population)." data.who.int, 2025, https://data.who.int/indicators/i/80BEA0B/E2FC6D7.

*****

The Blind Spot We Can't Afford: Indigenous Knowledge and the Future We Are Ignoring

Alyssa Nolan (23)
Carp, CANADA

"There is a power in nature that man has ignored. And the result has been heartache and pain." — Anasazi Foundation, The Seven Paths

Humanity has spent decades searching for solutions to the climate crisis, but in doing so, we've overlooked one of the most powerful sources of environmental insight: the knowledge of Indigenous peoples who have protected, nurtured, and learned from the land for millennia. This missing recognition isn't just an oversight, it is the central blind spot weakening global climate resilience.

Ignoring Indigenous knowledge means ignoring some of the planet's strongest tools for resilience, biodiversity protection, disaster preparedness, and ecological balance. As environmental pressures intensify, the consequences of this invisibility grow impossible to ignore.

The Blind Spot: Indigenous Communities Face Environmental Injustice While Holding the Keys to Resilience

SEALOEarth's video on environmental justice explains that "certain communities and groups across the world continue to face disproportionate exposure to environmental hazards," and that the benefits of environmental policies are "unequally distributed." Indigenous communities experience this most intensely.

Whether facing contaminated water, toxic industry, mining expansion, depleted fisheries, or land loss, Indigenous peoples often endure the worst environmental harms while being excluded from decisions. As Indigenous leader Gregorio Mirabal states, "We're fighting for soil, land, food, trees, water, birds. We're fighting for life." This is not metaphor, this is reality. Environmental harm threatens both cultural survival and physical survival.

Indigenous knowledge is crucial in the fight against climate change. Photo credit: Climate Promise/UNDP

Meaningful participation in environmental policy is frequently blocked, exactly the blind spot this contest asks us to identify. The silence around Indigenous expertise is not due to irrelevance; it is due to discomfort. As Luvvie Ajayi Jones argues in Get Comfortable with Being Uncomfortable, people often avoid difficult truths to protect the status quo. One such truth is that Indigenous peoples have cared for the Earth more sustainably than any modern system.

What We Are Missing: Indigenous Knowledge as a Living System of Environmental Stewardship

Indigenous knowledge (IK) is not nostalgia or superstition. It is a living; deeply empirical system of environmental management grounded in local observation and ecological relationships. The systematic literature review "Understanding How Indigenous Knowledge Contributes to Climate Change Adaptation and Resilience" (Dorji et al.) confirms this across 71 studies.

Indigenous communities use IK to: forecast environmental hazards, interpret ecological signals modern forecasting often overlooks, develop climate-resilient food systems, conserve water sustainably, preserve biodiversity, adapt hunting and fishing to changing seasons, protect seeds and store food, diversify livelihoods, and strengthen post-disaster recovery

This aligns with Janine Benyus's message in The Forgotten Wisdom of Nature: the planet is full of species that "live gracefully" within natural limits. Indigenous knowledge mirrors this worldview, based on humility before the land, not dominance over it. There is a cost of ignoring Indigenous ecological wisdom: environmental decline created by our refusal to listen.

Why the Blind Spot Matters: People, Nature, and the Future

1. It matters for people

For many Indigenous communities, IK is the only available tool for survival amid: unpredictable seasons, rising seas, crop failures, changing wildlife patterns, water scarcity, and extreme weather.

Yet these communities face the harshest environmental injustices. Father Anselmus Amo describes the result of deforestation in Papua: "The animals, medicine and clean water sources are gone. And with them, happiness is gone." Ecological loss is also cultural loss.

2. It matters for nature

Indigenous-managed lands hold 80% of global biodiversity, and their stewardship practices, rotational harvesting, sacred-site protection, controlled burns, actively restore ecosystems. Linda Hogan captures the danger of ignoring these relationships: "What a strange alchemy we have worked, turning earth around to destroy itself, using earth's own elements to wound it."

3. It matters for the planet's future

Global climate policy often relies on expensive, high-tech solutions, but Dorji et al. show that IK practices are: proven, scalable, cost-effective, community-driven, and ecologically sound. Ignoring IK is not just a philosophical mistake, it is a strategic one.

What Can Be Done: Integrating Indigenous Knowledge Into Climate Solutions

1. Bridge Indigenous Knowledge and Western Science

Dorji et al. emphasize "bridging IK and scientific knowledge." The Two-Eyed Seeing model is one example, uniting Indigenous insight with scientific methods to understand ecosystems more fully.

2. Include Indigenous Peoples in Decision-Making

Meaningful environmental justice requires: legal recognition of land tenure, Indigenous seats at climate negotiations, community-led conservation, translation of policy into Indigenous languages, and local monitoring systems.

Without this, inequity persists.

3. Preserve and Support Intergenerational Knowledge Transfer

IK is endangered not due to irrelevance, but due to colonial disruption. Supporting it means: community-led education, funding for knowledge keepers, culturally respectful documentation, and youth land-based programs

As Sherri Mitchell writes, "Mother Earth is our first teacher… she shows us this through the harmonious balance… in the rich

biodiversity of our world." Passing on this understanding is essential.

4. Invest in Indigenous-Led Climate Adaptation

This includes: climate-resilient crops, food storage initiatives, sustainable fishing, water conservation, and biodiversity protection

Communities already have solutions, they need investment, not replacement.

5. Speak Up About the Blind Spots

Ajayi Jones reminds us that change requires "being the domino" speaking up even when it is uncomfortable. The discomfort around land rights, sovereignty, and colonial responsibility cannot continue to silence Indigenous voices.

Sun Bear captures this well: "Nature is not dumb. Humanity is dumb when we can't hear… Nature is very much alive." Our greatest mistake is not ecological, it is relational.

Conclusion: Recognizing the Knowledge That Has Been Here All Along

Indigenous Knowledge is not merely a blind spot, it is a missed opportunity of global significance. While the world rushes toward new technologies, Indigenous peoples continue practicing time-tested environmental stewardship refined through generations of observation, cultural care, and ecological balance.

Ignoring this knowledge weakens our ability to face climate change. Uplifting it strengthens our future. The world cannot afford to overlook Indigenous stewardship, not when the planet's most adaptive and sustainable solutions may already exist in the practices of the communities who have cared for it longest.

The blind spot matters because our shared future depends on seeing clearly again.

Bibliography

1. Ajayi Jones, Luvvie. Get Comfortable with Being Uncomfortable. TED, 2017.
2. Anasazi Foundation. The Seven Paths: Changing One's Way of Walking in the World. Berrett-Koehler Publishers, 2014.
3. Benyus, Janine. "The Forgotten Wisdom of Nature." Sustainable Human, YouTube, 2021.
4. Dorji, Tashi, et al. "Understanding How Indigenous Knowledge Contributes to Climate Change Adaptation and Resilience: A Systematic Literature Review." Sustainability, vol. 16, no. 10, 2024, pp. 1–29. PMC11549107.
5. Garnett, S. T., et al. "A Spatial Overview of the Global Importance of Indigenous Lands for Conservation." Nature Sustainability, vol. 1, 2018, pp. 369–374.
6. Hogan, Linda. Dwellings: A Spiritual History of the Living World. W. W. Norton, 1995.
7. Mitchell, Sherri (Weh'na Ha'mu Kwasset). Sacred Instructions: Indigenous Wisdom for Living Spirit-Based Change. North Atlantic Books, 2018.
8. Mirabal, Gregorio. COICA. Various environmental advocacy statements.
9. "Environmental Justice." OECD, YouTube, 2023.
10. "Saving the Red Knot." Paulson Institute, YouTube.
11. Sun Bear. Walk in Balance: The Path to Healthy, Happy, Harmonious Living. Atria Books, 1992.

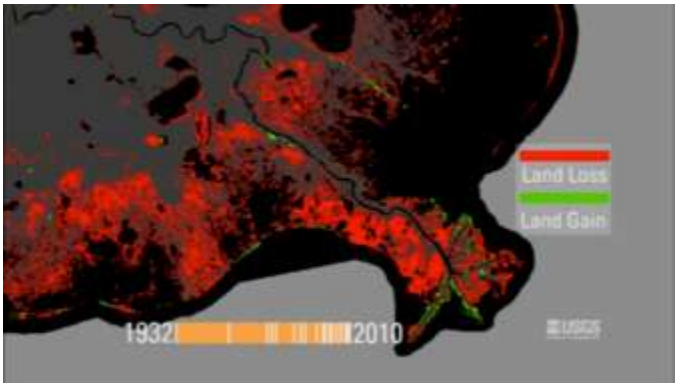
*****

Louisiana Wetland Blues: The Crisis of Louisiana's Vanishing Coast

Tara Allen (25)
Mason, USA

Situated at the mouth of the Mississippi River in the United States is the Louisiana coast. This coastline was formed over thousands of years as the changing course of the Mississippi River carried and deposited sediment into the Gulf of Mexico forming a series of deltas and a rich coastal landscape (Roberts & Mendelssohn). An integral part of this coast are the wetlands, which include both saltwater and freshwater ecosystems (CPRA). These wetlands are vast — covering an estimated 3 million acres across approximately 300 kilometers of coastline (Williams).

Unfortunately, these wetlands are being lost at a staggering rate of around 28 square kilometers per year along with large swaths of land due to coastal erosion (USGS). This is concerning because they provide a plethora of ecosystem services that are vital for the health of the planet and its inhabitants, including habitat provision, wave and flood attenuation, carbon sequestration, and pollution filtration (NOAA, "Coastal Wetland Habitat"). Coastal wetlands are particularly effective at sequestering carbon; they pull greenhouse gases from the atmosphere and store them in their plants and soils at a rate and scale greater than even tropical forests like the Amazon (NOAA, "Blue Carbon"). When these wetlands are damaged or destroyed, their ability to capture greenhouse gases is compromised and what they have already stored is released, contributing to climate change (NOAA, "Blue Carbon"). The degradation and loss of Louisiana's coastal wetlands deserves attention because millions of people, animals, and plants depend on them and the ecosystem services they provide.



Land Area Change in Coastal Louisiana (1932 to 2010). Photo credit: Ecosystems Mission Area/USGS.

The processes driving Louisiana's coastal erosion are varied and complex, including both natural and anthropogenic factors. Some of the primary drivers are sea level rise, hurricanes, saltwater intrusion, oil and gas extraction, and engineering modifications made to the Mississippi River (Roberts & Mendelssohn). It is difficult to discuss any one of these threats alone as they are highly interconnected and thus compound and exacerbate each other. A reduction in sediment deposition is one of the main causes of erosion. Under natural circumstances, large amounts of sediment flow from the Mississippi River and are deposited in the delta. However, the building of dams and levees has significantly reduced the amount of sediment that reaches the mouth of the river (Roberts & Mendelssohn). Without these sediment deposits, land that is washed away by tides and hurricanes is unable to be replaced, resulting in a net loss of land (Roberts & Mendelssohn).

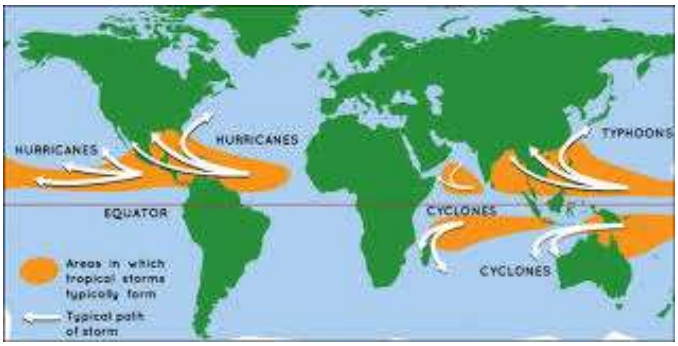
Another factor contributing to wetland loss in the region is oil and gas extraction. The region is one of the top producers of oil and gas in the U.S. — the production of petroleum products (along with chemical and coal products) makes up 30% of Louisiana's industrial activity (CPRA). Many oil and gas wells are drilled within these wetlands and the pipelines carrying the products crisscross the landscape,

damaging the ecosystem (Restore the Mississippi River Delta). In addition to this direct impact, the extraction of oil and gas creates gaps where the fluids used to be, which can then cause land subsidence (Roberts & Mendelssohn). Land subsidence compounds sea level rise, which is already being accelerated by climate change, resulting in relatively higher sea levels, which further submerges the wetlands (Roberts & Mendelssohn). These higher sea levels can also degrade freshwater wetlands by introducing saltwater (Roberts & Mendelssohn).

Regulatory Alert: Critical Habitat for the Rufa Red Knot (Calidris canutus rufa). Photo credit: GZA GeoEnvironmental.

Louisiana's wetlands support biodiversity by providing critical habitat for wildlife. It is estimated that over 5 million birds rely on these wetlands for wintering habitat and as migratory stopovers (LCWCRTF). One such bird species is the Rufa Red Knot, one of the American subspecies of the bird featured in the "Saving the Red Knot" video by the Paulson Institute. The wetlands serve as important habitat for these birds as they migrate from the Arctic. Some winter on the Louisiana coast while others use the wetlands as an opportunity to rest and refuel for a longer journey to South America (USFWS). As noted in the video and accompanying caption, populations of these birds are in decline due to the degradation and loss of the wetland habitats that they rely on (Paulson Institute).

In addition to birds, these wetlands also support many other species such as alligators, minks, shrimp, crawfish, and oysters (LCWCRTF; CPRA). The reliance of wildlife on these wetlands for habitat means that their loss will lead to population losses. Aquatic wetland species may be particularly impacted as so many aspects of their life cycles — breeding, spawning, feeding, and growing — are dependent on their habitat, which will have cascading effects up the food chain (LCWCRTF). Additionally, a significant portion of the economy of Louisiana is based on fishing — Louisiana provides 30% of the commercial fishing catch in the U.S. and 1 out of every 70 jobs in the state is related to this industry — and over 75% of commercially harvested fish in Louisiana depend on wetlands; thus the loss of these habitats not only has consequences for aquatic life, but also the people whose livelihoods depend on them (USGS; Louisiana Seafood Promotion & Marketing Board; LCWCRTF).



The Hurricane Prone Region Across the Globe. Photo credit: Barath Ponnusamy/Research.net

Over two million people live along the coast of Louisiana and many more rely on it for sustenance, employment, and recreation (CPRA). The Gulf of Mexico is a particularly hurricane-prone region and Louisiana's wetlands play an important role in mitigating the damage from these natural disasters. An invaluable ecosystem service provided by coastal wetlands is their ability to buffer coastal communities from storms by reducing the force of strong waves and temporarily absorbing the water, which can decrease the severity of flooding (LCWCRTF). As the wetlands disappear, however, so too does their ability to mitigate the damage caused by extreme weather events, leaving communities more vulnerable to their effects. As these extreme weather events grow in frequency and severity due to climate change, the protection offered by wetlands will be even more important than ever.

Some Louisiana communities, such as those living on the Isle de Jean Charles, are having to make the difficult decision to relocate. Coastal erosion has drastically reduced the size of the Isle de Jean Charles from over 22,000 acres to just 320 acres, this coupled with damage from other environmental disasters such as the 2010 Deepwater Horizon oil spill have left the residents with few other options (OCD). However, as with many other people in the region, the livelihoods and culture of the residents of the Isle de Jean Charles are tied to the land they live on. Many of the residents of the island belong to the Isle de Jean Charles band of the Biloxi-Chitimacha-Choctaw Tribe and see the island as the heart of their culture and traditions. However, as their island's environmental issues have worsened, members have been forced to leave over the years, fragmenting the community (Jean Charles Choctaw). Through years of advocacy work, the remaining islanders have been able to secure $48 million through the State of Louisiana to resettle in a new location, thus making them part of the first government-funded climate relocation project in the U.S., with the ultimate goal of reuniting their fragmented tribe and preserving their culture (OCD; Jean Charles Choctaw).

Chief Albert Naquin leads the Jean Charles Choctaw Nation. Photo credit: ICT

Relocation may not even be an option for other communities as it is an expensive process that takes years of planning. Some groups of people will be disproportionately impacted by the loss of these wetlands (OECD). This will likely include people with lower levels of income and education as well as the elderly and minority groups as they may lack the resources and ability to move and engage with decision-making processes (OECD).

Wild leucistic alligators are only found in Louisiana. Photo credit: Wikipedia.

The state of Louisiana's coast is alarming, but there are solutions that can and are being implemented to reverse and mitigate the damage. Louisiana's Coastal Protection and Restoration Authority has developed a "Coastal Master Plan" to help educate the public about the issue and guide restoration efforts. The plan identifies 77 restoration projects to be funded, which include marsh creation using dredged material and native plantings; diverting freshwater and sediment to wetlands by creating conveyance channels from the river; and restoring natural hydrologic patterns (CPRA). In 2017, the USGS noted that there has been a slowing of the rate of coastal land loss; although much of this may be attributed to fewer major hurricanes, the restoration efforts were identified as a contributing factor (USGS).

Restoration efforts alone are not enough to reverse the damage; it is also imperative that concrete steps are taken to address climate change as its effects are significant contributing factors to the problem (CPRA). These steps should include efforts to reduce greenhouse gas emissions through actions such as shifting to renewable energy and planning sustainable communities that reduce the reliance on personal vehicles. Implementing these steps will require large-scale improvements in environmental education as well as major lifestyle and mindset shifts for a significant number of people.

These changes may be uncomfortable, but we must all realize that we are intricately and irreversibly connected. Just as the river carries the sediment downstream and into the Gulf, giving life to flora and fauna along the way, we too have a downstream impact with every action we take, no matter how large or small. We then must ensure that we too are promoting life and not extinguishing it.

Bibliography

1. Jean Charles Choctaw Nation. The Environment. Accessed 15 February 2026. http://www.isledejeancharles.com/the-environment

2. Louisiana Coastal Wetlands Conservation and Restoration Task Force (LCWCRTF). THE 1997 EVALUATION REPORT TO THE U.S. CONGRESS ON THE EFFECTIVENESS OF LOUISIANA COASTAL WETLAND RESTORATION PROJECTS. January 1, 1997. https://www.lacoast.gov/reports/rtc/1997/title.htm

3. Louisiana Seafood Promotion & Marketing Board. Louisiana Seafood Industry. Accessed 15 February 2026. https://www.louisianaseafood.com/industry

4. National Oceanic and Atmospheric Administration (NOAA), Office of Habitat Conservation. Coastal Wetland Habitat. 1 January 2026. https://www.fisheries.noaa.gov/national/habitat-conservation/coastal-wetland-habitat

5. National Oceanic and Atmospheric Administration (NOAA), Office of Habitat Conservation. Protecting Coastal Blue Carbon Through Habitat Conservation. 4 September 2025. https://www.fisheries.noaa.gov/national/habitat-conservation/protecting-coastal-blue-carbon-through-habitat-conservation

6. Organization for Economic Co-operation and Development (OECD). “Environmental justice”. YouTube, 10 July 2024, https://www.youtube.com/watch?v=sdk2AGO2XBc

7. Paulson Institute. “Saving the Red Knot”. YouTube, 8 November 2016, https://www.youtube.com/watch?v=UBilXaDYffs

8. Restore the Mississippi River Delta. Land Loss. Accessed 12 February 2026. https://mississippiriverdelta.org/our-coastal-crisis/land-loss/

9. Roberts, Harry & Mendelssohn, Irv. Loss of Louisiana’s Coastal Wetlands. 12 January 2022. https://www.lsu.edu/cce/mediacenter/news/2022/01/wetlands.php

10. State of Louisiana, Coastal Protection and Restoration Authority (CPRA). Louisiana’s Comprehensive Master Plan for a Sustainable Coast. 25 May 2023. https://coastal.la.gov/wp-content/uploads/2023/06/230531_CPRA_MP_Final-for-web_spreads.pdf

11. State of Louisiana, Office of Community Development (OCD). Isle de Jean Charles Resettlement. Accessed 15 February 2026. https://locddr.la.gov/programs/isle-de-jean-charles-resettlement-project

12. United States Fish and Wildlife Service (USFWS). RUFA RED KNOT BACKGROUND INFORMATION AND THREATS ASSESSMENT. November 2014. https://www.fws.gov/sites/default/files/documents/Rufa Red Knot Supplemental Listing Document.pdf

13. United States Geological Survey (USGS), Office of Communications and Publishing. Louisiana’s Changing Coastal Wetlands: Lack of Major Hurricanes Since 2008 is Likely the Main Reason. 12 July 2017. https://www.usgs.gov/news/national-news-release/usgs-louisianas-rate-coastal-wetland-loss-continues-slow

14. Williams, S. Jeffress. Louisiana Coastal Wetlands: A Resource At Risk. 13 February 2026. https://pubs.usgs.gov/fs/la-wetlands/

*****

Highlights

Around the World

- Soil degradation is not merely an environmental challenge; it represents a strategic oversight with tangible implications for food security, biodiversity, climate resilience, and social justice. As we remain focused on more visible environmental issues, we cannot afford to overlook the vital role of healthy soils in sustaining life for future generations.

Ferdlyn Jeana Reimmer (CANADA)

- The many jobs of bugs might seem mundane at first glance---after all, most people don't look at a spider in the closet and think "that's my very own free pest control. Yippee!" However, they are crucial to the preservation of ecosystems, even as their importance is overlooked.

- While insects are often overlooked or misunderstood, their role as pollinators, decomposers, and foundational food sources make them indispensable. This is all part of the blueprint that has created the world as we know it, but we sometimes forget the power of nature's wisdom. Protecting insects means protecting the balance of the natural world itself, because when the bugs go silent, the consequences will be anything but.

Jean Park (USA)

- Peace has either positive or negative impact of political and social aim while sustainability is the result in which peace created.

- The second issue to prevent environmental degradation is using traditional knowledge of environmental protection which was used for long period of time though there is difference among ethnic groups or groups. For example, according to Oromo Geda system, environmental conservation is one role of the Geda leader and team. According to the Oromo people tradition, cutting upgrowing is curse. Instead, the society is advised to use the fallen or older trees for energy and construction of house. There is penalty for those who violate the rules and regulation of natural resource conservation developed in the Geda system.

Fenet Bekele (ETHIOPIA)

- Most people don't think much about what's under their feet, but the water that flows underground, through aquifers and hidden wetlands, is quietly keeping a lot of us alive. It's one of Earth's biggest blind spots. These systems support crops, ecosystems, and drinking water, but because they're not visible, we tend to ignore them until something goes wrong. Then it's a crisis.

- Another idea is creating neighborhood "groundwater guardians," teams that report changes in water color or smell. A lot of farmers already notice these shifts before anyone else. They just don't have the tools or training to act on them. That kind of knowledge matters too. It's not less important just because it didn't come from a lab.

Min-Naing Akamatsu (USA)

- Companies pump acidic fluids into underground aquifers to dissolve uranium before pumping the mixture back up. On paper, it's efficient and less visible than open-pit mining. In practice, however, it raises serious concerns.

- This silence around Baikenzhe illustrates a broader "blind spot." When nations debate nuclear energy, conversations focus on reactors, safety protocols, and geopolitical strategy. Rarely do these debates consider the village at the end of the supply chain. International forums debate uranium enrichment but neglect the everyday consequences for agricultural communities. Local and national news outlets prioritize more sensational stories, leaving those who bear the hidden costs

with no platform, no formal grievance process, and often, no legal recourse.

- Ultimately, Baikenzhe's story is not unique. Across the globe, communities near extractive sites—gold in Ghana, oil in Nigeria, rare earths in China—face similar fates. By recognizing these hidden tolls, we can advocate for global standards that prioritize human health alongside national interests. As a student, I may not rewrite policies overnight, but I can raise questions, share these stories, and work toward change. Our collective future depends on listening to those who live closest to the sources of our modern world.

Kausar Urmat (KAZAKHSTAN)

- The amount of food wasted per minute is two million pounds. An astonishingly large number but it poses a rather important question: where does all this food go? According to most reports, the food that we waste ends up going to landfills, combustion facilities and sewer systems. However, the most astounding fact is that most food waste occurs at home.

Amyura Santhosh (INDIA)

- While we focus on the quickly declining rate of our atmosphere and ocean structures, we fail to understand how crucial the disappearance of insects has awfully cascading effects that can trigger a large number of problems in our ecosystem.

Emma Vartanpour (USA)

- While headlines focus on floods, air pollution, or pandemics, one silent crisis is steadily growing- antimicrobial resistance (AMR). Often overlooked, AMR is a true "blind spot" in global health: infections that were once easily treatable are now becoming deadly. Resistant bacteria do not respect borders- travel, trade and contaminated food and water allow these microbes to spread globally. This makes AMR a planetary blind spot that demands urgent attention from all nations.

Nabil Saifullah Alvee (BANGLADESH)

- Remember when you lay beside me,
Whispered to me your hopes and dreams?
I responded, crashed on the shore,
With tides both high and low.
We were friends, weren't we?
But today, you are turning my cities of pink
Into ashes of coral reefs.

Aahana Dadu (INDIA)

- In the shadow of climate change, plastic pollution, and rising temperatures, there exists a set of environmental issues that remain largely unnoticed. These are Earth's blind spots, critical yet overlooked threats to our planet's balance. One such blind spot is the small, often forgotten wetland ecosystems that serve as crucial habitats for migratory birds, filter pollutants, and regulate local climates. These wetlands, though modest in appearance, act as silent architects of ecological stability, and their loss has far-reaching consequences for both nature and humanity.

- Wetlands exemplify a critical blind spot that matters profoundly for life on Earth. Protecting these ecosystems supports migratory species like the Red Knot, safeguards human health, mitigates climate impacts, and fosters environmental justice.

Touseef Ahmad (PAKISTAN)

- The world talks about climate change loudly. Whether it be goals of net zero emissions, international conferences, or sustainability campaigns, it is clear that the climate crisis garners worldwide attention. However, other issues closely tied with this are constantly overlooked, and viewed as secondary.

One of such is environmental injustice, where thousands of peoples' lives are being crushed by the consequences of an environmental crisis they did not create.

- Chile is a key example of what needs to happen in more places, and is proof that long term structural change and short term support can be achieved simultaneously. Though the costs of environmental injustice are borne daily by communities like the residents in the Korail slums, the progress demonstrated by cases such as Chile's offers a crucial reminder that environmental justice is achievable, if faced with strategic actions that prioritize the people.

Minsun Kim (TAIWAN)

- Before sunrise in many Sudanese villages, thin columns of smoke rise from small clay stoves. Women and children walk long distances to collect firewood, not as a cultural tradition, but as a daily necessity for survival. This dependence on traditional biomass is not only a local hardship; it reflects a broader global energy inequality affecting millions across the developing world.

Emtinan Mohamed (SUDAN)

- The environmental crisis isn't one big crisis, it's thousands of small ones, each with its own name and its own people and its own story.

Maria Fernanda Meza Mareco (PARAGUAY)

- Environmental sacrifice zones like Agbogbloshie are outdated. In the modern world in which we live, there is no point in sacrificing a community, people, or a livelihood for the so called greater good. Humanity has launched countless satellites, built amazing machines, put people on the moon and even made headway in the plastic crisis and as such are not clueless about how to find solutions to some of these mishaps. There is no reason to continue to practice barbaric waste management systems or overlook a struggling community. With reform, work and perseverance we can salvage these communities and our planet as a whole.

Oprah Nketiah (GHANA)

- Illegal mining is a major environmental issue causing destruction to many African countries, and Ghana is one of the most badly affected. Illegal mining in Ghana subjects many citizens of the country to environmental injustice of different forms. Due to illegal mining activities, many farmers are often forced to abandon their farmlands which serve as a source of living for them. Many communities, especially those in rural areas, are not able to access proper drinking water because major water bodies are destroyed by activities of illegal miners.

- Illegal mining is a serious environmental issue that affects many countries that are rich in minerals, almost making minerals appear as more of a curse than a blessing. It must be considered, however, that mining has been around for thousands of years and was never a problem. This proves that mining can still be done without becoming the leading cause of an environmental crisis. Hope is certainly not lost. If mining is effectively regulated, it can still serve as a source of income for the unemployed without simultaneously subjecting innocent people to environmental injustice.

Esther Ankrah (GHANA)

- Indigenous communities across Africa, Asia, and the Americas have long relied on herbs to treat infections, stomach problems, and pain. In places like Ghana, herbal remedies prepared from local plants have supported communities for centuries. However, as people depend more on synthetic medicine, fewer young people learn about these natural treatments.

- The forgotten wisdom of nature as a blind spot of the earth can be addressed by; integrating nature into the education system, encouraging sustainable lifestyles, building strong environmental policies, intentionally rebuilding our connection with the natural world, getting hands-on engagement with nature, and reviving traditional knowledge on nature.

Princess Fafali Tamakloe (GHANA)

- Yet outside the shop, sugar disappears again into marketing, into culture, and into habit. Unlike plastic waste or carbon emissions, it does not accumulate in landfills or linger in the atmosphere where we can see it. Instead, it accumulates quietly in bodies and communities. This is the blind spot.

- The most dangerous environmental problems are not always the ones we can see. Sometimes, they are the ones that dissolve so completely into our daily lives that we forget to question them at all. Sugar is one of them. It slips into everything, into our habits, our routines, and our expectations, until it becomes easy to ignore. But that is exactly why it matters. We call it sweet, but the cost of sugar is something we can no longer afford to ignore.

Crystal Zheng (USA)

- Environmental injustice remains one of the most overlooked crises today, not because it cannot be solved, but because it is often ignored. Protecting the environment means protecting human lives and dignity.

Nnebedum Chimaobi (NIGERIA)

- Fast fashion is a business model that has greatly changed the fashion industry by creating an efficient supply chain to rapidly produce trendy merchandise. Fashion waste has polluted the environment becoming an overlooked problem by everyone.

- It is even worse in marginalized communities in Kenya who are sent both used and new clothes from Europe and China to be sold called "Mtiumba" but often they end up as landfill and waste disposal due to their low quality.

- The fast fashion industry requires urgent reform and we need to take action now.

Ivy Amoako (GHANA)

- Urban heat islands also undermine ecological stability. Wildlife in urban environments—such as pollinators, birds, and small mammals—experience physiological stress under prolonged high temperatures and elevated surface heat can damage root systems in urban trees, reducing their lifespan and cooling capacity.

- Solutions must be structural, not cosmetic.

- The blind spot surrounding urban heat in Britain persists partly because it contradicts national self-image. The stereotype of a cool, rainy island obscures a warming reality. But in 2022, the country was briefly hotter than parts of California. The truth is that the climate is shifting, and our cities, which were designed for a much milder time, are struggling to adapt.

- Urban heat islands reveal a truth we would prefer to ignore: environmental risk is built into the landscape. It is encoded in planning decisions, maintenance budgets, and zoning priorities and as climate change accelerates, these encoded inequalities are bound to intensify. The question is not whether Britain will experience more heatwaves. The question is who will bear the brunt when it does.

Benjamin Pearce (UNITED KINGDOM)

- Away from the city, there is a place that looks clean and peaceful from the outside, but it carries deep pain inside, a reality that we cannot ignore. A place where litter travels from irresponsible and unaware hands to water bodies and then

settles in the ecosystem. These are “Mangroves,” an ecosystem that is on “Red Alert” today.

- I remember the moment when I first stepped off the road and walked inside. I did not expect that the place, which looked greener from the roadside, was very polluted from the inside. That taught me that visual beauty does not always reflect ecological health.

- When I walk out of the mangroves with dirty clothes and a bag full of trash, I feel a deep sense of pride. During the drive, my mind lives in the present and is always in quiet conversation with nature.

Saloni Vengurlekar (INDIA)

- Humanity has spent decades searching for solutions to the climate crisis, but in doing so, we’ve overlooked one of the most powerful sources of environmental insight: the knowledge of Indigenous peoples who have protected, nurtured, and learned from the land for millennia. This missing recognition isn’t just an oversight, it is the central blind spot weakening global climate resilience.

- Indigenous Knowledge is not merely a blind spot, it is a missed opportunity of global significance. While the world rushes toward new technologies, Indigenous peoples continue practicing time-tested environmental stewardship refined through generations of observation, cultural care, and ecological balance.

Alyssa Nolan (CANADA)

- Dust is not a minor irritation, but a pollutant that is dangerous enough to threaten both the lives of many generations and the health of the Earth. Treating it as a threat it is may be one of the simplest ways to protect our people and the planet.

- Dust remains a blind spot because it lacks a spectacle big enough to create attention. It does not explode. It does not burn. It does not smell. It is slow in violence. It spreads until a cough turns into a chronic and breathing begin to require effort, eventually a father can no longer provide. Dust has always existed; it hides behind familiarity making us assume it is harmless. The assumption becomes an excuse for inaction.

- The exposure to dust is not distributed equally. They concentrate where infrastructure is weak-informal settlements, unpaved roads, bare playing grounds and areas where policies exist on paper but not in practice-left to gather dust along roads they were meant to protect.

Meek Amani (KENYA)

- The degradation and loss of Louisiana’s coastal wetlands deserves attention because millions of people, animals, and plants depend on them and the ecosystem services they provide.

Tara Allen (USA)

*****

Acknowledgments

We would like to express our heartfelt gratitude to the Hiremath family for their invaluable time and belief in our vision of uniting people, caring for all inhabitants of our unique planet, and cherishing our environment

Our sincere thanks also go to the dedicated members of our Board of Directors for their time, unwavering dedication, and enthusiasm in driving our mission forward.

We extend our deepest appreciation to our international panel of judges for the essay contest and all the volunteers who selflessly devoted their time.

We would like to extend our sincere gratitude for the cash donations and in-kind gifts received from the following:

Individuals

Thank you for your generosity and belief in our cause.

Contact Us

Editor

Founder and President

Dr. Chaitanya Hiremath

Please send your valuable feedback to:

info@sealoearth.org

SEALOEarth is a 501c3 non-profit organization
World Headquarters: Boston, MA, USA
www.SealoEarth.org

SEALOEarth's mission is to heighten awareness of the responsibility of all people to manage global resources in a sustainable way, regardless of an individual's country of origin, cultural background, spoken language or religion.