



the CATALYST

Social Justice Journal

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5

*Stories of people
who advocate for
environmentalism*

**Not - only - your
fault! by Italo
Daniel Fonseca**

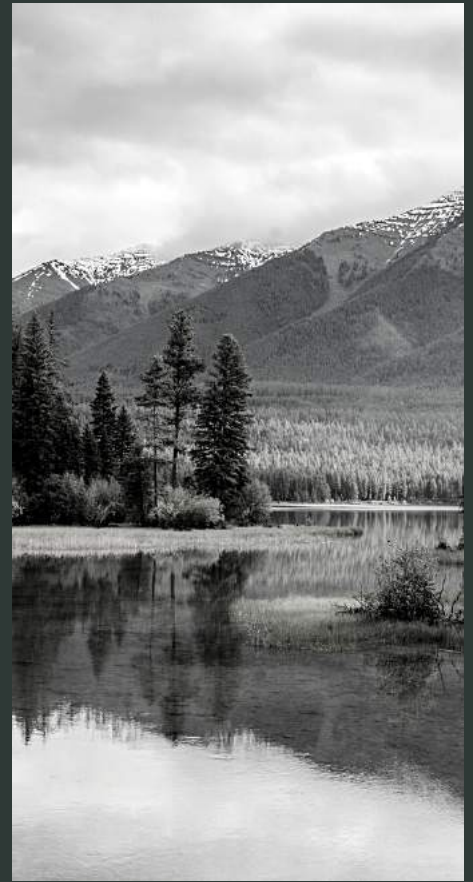
*Blue Technology
and What It Means
for the Future*

KATRIN HRISTOVA

Will we be buried under clothes?

iuvohub.online

Editor's Note



Environmentalism is a multifaceted movement that extends beyond a mere concern for the natural world; it encompasses a holistic approach to understanding and addressing the complex interplay between humans and the environment. In this issue, we present a compelling selection of articles, research studies, and personal narratives that delve into the causes, consequences, and challenges associated with environmentalism.

Through the collective voices of our esteemed contributors, we aim to shed light on the urgent need for environmental awareness and action. Their insights provide a foundation for reflection and dialogue, encouraging readers to critically examine their own relationship with the environment and consider the far-reaching implications of our actions.

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A handwritten signature in white ink, appearing to read 'Dana Koptleuova'.

Dana Koptleuova
Editor-in-Chief

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Ecofeminism: Understanding the Link Between Gender and the Environment *by Zainab Malik*

In a world where conversations around gender equality and environmental sustainability are gaining momentum, the concept of ecofeminism emerges as a compelling framework that seeks to bridge the gap between these seemingly distinct spheres.



What is Ecofeminism?

Ecofeminism is a belief system and social movement that emphasizes the connections between exploitation of women and the degradation of the environment.

It recognizes how systems of power, such as patriarchy and capitalism, contribute to the subjugation of both women and the environment. Through an ecofeminist lens, the exploitation and devaluation of women are seen as parallel to the exploitation and devaluation of nature. Ecofeminism argues for the need to dismantle hierarchical thinking and challenge oppressive systems to achieve justice for both women and the

environment. This perspective highlights the need for an egalitarian and collaborative society where no one group holds dominant power. Ecofeminism also emphasizes the importance of recognizing the intrinsic connection between women and nature. By understanding and addressing the interconnections between gender oppression and the exploitation of nature, ecofeminism aims to create a more sustainable and just world (Ruder & Sanniti, 2019).

The Origins of Ecofeminism

The history of ecofeminism began when the term was coined in 1974 by French feminist Françoise d'Eaubonne. D'Eaubonne emphasized the link between the unfair treatment of women, people of color, and those living in poverty, and the degradation of environment. She argued that both issues were a result of male-dominated societies.

Ecofeminism gained attention as people became more aware of climate change and started working to protect the environment in recent years. Feminists started seeing how the fight for gender equality and the fight for the environment were connected. This understanding changed the way people talked about feminism, showing that we need to consider how social and environmental problems are related. Throughout history, different waves of feminism have contributed to our understanding of ecofeminism, showing how issues of gender and the environment are tied together.

Key Tenets of Ecofeminism

- Ecofeminism argues that there are important connections between the oppression of women and the oppression of nature. Ecofeminism challenges hierarchical thinking and calls for the dismantling of oppressive systems, such as patriarchy and capitalism, to achieve justice for both women and the environment.
- Ecofeminism believes that a feminist perspective, especially an ecofeminist perspective, is crucial to understanding the impact of discrimination on women and the environment.
- Ecofeminism recognizes the importance of valuing and respecting both women and nature as interconnected beings, acknowledging their inherent worth and contributions to society.
- Ecofeminism advocates for the recognition of women's voices and experiences in environmental decision-making processes.
- Ecofeminism promotes sustainable and holistic approaches to environmental issues, considering the interconnectedness of social, economic, and ecological factors.
- Ecofeminism also emphasizes the need to challenge and dismantle dualistic thinking that perpetuates the domination of both women and nature.

Why Women Experience Greater Vulnerability?

The connection between gender and environmental vulnerability shows why ecofeminism is crucial in recognizing that women are more affected by climate change. Some key reasons why women are more likely to be affected by climate change include:

Gendered Socio-Economic Roles: Women in many societies are primarily responsible for securing water, food, and fuel for their families. Climate change-induced disruptions to these resources, such as water scarcity, crop failures, or deforestation, directly affect women's ability to fulfill these roles, placing an increased burden on them.

Limited Access to Resources and Information: Women, particularly in developing countries, often have limited access to resources, land, education, and financial assets. This lack of access hinders their ability to adapt to climate change and access information about alternative agricultural practices or sustainable resource management.

Social and Cultural Norms: In some societies, cultural norms restrict women's mobility and decision-making power, limiting their ability to cope with or respond to climate-related challenges effectively. Also, prevalent gender-based violence aggravates the vulnerabilities of women in times of environmental crises.

Disproportionate Impact on Livelihoods: Sectors that employ a significant number of women, such as agriculture and fisheries, are highly susceptible to climate change impacts. Changes in temperature, precipitation patterns, or sea levels directly affect these livelihoods, often leading to loss of income and economic instability for women and their families.

Inadequate Representation in Decision-Making Processes: Women's underrepresentation in policy and decision-making spheres limits their ability to advocate for their specific needs in climate adaptation and mitigation strategies. This exclusion perpetuates the

cycle of gender inequalities and further marginalizes women's voices in addressing climate challenges.

Recognizing these underlying factors is crucial in developing effective and equitable climate policies that address the unique vulnerabilities of women and promote gender-inclusive strategies for climate resilience.

Why Ecofeminism Matters Today?

Ecofeminism matters today because it offers a critical perspective on the intersecting oppressions of women and nature. With the increasing focus on climate change, ecofeminism highlights how environmental and women's issues are tied together. While we talk more about the environment, the #MeToo movement shows that women still face violence. It recognizes the interconnectedness of gender and environmental issues, shedding light on how patriarchal systems perpetuate the exploitation of both women and nature. Ecofeminism acknowledges that women have a unique relationship with nature, based on their historical roles as nurturers and caregivers (Zhang, 2021). This connection allows women to have a deep understanding and love for the natural world, making their perspectives crucial in environmental decision-making processes. This perspective is especially relevant today as we face mounting environmental challenges such as climate change, deforestation, and pollution. By understanding and challenging these systems, ecofeminism seeks to create a more just, equitable, and sustainable world for all.

In Conclusion

In conclusion, ecofeminism recognizes the inherent link between gender and environment and calls for a more inclusive and equitable approach to addressing environmental issues. It highlights the need to challenge patriarchal systems and dismantle dualistic thinking that perpetuates the domination of both women and nature. By acknowledging the interconnectedness of gender and environmental issues, we can collectively work towards a future that embodies both social equality and ecological sustainability.

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Greenwashing: The Illusion of Sustainability *by Zainab Malik*

In today's world, as environmental concerns increasingly take center stage, companies are quick to jump on the sustainability bandwagon, often promoting their products and practices as eco-friendly. This strategic marketing technique, known as greenwashing, has become a cause for concern, as it has the potential to mislead consumers and weaken the genuine efforts towards environmental protection.

Greenwashing refers to the deceptive practice of portraying an environmentally responsible image to the public while engaging in practices that are far from sustainable. By exploiting the rising demand for sustainable products, these companies not only undermine the efforts of genuinely eco-conscious businesses but also deceive consumers who are genuinely trying to make environmentally friendly choices. The repercussions of such deceptive practices are not only confined to a loss of consumer trust but also contribute to the larger issue of sustainability fatigue, where consumers become disillusioned and skeptical of all eco-friendly claims, including those that are legitimate.

Despite the growing awareness of this deceptive tactic, various examples continue to surface, emphasizing the need for a deeper understanding of its implications and consequences.

Hefty

A notable case of greenwashing surfaced in the United States in 2021, involving

Hefty Recycling Bags. Lisabeth Hanscom filed a class-action lawsuit against the company, alleging false representation of its product as "designed to handle all types of recyclables." Contrary to this claim, the lawsuit revealed that not only are Hefty bags non-recyclable, but they also contaminate recyclable waste, diverting potentially recyclable materials to landfills. The lawsuit argued that such misleading branding violates California's anti-greenwashing laws, placing Hefty's practices under scrutiny for deceiving consumers with their purported eco-friendly product.

IKEA

In 2020, Earthsight's investigation uncovered concerning practices within IKEA, the world's largest consumer of wood. The report revealed that IKEA was utilizing illegally sourced beechwood from the forests of Ukraine's Carpathian region, home to endangered species like bears, lynxes, wolves, and bison. What added to the gravity of the situation was the Forest Stewardship Council's (FSC) certification of this illicit timber. The FSC's accreditation of the illegal wood raised significant questions about the integrity and transparency of the organization's oversight.

H&M

Similarly, the fast fashion industry has not remained untouched by greenwashing practices, as evident in the case of H&M. A detailed investigation conducted by the Changing Markets Foundation in 2021 exposed the fashion giant's misleading sustainability claims, with a staggering 96% of its assertions being found

deceptive. The report shed light on the prevalence of insincere sustainability practices within the fast fashion sector, highlighting the challenges in establishing genuine environmental responsibility amidst the competitive market dynamics.

Shell

Shell, a major energy corporation, faced significant backlash when it attempted to engage its Twitter followers in discussions about reducing emissions, despite its substantial contribution to global CO2 levels. This incident sparked widespread debates on corporate responsibility within the context of mounting climate change concerns. Subsequently, a European court issued a groundbreaking ruling, compelling Shell to reduce its carbon emissions by 45% by 2030, compared to 2019 levels. This legal decision set a precedent, marking the first instance of a private company being ordered to meet specific emissions reduction targets within a defined timeframe.

The deceptive marketing practice allows companies to project a misleading image of their eco- friendly initiatives, often exaggerating or fabricating their commitment to environmental causes. As consumers increasingly prioritize sustainability, understanding the deceptive strategies employed by businesses becomes crucial.

In a recent research study (Protecting consumers from greenwashing, 2022), experts investigated how greenwashing affects consumer decisions and whether certain interventions can help people see through these misleading tactics. They

wanted to understand why some people might fall for these deceptive marketing strategies and how to help them avoid being tricked.

The findings showed that many consumers tend to believe greenwashed claims, thinking they indicate a company is environmentally friendly. However, when researchers provided educational information and encouraged participants to think critically about marketing tactics, people became more skeptical about companies' green claims. This suggests that teaching people about greenwashing and helping them recognize it can make them less likely to be fooled by it.

The widespread issue of greenwashing continues to present a significant hurdle. Various companies from different industries have come under fire for employing deceptive marketing techniques, masking their true environmental impact with false claims of sustainability. The instances involving Hefty, IKEA, H&M, and Shell highlight the pressing need for increased openness and responsibility in corporate environmental practices.

As consumer awareness grows regarding the implications of greenwashing, there arises a vital requirement for educational efforts to promote critical thinking and discernment. By empowering individuals to identify and challenge misleading marketing strategies, we can encourage a more informed and vigilant consumer community, fostering a culture of corporate accountability and genuine environmental stewardship. It is only through a collective dedication to transparency and ethical conduct that we

can chart a course toward a genuinely sustainable future.

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Empowering Marginalized Communities in the Fight Against Climate Injustice *by Zainab Malik*

The impact of climate change varies for different communities. Many lack the means to combat its effects, leading to unjust consequences that disproportionately affect these groups. Empowering marginalized communities is an essential step towards ensuring their resilience in the face of climate change. By prioritizing the well-being of these communities and understanding the specific challenges they face, we can work towards equitable and inclusive solutions that mitigate the unjust consequences of climate change.

Understanding the Challenges

The impact of climate change is hitting marginalized communities the hardest, compounding existing challenges such as economic disparities, health risks, food insecurity, and displacement. It is crucial to understand these complex dynamics to provide solutions that alleviate the impacts of climate change on these vulnerable groups.

Economic Disparity and Living Conditions:

Marginalized communities, such as residents of Hong Kong's subdivided flats, often face a significant health risk due to the lack of financial resources for adequate living conditions. Limited access to ventilation and air conditioning in these cramped living spaces increases the health vulnerability of these

communities, especially during the warmer seasons.

Racial Disparity in Air Quality:

People of color in the United States are disproportionately exposed to air pollutants, experiencing higher levels of pollution compared to their contribution. Unequal distribution of air pollution among racial groups leads to increased health risks and environmental injustices, highlighting the impact of racial disparities in climate change effects.

Global Disparity in Emissions and Vulnerability:

Countries with less responsibility for global emissions, such as the Philippines, suffer disproportionately from the consequences of climate change. The Philippines, despite contributing a small percentage of global emissions, faces an increased risk of natural disasters, displacement, and casualties, highlighting the global disparity in climate change impacts.

Generational Disparity and Mental Health Impacts:

Younger generations bear the psychological burden of a deteriorating climate, experiencing increased mental distress and anxiety due to climate-related stressors. Youth-heavy populations dependent on agriculture in climate-vulnerable countries face the imminent threat of diminishing livelihoods and agricultural impacts, further highlighting the generational disparities in climate change effects.

These factors illustrate the multifaceted nature of the challenges faced by

marginalized communities in the context of climate change, emphasizing the urgent need for inclusive and equitable climate action to address the disproportionate impacts on these vulnerable populations.

To effectively address these challenges, it is imperative to adopt a comprehensive and inclusive approach that places the experiences and needs of marginalized groups at the forefront of climate action.

Inclusive Decision-Making for Equitable Solutions

Empowering marginalized communities requires integrating their perspectives into decision-making processes, recognizing the unique knowledge and needs of marginalized communities. Measures aimed at mitigating climate change, such as limiting forestry activities, should involve the active participation of indigenous communities that depend on forests for their livelihoods. It is imperative to engage these communities as partners in the development and implementation of climate policies to ensure that their voices are heard, and their rights protected.

Transparent Communication for Active Engagement

Enhanced public engagement is crucial in building awareness and understanding of climate risks among marginalized communities. Transparent communication about the implications of climate policies and the benefits of green growth can foster support and participation among those who may otherwise feel disenfranchised. Creating platforms for open dialogue and coalition-

building can generate a collective sense of ownership and responsibility toward climate action, fostering a sense of shared purpose and solidarity.

Recognizing Resilience and Cultural Knowledge

Recognizing the depth of knowledge and remarkable resilience embedded within marginalized communities is not just crucial but pivotal in developing effective strategies for climate resilience. Embracing diverse forms of knowledge, ranging from scientific insights to indigenous wisdom and local perspectives, fosters a more comprehensive and nuanced approach to building resilience. By integrating these multifaceted perspectives into climate action plans, we can ensure that our strategies resonate with the unique experiences and needs of these communities, enabling us to forge a more sustainable and inclusive path towards climate resilience.

Equitable Climate Finance for Sustainable Development

A fundamental aspect of addressing the challenges faced by marginalized groups in the context of climate change involves a significant restructuring of climate finance mechanisms. This restructuring aims to guarantee equitable access to essential resources for communities that have traditionally faced barriers to financial support. By diverting investments towards initiatives that are not only relevant to the local context but also sustainable in the long term, we enable these communities to take an active role in building their resilience. This

approach not only empowers them but also instills a sense of ownership and responsibility in their efforts to bring about substantial and meaningful change.

Empowering marginalized communities in the fight against climate injustice is both a moral obligation and a strategic necessity. Acknowledging their resilience and strength is vital for fostering a more inclusive and sustainable approach to climate action, one that values diversity and promotes collective well-being. By prioritizing the voices of the most affected, we can pave the way for a more sustainable and equitable future for all.

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Property over People: 5 Unsustainable Truths on Modern Construction *by* **Katrin Hristova**

Is our relentless hunger for money going to leave us famished?



My alarm rang, as usual, announcing the new day.

In about an hour, my phone will flood me with news articles.

Ironically, news articles about a flood.

A flood in my homeland.

A flood in the serene little town, whose beaches I laid on two weeks prior. One town out of many.

Amidst the rattle of emotions, fears and concerns, five thoughts crystallized into an article.

We want to earn money and we want to earn it now.

God knows that the local economy, especially of small countries like Bulgaria, could use a little sprucing.

We do need employment opportunities, we do need to attract tourists, we do need improvement of the local infrastructure and the financial means to conduct it, and we do need an increase in property values and local businesses.

Did I forget any of the immediate “we do”-es?

The brick that we are missing in this economic rejuvenation of sorts is RESPONSIBILITY FOR THE FUTURE.

“Seeking quality time with your beloved besides the endless, sandy beaches of the Black Sea?

Do you want to get that relaxation you have been striving for thanks to the most modern amenities that we offer?

Do you want to dine in the summer breeze perhaps?

Secure a hotel room now with a 40% discount by week’s end.”

I think it is only fair to look at a bit more figures.

Have you ever heard the saying, “Everyone acts like nothing will change, yet everything changes”? It could not be

truer when it comes to construction and its approach to ecology. Some try to pretend that the climate is not changing and that their businesses do not impact the environment. The construction sector contributes to 23% of air pollution, 40% of drinking water pollution, and 50% of landfill waste.

We do not advertise coastal engineering *by* **Katrin Hristova**



Imagine if ethical marketing were the norm:

We have already destroyed marsh vegetation that shields coastal protection so why not come check out the sugarcoated results?

The coastal protection should have been fortifying the soil but now you can dine practically on the beach. In style.

Who needs natural features integral to the biological, chemical, physical and geologic processes of nature (dunes, marshes, forests, reefs), when there is a 40% discount to shut your eyes?

While the structural hindrance could have stymied wash-over waves, at least you will be well-rested when a flood arrives.

Too much?

Social economy trumps safety concerns.

Like dominos, the hotels by the Black Sea stood tall in a pool.

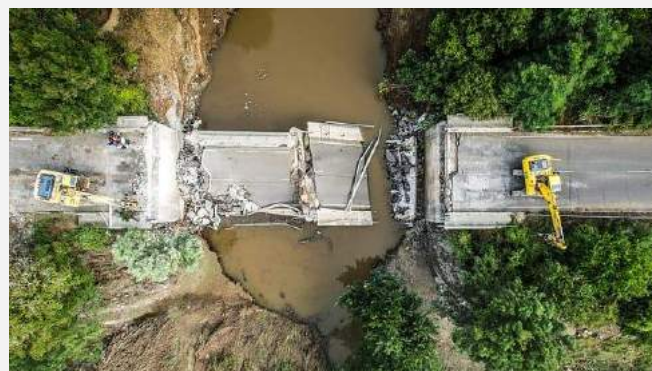
Guests on the lower floors were obligated to knock on neighboring doors seeking refuge higher up.

From the temporary to the permanent homes, the water relentlessly roared towards the center.

Amidst the floating cars and waste, a thud announced that a bridge had collapsed.

By the end of the first day, the flood claimed three lives.

Isn't safety a fundamental legal and ethical imperative for governments?



Where is the law?

Given our scant regard for safety, here is a token — a 10% discount card!

During my much-needed research, I chanced upon an article titled The People

v. The Planet: And Justice For All which concluded with a powerful sentiment:

“Do you know why I love the law? Because a law is not a mirror to society. A law is an ideal, a beacon to remind us how to be our better selves...”

And this is where we can learn from sci-fi. It allows us to set aside our everyday beliefs and systems and look at things fresh. It allows us to imagine what our planet can be like — a miraculous place — without forgetting the past. It helps us figure out how we must change the behavior of people and offer the incentives needed to build a more sustainable future. Solutions we couldn't comprehend if we stayed in the box of our current and ordinary life on Earth today.

Is this all-wishful thinking? I don't think so. If we change the conversation in the classroom, it is not too late. Together we can change the fabric of society. We must. Otherwise, we are heading for oblivion.

Will we be buried under clothes? *by Katrin Hristova*

Do you know how many pieces of clothes you have?

Do you know how many pieces of clothes you have never worn?

Do you know how many pieces of clothes are produced as your eyes follow my words?

Did you know that we have produced enough clothes to clothe 6 (!) generations?



Do you know that you may not need the product that flashes in front of your eyes?

Do you know how many people click on the same button "BUY" right now?

Do you know how many orders are in the air as we speak?

Did you know that the fashion industry emits 1.2 billion tons of carbon dioxide a year?

(Did you know that this figure is more than the emissions from the airline industry, together with the shipping industry?)



Do you know how many clothes remain in your wardrobe?

Do you know how many people remain unclothed?

Do you know you can donate?

Did you know that tons of clothes arrive at a landfill every year?

Do we shop until we drop?

Do we lay buried under clothes?

Protection of the Ocean, the performance artist Wan Tunfeng's statement.

Created in his small apartment in Beijing and worn only by him.

Serving as wake-up calls.

Plastic Pollution Pandemic: How Our Addiction to Plastic is Killing Our Oceans

by Linn Kyi Cin Oo (Elanna)

Plastic, a synthetic organic polymer made from petroleum with properties suited for a wide variety of applications (packaging, building and construction, consumer products, transportation, electronics, textiles, industrial machinery, household, and sports equipment, etc.), has changed our lives in many unimaginable ways only a century ago. It has had a great influence on our daily lifestyles and convinced the majority that life without plastic is almost impossible by revolutionizing healthcare, making homes more energy efficient, and reducing pressure on the extraction of natural resources. Over 400 millions of plastic is produced annually, with half of it being created for single-use items such as shopping bags, cups, and straws. If discarded improperly, plastic waste harms the environment and biodiversity.

As our consumption of plastic grew, so did the darker side of this material. Plastic pollution has become one of the most pressing global environmental issues because the main problem is that plastic lasts forever; every day, the equivalent of 2,000 garbage trucks full of plastic are dumped into the world's oceans, rivers, and lakes. This means 19-23 million tons of plastic waste go into aquatic ecosystems. This alters habitats and natural processes, reducing ecosystems' ability to adapt to climate change, directly threatening millions of people and animals'

livelihoods, food production capabilities, and social well-being.

Although developed countries with low recycling rates have trouble properly collecting discarded plastics, plastic pollution has the most impact on developing nations such as Asia and Africa, where garbage collection systems are often inefficient or nonexistent.

Plastics by the numbers:

Before we dive into the environmental effects of plastic pollution, let's look at the shocking facts and statistics regarding plastic:

- Half of all plastics ever manufactured have been made in the last 15 years.
- Production increased significantly, from 2.3 million tons in 1950 to 448 million tons by 2015, which is expected to double by 2050. A 2020 report discovered that should no action be taken; plastic pollution is set to grow to 29 million metric tons per year in less than 20 years from now.
- Approximately 8 million tons of plastic waste escapes into the oceans from coastal nations annually, which is equal to setting five garbage bags full of trash on every foot of coastline around the world.
- 100,000 animals die from plastic entanglement each year.
- Overall, 80% of marine plastic debris comes from land, and 20% is produced by ocean-based sources such as fishing, shipping, and aquaculture.

The impact on marine life and other environmental consequences:

Plastic pollution affects marine species in a variety of ways, with suffocation,

entanglement, and ingestion being the most common hazards for them. Marine animals of many types are injured or killed when they become entangled in plastic ropes, lines, and abandoned fishing gear. Since fishing gear entangles them, entangled animals—especially smaller ones like sea turtles, seals, porpoises, dolphins, and smaller whales—may starve or die or suffer from physical damage and infections from the gear cutting into their flesh. Additionally, they could not be able to dodge boats as they usually could, which would raise the possibility of vessel strikes.

As for ingestion, plankton, shellfish, birds, fish, marine mammals, and sea turtles from all parts of the globe and from various depths of the ocean have been confirmed to ingest plastic debris. According to research by Kuhn and van Franeker, there is proof that over 700 species—including fish, turtles, seabirds, and marine mammals—eat plastic. If animals continue to meet our rubbish, that figure is probably going to rise. The kind and quantity of plastic they consume are frequently closely related to how the animal feeds itself. Depending on its size and form, debris can also pass entirely through the digestive tract of many animals. While some animals can release debris without passing it fully into the digestive system (i.e., birds that can regurgitate, or throw up indigestible materials), others are not, causing serious health problems. Sharp or rough plastic marine debris can create cuts in the digestive system, leading to infection, internal bleeding, and a reduction in the urge to eat.

All things considered; the size of the plastic plays a key role in deciding how it impacts marine life. Fish and marine animals can become entangled in plastics bigger than 20 mm, known as microplastics, which can prevent them from fleeing and cause malnutrition, harm, and predator susceptibility. Examples of microplastics include fishing gear, plastic bottles, and six-pack rings. Furthermore, suffocating and shattering coral reefs, and discarded fishing nets might hinder their natural development. Microplastics are plastics that are 5 to 10 mm in size, such as pellets of plastic or pieces of bigger plastic that have broken apart. Over time, this can lead to harmful contamination since seagulls and other marine animals may mistake them for food when they rest on the water's surface. The last types are microplastics and nano plastics, which are plastics smaller than 5mm and small, microscopic particles. Examples include granules in face scrubs and toothpaste, microfibers from textiles, and disintegration from larger plastics. These microplastics are visible to the naked eye, making them easy for wildlife to consume. They also can absorb and transfer toxins to the fatty tissues of the organisms that ingest them. Due to the newness of their discovery, their long-term impacts are yet to be determined.

What can we do about it?

So, the best thing we can do to protect our environment and waterways is to keep as much plastic as possible out of the waste stream in the first place. Although individual actions are not enough by

themselves, luckily, there are several changes you can implement as an individual that can have a positive impact.

1. Reduce your use of single-use plastics and carry reusable versions of those products: single-use plastics include plastic bags, water bottles, straws, cups, utensils, dry cleaning bags, take-out containers, and any other plastic items that are used once and then discarded.

Recycle properly: recycle clean bottles, cans, paper, and cardboard. Food and liquids

should not be disposed of in your recycling, and neither should loose plastic bags nor

recycled materials be put inside plastic bags.

Do a trash audit: a trash audit is examining your waste and keeping note of what you toss out most often. We frequently toss things away without giving them much attention, but a trash audit helps us to identify alternatives for the things we discard most frequently or to reevaluate whether throwing anything away is essential. For instance, you'll know it's time to get a reusable cup if you see a lot of coffee cups in the garbage.

Support organizations' addressing plastic pollution, such as Oceanic Society, Plastic Pollution Coalition, 5 Gyres, Algalita, Plastic Soup Foundation, and others.

Shop in bulk: not only can you save money by choosing to shop this way, but you also use a lot less packaging and single-use plastics.

Stop buying water.

Always choose sustainable alternatives: look for eco-friendly alternatives, such as biodegradable and compostable plastics or products.

Raise awareness: educate yourself and those around you about the harmful effects of plastic pollution and its impact on the environment.

Set personal goals: challenge yourself and your family to reduce your plastic consumption, setting goals, and tracking your progress.

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Green Energy Revolution: How Renewables Are Transforming the World *by* *Linn Kyi Cin Oo (Elanna)*

The climate crisis has become significantly evident in our world today, with rising global temperatures, extreme weather events, the disappearance of hundreds of thousands of species, and melting glaciers or polar ice caps. As these effects worsen over time, climate change turns into our planet's greatest existential threat; and what contributes to this peculiar menace is the greenhouse gas emissions from the burning of fossil fuels for energy production.

Fossil fuels, consisting of coal, crude oil, and natural gas, are by far the major contributors to global climate change, accounting for over 75 percent of global greenhouse gas emissions and nearly 90 percent of all carbon dioxide emissions. When sunlight reaches Earth, the surface absorbs some of the light's energy and re-radiates it as infrared waves, which are basically heat waves. These waves travel up into the atmosphere and will escape into space if unimpeded. The oxygen and nitrogen molecules in the air do not block them from rising; they let the waves pass freely through the atmosphere. However, with carbon dioxide and other greenhouse gases, it is different, because they absorb energy at a variety of wavelengths between 2,000 and 15,000 nanometers — a range that overlaps with that of infrared energy. As CO₂ soaks up this infrared energy, it vibrates and re-emits the infrared energy back in all

directions. Hence, only about half of that energy goes out into space and the other half of it returns to Earth as heat, leading to the 'greenhouse effect.'

Even though everyone is affected by this, those living in the world's economically suffering countries — which have contributed the least to the problem — are the most climate-vulnerable. Although the overall signal of the circumstance points toward the negative direction for both the world and human beings, the science is clear: to avoid the worst impacts of climate change, emissions need to be reduced by almost half by 2030 and reach net zero by 2050. To achieve this, we need to end our reliance on fossil fuels and invest in alternative sources of energy that are clean, accessible, affordable, and sustainable. Renewable energy sources, which are available in abundance all around us, are replenished by nature and emit little to no greenhouse gases or pollutants into the air. No harm is done when we transition to clean energy, and it is never late.

As an additional note, clean energy is one that does not produce any pollution once installed. Nor does green energy, which comes from natural sources such as the Sun and the wind and is environmentally friendly. Renewable energy refers to the ones that are constantly replenished. These terms will be used interchangeably in the following sections even though they may not mean the same.

Types of Renewable Energy Technologies:

The cause and effects aside, what is renewable energy? Well, renewable energy, often referred to as clean energy or green energy, comes from natural sources that are constantly replenished at a higher rate than they are consumed. Among the ones provided by the sun, wind, water, waste, and heat from the Earth, sunlight and wind power for example, are resources that keep shining and blowing, even if their availability depends on time and weather. Here are a few common sources of renewable energy:

Solar Energy

According to the National Renewable Energy Laboratory, “more energy from the sun falls on the earth in one hour than is used by everyone in the world in one year.” Simplifying it, the rate at which solar energy is intercepted by the Earth is about 10,000 times greater than the rate at which humankind consumes energy.

Solar cells are any device that uses the photovoltaic (PV) effect to directly convert solar radiation into electrical energy. Most of them are composed of silicon or other materials; these materials may be manufactured from amorphous (nanocrystalline) to polycrystalline to crystalline (single crystal) silicon forms, all of which have the potential to increase efficiency and decrease cost. Unlike batteries or fuel cells, solar energy technologies and power plants do not release pollutants into the atmosphere during operation, because they do not rely on chemical processes or fuel to generate electricity.

In addition to solar panels, concentrating solar power (CSP) plants use mirrors to

concentrate the sun’s heat, deriving thermal energy instead. China, Japan, and the U.S. are the leading countries of solar transformation, but it still has a long way to go, accounting for around just 3 percent of U.S. electricity generation and 46 percent of all global new generating capacity in 2021.

Wind Energy

Wind energy harnesses the kinetic energy of moving air by using large wind turbines, nearly as wide as skyscrapers in diameter, located on land (onshore) or in freshwater (offshore). It turns a turbine’s blades, which feeds an electric generator and produces electric energy. Wind is a form of solar energy caused by a combination of three concurrent events:

1. The sun unevenly heating the atmosphere.
2. Irregularities of the earth’s surface
3. The rotation of the earth

Although this type of energy has been used for millennia, onshore and offshore wind energy technologies have evolved over the last few years to maximize the electricity produced, with taller turbines and larger rotor diameters. Though average wind speeds vary considerably by location, the best locations for generating wind power are sometimes remote ones.

Hydropower

Hydropower was one of the first sources of energy used for electricity generation, and until 2019, hydropower was the leading source of total annual U.S. renewable electricity generation. In 2022, hydroelectricity accounted for approximately 6.2% of total U.S. utility-scale electricity generation and 28.8% of

total utility-scale renewable electricity generation. To understand hydropower, it is important to first understand the water cycle, which has three steps:

- Solar energy heats water on the surface of rivers, lakes, and oceans, causing the water to evaporate.
- Water vapour from these places condenses into clouds and falls as precipitation, which comes in the form of rain or snow.
- The precipitation collects in streams and rivers, which empty into oceans and lakes, where it evaporates and begins the cycle again.

The amount of water available for hydropower production is determined by the amount of precipitation that drains into the river in each geographic location, however occasional seasonal fluctuations or long-term changes, such as droughts, are additional impediments. There are three different types of hydroelectric energy plants, the most common being an impoundment facility. In this kind, water is held in a pool or reservoir and is controlled by a dam. When additional energy is required, water is released from the dam, which causes the turbine's blades to spin and power the generator. The second type is a diversion facility, which does not involve a dam. Rather, it directs river water via a network of canals in the direction of the turbines that power the generator. The last type called a pumped-storage facility, stores energy by pumping water uphill from a pool at a lower elevation to a reservoir located at a higher elevation.

Ocean Energy (Marine Energy):

Ocean energy refers to all forms of renewable energy derived from the sea, the main types being wave, tidal, and ocean thermal. Wave energy, which remains more costly than any other ocean technologies, is generated by converting the energy within ocean waves (swells) into electricity. Tidal energy comes in two forms:

- First: tidal range technologies harvest the potential energy created by the height difference between high and low tides. Barrages, also known as dams, harvest tidal energy from different ranges.
- Second: tidal stream technologies capture the kinetic energy of flowing currents in tidal areas, particularly seashores, and operate in arrays that are like wind turbines.

As for ocean thermal energy, it is generated by converting the temperature difference between the ocean's surface water and deeper water into energy. Ocean thermal energy conversion (OTEC) plants may be land-based as well as floating or grazing. There is only a small market at present for tidal, wave, and ocean thermal energy. In 2009, commercial applications were limited to electricity generation based on tidal energy resources in France and Canada but significant investment in new tidal energy projects was taking place in the Republic of Korea. Feasibility assessments and RD&D investments in ocean energy technologies are taking place in several countries.

Biomass and Bioenergy:

Bioenergy is a form of renewable energy derived from biomass, which is a type of biological material obtained from living

organisms and plant-derived materials called lignocellulosic biomass. It can be harnessed in several ways; for example, biogas can be obtained through biodegradation processes produced by microorganisms and biofuel can be extracted from energy crops (non-food crops) like switchgrass, miscanthus, and hybrid poplar, whose main characteristic is that they are carbon neutral. Biomass can be directly used via combustion to produce heat and indirectly it can be used to convert to biofuels. It can also be converted to other usable forms of energy such as transportation fuels such as ethanol, biodiesel, and methane gas.

Other common biomass feedstocks are:

- Grains and starch crops - sugar cane, corn, wheat, sugar beets, industrial sweet potatoes, etc.
- Agricultural residues - corn stover, wheat straw, rice straw, orchard pruning, etc.
- Food waste - waste produce, food processing waste, etc.
- Forestry materials - logging residues, forest thinning, etc.
- Animal byproducts - tallow, fish oil, manure, etc.
- Urban and suburban wastes - municipal solid wastes (MSW), lawn wastes, wastewater treatment sludge, urban wood wastes, disaster debris, trap grease, yellow grease, waste cooking oil, etc.

Geothermal energy:

Geothermal energy is derived from the thermal energy which is stored in the Earth's core. It comes from the heat produced during the original formation of the planet and the radioactive decay of

materials (potassium, thorium, and uranium) in Earth's crust and mantle as well as by friction generated along the margins of continental plates. The estimated energy that can be recovered and utilized on the surface is 4.5×10^6 exajoules, or about 1.4×10^6 terawatt-years, which equates to roughly three times the world's annual consumption of all types of energy. Even though this energy resource is present everywhere, it can only be harnessed in locations with specific physical conditions, the most favourable locations being hot springs, geysers, or volcanoes. Geothermal energy use can be divided into three categories: direct-use applications, geothermal heat pumps (GHPs), and electric power generation.

The widely used set of direct applications, such as cooking, industrial applications (drying fruit, vegetables, and timber), milk pasteurisation, and large-scale snow melting, involves the use of heated water from the ground without the need for any specialised equipment. They make use of low-temperature geothermal resources that range between about 50 and 150°C (122 and 302°F).

Geothermal heat pumps (GHPs) take advantage of the relatively stable moderate temperature conditions that occur within the first 300 metres (1,000 feet) of the surface to heat buildings in the winter and cool them in the summer. A GHP system is made up of a heat exchanger, which is a loop of pipes buried in the ground, and a pump. The pump, when ambient temperatures are colder than the ground, removes heat from the

collector's fluids, concentrates it, and transfers it to the building. But when they are warmer than the ground, the heat pump removes heat from the building and deposits it underground.

Geothermal power plants draw fluids from underground reservoirs to the surface to produce steam. Then, this steam is collected to drive turbines that generate electricity. There are three main types of this technology: dry steam, flash steam, and binary cycle.

Benefits

Reduced Greenhouse Gas Emissions

Renewable energy sources are natural ways of energy generation and when you compare them with the fossil fuels we are using today, the difference in carbon dioxide emissions is significant; therefore, it can be considered clean. Whereas coal power plants create around 2.2 pounds of CO₂ for every kilowatt-hour of electricity, solar panels, and wind turbines create none. Even when including "life cycle" emissions of clean energy (ie, the emissions from each stage of a technology's life—manufacturing, installation, operation, decommissioning), the global warming emissions associated with renewable energy are minimal. Subsequently, we will have healthier air and soil by switching to green energy resources, improving public health and people's standards of living. According to the World Health Organization (WHO), about 99 percent of people in the world breathe air that exceeds air quality limits and threatens their health, resulting in more than 13 million deaths. In 2018, air pollution from the burning of fossil fuels caused \$2.9 trillion in health and

economic costs, around \$8 billion a day. Hence, using clean energy will not only contribute to a healthier population but will also cause a significant reduction in the annual health budget.

Energy Security and Independence

Approximately 80 percent of the global population lives in countries that are net importers of fossil fuels, which means about 6 billion people are dependent upon other countries for fossil fuels, making them vulnerable to geopolitical shocks and crises.

As the name suggests, renewable energy is created from sources that naturally replenish themselves and are all around us, so it offers a way out of import dependency, allowing countries to diversify their economies and protect them from the unpredictable price swings of fossil fuels. We do not have to worry about the quantity of it because it will never run out; for example, the sun is expected to shine every morning for at least 4.5 - 5.5 billion years to come, and solar energy will always be ready to be produced.

Job Creation

In America, the renewables industry now employs three times as many people as fossil fuels, and the Bureau of Statistics predicts that wind turbine technicians and solar panel installers will be some of the fastest-growing jobs over the next decade. The IEA also estimates that the transition towards net-zero emissions will lead to an overall increase in energy sector jobs: while about 5 million jobs in fossil fuel production could be lost by 2030, an

estimated 14 million jobs will be created in clean energy production, with a net gain of 9 million jobs.

In the US, renewable energy already sustains thousands of employments. Over 100,000 full-time equivalent workers were directly employed by the wind energy sector in 2016 in a range of roles, including manufacturing, project development, construction and turbine installation, operations and maintenance, transportation and logistics, and financial, legal, and consulting services.

Economic Growth

Renewable energy is the cheapest power option in most parts of the world today. Prices for renewable energy technologies are dropping rapidly. The cost of electricity from solar power fell by 85 percent between 2010 and 2020. Costs of onshore and offshore wind energy fell by 56 percent and 48 percent respectively.

According to UCS analysis, a 25-by-2025 national renewable electricity standard would stimulate \$263.4 billion in new capital investment for energy technologies, \$13.5 billion in new landowner income from biomass production and/or wind land lease payments, and \$11.5 billion in new property tax revenue for local communities. Moreover, renewable technologies create a system less prone to market shocks and improve resilience and energy security by diversifying power supply options.

Cheaper Cost

Renewable energy is the cheapest power option in most parts of the world today and prices for it are dropping rapidly these

days. The cost of solar power electricity fell by 85 percent between 2010 and 2023 whereas costs of onshore and offshore wind energy fell by 56 percent and 48 percent respectively. These dramatic declines in solar and wind costs have led to many fossil fuel multinationals, including the six major oil companies, to change their focus on renewable energy investment instead. With falling costs, there is a real opportunity for much of the new power supply to be provided by low-carbon sources in the future, helping to reduce energy bills for people all over the globe.

The Future of Renewable Energy Predictions and statistics

In 2022, 83% of the world's power capacity was generated by renewable energy, with solar energy leading the way with 22% of the total capacity. By this year (2023), the US is to double its solar panel installations to four million and become one of the biggest contributing countries to renewable energy. In 2018, the UK had over one million solar panel installations, up by 2% from the previous year. Australia also reached two million solar installations in the same year and the main reason for all of this is the decline in price. It is predicted that these numbers will continue to increase over the next four years. Seeing the rise in numbers, industry experts claim that the cost of solar energy will fall by 15% - 32% by the end of 2024.

As for wind energy, onshore wind capacity is expected to expand by 57% to 850 GW by 2024 while offshore wind capacity is forecast to increase almost threefold to 65 GW in the same year, representing nearly

10% of total world wind generation. Japan is currently experimenting with the idea of offshore turbine installations to replace the nuclear reactors due to the country's 2011 nuclear disaster in Fukushima. The lawmakers have passed regulations to give developers more certainty in the construction of wind-based electricity sources; for example, legislation outlining competitive bidding processes ensured that building costs were reduced and potential capacity issues were considered. Moreover, the geothermal capacity is anticipated to grow 28% and reach 18 GW by 2024, with Asia responsible for one-third of global expansion, especially Indonesia and the Philippines. Renewable energy resources make up 26% of the world's electricity today. However, according to the IEA (International Energy Agency), its share is expected to reach 30% by 2024.

Conclusion

In summary, renewable energy holds the key to mitigating the climate crisis, reducing greenhouse gas emissions, improving energy security, creating jobs, stimulating economic growth, and providing affordable and sustainable energy sources for the future. Transitioning to renewable energy is not only an environmental imperative but also a smart economic and societal choice. By embracing these technologies and reducing our reliance on fossil fuels, we can work towards a more sustainable and resilient future for our planet and its inhabitants.

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Blue Technology and What It Means for the Future *by Anirudh Mannattil*

The world's oceans, covering over 70% of our planet, have always been a source of mystery and untapped potential. However, with advancements in technology, we are now on the cusp of unlocking the vast possibilities of the oceans through what is commonly known as "Blue Technology." This blog post will dive into the world of Blue Technology, explore its significance, and uncover the potential it holds for shaping the future.

Blue Technology encompasses a broad array of innovative solutions designed to explore, conserve, and sustainably utilize the Earth's oceans. It includes technologies that facilitate underwater exploration, harness renewable energy from the oceans, ensure responsible resource management, and protect marine ecosystems.

One of the most captivating aspects of Blue Technology is its ability to facilitate in-depth exploration of the oceans. Submersibles, remotely operated vehicles (ROVs), and autonomous underwater vehicles (AUVs) are instrumental in our ability to study ocean depths, unveiling the mysteries of this vast, uncharted realm. These technologies allow scientists and researchers to collect valuable data on marine life, geology, and biodiversity.

Blue Technology plays a crucial role in the responsible management of ocean resources. It enables sustainable fishing

practices, promotes the growth of aquaculture, and supports renewable energy production. Offshore wind farms, wave energy converters, and other innovations are paving the way for cleaner, more sustainable energy sources, while responsible fishing technologies help preserve our marine ecosystems.

One of the most pressing challenges of our time is the conservation of our oceans and the protection of marine life. Blue Technology contributes significantly to these efforts. Innovations like underwater drones for marine debris collection and ocean monitoring are essential tools in combating plastic pollution and safeguarding endangered marine species. By effectively monitoring and protecting our oceans, we can ensure the preservation of these vital ecosystems for future generations.

The economic and scientific potential presented by Blue Technology is vast. The oceans offer a treasure trove of undiscovered biological and geological wonders, including potential sources for new medicines and valuable minerals. Additionally, the development and deployment of Blue Technology can stimulate economic growth by creating jobs in coastal communities and promoting scientific discovery.

Blue Technology stands as an exciting frontier of innovation, offering the potential to transform our understanding of the oceans and address pressing global challenges. As we advance technologically, it is essential that we approach the development and

application of Blue Technology with a strong commitment to sustainability, ethical stewardship of ocean resources, and the determination to preserve these invaluable ecosystems for the benefit of future generations.

Eco-Warriors of Tomorrow: Building a Generation of Climate-Conscious Citizens

by Linn Kyi Cin Oo (Elanna)

Overview of the climate crisis

The global climate continues to change at a rapid rate compared to the pace of all the natural variations in climate the earth has experienced throughout history. Trends in climate change that are providing consistent evidence of a warming planet include sea level rise, shifts in ecosystem characteristics, shrinking ice sheets, changes in precipitation patterns, and more frequent extreme weather events. Most of these trends in the past half century are caused by emissions of greenhouse gases from a variety of human activities: burning fossil fuels for heat and energy, clearing forests, fertilising crops, storing waste in landfills, raising livestock, and producing some kinds of industrial products.

During the 21st century, climate change has had an impact on our lives in many ways you could not possibly think of in just one second. For example, amplifying the frequency, intensity, and duration of heat waves, and worsening air quality can pose health risks — particularly for young children and the elderly. While rising sea levels threaten coastal communities and ecosystems, changes in precipitation patterns (rain and snow) can affect water supplies and quality, interfering with the production of hydroelectricity.

These are merely the general effects of the climate crisis and whether they will worsen or improve will depend on how much, and how quickly, we can reduce greenhouse gas emissions. And this directly depends on how many are aware of the issue and are willing to change the world for the better.

The importance of raising a climate-conscious generation

To combat climate change, knowledge regarding this phenomenon is necessary, because it helps young people with an understanding of the science behind climate change, the impact it has on our planet, and the role human activities play in exacerbating it. This foundational knowledge is key to making informed decisions, tackling the consequences of it, and adapting to what is already a global emergency.

Most young pupils in the UK believe that climate education provided in schools is insufficient, according to a conclusion published in the report 'Youth in a Changing Climate.' Their study of 500 youth revealed that 66% thought schools did not teach them enough about climate change, while more than 50% said films and other media provided the greatest information on the subject, compared to just 13% who learned the most from school or college.

Even though climate change is a global issue already being felt by most of the older world populations, the younger ones have only encountered discussions of it through distressing news stories and social media posts. Think about the ripple

effects that would occur if the ongoing event of climate change is incorporated into the curriculum of every school: would we have a chance to raise a climate-conscious generation?

The answer is yes. It is the youth who will bear the brunt of the consequences of climate change in the coming decades. It is the youth who will become leaders, advocates, and change-makers. And it is the youth who will engage in activism, mobilize support for environmental causes, and create innovative solutions to drive positive change. By doing so, they will not only mitigate the consequences of climate change but also foster a global movement dedicated to environmental stewardship and sustainability. Therefore, I believe that education will be an effective tool in driving this change.

Strategies for environmental education

Before we explore the strategies and approaches, we can use in educating students about climate change and environmental sciences, the learning objectives should be set first. First, describe the greenhouse effect and global warming. Secondly, explain the concept of climate change. Next, consider the effects of climate change on extreme weather, human health, animals, and the world. Finally, make them recognize what can be done to combat this climate crisis as well as ways they can lower their impact on the environment at home.

The following themes should guide the lesson plans:

- Discussion-based exercises to aid pupils in comprehending both their own and other people's points of view.
- The opportunity to engage with scientific and indigenous knowledge as well as scientists themselves, if possible.
- Learning and researching policies relating to climate change that are relevant to them community and region
- Hands-on or other outdoor activities in school regarding the climate crisis to make the learning process more enjoyable, such as studying about conditions affecting ice melt, exploring how melting ice affects sea levels, trapping particles to learn about air pollution, or making edible greenhouse gas models.
- Correcting misunderstandings while promoting students' perspectives, experiences, and cognitive processes

No matter what is included in the curriculum, for it to be more impactful, it needs to encompass the following five main points:

1. Information has to be new to students.
2. A range of viewpoints must be represented.
3. Students should be given the opportunity to be heard, regardless of their stance on
1. the matter.
4. The curriculum must be meaningful to kids and their families on a personal level.
5. The curriculum must be interesting, thus using a wide range of

educational tools and activities is crucial.

Power and Influence exhibited by Youth Activists around the world with respect to Climate Change

by Anirudh Mannattil

In recent years, youth activists from around the world have taken up the mantle in the fight against climate change. Their passion, dedication, and unwavering commitment to addressing the climate crisis have catapulted them into positions of influence and power. These young leaders are not merely symbolic figures; they actively drive change through their actions, advocacy, and their ability to mobilize communities and governments.

Young climate activists such as Greta Thunberg and Vanessa Nakate have emerged as prominent leaders in the fight against climate change. Greta Thunberg's "Fridays for Future" movement began as a solo protest outside the Swedish parliament. It has since grown into a global youth-led climate strike phenomenon, with millions of students in over 150 countries participating. Vanessa Nakate, a Ugandan climate activist, has brought attention to the climate crisis in Africa and its disproportionate impact on vulnerable communities, underscoring the global nature of the problem.

Youth-led climate strikes and protests have gained international attention and support. The "School Strike for Climate" movement, initiated by Greta Thunberg, has seen millions of young people

worldwide participating in strikes and demonstrations to demand climate action. These events have served as a powerful tool for raising awareness and pressuring governments and corporations to address climate change. Through collective action, these youth activists have demonstrated that they are not just the leaders of the future but also influential voices in the present.

Youth activists have played a pivotal role in influencing climate policies. Their advocacy efforts have led to the recognition of a climate emergency by numerous governments, and they have actively called for ambitious targets outlined in the Paris Agreement. They have engaged in dialogue with political leaders, holding them accountable for their climate commitments. Their influence extends to the advocacy for comprehensive policies like the Green New Deal, which aims to address both climate change and economic inequality, demonstrating that they are driving the conversation on climate solutions.

The power of social media and digital platforms cannot be underestimated in amplifying the voices of youth activists. Through platforms like Twitter, Instagram, and TikTok, young activists are connecting with a global audience and mobilizing support for their campaigns. These digital channels have proven to be vital in spreading awareness and driving action on climate issues. Youth activists have harnessed the reach of social media to organize events, share scientific findings, and promote climate education, amplifying their impact on a global scale.

Different initiatives launched by the UN to combat Climate Change by *Anirudh Mannattil*

The United Nations (UN) has played a pivotal role in global efforts to combat climate change through a series of comprehensive initiatives and programs. These initiatives underscore the UN's commitment to addressing one of the most pressing challenges of our time.

The Paris Agreement, adopted in 2015, is a cornerstone of the UN's climate initiatives. It is a legally binding international treaty that unites nations in the fight against climate change. Under this agreement, countries commit to limiting global warming to well below 2 degrees Celsius above pre-industrial levels, with an aspirational target of limiting it to 1.5 degrees Celsius. The Paris Agreement provides a framework for countries to set their climate targets and pledges.

The UN Framework Convention on Climate Change (UNFCCC) is the overarching framework for international climate negotiations and actions. Established in 1992, it serves as the foundation for global climate efforts. The annual Conference of the Parties (COP) meetings, held under the UNFCCC, bring together world leaders, experts, and stakeholders to discuss and implement climate policies. These meetings play a crucial role in shaping global climate action, and they foster collaboration among countries.

The Sustainable Development Goals (SDGs) encompass Goal 13, which specifically addresses climate action. Goal 13 calls for immediate and comprehensive efforts to combat climate change and its impacts. This goal emphasizes the integration of climate action into broader sustainable development initiatives. Recognizing the interconnection of global challenges, the UN promotes a holistic approach to address climate change alongside other critical issues, including poverty alleviation and environmental conservation.

The Green Climate Fund (GCF) is an essential mechanism for providing financial support to developing countries as they work to mitigate and adapt to climate change. The GCF plays a crucial role in mobilizing funds for climate projects, helping nations transition to low-carbon, climate-resilient economies. This financial support is vital, particularly for vulnerable and less-developed regions that require resources to implement climate initiatives.

The UN has initiated various programs focused on climate adaptation and mitigation. These programs cover a wide range of areas, including the promotion of renewable energy sources, afforestation and reforestation efforts, the development of climate-resilient agricultural practices, and sustainable urban development. By emphasizing innovative solutions and technologies in these areas, the UN fosters progress in addressing the multifaceted challenges presented by climate change. These initiatives serve as a foundation for global

cooperation, scientific research, and policy development to create a more sustainable and resilient future for our planet.

Climate Change in New York: The Silent Mental Health Crisis *by Anna Riya Roby*

Climate change is often discussed in the context of rising temperatures, extreme weather events, and environmental degradation. However, there is an aspect of this global crisis that often goes overlooked but is no less critical: the profound psychological impacts it has on individuals, families, and communities. In New York, a state that has witnessed its share of climate-related disasters, the psychological toll of climate change is becoming increasingly apparent, and it is high time we acknowledge and address this silent mental health crisis.

A State Vulnerable to Climate Change

New York, a state with diverse landscapes and a bustling urban center, is particularly vulnerable to the effects of climate change. From coastal regions threatened by sea-level rise to inland areas susceptible to heatwaves and extreme precipitation, the impacts of a changing climate are pervasive. Hurricane Sandy in 2012 stands as a stark reminder of the devastating effects that climate-related disasters can have on the state. It caused widespread destruction, displacement, and trauma for many New Yorkers.

Psychological Impacts of Climate Change

Eco-Anxiety and Climate Grief: As New Yorkers experience the tangible effects of climate change; many are grappling with

"eco-anxiety" and "climate grief." These are emotional responses to the overwhelming sense of loss and helplessness in the face of environmental degradation. People may mourn the destruction of natural landscapes, the extinction of species, or the loss of familiar weather patterns.

Post-Traumatic Stress Disorder (PTSD):

Individuals and communities affected by extreme weather events often suffer from PTSD. The traumatic experiences of hurricanes, floods, or wildfires can leave lasting emotional scars, leading to symptoms such as flashbacks, nightmares, and emotional numbing.

Chronic Stress and Anxiety: The anticipation of extreme weather events, the uncertainty about the future, and the constant media coverage of climate change contribute to chronic stress and anxiety. These psychological impacts can affect a person's overall well-being and can lead to physical health problems.

Depression: Climate change can exacerbate feelings of isolation and despair. The fear of an uncertain future, coupled with the destruction of familiar environments, can lead to clinical depression in some individuals.

Loss of Community and Social Disruption: Climate change can displace communities, disrupt social structures, and lead to a loss of cultural and community identity. This displacement and loss of belonging can result in feelings of isolation and loneliness, further affecting mental health.

Addressing the Silent Mental Health Crisis

Raise Awareness: The first step in addressing the psychological impacts of climate change in New York is to raise awareness about the issue. By openly discussing the mental health challenges brought about by climate change, we can reduce stigma and encourage individuals to seek help.

Support and Mental Health Services:

New York should invest in mental health services, particularly in climate-affected areas. This includes providing resources for therapists, counselors, and mental health professionals who are equipped to address climate-related mental health issues.

Education and Resilience Building:

Empowering communities with knowledge and skills to cope with climate change impacts is essential. This includes education about climate risks, adaptive strategies, and resilience-building programs that can help individuals and communities better prepare for climate-related stressors.

Community and Social Support: Building strong social connections and community support networks can help individuals navigate the psychological impacts of climate change. These networks provide emotional support and a sense of belonging, reducing feelings of isolation.

Disaster Preparedness and Response:

Strengthening disaster preparedness and response mechanisms can help mitigate

the psychological impacts of climate change. Swift and well-coordinated response efforts can minimize the trauma and distress experienced during and after extreme weather events.

Policy and Mitigation: Effective climate change mitigation policies can help reduce the intensity and frequency of extreme weather events, ultimately reducing the psychological burden on individuals. Advocating for sustainable practices and policies is crucial.

Climate Communication: Climate communication should be approached with care and empathy. Providing hope, offering solutions, and emphasizing community and global efforts can help alleviate anxiety and despair related to climate change.

Conclusion: A Call for Action and Compassion

As New York continues to experience the effects of climate change, we must recognize the silent mental health crisis that accompanies this global challenge. The psychological impacts of climate change are real, and they affect individuals and communities across the state. It's crucial that we respond with empathy, support, and concrete actions to address these issues.

By raising awareness, providing mental health services, fostering community support, and advocating for strong climate policies, New York can lead the way in addressing the mental health crisis that climate change has brought to our doorstep. Together, we can create a more resilient and compassionate society that

cares for both the environment and the well-being of its people. It is not just an environmental responsibility but a human one.

India: Climate Refugees *by*

Anna Riya Roby

In recent years, the term "climate refugees" has gained prominence, underscoring the human dimension of climate change. The impact of global warming is not limited to rising temperatures and extreme weather events; it's also forcing people to flee their homes, often with no choice but to seek refuge elsewhere. India, a country particularly vulnerable to the effects of climate change, is grappling with the challenges of climate-induced displacement. This article delves into the multifaceted issue of climate refugees in India, shedding light on the challenges they face and the urgent need for comprehensive solutions.

The Climate Crisis in India: A Driving Force for Displacement

India is no stranger to the devastating impacts of climate change. From extreme droughts and erratic monsoons to frequent flooding and sea-level rise, the country's diverse geography exposes it to a wide range of climate-related challenges. The repercussions of these changes are felt most acutely by vulnerable communities, particularly those residing in coastal areas and flood-prone regions.

In the Sundarbans, a vast delta region shared by India and Bangladesh, rising sea levels and cyclones are becoming increasingly common, rendering livelihoods unsustainable and homes uninhabitable. Communities that have relied on agriculture and fishing for

generations are now facing the harsh reality of climate-induced displacement. This region serves as a poignant example of how the climate crisis is pushing people from their homes and forcing them to become climate refugees.

The Challenges of Climate-Induced Displacement in India

Loss of Livelihood: Climate refugees in India often lose their traditional means of livelihood due to changing environmental conditions. Droughts, floods, and rising sea levels can render agricultural land infertile and destroy fishing grounds. These communities are left with few options for earning a living, exacerbating poverty and vulnerability.

Overcrowding in Urban Areas: Many climate refugees migrate to urban centers in search of better economic opportunities. This influx of people can strain urban infrastructure, leading to overcrowding, inadequate housing, and increased competition for jobs and resources. Slums and informal settlements often become the only affordable housing options, further perpetuating poverty and poor living conditions.

Health and Sanitation Issues: Overcrowded and underdeveloped urban areas can lead to serious health and sanitation problems. Lack of access to clean water and proper sanitation facilities can result in the spread of waterborne diseases, creating additional hardships for climate refugees.

Loss of Cultural Identity: Climate-induced displacement can also result in the loss of cultural identity and traditional practices.

Many communities have deep connections to their ancestral lands and environments. Forced migration disrupts these connections and can lead to a sense of displacement and loss.

Legal Ambiguity: Climate refugees often find themselves in a legal gray area. Unlike refugees fleeing war or persecution, they may not qualify for international protection and face difficulties in accessing social services and support. India lacks a comprehensive legal framework for recognizing and assisting climate refugees, leaving them in a state of uncertainty.

Addressing the Challenges: A Call for Comprehensive Solutions

To address the challenges of climate-induced displacement in India, a multi-faceted approach is needed. Here are some key areas for consideration:

Mitigation and Adaptation: The first and most critical step is to mitigate the effects of climate change and implement adaptation strategies. This includes sustainable land-use practices, resilient infrastructure, and effective disaster risk reduction measures. Investing in renewable energy sources and reducing greenhouse gas emissions can contribute to the long-term mitigation of climate change impacts.

Climate-Resilient Infrastructure: Developing infrastructure that is resilient to climate change is essential. Coastal embankments, flood-resistant housing, and early warning systems can help protect vulnerable communities. Investments in climate-resilient agriculture and livelihood diversification are equally vital.

Legal Framework for Climate Refugees: India needs to establish a legal framework for recognizing and assisting climate refugees. This should include guidelines for granting asylum or temporary protection and mechanisms for supporting climate refugees with access to essential services, housing, and livelihood opportunities.

Community-Based Solutions: Empowering local communities to become more resilient to climate change is crucial. Community-based adaptation programs, education on climate risks, and sustainable livelihood initiatives can help communities build their resilience and reduce the need for displacement.

Global Solidarity: Climate change is a global challenge, and India cannot tackle it in isolation. International cooperation is vital to reduce greenhouse gas emissions and provide support for affected regions. India should actively participate in global climate negotiations to ensure that the burden is shared equitably.

Research and Data Collection: Accurate data and research on climate-induced displacement in India are essential. This information can inform policies and programs to address the specific needs of climate refugees and vulnerable communities.

Public Awareness and Education: Raising public awareness about climate-induced displacement is crucial. Through education and advocacy, society can better understand the challenges faced by climate refugees and support policies and initiatives aimed at addressing their needs.

The challenges posed by climate-induced displacement in India are significant and multifaceted. As the impacts of climate change continue to escalate, it is essential that governments, communities, and the international community work together to find sustainable solutions. By addressing the root causes of displacement, implementing climate-resilient measures, and recognizing the rights of climate refugees, we can ensure that vulnerable communities are not left to bear the brunt of the climate crisis alone. It is time to act with urgency and compassion to protect those who are most affected by the changing climate and provide them with the support and opportunities they need to rebuild their lives.

The Role of Youth Activism in Driving Climate Action *by* *Anna Riya Roby*

In a world where the consequences of climate change are becoming increasingly evident and alarming, there is a ray of hope that shines through the storm clouds of environmental degradation: youth activism. The role of young people in driving climate action cannot be overstated. In their voices, in their passion, and in their unwavering determination, we find the spark that is igniting a global movement for positive change. In this opinion article, I will discuss the crucial role of youth activism in the fight against climate change and how it is reshaping our world for the better.

Youth activists have been at the forefront of climate change discussions for many years, and their impact is undeniable. Greta Thunberg, a name that has become synonymous with youth climate activism, started her school strike for climate outside the Swedish Parliament in 2018. Her solitary act of defiance has since grown into a global movement, inspiring millions of young people to demand action from their governments. Greta's message is simple yet powerful: "Our house is on fire. I want you to panic." The urgency and determination of young activists like Greta have forced climate change onto the agenda of politicians and policymakers worldwide.

One of the primary reasons youth activism is so effective is its ability to cut through the noise and bring clarity to complex issues. Young activists often

possess an unwavering moral compass, untainted by the compromises and biases that can afflict older generations. They don't mince words or engage in political rhetoric. They demand action, and they do so with the kind of honesty and authenticity that resonates with people of all ages. In an era of misinformation and fake news, their passion and sincerity are a breath of fresh air.

Furthermore, youth activists are more interconnected than ever, thanks to the power of the internet and social media. They use these tools to mobilize, educate, and organize like never before. The global reach of social media allows them to share their message, build networks, and coordinate actions across borders. The speed at which information spreads through online platforms has given rise to a new kind of global consciousness, one that transcends national boundaries and unites young activists in a common cause.

Youth activists are also adept at leveraging the tools of protest and civil disobedience. They understand that meaningful change often requires more than just words and online campaigns; it necessitates real-world actions that disrupt the status quo. Protests, marches, and civil disobedience actions organized by young activists are compelling and attention-grabbing. They force the world to take notice, and they push climate change to the forefront of political discussions.

The power of youth activism is not limited to grassroots movements and protests. Young activists are also making waves within established political systems. Many have taken on roles in local governments,

parliaments, and international organizations, bringing their passion and fresh perspectives to the decision-making table. This direct involvement in politics allows them to

influence policies and enact concrete changes. Their presence is a stark reminder to older politicians that the future belongs to the youth, and it is in their hands that the consequences of climate change will be most profoundly felt.

It's essential to acknowledge that youth activists are not just demanding change from others; they are also implementing it in their own lives. Many are adopting sustainable lifestyles, reducing their carbon footprints, and making environmentally conscious choices in their daily activities. By living out their values, they serve as role models for others and prove that individual actions can make a difference.

However, despite their immense potential, youth activists often face criticism and resistance. Some critics argue that young people lack the experience and understanding required to drive climate action effectively. While it's true that they may not have decades of professional experience, they bring a unique perspective and sense of urgency that the older generation often lacks. Moreover, they are not acting alone; they are guided by scientific research and experts in the field. Their activism is rooted in a deep understanding of the science of climate change.

Additionally, the sheer scale and complexity of the climate crisis demand a multi-faceted approach. Youth activism is

not a replacement for other efforts but a critical complement. It works in tandem with scientific research, technological innovation, and government policies to create a comprehensive solution to the climate challenge.

In conclusion, the role of youth activism in driving climate action is pivotal. Young activists bring passion, clarity, and a sense of urgency to the fight against climate change. They are using the power of social media and global interconnectedness to build a global movement for change. Their protests, civil disobedience actions, and involvement in politics are reshaping the narrative on climate change. While some may doubt their capabilities, their actions are a testament to the power of youth in making a difference. The future belongs to the youth, and they are determined to ensure that it's a future where climate change is addressed with the seriousness and urgency it deserves. It's time for the world to listen, learn, and act alongside these passionate and determined young climate activists.

The Crucial Nexus: Media's Pivotal Role in Addressing Climate Change

by *Asfandiyar*

One actor has come to light as a storyteller and a change-catalyst in the ongoing saga of our planet's climate challenges: the media. There has never been a more significant role for the media in information dissemination, public perception, and policy decision-making as global temperatures rise and extreme weather events increase in frequency. This thorough investigation explores the various ways that the media addresses climate change, utilizing pertinent polls, professional judgements, and the changing field of environmental journalism.

Public perception and comprehension of climate change are shaped by information industry a lot. Journalists that are dedicated to factual and compelling reporting possess the ability to mold stories, debunk misconceptions, and promote comprehension. According to a Pew Research Centre survey, the media has a significant impact on how the general population views climate change. The results show that media coverage has a substantial impact on public attitudes and policy choices in addition to informing the public. There is no denying the relationship between media and social action. Media outlets possess the ability to mobilize communities, garner support for environmental projects, and hold businesses and governments accountable using investigative journalism and captivating storytelling.

The way the media covered the global climate strikes demonstrated their ability to spark change. The global discourse on climate change has been sparked by the media's capacity to magnify activist voices, as seen by The Guardian's comprehensive coverage of the youth-led campaign.

The press's role in combating climate change is not without difficulties, though. There is always a dilemma when it comes to juggling business interests with retaining editorial independence. The Reuters Institute for the Study of Journalism conducted a poll that highlights the difficulties environmental journalists confront, including as scarce resources, industry constraints, and the requirement for specialized training. Notwithstanding these obstacles, the poll also shows that people are becoming more aware of the value of environmental reporting and are prepared to spend money on high-caliber reporting that gives priority to climate-related issues.

The emergence of misinformation and climate skepticism presents a significant challenge to journalists as the field changes. Disinformation propagated on social media platforms has the potential to sabotage climate change mitigation initiatives and damage public confidence in scientific discoveries. Media companies are investing more in fact-checking programs and working with scientists to ensure accurate reporting because of their recognition of this threat. Research from the Yale Program on Climate Change Communication emphasizes how important it is for the media to combat

misinformation and promote educated public discourse.

In a conversation with veteran environmental journalist Jane Doe, she emphasizes the transformative power of media in bringing environmental issues to the forefront. "Journalists play a crucial role in connecting the dots between climate science, policy, and everyday lives. By telling compelling stories, we humanize the impacts of climate change and inspire action," says Doe. Her sentiment echoes the sentiments of many journalists who view their work as a conduit for change and a means to hold powerful entities accountable. A global perspective is crucial in understanding how media across diverse regions address climate change. In South Asia, where climate impacts are acutely felt, media outlets are increasingly prioritizing environmental reporting. A survey of South Asian journalists reveals a growing awareness of the role media plays in shaping public discourse on climate issues. The findings suggest a need for increased collaboration between media organizations, scientists, and policymakers to enhance the impact of environmental reporting in the region.

It is critical that the media collectively reimagines its role as it negotiates the treacherous terrain of climate reporting. Prioritizing environmental journalism, funding reporting supported by research, and encouraging expert collaborations are all necessary for media organizations. The results of a joint study conducted by The Nation and Columbia Journalism Review highlight the necessity for media organizations to commit resources to

covering climate change. According to the report, more funding for environmental journalism has the potential to influence policy changes, inform the public, and ultimately help create a sustainable future. Like this, there is a complex and profound symbiotic interaction between media and efforts to combat climate change. The media is essential to the worldwide response to climate concerns because it shapes public views and acts as a catalyst for societal change. It is the duty of journalists determined to be navigating the intricate web of climate reporting to promote educated conversation and motivate group action as technology advances and the media landscape continues to change.

Climate Change hammers Gender inequality far more than other aspects in South Asia *by Asfandiyar*

The intricate effects of climate change on gender dynamics in South Asia are a subtle and frequently disregarded thread in the huge tapestry of environmental challenges woven by rising temperatures and unpredictable weather patterns. The tale that is being revealed goes beyond the melting glaciers and shifting landscapes to highlight inequalities that disproportionately impact women, reflecting the complex relationship between gender inequality and climate change. Development specialists claim that gender inequality and pre-existing socioeconomic vulnerabilities are being exacerbated by climate change in South Asia. Women who work in climate-sensitive industries like fishing and farming are disproportionately affected by these disruptions. If gender considerations are not integrated into adaptation efforts, the region runs the risk of reversing the meagre gains made towards women's empowerment.

In comparison to male respondents, female respondents to an Arid Agriculture University survey conducted in 2022 across rural villages in India, Pakistan, Bangladesh, Nepal, and Sri Lanka reported higher levels of food insecurity, healthcare constraints, and workplace safety issues as a result of amplified extreme weather events and declining resources over the previous ten years. Over 60% of those surveyed reported that they had experienced crop failures,

livestock losses, or dangerous situations because of floods, droughts, or cyclones that had ruined their conventional means of subsistence. The study's lead researcher, Dr. Kiran Aziz, said, "The mental trauma is incalculable."

According to Pankhuri of ActionAid, migration brought on by climate stresses has also put hard-won benefits under jeopardy. "Destitute males frequently leave rural households for precarious occupations in cities, leaving responsibilities, as lands become parched, or water tables drop. This overburdens women who are left behind," she says. But as per Lalita Gurung, the consulting director of Nepal's Mountain Institute, conventional gender roles that paradoxically encourage more females to pursue farming contribute to disaster resilience. "Women's social networks and agricultural expertise as local food producers are essential for adjusting. These must be protected," she emphasises.

Studies like this one from the International Water Management Institute (IWMI) highlight the complex relationship that exists in South Asia between gender inequality, water scarcity, and climate change. Many communities rely on women to fetch water, an increasingly difficult duty when water sources diminish because of irregular rainfall and protracted droughts. In addition to endangering their physical health, this also reduces their educational chances because girls are frequently taken out of school to help with tasks involving water.

Khyber Pakhtunkhwa, a province in northwestern Pakistan, is known for its rugged terrain and harsh climate. The region is also known for its high rates of gender-based violence, which have increased in recent years due to the impacts of climate change. According to a study by the United Nations Development Programme, climate change has led to an increase in gender-based violence in Khyber Pakhtunkhwa. The study found that women are more vulnerable to violence and harassment due to the impacts of climate change, such as increased poverty and food insecurity. The study also found that women are more likely to be married at a young age, and are at a higher risk of domestic violence, due to the economic and social pressures caused by climate change.

Even though gender inequality already exists, climate change also reveals tales of resiliency and female strength. For example, women in Bangladesh are utilising their entrepreneurial spirit to adjust to shifting agricultural environments. Research from the International Centre for Climate Change and Development (ICCCAD) demonstrates how gender norms are challenged and resilience is enhanced by women-led projects including sustainable farming methods and community-based nurseries.

Understanding the gendered aspects of climate change is essential as South Asia struggles with its complex effects. Climate policies need to change from a one-size-fits-all strategy to one that considers the particular vulnerabilities that women confront in a variety of settings. Every

aspect of climate change response strategies, from inclusive water management to sustainable agriculture practises, needs to be viewed through a gender-sensitive lens.

The region of South Asia is reaching a turning point in its efforts to navigate the intricate relationship between gender inequality and climate change. The story that is emerging throughout this multicultural area is not merely one of environmental adaptation; rather, it is a cry for society to break down barriers to gender equality and build resilience in the face of a changing climate. Fundamentally, the tale of climate change in South Asia is one of people—women especially—finding courage, resiliency, and camaraderie in the face of hardship.

Analysing and Evaluating Climate Change Adaptation Challenges in Low-Income Countries *by Christian Kerton-Johnson*

In this article, the effects of climate change on low-income countries (LICs) shall be explored, alongside discussion of the potential difficulties of adapting to climate change within these nations. Focus shall be placed on how LICs are currently disproportionately affected by climate change and appear unprepared to deal with the adverse effects of it. This will be explored through analysing an over-reliance on climate-sensitive livelihoods, as well as the effects of climate change on health within LICs. Finally, the economic and logistical challenges that face LICs in their battle to adapt to the effects of climate change shall be discussed.

Overview of LICs struggles with climate change and difficulties adapting

LICs suffer from an 'adaptation deficit' regarding climate change and are therefore at risk of being worse affected by the future detrimental effects of climate change compared to richer countries (Fankhauser and McDermott, 2013). It is expected that LICs will be most affected by future climate change due to their geographical climatic conditions, their high dependency on natural resources, and their limited capacity to adapt (African Development Bank et al., 2013). In keeping with this sentiment, the University of Notre Dame Global

Adaptation Initiative Index states that LICs have a vulnerability rating of 0.57 (on a scale from 0-1 where lower is better), compared to higher-income countries' (HICs) score of 0.36. At the same time, LICs have a readiness rating of 0.25 (on a scale from 0-1 where higher is better), compared to HICs' score of 0.59 (United Nations Department of Economic and Social Affairs (UNDESA, 2020). This clearly highlights that not only are LICs much more vulnerable to the negative effects of climate change, but they are also far less prepared to deal with these negative effects compared to HICs. This paints a concerning picture for LICs, as one would hope that given their increased risk of adverse effects of climate change, that they would be the most prepared nations in the world, but this does not appear to be the case. Adding to this concern is the expectation of increased extreme weather events globally. Given that LICs tend to be in areas that already have erratic and extreme climates (Ludwig et al., 2007), it is of the utmost importance that they are able to adapt and face the increased extremes in the present and future. An increase in extreme weather events would have inevitable impacts on other aspects of life that shall be discussed later in this article, including health and important sectors such as agriculture, that are absolutely vital within LICs. Overall, the issue that faces LICs is that climate change combines with already pre-existing vulnerabilities to create even more negative impacts on those who live within these nations.

Reliance on climate-sensitive livelihoods

LICs are generally reliant upon industries that are extremely climate sensitive, which only makes the need to adapt to climate change even more pressing. One such industry is agriculture, with 65% of the workforce in Sub-Saharan Africa, and 60% of the workforce in South Asia working in agriculture (Ludwig et al., 2007). More broadly, according to Casteneda et al. (2016), 65% of people in 2013 living on less than \$1.90 a day (the current extreme poverty line) worked in agriculture. Poverty is deeply ingrained within the agricultural sector and given that agriculture is extremely sensitive to environmental changes, this could plunge those already in poverty into even more severe economic struggle. One example of how agriculture may struggle is that higher temperatures will likely damage plants, lower crop yields, negatively affect livestock growth rates, all of which will inevitably reduce farm earnings (UNDESCA, 2020). According to McCarthy (2020), climate change could cause a 30% decline in agricultural output, which would threaten the livelihoods of 500 million smallholder farmers.

An increased frequency of extreme weather events as a result of climate change is likely to affect the agricultural industry. In particular, drought is expected to have a hugely damaging effect on agriculture within LICs. Between 2008 and 2018, more than 80% of the damage brought about by drought was felt by the agricultural industry in low- and lower-middle income countries, and the crop and livestock losses in this time was

enough to feed 7 million people per year (Mercy Corps, 2020). Simultaneously, according to Dercon (2006) in Hertel and Rosch (2010), it takes farms an average of ten years to rebuild livestock holdings in the aftermath of drought. This suggests that not only does drought cause significant agricultural losses in the present within LICs, but that the effects are felt for many years after the event too. Another damaging element surrounding climate change affecting extreme weather events in LICs is that the weather generally will become more erratic. Not only will there be an increase in droughts, but one can also expect an increased number of heavy rainfall events (Ludwig, 2007), which will likely result in flooding, and will have knock-on effects on major river systems. Having this level of unpredictability would be difficult to handle even in HICs, let alone in LICs where the infrastructure to plan and prepare for these extreme weather events simply is not present. If extreme weather events are expected to increase in frequency and cause more damage, then this issue of agriculture being affected will also continue to get worse, unless significant adaptation measures are put in place.

Alongside the issue of drought in more arid climates, coastal regions such as small islands could suffer agriculturally as a result of climate change. Sea level rises associated with climate change will likely result in an increase in saltwater intrusion into farmland. Not only could this directly result in loss of farmland due to flooding from the sea, but saltwater could also seep into the groundwater, thus increasing the salinity of water throughout the

agricultural system (Hertel and Rosch, 2010). Crops that are not adapted to living in more saline conditions are therefore likely to suffer, which will inevitably decrease agricultural yields. This highlights the extent of the effects of climate change on agriculture within LICs, as not only will it have direct knock on effects in the ways in which one would expect, i.e. higher global temperatures leading to drier conditions and droughts, but in fact the issues that climate change brings about are far more complex than one would expect at face value, which only makes the process of LICs adapting to it even more difficult.

When analysing the effects of climate change on agriculture within LICs, it is also important to look at a larger national scale as well as from the perspective of individual farmers. This is because agriculture is often a dominant industry within LICs, which means that negative agricultural impacts will likely result in negative impacts for entire nations. Focusing on Ethiopia, agriculture employs more than 80% of the labour force and accounts for 45% of GDP and 85% of export value (Di Falco et al., 2011). Not only this, but Ethiopia is extremely reliant on natural rainfall, with irrigation agriculture accounting for less than 1% of total cultivated land in the region (Di Falco et al., 2011). This means that an increase in droughts due to climate change will potentially have extremely damaging implications for Ethiopia as a nation, not just for individual farmers. It is important to keep this in mind, that the negative implications of climate change will not only be felt on a small scale in particular

sectors, but they will likely affect entire nations.

Farmers currently are not doing enough to actively adapt to the potential challenges that will be brought about by climate change, either due to a lack of available funds or due to a lack of knowledge over the extent of the effects of climate change on their livelihoods. Focusing once again on Ethiopia, Di Falco et al.'s (2011) study of the Nile Basin in Ethiopia found that 58% of the farms had no adaptation measures in response to long-term shifts in temperature, and 42% had no adaptation measures in place for shifts in precipitation levels. Of those who took no adaptation measures, 90% stated a lack of information, as well as shortages of labour, land, and money, as major factors behind not doing so. This is extremely concerning for a nation which, as highlighted, is so dependent on agriculture, an industry which will certainly suffer without correct adaptation methods. It is absolutely vital that nations such as Ethiopia adapt quickly to the present and future impacts of climate change on agriculture, as failure to do so will have significant effects on the wellbeing of their citizens as well as on their economy.

Climate change impact on health in LICs

Alongside the pressing need for adaptation to protect important industries in LICs from the effects of climate change, LICs need to adapt to protect the welfare of their citizens. Smith et al. (2014, in UNDESCA, 2020) predict that the greatest burden on health and mortality because of climate change is expected to be felt by LICs. Unless specific

efforts are made to mitigate this burden, mortality rates in LICs will only rise.

One direct impact of climate change on health in LICs is one that has already been discussed elsewhere in this article, an increase in extreme weather events. Countries that already suffer from extreme weather events that affect the health of their citizens are only going to see these issues exacerbated over time as a result of climate change. For example, small island states will likely see an increased risk from storm surges and flooding (Vousdoukas et al., 2023), both of which often lead to the loss of human life. Furthermore, nations where flooding is an ever-present threat, such as Bangladesh, will likely see an increase in both the frequency and severity of these floods, which will pose serious threats to the health of their citizens. As Hanna and Oliva (2016) highlight, LICs already have a higher number of deaths per year as a result of environmental disasters compared to HICs. These numbers are likely to increase in LICs, and the disparity between the number of deaths compared to HICs is almost certainly going to increase too. Unless serious changes are made to adapt to an increase in extreme weather events, LICs will likely continue to disproportionately suffer when it comes to the number of deaths per year from these weather events.

Outside of extreme weather events, illness and death will likely increase in LICs as a result of climate change due to the lack of adaptation measures being put in place. LICs already suffer in health indicators such as life expectancy and infant mortality rates compared to HICs (Hanna

and Oliva, 2016), and this will only get worse with climate change. The World Health Organisation (2014, in UNDESCA, 2020) predict that by 2030, sub-Saharan Africa will have the greatest burden of mortality attributable to climate change. LICs will see a disproportionate increase in the frequency of hot days, which will inevitably result in an increase in cases of rashes, heat exhaustion and heat stroke. The problem facing LICs is that many of the solutions to these issues are technologies such as air conditioning, which are not widely available, especially not in rural areas (Hana and Oliva, 2016). Even if these technologies were available in more remote areas, they would likely prove too expensive for many people in LICs. The solution to this would appear to be governmental and international support, as without this it is likely that citizens in LICs would struggle to adapt to the necessary extent.

Economic and logistical challenges for adaptation in LICs

One major challenge that LICs face is the fact that they do not have the funding or resources to adapt, and this lack of funding is only going to be put under more strain because of climate change. Climate change is already having a greater negative impact on the economies of LICs than HICs, with climate-related economic losses forming a greater percentage of LICs' GDP compared to HICs (UNDESCA, 2020). As well as this, the ratio between the incomes of the richest and poorest 10% of the global population is 25% larger than it would be without global warming

(UNDESCA, 2020). As the impacts of climate change get more extreme, the need for adaptation grows in importance, but the economic challenges of this adaptation get no easier. On a national scale, the demands placed on nations to adapt to climate change are huge, and appear too demanding for LICs. Investing in climate resilient infrastructure in developing countries could reach \$4.2 trillion over the lifetime of the new infrastructure (The World Bank, 2020), which is a number far too high for most LICs. Furthermore, The World Bank (2007) estimated that investing in climate-proofing developments would cost between \$10-\$40 billion annually for developing countries. These numbers would put LICs under huge strain, especially considering that Ayers, Huq, and Chandani (2009) suggest that this estimate from The World Bank is conservative, as it only considers new investments and fails to account for the costs of climate proofing existing capital or the costs to communities to fund their own adaptation needs. In nations where there are already pre existing issues regarding economic conditions, health, and other associated issues with LICs, it is difficult to imagine that the priority would be proactive climate-proofing in preparation for the future, given the pressing need for improvements elsewhere in the present.

Even on a smaller scale it appears difficult for adaptation methods to be effective in LICs as a result of economic barriers. This is because new climate-friendly innovations are often too much for individuals in LICs to afford. For example, Kaudia (2015) highlights how a climate-

friendly innovation such as an energy efficient cooker, despite its clear climate and health benefits, would likely not be utilised within LICs if it costs \$50. Whilst it is positive that new technologies are available to be more climate friendly and to adapt to the negative effects of climate change, if these technologies are not affordable to the masses in LICs then their impacts will not be felt. Economic struggles within LICs will limit the implementation of more expensive climate adaptation measures as they are simply beyond the budget of the average LIC citizen.

Nations and individuals being priced out of implementing climate change adaptation measures are not the only economic pitfall in this discussion. Alongside the costs being too much to afford, one major barrier facing LICs' ability to adapt to climate change is that the funds set up to support climate change adaptation are yet to be truly successful. Various funds, such as the Least Developed Countries (LDCs) Fund, established under the Kyoto Protocol to support LDCs carry out the implementation of National Adaptation Programmes of Action (NAPAs) (Ludwig et al., 2007) have been introduced, but there have been issues during their application. Throughout the development and planning of NAPAs, LICs faced a number of key issues. For example, even when LICs received extra external funding for their planning of the NAPA, this funding was not enough, and budgetary issues remained a significant limiting factor in the planning of the programmes, according to Osman-Elasha and Downing (2007). They further identify that there

were communication problems, a lack of sufficient technical capabilities, as well as insufficient financial resources, which all constrained the implementation of NAPAs within Eastern and Southern Africa. One specific example, the Malawi NAPA project, experienced problems due to the need to acquire significant information and planning before actually undertaking the project itself. This led to 35% of total costs going towards gaining information and planning, with only 13% going towards tackling issues of agriculture and water, and 20% towards livelihoods and health. This lack of existing information and technical capabilities took away the ability of LICs to effectively adapt and prioritise key areas. Furthermore, few NAPAs considered important issues such as fisheries, energy conservation, and biodiversity conservation in their planning of their projects. These oversights and the need to gather information beforehand taking up much of the budget seriously limited the effectiveness of NAPAs, and lessons must be learnt if future projects are to be more successful.

Finally, there are logistical challenges surrounding adaptation to climate change in LICs. One such example is one that has already been discussed throughout, a lack of access to information on climate change and climate change adaptation. Those in LICs simply do not currently have sufficient resources available on what the true effects of climate change are/will be, and more importantly they do not have access to any information on how to remedy these effects. This may be in part due to overall low education rates in these

nations, but certainly more proactive measures need to be taken on the part of governments and international organisations to actively educate those in LICs on the dangers of climate change and how to deal with them. This goes hand in hand with a further challenge that faces LICs, the unwillingness of city and municipal governments to work with individuals in informal settlements to counter the negative effects of climate change (Moser and Satterthwaite, 2008). Despite those in LICs being the most vulnerable to climate change, not enough is being done to support them. Once again, if governments are failing to do enough for their citizens, there needs to be specific efforts on the part of the international community to recognise the difficulties that LICs face when adapting to climate change, and support them in any way that they can. The negative effects of climate change on LICs has already been discussed throughout this article, and the importance of supporting adaptation efforts cannot be understated. The issues that LICs currently face, such as extreme weather events, economic struggles, and poor levels of health and mortality, are only going to increase as the impacts of climate change become more significant, and thus it is vitally important to support adaptation efforts now, before it is too late.

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“The least developed countries should not be held to the same emissions reduction standards as more developed nations when it comes to adopting renewable energy and striving for net-zero emissions” *by Christian Kerton-Johnson*

In recent years there has been a big push for a joint global movement to lower emissions, and rightly so given the current climate crisis, but it is important to recognise the distinct imbalance within these goals. Expecting all nations to push for renewable energy and to lower emissions is unjust given the current and historical global context of climate change. In my opinion, expecting developing nations to commit towards the same sort of plans as more developed nations is not right, as they have not contributed nearly as much to current CO₂ rates as developed nations have. In fact, 79% of historical carbon emissions are from developed countries, and in 2019, the carbon footprint for an average person in a developed country was more than 23x larger than that of the average person in one of the least developed countries. Expecting developing nations to dramatically reduce their carbon emissions, given this context, is not equitable whatsoever. Despite this, these nations who are not huge contributors towards the current climate emergency are making bold pledges akin to those

being made by more developed nations. One such example is at COP26, where India pledged that it would reach net-zero by 2070. This is just 10 years after China's pledge of reaching net-zero by 2060, all whilst India's per capita emissions rates are some 30 years behind China's and are only half of the present world average. It seems far too demanding to expect developing nations to achieve goals like these.

Furthermore, when one considers the global impacts of climate change, it seems even more unjust for developing nations to be required to lower emissions. This is because whilst the poorest nations did the least to contribute to total historical global emissions and emit far less per capita, they are the ones who are the most exposed to the impacts of climate change, whilst simultaneously being the least able to adapt and protect themselves. In the past 50 years, 69% of worldwide deaths caused by climate-related disasters occurred in the least developed countries in the world. In 2020 alone, floods submerged almost a quarter of Bangladesh, killing at least 54 people and affecting a further 5 million, in Sudan flooding killed at least 100 people and displaced a further 500,000, flash floods in Yemen killed at least 172 people, and in total, climate disasters caused more displacement than war, with at least 30 million people displaced due to floods, storms, and fires. Given these statistics and given the inevitable increase in extreme weather events as a result of climate change, it would be hard to argue against developing nations if they

decided to prioritise adapting to the negative effects of climate change instead of reducing their own emissions.

Tied into this sentiment, the argument could be made that developing nations should not be restricted in the same ways as developed nations regarding their emissions. The latter emitted an incredible amount during their push for development, so why should developing nations with fewer resources be expected to act any differently? One could argue that for development to happen, emissions need to increase in the short term. Every other developed nation has had their time to develop whilst emitting significantly, which has led to the current crisis, yet developing nations are being expected to leapfrog past unrenewable energy straight to more climate-friendly energy sources. Whilst of course in an ideal world all nations would cut back on emissions, forcing all nations to do so is discriminatory against those who were not the primary contributors in the first place.

Linked to this, it would also be hypocritical to place sanctions or enforced targets on developing nations to be more renewable in their early stages of development when developed nations were not at all climate-conscious in theirs. Granted, this was due to the climate crisis back then not being what it is today, but development nations have nonetheless contributed the most to our current climate state. If developed nations want developing nations to be more climate-friendly, then they need to be the ones to offer support and offer viable alternatives. If developed nations

do end up offering effective support, it also should not be met with overwhelming recognition and calls of heroism. It is the duty of developed nations as key contributors to the climate crisis to fix the damage that they have done, it is not an extension of selfless charity to act in a way that reduces climate change.

The key sentiment behind the call for global emission reduction is that of common but different responsibilities. Yes, all nations should really be striving to reduce emissions, but developed nations should certainly be doing the most. Regarding developing nations growth, whilst greener methods of growth are possible at a cheaper cost than they once were, developed nations should be at least assisting in these processes. Preventing climate change and rising temperatures are key issues for less developed nations, given they bear the brunt of the effects, but the responsibility should lay on more developed nations taking actions. This action could be done in several ways. For example, state-of-the-art technology is often extremely important for tackling climate change, and whilst often private sector owned and expensive, the governments of more developed nations could incentivize the private sector businesses to assist less developed nations or could contribute to the costs of purchasing the technology. More developed nations could also help provide better supply chains to less developed nations. As COVID showed, poorer nations are often the last in line to get access to resources available to the

rest of the world. This cannot be the case for tackling climate change and reducing emissions, and more developed nations must ensure that less developed nations do not get left behind in the global push to be greener. Furthermore, the past promises of funding to developing nations need to be improved upon. Not only are the financial elements of many past pledges either insufficient or misleading, but they also too often have not been fulfilled. More developed nations must follow through fully on the 'promises' and 'goals' that they set, as tackling climate change is not an issue that can be done half-heartedly.

Finally, it is important to mention that the concept of offsetting by developed nations is not currently good enough. There are far too many loopholes in the current sphere of offsetting carbon emissions, a process often carried out by more developed nations. Offsetting one's emissions in less developed nations is not a fair and equitable process, and I'd argue that emitting at the same level but offsetting elsewhere does not actually show a true dedication to reducing climate change. Emitting at the same harmful level but then offsetting elsewhere is not 'green' and is not doing good for the environment. To effectively tackle climate change, developed nations need to take greater responsibility and stop with these surface level 'green' tactics.

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Not – only – your fault! *by Italo Daniel Fonseca*

In the last few years, many sustainable practices have started to take place on Instagram and Twitter posts: tips like reducing your shower time and buying reusable straws in order to reduce global warming. It is a fact: we need to change our actions if we want to change the world, and sustainable practices are the first step to start doing it. But with those tips, a delusional mindset started to grow, mainly in the youngest, that only these actions are enough to save the world from an environmental breakdown.

In parallel, agribusiness and polluting industries are polluting and destroying the world, progressively, day by day.

Agribusiness from an international view
Agribusiness is a really essential part of the international dynamic. It is responsible for providing food and groceries for many people, and it is also liable for a great part of the economy of some countries, like Brazil.

In 2021, agribusiness was the biggest cause of illegal deforestation in Brazil, representing 97% of it, and was also 20% bigger when compared to previous years. Also, a great number of these forests are being destined to produce commodities - like livestock and agriculture.

Nevertheless, besides deforestation, agrotoxic products continue to degrade Brazil's soil, leading Brazil to the top of the list of the countries that use agrotoxic the most. It is used mainly because of its efficiency to bring more results for the plantation, leading to a better dynamic, and occasionally to make a better profit.

Although there are plenty of laws that prohibit farmers from using it excessively, they do it anyway, illegally. Moreover, it is also starting to affect the close neighbors of the farms, causing pulmonary diseases, for example. Furthermore, agribusiness has a contradictory point: if the soil and forests are not helped with preservation, even the quality of cattle and plantations are affected, causing a decrease in prices, and impacting the economy.

Polluting industries

Also, industries have an important role in impacting the environment. One of the reasons for that is the over-consumption practices that are increasing greatly every single year. The textile industry, which is included in the top three industries that pollute the most, besides causing damage to the planet, also creates problems with water treatment and use, since it is the biggest and most important component for making clothes.

And the data is clear: 71% of polluting emissions are from only 100 companies. It is influenced, once again, by economic purposes; they are not focused on trying to decrease environmental impacts, instead, they are preoccupied with making as much money as they can. Because of that, there is a small percentage of companies that are eco-friendly - those who care for environmental purposes. Unfortunately, there are also institutions that are using this cause to create a fake “we care for this problem” image, for pure marketing; because of that, people must research a lot to be certified they are not being influenced by a business strategy.

Sustainable economy and the solution

A sustainable economy is the most accessible way to stop industries and companies from manipulating the environment the way they want. Although we do live in a world that is preoccupied with profit, a sustainable economy appears as a possibility to stop letting it be on top of our worries about Earth. It is our job to use it, refusing consumerism; also, we can put pressure on companies to use a sustainable economy, so they can optimize their logistics to be less degradative with nature.

Indigenous' land is not an investment! *by Italo Daniel Fonseca*

The Amazon is known worldwide as one of the forests with the greatest biodiversity in the world, also being the "lung of Earth". But the Amazon is also home of Brazil's original people, the indigenous. And unfortunately, they are suffering the results of deforestation, and consequently, environmental problems. In fact, not only the Amazon is suffering those consequences, but tribes all over Brazil.

According to one of the biggest newspapers in Brazil, 92% of the territory around indigenous lands is being deforested: this number is equivalent to 278 thousand football camps. Besides that, illegal mining is one of the reasons for making indigenous lives dangerous in their own land.

Yanomami: the world must know their story!

The Yanomami is an indigenous group of approximately 35,000 people in the Amazon, who have faced a true crisis since 1993. In July of that year, a group of 20 illegal prospectors invaded their land, murdering 16 people - three teenagers, two elderly and one baby-; it was considered a true genocide by Brazilian justice.

Nowadays, Yanomami continues to struggle with it - even more than in previous decades. Compared to 2018, illegal mining increased 309%, and it is estimated that even 20,000 prospectors live in their land.

Moreover, illegal invasions cause social disorganization, also bringing many diseases. The mining leads to river pollution, which creates excavations in the soil, causing water deposits that promote the proliferation of gnats, increasing cases of malaria. Because of that, the Yanomami became notorious in Brazil in 2022, since they are facing severe malnutrition; moreover, the prospectors also have abused several Yanomami women.

After so many years of experiencing despair, there are many questions that remain: how long will profit overcome humanity? How long will this tribe suffer for only wanting their land back, to live in peace? What is the job of the government in this situation? Those questions are not easy to solve. But it is a fact that something needs to be done quickly, so they can have the dignity of their lives again.



It is happening right now!

Tymbektodem Arara, an indigenous activist who spoke about and exposed the invasion of his land at the United Nations was found dead on 10/31/23. "We are a people of very initial contact, we come here to require respect for our life and our territory. We have suffered many

invasions. The demarcation only happened 30 years after contact with the non-indigenous, in 2016.” said Tymbektodem at the United Nations. Also, audio from prospectors were found where they made death threats to the activists. Regardless of that, the Brazilian police are investigating the cause of death and further details.



Shell's Continued Pollution of Nigeria's Niger Delta: Oil Spills, Lawsuits, and The Way Forward *by Jacob Antigha*



The Niger Delta is the delta of the Niger River that forms a vast intricate network of rivers, swamps, and wetlands near the Gulf of Guinea. For locals, the delta comes as a blessing for its agricultural capabilities which provide their livelihood. Then, you have the abundance of natural oil and gas from the region that attracts oil corporations, such as Shell, which for the past 50 years has been polluting the Niger Delta with its oil spills.

A Brief History of Shell in Nigeria

Like most African and third-world countries, Nigeria relied solely on its agricultural industry to support its economy. This changed however in 1938 when The Royal Dutch Group started operations in Nigeria under the Shell D'Arcy name and was granted an exploration licence to search for oil throughout the country. Then in 1956, Shell D'Arcy started the first oil field for commercial use at Olobiri in the Niger Delta where oil exports soon followed.

The Pollution Problem



Amnesty International reported that since 2011, Shell has reported 1,010 spills, with 17.5 million litres of Shell's oil being spilt into the Niger Delta. That's about seven Olympic swimming pools. Such spillage has devastating effects on surrounding communities, something the people of Ogoniland already know.

This is because since 1970 two million barrels of oil were spilt on farmland and rivers of the south-eastern district. This had a direct impact on those who depend on farming and fishing for their livelihoods and that's not even accounting for the myriad health issues which has lowered the life expectancy of locals from 51 years to 41 years.

Legal Action



Due to the damages oil spills cause to its land and its people, Nigeria's courts have taken action to prosecute Shell. One

example was when Shell was ordered by the Federal High Court in Port Harcourt, Nigeria to pay a "full and final settlement" of \$111m to Ogoniland's Ejama-Ebubu community in order to settle the 1967-70 Biafran war oil spill case, albeit 54 years later.

The people of Nigeria also have taken legal action against Shell such as in February earlier this year when over 13,000 residents from the Ogale and Bille communities in the Niger Delta filed claims against the oil industry giant. Mark Dummett, Amnesty International's Head of Business and Human Rights, said that the residents asked Shell to "clean up oil spills which they say have wrecked their livelihoods, poisoned their wells, and polluted their land and water, which means they can no longer farm or fish". Shell strongly denies any liability and plans to prolong the lawsuit until 2029, so that their claimants can no longer afford it.

Shell's response



To combat claims against them and protect its reputation, Shell has responded to conflicts regarding their oil spills in the Niger Delta through a combination of public statements, legal actions, and remediation efforts.

Sabotage and Theft: Shell has frequently pointed to sabotage and theft as reasons for the oil spills in the Niger Delta. In a 2018 Sustainability Report, Shell stated that 62% of the number of incidents of crude oil theft/spill volume was caused by sabotage of our facilities.

Legal Actions: As mentioned before, Shell has engaged in legal battles to defend its position. In the case of the \$111 million compensation order, Shell expressed its intention to appeal with a Shell spokesperson saying, "We are disappointed by today's judgement and the earlier separate 2010 Federal High Court ruling on Bodo".

Remediation Efforts: Shell has acknowledged the need for environmental remediation. In a press release from 2015, Shell announced plans to establish the Ogoniland Trust Fund, committing \$1 billion to address environmental issues in the region.

However, it's important to note that Shell's responses to conflicts in the Niger Delta have been subject to scrutiny, with various stakeholders holding differing views on the company's level of responsibility and the effectiveness of its actions to address the environmental and social impacts of oil spills in the region.

Regulatory Framework to Counter Oil Pollution



The role of Nigerian government agencies in regulating oil companies' activities in the Niger Delta is significant but has been a subject of ongoing debate regarding their effectiveness in protecting the environment and local communities.

The Department of Petroleum Resources (DPR) is the Nigerian government agency responsible for regulating the oil and gas industry. They issue licenses, enforce regulations, and monitor compliance with environmental standards. However, critics argue that regulatory agencies have at times struggled to hold oil companies accountable for environmental damages, allowing ongoing pollution and oil spills to harm local communities and ecosystems. While the regulatory framework to combat oil pollution is done internally in Nigeria, the country also has help from external, international human rights organisations such as Amnesty International. Amnesty International has played a vital role in advocating for the rights of local communities, like Ogale and Bille, affected by Shell's oil spills in the Niger Delta. The organisation conducts investigations, documents human rights abuses, and raises awareness of environmental and social issues in the region.

Amnesty International has been particularly critical of both Shell and the Nigerian government for their handling of oil-related issues/cases in the Niger Delta.

The Way Forward



Addressing the oil pollution crisis in the Niger Delta requires immediate action and collaboration among stakeholders. It may be a hard job but there are solutions to this problem. Some of these include:

Improved Regulation: Increase regulatory oversight and enforcement, ensuring that Shell and other companies adhere to environmental standards. The Nigerian government should enhance the DPR's capabilities for effective monitoring.

Community Engagement: Involve local communities in the decision-making and implementation of oil-related projects, promoting a sense of ownership and sustainable development with initiatives like the Global Memorandum of Understanding (GMoU).

Transparency and Accountability: Ensure transparency in reporting oil spills and hold companies accountable for violations. Collaborative efforts like the Niger Delta Partnership Initiative (NDPI) can foster transparency.

By implementing these solutions and drawing inspiration from successful initiatives, the Niger Delta can move toward a more sustainable and environmentally friendly future.

Forging a greener world by uniting governments, corporations, and civil Society *by Lucy V.*

Climate change and environmental justice are two critical issues facing our world today. The impact of climate change is felt by every living being on this planet, but it is the most vulnerable communities and individuals who bear the brunt of its consequences. To address this issue, we must come together as a global community and take decisive action to achieve environmental justice.

One way to combat climate change and promote environmental justice is to eliminate plastic consumption and enhance environmental sustainability. Plastic pollution is a major contributor to environmental degradation, and its effects are far-reaching. It contaminates ecosystems, harms marine life, and contributes to climate change through the emission of greenhouse gases during its production and disposal.

Forging partnerships and signing memorandums of understanding (MoUs) can facilitate a united approach towards reducing plastic consumption. Collaboration between governments, corporations, and civil society can lead to the development of innovative solutions and the sharing of best practices. By working together, we can collectively harness our expertise, resources, and influence to tackle the plastic crisis head-on.

Contractual agreements could be established to ensure accountability and foster a sense of responsibility among stakeholders. These contracts can stipulate specific targets and measures that must be adhered to, promoting transparency and providing a framework for monitoring progress. Regular evaluations and assessments should be conducted to assess the effectiveness of these agreements and identify areas for improvement.

Environmental justice requires us to address the disproportionate burden of climate change on marginalized communities. Low-income communities, communities of color, and indigenous communities are often the most affected by climate change and environmental degradation. They are more vulnerable to extreme weather events, have limited access to resources, and face greater health risks due to pollution.

To achieve environmental justice, it is essential to involve these marginalized communities in decision-making processes and ensure their voices are heard. Governments and organizations should prioritize inclusive and participatory approaches, seeking input from these communities and incorporating their perspectives into policymaking.

Investment in sustainable infrastructure and technologies is another vital aspect of achieving environmental justice. By prioritizing renewable energy, efficient transportation systems, and sustainable agricultural practices, we can create jobs

and economic opportunities while reducing our carbon footprint. This will not only help combat climate change but also contribute to the well-being of communities, especially those currently reliant on industries that contribute to environmental degradation.

Education and awareness also play a crucial role in promoting environmental justice. By equipping individuals with knowledge about the impacts of climate change, the importance of sustainability, and their rights to a healthy environment, we empower them to become advocates for change. Education should be accessible to all, and efforts should be made to bridge the gap in environmental literacy between different communities. In addition, this may also further encourage youth activism in driving enhancement for climate action.

In conclusion, tackling climate change and achieving environmental justice requires a comprehensive and collaborative approach. We cannot afford to be passive observers while the world around us deteriorates. We must take responsibility, hold ourselves accountable, and work together to create real change. The time for action is now, and it is up to each and every one of us to make a difference.

Implementing international legislation policies to examine the nexus of climate change and environmental justice *by Lucy V.*

In recent years, the issue of climate change has dominated headlines and conversations around the world. The catastrophic impacts of rising global temperatures are becoming increasingly apparent, with devastating wildfires, extreme weather events, and rising sea levels threatening communities and ecosystems everywhere. But in the discussions on climate change, one crucial aspect often goes unnoticed – environmental justice.

Environmental justice refers to the fair and equitable distribution of environmental benefits and burdens among different communities. Unfortunately, it is often the most vulnerable and marginalized communities that bear the brunt of the consequences of climate change and environmental degradation. This is no coincidence. Environmental justice issues are intricately linked to systemic inequalities and social injustices that perpetuate the unequal distribution of power and resources.

Plastic waste is one of the main culprits contributing to global climate change and environmental injustice. Not only does plastic pollution directly harm ecosystems, but it also disproportionately

affects already disadvantaged communities. Marine life, in particular, is at risk. Plastic pollution in the oceans is harming and killing marine animals at an alarming rate, with endangered species often being the most vulnerable. This has a devastating impact on the biodiversity and overall health of marine ecosystems.

The need to reduce our consumption of plastic is evident. It is time for international legislation policies to be implemented to control the damage caused by plastic consumption. These policies should aim to regulate the production, use, and disposal of plastic products. Continuous updating of memorandums and signing contracts can ensure that industries and individuals alike are held accountable for their plastic consumption.

Implementing international legislation to control plastic consumption is a necessary step towards mitigating the catastrophic impacts of plastic pollution. However, we must also incentivize the development of sustainable alternatives. By investing in research and development, we can encourage the creation of innovative and eco-friendly materials that can replace plastic in various industries. This will not only help protect the environment but also stimulate economic growth and create new employment opportunities.

Additionally, it is crucial to continuously update these policies to adapt to changing circumstances and emerging technological advancements. The fight against plastic pollution and climate change requires a dynamic and proactive approach. As new information and

technologies become available, we must be open to incorporating them into our strategies to ensure their effectiveness.

We cannot continue to disregard the voices and well-being of marginalized communities in the fight against climate change. As we address the environmental challenges ahead, let us strive for a future that is not only sustainable but also just and equitable for all. Only then can we truly tackle climate change and create a world that our future generations can thrive in.

Using the PIE framework to combat climate change inequities, especially on marginalized communities

by Lucy V.

Climate change is one of the most pressing challenges of our time, impacting every aspect of our lives and the planet we call home. However, the impact of climate change is not evenly distributed across society. Marginalized communities, including low-income individuals, people of color, indigenous populations, and those living in vulnerable areas, are more likely to bear the brunt of climate change effects. This can manifest in various forms, including rising temperatures, more frequent and severe natural disasters such as hurricanes and floods, water scarcity, food insecurity, and increased health risks.

Environmental Racism and Unequal Distribution of Pollution

In addition to the direct impacts of climate change, marginalized communities also face the burden of environmental racism and the unequal distribution of pollution and toxic waste. Industrial facilities, hazardous waste sites, and polluting industries are often located in or near marginalized communities, resulting in exposure to harmful pollutants and adverse health outcomes. This unequal distribution of pollution perpetuates environmental injustice, exacerbating the already existing social and economic inequalities.

Utilizing the PIE Framework for Environmental Justice

To address the challenges posed by climate change and environmental injustice, it is crucial to utilize the planning, implementation, and evaluation (PIE) framework. This framework provides a strategic approach to designing and implementing effective solutions.

1. **Planning:** An effective response to climate change and environmental injustice begins with comprehensive planning. This involves identifying vulnerable communities, assessing their specific needs and vulnerabilities, and developing strategies to mitigate the impacts. It also requires collaboration and engagement with the affected communities to ensure their voices are heard and their concerns are addressed.
2. **Implementation:** Once comprehensive planning is complete, the next step is implementing the identified strategies. This involves mobilizing resources, raising awareness, and advocating for policy changes that promote environmental justice. It is crucial to work collaboratively across sectors, including government agencies, NGOs, and local communities, to ensure a coordinated and impactful response.
3. **Evaluation:** Regular evaluation is essential to assess the effectiveness of implemented strategies, identify gaps, and identify areas for improvement. Monitoring the progress made and evaluating the outcomes helps hold stakeholders accountable and enables the adaptation of strategies to changing

circumstances. It is vital to involve marginalized communities in the evaluation process to ensure their perspectives are considered and that the solutions are addressing their specific needs.

Continuous Improvement for a Sustainable Environment

Climate change and environmental injustice are complex and deeply intertwined issues. By utilizing the PIE framework, we can address these challenges holistically. Comprehensive planning, implementation of effective strategies, and regular evaluation are crucial steps in reducing the disproportionate impacts of climate change on marginalized communities. Furthermore, it is essential to address environmental racism and the unequal distribution of pollution and toxic waste to ensure equitable access to a clean and healthy environment.

Conclusion

Climate change poses a significant threat to our planet and society, with marginalized communities bearing the heaviest burdens. By embracing the principles of environmental justice and utilizing the planning, implementation, and evaluation (PIE) framework, we can work towards a more equitable and sustainable future. It is essential to prioritize the needs of marginalized communities and address the systemic

injustices that perpetuate environmental disparities.

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Climate Change and the Impact *by Monia (Peachy) Romero*

Climate change not only impacts adults, animals, the environment, but also the youth of our nation. Most people who are discussing climate change are adults and they are working towards the betterment of the environment. But with this discussion comes the concern we should have for future generations and the children of today. As climate change and global warming become prevalent, considering the effects it has on humanity is vitally important.

Climate Crisis

The causes of climate change are simple: human development and industrialization has led to an increasing issue of air pollution and greenhouse gas emissions. According to the United Nations, many things such as manufacturing goods, generating power, transportation, and more all heavily influence climate change and contribute to pollution. One article state, "Burning fossil fuels, along with destructive agricultural practices and deforestation, have led to greenhouse gasses accumulating in the atmosphere (principally carbon dioxide [CO₂] and methane); this prevents heat from escaping the Earth, which in turn causes land and sea temperatures to rise." With this in mind, it explains heat waves, ice caps melting, sea levels rising, and extreme weather.

This is not to say that people cannot have the developments and technology we already have, but rather that we should be conscious of the reality we are facing in order to change the outcome of what climate change is doing to the Earth.

Social Effects

How this affects us socially is an even bigger disparity when we consider the social issues of today, combined with how climate change affects us. Issues such as inequality of incomes across different socioeconomic statuses, climate change affects how food and water is sourced, and people with chronic illnesses/disabilities can suffer from worsening symptoms as climate change worsens. An article states that when extreme weather events happen, such as a heatwave for example, "Heat waves, which have increased in frequency in recent years, cause a variety of heat-related disorders and exacerbations of cardiovascular diseases, respiratory disorders, and other chronic conditions" (Levy). Considering people's health conditions and abilities make a considerable amount of the population and can impact their ability to work, especially among outdoor workers.

Factors such as economic status are important when looking at housing locations and how inequitable locations suffer from different forms of weather events. Flooding is quite different from fires in terms of damage, but the psychological and economic effects it can have on families are considerably the same.

Psychological Effects

Many of us know and understand the effects of climate change physically, but we do not consider the psychological effects. People sometimes experience post-traumatic stress disorder (PTSD) following extreme weather such as flooding and large fires. They will most likely suffer from depression as well. According to the American Psychological Association, many are already experiencing this alongside anxiety in their daily lives concerning climate change and global warming.

Another factor we do not consider is how it affects children. For example, if people are experiencing displacement after a large fire, their home destroyed, valuables gone, etc, there is a higher chance of those children feeling the displacement and stress the same as their parents or guardians. One article state that “after the 2010 floods in Pakistan, 73% of 10- to 19-year-olds displayed high levels of PTSD, with displaced girls affected most seriously (Gibbons, 2014).

Other reactions to extreme weather events also included feelings of “distress, grief, and anger; loss of identity; feelings of helplessness and hopelessness; higher rates of suicide; and increased aggression and violence (Clayton et al., 2017).” Children are often dependent on the adults in their life which leads to the children also experiencing the impacts of climate change just as the adults would. The psychosocial consequences of climate change can be drastic and highly depend on the economic status and well-

being of the family before these extreme weather events.

Another article states “While eco-anxiety is a normal response to the climate emergency and does not usually rise to the level of clinical concern, it may shape views of society and the future, leading to anger, hopelessness, or paralysis, particularly in young people (Hickman).” As many of us know the effects can very well be passed on to the youth of today. Having anxiety about these situations can lead to negative emotions about not being able to do anything at a large scale.

Conclusions

The damage caused by the aftereffects of climate change are far more reparable, but by not finding solutions to climate change, we will suffer now, and will see the effects within children as they grow up. Being more conscious of our electricity usage, how much we use in fossil fuels, lowering food waste, and using other sustainable methods, we can begin to find ways we can have our developments in technology while being climate conscious. As we find better solutions to climate change, sustainability is the key to bettering our planet for current and future generations.

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Indigenous Sustainability

by *Monia (Peachy) Romero*

Indigenous People have been using sustainable methods for centuries and now more than ever should we consider their methods to help sustain our well-being on Earth for us animals, and future generations. Some are suffering from the effects of climate change already, and by having Indigenous community-led programs we can create a plan together to respect their cultural diversity while learning their techniques and cultivating ideas for innovative ways of preserving the environment.

First, what is climate change? As defined by the United Nations it is the “long-term shifts in temperatures and weather patterns...” Although it can be a natural occurrence, human activities have been the main component of climate change since the 1800s with the production of coal, oil, gas, and greenhouse gasses.

Now for sustainability, we have the Eurocentric views of sustainability in which we separate ourselves from nature, whereas Indigenous People view humans as a part of nature. The dichotomy between these two views is essential to understanding that we are not a community of unnatural beings with higher intelligence with no responsibility to our planet, we are intelligent beings who have a responsibility to take care of the only environment we have. When considering these components, sustainability is the “avoidance of the depletion of natural resources in order to

maintain an ecological balance,” according to Oxford Language.

To the United Nations, it means more than that; it means 140 developing countries are seeking ways of being sustainable for now and future generations while ensuring development needs are meant for today's people. With this information in mind, we can better implement ways to keep not only resources for humans to live a sustainable life but also provide animals and the environment with an ecological balance for future generations. By combining this information with Indigenous Peoples' knowledge from all over the world, we can achieve that goal.



Not many individuals know about the status of one of the seven wonders of the world and how it is dying. Located on the northeastern coast of Australia, the Great Barrier Reef (GBR) stretches for approximately 1,429 miles and is one of the largest living structures visible from space. Home to many corals, fish, sea turtles, and more, we have and will continue to see the effects of climate change on the Great Barrier Reef such as flooding nesting sites, coral bleaching, and other imbalances. The Great Barrier Reef Foundation is one organization

implementing Indigenous community-led programs to acknowledge the Traditional Owners of the First Nations People. By collaborating to reduce coral bleaching, prevent poor quality ocean water, community reef protection, and more, they have created a community dedicated to providing the ecological balance that can be sustained for future generations.

According to the Great Barrier Reef Foundation, coral bleaching is a process in which corals cannot tolerate higher temperatures and become stressed. Corals will “expel the microscopic algae that live in their tissues. Without these algae, corals' tissues become transparent, exposing their white skeleton.” Although that may not cause the death of corals, it can exponentially increase the chances of diseases and starvation, thus leading to their death. Corals are also a large part of the ecosystem, and with coral bleaching, the ecosystem can collapse, causing a domino effect that has and will affect other creatures as they eat coral or house themselves in the reef.



Animals like the endangered green sea turtle are suffering from climate change and pollution already, whether eating

plastic bags by mistaking them for jellyfish or as temperatures rise, sea levels rise causing hatchlings to drown before they reach the surface. This is crucial to understand because only one green sea turtle in every thousand will survive to adulthood, therefore losing a nest of at most 110 eggs to flooding/drowning is debilitating to their population.



To combat these issues, the GBR Foundation works to grow heat-tolerant corals and has started Coral IVF where they implant, grow, and settle millions of baby corals. To protect these corals and to help them thrive they have implemented coral probiotics to strengthen their immune system and prediction technology to know when and where they should intervene to ensure the long-term health of corals from now and into the future.

For turtles, they are collaborating with researchers and the Traditional Owners, the Wuthati Nation and Meriam Nation, to:

- “1. installing fencing to reduce fatal cliff falls.
2. moving sand to create more room for nesting.

3. rescuing fallen and trapped turtles.
4. Track turtles thousands of kilometers to learn more about how to help them apply 60,000 years of Traditional Knowledge.
5. keeping endangered seabird nests safe.
6. protecting and restoring a vital ecosystem”

Whether it is repopulating the corals, saving the turtles, or otherwise, there is a domino effect from climate change in itself. The reason corals and turtles are suffering is due to climate change from the after-effects of, according to the United Nations, “intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, and declining biodiversity.” Our Planet is one giant ecosystem, a system of interconnected biological connectors that affect one another. If this can be debated for a small ecosphere, why not a larger one such as our planet?

Jenna Grey-Eagle writes of Tribal success stories in her article “Sustainability from an Indigenous Perspective”. She describes a community that has created “exergy” in Belcourt, North Dakota. This “exergy” is a sustainable development by the Turtle Mountain Community College where they are harnessing and using geothermal and wind energy to where no resources are wasted, and they produce more energy than they consume.

Indigenous Sustainability can be taught if we are willing to listen. Eurocentric viewing of the world that separates us from nature is objectifying its beauty and the animals that inhabit it. With

Indigenous knowledge, we can understand how to create a better and more ecological way of helping the flora and fauna, reducing waste, and protecting the environment.

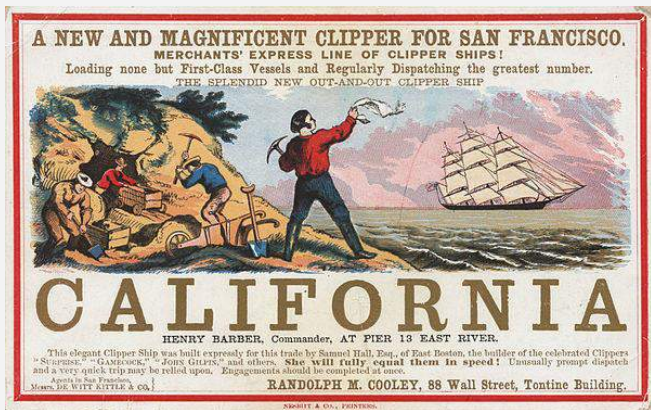
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California Gold Rush and Deforestation *by Monia (Peachy) Romero*



During the gold rush, many advertised for the expansion westward in search of gold. This is just one example of an advertisement where people would expand westward in order for human development and industrialization of the area. With the discovery of gold in this region, it meant that there was more reason to head west and explore the possibilities of mining gold in the areas untouched. The photo depicts a man waving down a ship in the distance while he stands on the cliff as they mine for gold.



The need and want for gold increased as it had started to fuel America's economy.

With that need came deforestation of the Redwood Forests in search of gold. What once was a forest was now becoming an industrialized area that eventually led to laws being made to protect what was left of the forest. These laws were placed, and it is now illegal to cut them down, protecting these older than 3,000 year beings. The photo depicts men standing besides, in front, and in between the base of a redwood tree being chopped down.



As much as it is a sight to see these trees being chopped down to search for gold, we must consider how we give meaning to tangible items of gold, but we cannot appreciate the beauty and the cost of deforestation of the redwoods. As gold became more prevalent during their mining processes, more resources were used to chop down redwood trees and mine for gold as more areas were being landscaped for homes. Many Native Americans were forced off their land to mine for this gold and further showed the lack of care that was put into what they were doing for future generations. Although it was fueling the American economy, these trees were nearly extinct until laws were put into place to protect

the rest of the redwood forest which lies on the coast. The photo depicts men standing next to one third of a chopped redwood tree, other men sit on top of the redwood chunk. One man is half the diameter of one redwood tree.



When we look at today and the laws that were placed to protect these redwoods, we are now facing poachers who cut large chunks off the bases of redwood forest trees. There are protections and laws against cutting down these trees with their rareness, as only 5 percent of the forest still exists today. We choose to give value to the things like gold that not only destroyed wildlife but had given no beauty to the world other than fine jewelry and having economic and monetary value that stimulates the economy. Depicted is a woman standing next to the base of a red wood tree where poachers have carved and cut out chunks of the base.



Looking at today's environmental issues, we are now having to protect the redwood forest, or what is left of it, from the aftereffects of climate change such as fires caused from extreme heat, land conversion, introducing new stressors to the redwoods such as air pollution and invasive species. Protecting these trees goes beyond the realm of our mortal life, and to protect these giant sequoias for future generations to enjoy, we should consider the carbon cycle and carbon footprint. As much as carbon dioxide emissions are made, trees are a large contributor to lowering carbon dioxide emissions into oxygen. Being part of this ecosystem means having to protect the ecosystem we reside in. I believe it is in our best interest to protect the woods from poachers and climate change stressors to allow ourselves to bask in the beauty of the world. The photo depicts one half in black and white, men who are standing and sitting on top of a slice of redwood tree after chopping it down, the other half of the photo is in color of a woman admiring a redwood tree.

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What is Climate Change? *by Shylo Monroe*

According to a United Nations article, climate change is the shift in the weather patterns and temperatures. Instead of these shifts being temporary, they seem to be everlasting. It has been a phenomenon that has overtaken the world for many years now. Sadly, just recently, this problem has started to progress rapidly. It causes multiple problems within different countries, continents, and cities. The most common type of climate change is what people like to classify as “global warming.” This term specifies when certain cold areas become abnormally warmer. Antarctica is a great example of the effects of global warming. Animals and humans living on that certain continent have been suffering with the changes in temperature, since Antarctica wasn’t made to become hotter. Even though there are many causes of climate change and global warming, there are also many ways to help overcome the effects of it as well.

The greenhouse effect, caused by greenhouse gases, is a large contributor to climate change. Britannica states that greenhouse gases do occur naturally, but they are being enhanced by humans. The greenhouse effect is caused by different vapors and gases trapping heat from the sun. They let the heat from the sunlight pass through, while also not letting it back out. It is also said that water vapor is the most common greenhouse gas. Now, there is more and more heat being trapped in the atmosphere. Because of the excessive amount of these gases, the

universe is becoming progressively warmer as time goes on. However, along with absorbing heat, they also absorb radiation, which is one of the unhealthiest things for the environment now. An Eia article claims that Ozone is another greenhouse gas, but it can be helpful or harmful. It just depends on the location of the Ozone. National Geographic says that heat is not the only factor that greenhouse gases cause. Air pollution has also increased as these gases have increased in severity. Wildfires have also been happening more because of some environments becoming drier. Therefore, these places are more susceptible to fires. This causes a domino effect to happen amongst the worlds. Because of greenhouse gases, there is climate change. Since there is climate change, there are more wildfires in certain areas. Lastly, because of these wildfires happening more frequently, more toxic gases are released and emitted. Thankfully, though, the Center for Climate and Energy Solutions writes that most plants absorb these toxins.

The greenhouse effect isn’t the only problem that is causing climate change and global warming, though. Using cars and other types of vehicles/ transportation can play a big role in these changes as well. The United Nations shows evidence that most, if not all, vehicles emit some sort of gases that aren’t healthy for the earth, or the people living on the earth. With so many new cars and trucks being created, the level of gases that are being released into the air are not getting any slimmer. Along with vehicles contributing to climate change, there are also things as

simple as using electricity. Sadly, there isn't much to do for this problem, since electricity is vital for homes and buildings. We can make a difference when it comes to reducing the usage of gases emitted by transportation though. The National Park Service makes the point that bicycling and walking is an effective way to get from one place to another. By replacing driving with walking, biking, or even skateboarding, there is a good chance that climate change will be less severe. Another point that The National Park Service made is to take public transportation to certain places. This is a simple but effective way to reduce the toxins being released into the air. Even though it isn't getting rid of the toxicity altogether, it is still beneficial to the environment. Lastly, carpooling was another attainable option for groups of people or families. "Carpooling" is when multiple people share one car or vehicle to go to a certain destination. So, instead of using 5 cars to transport 5 people, there can be one larger car to transport everyone.

Other ways to reduce the effects of climate change and global warming can be as simple as planting a flower or tree. Planting something can help nature a lot more than you might think. This can help feed bees and other insects/ bugs. This will especially help bees with pollination. UC Davis also says that wasting water is a big problem against numerous people. Therefore, putting in the effort to save as much water as possible can also lessen the effects of climate change/ warming. In fact, the article from the website claims that California's drought saved

greenhouse gas emissions that were equal to getting rid of 110,000 cars. Lastly, UC Davis also wrote that people could reduce the amount of plastic used in households. Some plastic is able to be recycled or biodegradable, but some types of plastic are not. Usually, people just throw plastic away after one use, especially if it is plastic silverware, like spoons, or plastic water bottles. Glass or paper are both great alternatives to plastic. Glass can be reused over and over again, while paper plates can be thrown away, but they are much better for the environment. Some restaurants have resorted to using paper straws instead of plastic straws, which also makes a large difference. With every piece of plastic that is not used, the world is getting healthier. Even though climate change has been taking over the world for some time now, there are many ways you can help. Fossil fuels, greenhouse gases and transportation of all types are just a few things that contribute to the changes that are happening currently. Some of these changes are happening naturally, but even then, there are still ways to help. As stated earlier, biking, walking, or skateboarding to different locations can help reducing the fumes that are being put out into the air. Recycling, or not using plastic is also an option. Aiding the world in any way will create a better habitat for humans today.

Climate Change and Equity: Bridging the Gap for Environmental Justice *by* *Tasfia Khan Lamia*

Climate change is a pressing issue that affects us all, but it disproportionately impacts vulnerable communities. Environmental justice is the recognition that the burden of environmental degradation does not fall evenly across society. This article explores how climate-induced challenges exacerbate existing inequalities and how we can work towards equitable solutions for a sustainable and just world.

Now, climate change and environmental justice are intimately intertwined. Climate change, driven primarily by human activities like the burning of fossil fuels, leads to a warming planet with severe consequences, including extreme weather events and rising sea levels. Environmental justice, on the other hand, focuses on the equitable distribution of environmental benefits and burdens, highlighting the disproportionate impact of environmental issues on marginalized communities. These communities often face a double-edged sword, as they are not only more vulnerable to the impacts of climate change but are also more likely to live in areas with higher pollution levels and fewer resources to adapt.

The connection between climate change and environmental justice is clear: the impacts of climate change, such as heatwaves, flooding, and food insecurity, disproportionately affect low-income and

minority communities. Addressing environmental justice within the context of climate change means recognizing and rectifying these disparities. It requires equitable solutions that not only reduce greenhouse gas emissions but also protect and support those at the greatest risk. Ultimately, the goal is to create a more sustainable and just world where the burdens and benefits of addressing climate change are shared fairly among all members of society, regardless of their background or circumstances.

Climate change and environmental justice are critical issues that demand our attention for many reasons.

Firstly, climate change is a global issue that affects not only the environment but also economies, societies, and people's well-being worldwide. Its far-reaching consequences call for urgent action to mitigate its effects.

Secondly, the vulnerable and marginalized communities suffer disproportionately from climate change, exacerbating existing inequalities and making it an issue of social justice. These communities often lack the resources to adapt to changing conditions and are more likely to live in areas exposed to environmental hazards.

Thirdly, the economic costs of climate change are enormous, including damage from extreme weather events, loss of agricultural productivity, and healthcare expenses. These costs burden

Fourthly, climate change threatens biodiversity, leading to the extinction of

species and ecosystems. This loss has ecological and scientific implications, as well as potential impacts on human survival.

Fifthly, climate change can displace millions of people, creating climate refugees, and has significant humanitarian and geopolitical implications. As such, it is crucial to address climate change from a global perspective.

Sixthly, climate change can lead to conflicts over resources like water and arable land, posing security risks and potentially destabilizing regions. Addressing these risks is vital to maintaining global stability.

Seventhly, climate change contributes to the spread of diseases, heat-related illnesses, and worsening air quality, all of which affect human health. We must take action to protect human health and well-being from the impacts of climate change.

Eighthly, failing to address climate change and environmental justice issues now will leave a legacy of environmental degradation and social inequality for future generations.

The significance of addressing climate change lies in the preservation of our planet, as it threatens the environment, economies, and the well-being of current and future generations. By taking action to reduce its impact, we can mitigate the devastating consequences of extreme weather events, protect ecosystems, foster a sustainable and equitable global

society, and ensure a habitable planet for all. The following actions can be crucial in mitigating these problems and ensuring a sustainable future for generations to come:

1. Reducing Greenhouse Gas Emissions: To combat the devastating impact of greenhouse gas emissions, it is necessary to take steps such as adopting energy-efficient appliances and lighting, transitioning to renewable energy sources like solar and wind power, reducing personal vehicle use, opting for public transport, carpooling, biking, or walking, and supporting policies and initiatives that reduce emissions, such as carbon pricing.

2. Conserving Resources: Reducing, reusing, and recycling to minimize waste, supporting sustainable and local agriculture and food systems, and promoting water conservation practices are essential steps in conserving resources and preserving our planet.

3. Advocating for Policy Change: Supporting and advocating for government policies that reduce emissions and promote environmental justice, such as renewable energy incentives and regulations to limit emissions from industries, is crucial in effecting real change.

4. Educating and Raising Awareness: Informing yourself and others about climate change and environmental justice, engaging in conversations, and participating in educational initiatives in your community are important steps in raising awareness of the issue.

5. Supporting Sustainable Practices: Choosing products and companies that prioritize sustainability and environmentally friendly practices, reducing meat consumption, and minimizing waste by using reusable products and recycling materials when possible are necessary steps in promoting sustainable practices.

6. Reducing, Reusing, and Recycling: Minimizing waste through the use of reusable products and recycling materials when possible is necessary for reducing the impact of waste on our environment.

7. Protecting and Restoring Ecosystems: Supporting conservation efforts and engaging in local habitat restoration projects are essential in protecting and restoring ecosystems that have been damaged by human activity.

8. Advocating for Environmental Justice: Joining or supporting organizations working for environmental justice in your community and participating in protests and advocacy campaigns to address environmental inequalities are important steps in promoting environmental justice.

9. Preparing for Climate Impacts: Building climate-resilient infrastructure and communities and implementing disaster preparedness plans are necessary steps in preparing for the impacts of climate change.

10. Supporting Green Technologies and Research: Investing in and advocating for the development and deployment of green technologies and research that can

help combat climate change is crucial in finding long-term solutions to the issue.

11. Engaging in Sustainable Living Practices: Adopting sustainable lifestyle choices, including reducing single-use plastics, conserving water, and supporting eco-friendly businesses, is necessary for promoting sustainable living practices.

12. Engaging in Climate Activism: Joining or supporting climate activism movements to raise awareness and demand action from governments and corporations is a significant step in combating climate change and promoting environmental justice.

We must act urgently to address climate change and build more resilient communities. Increasing awareness about climate impacts and solutions, encouraging local initiatives, advocating for supportive policies, and participating in activism are all ways we can channel our collective energy toward effective action and a more resilient future. Let's join hands and work together to build a brighter and more sustainable tomorrow for the benefit of generations to come.

SOCIAL

Social justice refers to the fair and equitable distribution of resources, opportunities, and privileges within society. It is concerned with promoting equal access to basic human rights, such as education, healthcare, and housing, regardless of a person's race, gender, religion, or socioeconomic status.

JUSTICE

Social justice also seeks to challenge and address systemic inequalities and discrimination that contribute to the marginalization of certain groups within society. It is a fundamental principle of a just and democratic society, and is often pursued through advocacy efforts.

THE CATALYST

fight for social justice