

LINGAYA'S MAGAZINE



Edition 2025

WE FOR ENVIRONMENT



Lingaya's Lalita Devi Institute of Management & Sciences, Mandi Rd, near Chattarpur, Mandi,
New Delhi, Delhi 110047

MESSAGE



DR. PICHESHWAR GADDE

CHAIRMAN & CEO- LINGAYA'S GROUP OF INSTITUTIONS

At Lingaya's Group of Institutions, we recognize the critical role education plays in fostering environmental responsibility. As an institution dedicated to academic excellence and holistic development, we are committed to equipping our students with the knowledge and skills needed to address today's pressing environmental challenges. Sustainability is not just a concept but a way of life that we instill in our students. Through our curriculum, research initiatives, and campus-wide green initiatives, we aim to create a culture of environmental stewardship. From promoting renewable energy solutions and waste management programs to encouraging community-driven conservation efforts, our goal is to make a tangible impact on our planet. As educators and leaders, we have a responsibility to ensure that future generations inherit a healthier, greener world. I encourage all students, faculty, and stakeholders to actively participate in this mission and make conscious choices that contribute to a more sustainable future. Together, let us take meaningful steps toward a cleaner, greener, and more sustainable world.

MESSAGE



MS. SUNITA GADDE

SECRETARY LINGAYA'S GROUP OF INSTITUTIONS

Education is a powerful catalyst for change. As we face growing environmental challenges, it is our collective responsibility to nurture a generation that values sustainability and takes proactive steps toward preserving our planet. Our institution is dedicated to integrating environmental consciousness into academics, research, and campus initiatives. We actively encourage students to engage in green practices, from energy conservation and waste reduction to participating in environmental awareness programs. By fostering an eco-friendly mindset, we aim to shape responsible global citizens who contribute meaningfully to society. Sustainability is not just a commitment but a way of life at Lingaya's. Through innovative projects, collaborations, and community engagement, we continue to promote environmental stewardship and encourage every member of our institution to take action. Let us all pledge to be guardians of nature and work together for a cleaner, greener, and more sustainable future.



MS. AMITA KUMAR

ADVISOR LINGAYA'S GROUP OF INSTITUTIONS

Progress is measured not just by academic excellence but by our commitment to sustainability and social responsibility. As educators and mentors, we have a duty to instill environmental consciousness in our students, ensuring that they become responsible stewards of the planet. Our institution continuously strives to integrate sustainability into our curriculum, research, and campus initiatives. By promoting eco-friendly practices, fostering innovative solutions, and encouraging active participation in environmental causes, we aim to create a culture of awareness and action. The challenges of climate change, resource depletion, and pollution require collective efforts. It is our responsibility to equip students with the knowledge and skills to address these issues and contribute to a greener, more sustainable world. Together, let us pledge to protect and preserve our environment for future generations. Every small step counts, and with education as our foundation, we can build a better, more sustainable tomorrow.

MESSAGE



DR. PRANAV MISHRA

DIRECTOR, LINGAYA'S LALITA DEVI INSTITUTE OF MANAGEMENT & SCIENCES

At Lingaya's Lalita Devi Institute of Management & Sciences, we strongly believe that education plays a transformative role in shaping a sustainable future. In today's rapidly evolving world, where environmental concerns are becoming increasingly critical, it is imperative for educational institutions to lead by example. As an institution committed to academic excellence and holistic development, we aim to instill a deep sense of environmental consciousness in our students, preparing them to be responsible leaders, professionals, and change-makers. Sustainability is not just a theoretical concept but a way of life that must be practiced and promoted. At our institute, we integrate sustainable principles into our curriculum, research, and day-to-day activities. From organizing awareness campaigns and eco-friendly drives to implementing green campus initiatives such as waste segregation, energy conservation, and tree plantation programs, we are committed to fostering a culture of responsibility and innovation. Our faculty and students actively engage in research and projects that explore innovative solutions to environmental challenges, reinforcing our mission to contribute meaningfully to society. As we move forward, we must recognize that the responsibility of protecting the environment does not rest on a single individual or institution—it is a collective effort that requires the participation of all. The students of today will be the policymakers, entrepreneurs, and industry leaders of tomorrow, and it is essential that they carry forward the values of sustainability and ethical responsibility in their professional and personal lives. Let us all pledge to take meaningful actions—no matter how small—to protect our planet. Together, we can build a future that is greener, healthier, and more sustainable for generations to come.

HOD'S DESK



ASSOCIATE PROFESSOR, HEAD OF DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION, LLDIMS

In an era where environmental challenges are intensifying, the role of media and communication in shaping public perception and driving change has never been more crucial. As journalists, communicators, and media professionals, we hold the responsibility of informing, educating, and inspiring society toward sustainable practices. At Lingaya's Lalita Devi Institute of Management & Sciences, our Journalism and Mass Communication department is committed to equipping students with the knowledge and skills to advocate for environmental responsibility through impactful storytelling. The media serves as a powerful tool to highlight pressing environmental issues such as climate change, deforestation, pollution, and biodiversity loss. Through investigative journalism, documentaries, digital campaigns, and social media activism, we can bring attention to these critical concerns and influence policies and behaviors. As educators, we emphasize the importance of ethical journalism that not only reports facts but also motivates action for a sustainable future. Our department actively encourages students to engage in projects and research focused on environmental communication. Through workshops, seminars, and collaborations with environmental organizations, we aim to provide students with practical exposure to the role of media in driving sustainable change. The integration of new-age digital media tools also allows for innovative storytelling approaches that can reach wider audiences and create a lasting impact. As future media professionals, our students have the potential to shape narratives, challenge misinformation, and advocate for policies that benefit the environment. Journalism is not just about reporting news—it is about being the voice for those who cannot speak, including our planet. It is about holding individuals, corporations, and governments accountable for their environmental impact. At LLDIMS, we are committed to nurturing a generation of media professionals who will use their platforms responsibly to drive awareness, influence change, and contribute toward a greener, healthier world. Let us recognize the power of words and visuals in shaping a more sustainable future and take the initiative to make a difference—one story at a time.

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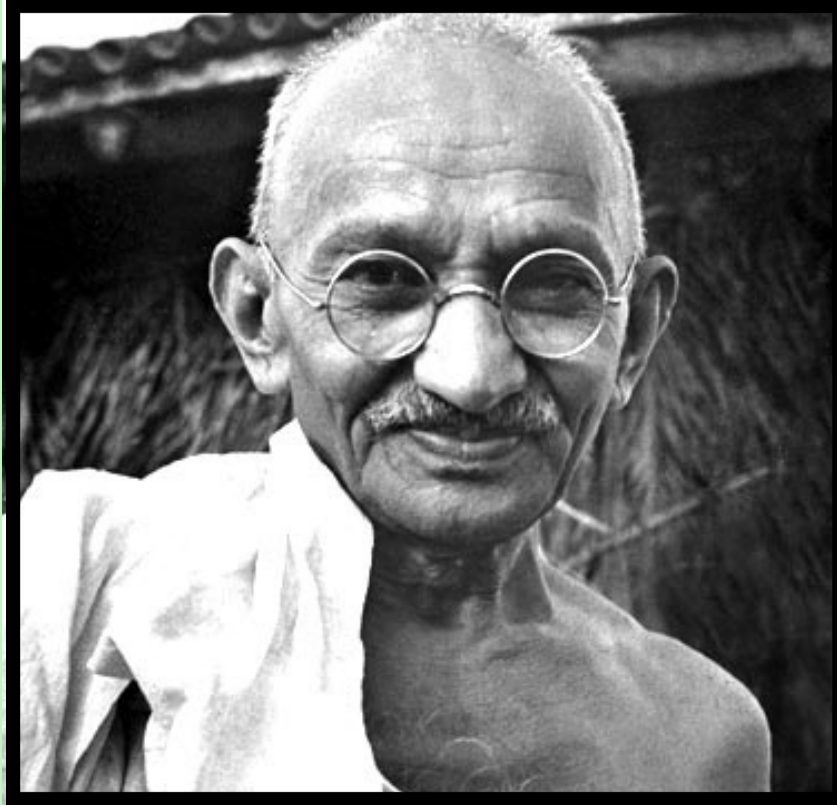
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Earth provides enough to satisfy
every man's needs, but not every
man's greed.

Mahatma Gandhi

INSPIRING YOU



Tulsi Gowda
(1937 or 1938 - 16 December 2024)

Tulsi Gowda (1937 or 1938 - 16 December 2024) was an Indian environmentalist from Honnali village. She planted more than 30,000 saplings and looked after the nurseries of the Forest Department. Her work has been honoured by the Government of India and other organisations. In 2021, the Government of India awarded her the Padma Shri, the country's fourth highest civilian award. She is known as the "Encyclopedia of the Forest" for her ability to recognise the mother tree of any species of tree.

Protecting Our Planet: The Need for Environmental Action



Riya Namdeo
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3rd Year

The environment is facing an unprecedented crisis due to human activities such as deforestation, pollution, and excessive use of fossil fuels. Climate change, caused by greenhouse gas emissions, has led to rising global temperatures, extreme weather events, and the loss of biodiversity. Industrial waste and plastic pollution are contaminating air, water, and soil, posing a severe threat to both wildlife and human health. Deforestation, driven by urban expansion and agriculture, is further reducing the planet's ability to absorb carbon dioxide, accelerating global warming.

However, numerous solutions can help restore ecological balance. Renewable energy sources like solar, wind, and hydropower can significantly reduce our dependence on fossil fuels. Sustainable agriculture, afforestation, and waste management strategies, including recycling and composting, can help conserve resources. Governments must implement strict environmental regulations, while businesses should adopt eco-friendly practices to minimize their carbon footprint. Individuals, too, can contribute by reducing plastic use, conserving water, and supporting green initiatives.

A collective effort is needed to protect the planet for future generations. Educating communities about environmental conservation and promoting sustainable living are essential steps toward change. By embracing a greener lifestyle and supporting policies that prioritize nature, we can slow down climate change, preserve biodiversity, and ensure a healthier Earth. The time to act is now—before irreversible damage is done.



Source: CSR Mandate (Google Images)

Waste Management Crisis: A Looming Environmental Threat



Manisha Shah
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The waste management crisis in many regions, presents a significant environmental and public health challenge. The uncontrolled accumulation of solid waste, stemming from rapid urbanization and increased consumption, leads to severe consequences. Open dumping and inadequate disposal methods result in the release of harmful pollutants into the air, water, and soil.

The burning of waste, a common practice in many areas, emits toxic fumes that contribute to respiratory problems and exacerbate air pollution.⁴ Furthermore, leachate from landfills contaminates groundwater sources, posing a threat to drinking water supplies and aquatic ecosystems.



Source: Pexels (Google Images)

A critical aspect of the problem is the lack of effective waste segregation and recycling infrastructure. Without proper segregation at the source, valuable recyclable materials end up mixed with general waste, making recovery difficult. This not only wastes resources but also increases the volume of waste that ends up in landfills. The absence of comprehensive recycling programs and composting facilities further compounds the issue. The sheer volume of plastic waste, in particular, poses a major challenge, as it persists in the environment for extended periods, breaking down into microplastics that contaminate ecosystems and potentially enter the food chain.

Addressing this crisis requires a multi-pronged approach involving government agencies, local communities, and individuals. Implementing robust waste management systems, including door-to-door collection, segregation at source, and efficient transportation, is crucial. Investing in recycling and composting facilities, along with promoting waste-to-energy technologies, can help divert waste from landfills and recover valuable resources. Public awareness campaigns and educational programs are essential to promote responsible waste management practices and encourage behavioral changes.

Strengthening enforcement of environmental regulations and holding polluters accountable are also vital steps. Collaboration between government, industry, and civil society organizations is essential to develop and implement sustainable waste management solutions that protect the environment and safeguard public health.

Mahakumbh's Environmental Toll: Ganga River's Water Quality Plummets to Alarming Levels



Anima Jyotishi
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The recently concluded Mahakumbh 2025, which drew millions of devotees to the sacred city of Prayagraj, has left behind a trail of pollution in the Ganga River and its tributaries. A recent study has revealed alarming levels of water pollution, sparking concerns among environmentalists, health experts, and local authorities.

The study, conducted by a team of researchers from the Indian Institute of Technology (IIT) and the National Environmental Engineering Research Institute (NEERI), found that the water quality of the Ganga River and its tributaries, including the Yamuna and the Saraswati, has deteriorated significantly since the Mahakumbh festivities began.



Source: PTI Photo

The researchers collected water samples from various locations along the river and found high levels of pollutants, including fecal coliform, biochemical oxygen demand (BOD), and chemical oxygen demand (COD). The levels of these pollutants were found to be significantly higher than the permissible limits set by the Central Pollution Control Board (CPCB).

"The water quality of the Ganga River and its tributaries has been compromised due to the massive influx of pilgrims and the subsequent discharge of waste and pollutants into the river," said Dr. R.K. Singh, a researcher involved in the study. "The situation is alarming, and immediate action is needed to restore the river's water quality."

The pollution of the Ganga River and its tributaries has serious implications for the aquatic life and human health. The river is a source of drinking water for millions of people, and the pollution can lead to the spread of waterborne diseases.

Environmentalists and activists have welcomed the government's response but have called for more urgent and sustained action. "The government needs to take immediate action to address the pollution in the Ganga River and its tributaries," said Swami Chidanand Saraswati, a prominent environmental activist. "We need to work together to protect the river and its ecosystem."

As the city of Prayagraj returns to normalcy after the Mahakumbh festivities, the focus shifts to the urgent task of restoring the water quality of the Ganga River and its tributaries. The government, civil society, and individuals must work together to address this critical issue and ensure the long-term health and sustainability of the river and its ecosystem.

The Role of Urban Green Spaces in Combating Climate Change



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Climate change due to high carbon emissions from transportation, industries, and energy consumption. However, urban green spaces parks, gardens, green rooftops, and tree-lined streets play a critical role in mitigating the impacts of climate change. These areas are not only vital for human well being but also offer numerous environmental benefits that help combat global warming and create resilient cities.

1. Carbon Sequestration

One of the primary ways urban green spaces combat climate change is through carbon sequestration. Trees and plants absorb carbon dioxide (CO₂) from the atmosphere during photosynthesis, storing carbon in their biomass and roots. This process reduces the overall concentration of CO₂.

2. Cooling the Urban Heat Island Effect

Cities often experience higher temperatures than surrounding rural areas, a phenomenon known as the Urban Heat Island (UHI) effect. This occurs due to extensive concrete, asphalt, and other heat-absorbing surfaces that trap heat. Urban green spaces help mitigate this effect by providing shade and through evapotranspiration, where plants release moisture into the air.

3. Improving Air Quality

Urban areas are typically plagued by high levels of air pollution, including particulate matter (PM_{2.5}), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Green spaces act as natural filters, absorbing these pollutants and improving overall air quality.

4. Enhancing Biodiversity

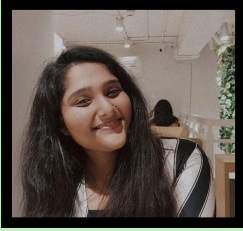
Urban green spaces support biodiversity by providing habitats for various plant and animal species. These spaces can create small ecosystems within the city, helping maintain the balance of local flora and fauna.

5. Stormwater Management

Urban green spaces contribute to the management of stormwater, reducing the risk of floods, which are becoming more frequent and severe due to climate change. Green areas with permeable surfaces, such as grassy lawns, wetlands, and trees, absorb and filter rainwater, preventing runoff that can overwhelm urban drainage systems. This helps maintain the water cycle and reduces the pressure on cities' infrastructure during heavy rainfall.

As cities continue to expand, the importance of urban green spaces in combating climate change cannot be overstated. These spaces provide a multifaceted solution by reducing carbon emissions, improving air quality, cooling cities, managing stormwater, and enhancing the quality of life for urban residents. By investing in and expanding green infrastructure, cities can create more sustainable, resilient, and healthier environments that not only address the challenges of climate change but also improve the well-being of their inhabitants for generations to come.

How Renewable Energy Can Help Us Fight Climate Change



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Add a Climate change isn't just a distant threat—it's happening right now, affecting our weather, air quality, and even the food we eat. One of the biggest culprits? Our reliance on fossil fuels like coal, oil, and gas, which pump harmful greenhouse gases into the atmosphere. But there's good news: renewable energy offers a way forward.

Imagine a world where the power we use comes from the sun, the wind, and the movement of water unlimited sources that don't pollute the air we breathe. Solar panels on rooftops, wind turbines spinning in open fields, and hydroelectric plants harnessing rivers can all help reduce our dependence on fossil fuels. The more we shift to renewables, the less we contribute to global warming.

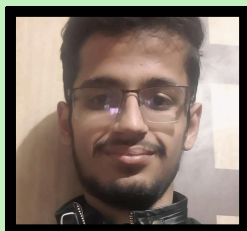
Beyond helping the planet, renewable energy also creates jobs and makes energy more accessible. Governments and businesses are already investing in cleaner technologies, but we all have a role to play whether it's choosing green energy plans, supporting policies that promote sustainability, or simply being mindful of our own energy use.

The future of our planet depends on the choices we make today. By embracing renewable energy, we can slow climate change and build a cleaner, healthier world for future generations.



Source: Adobe

The Suffocating Truth: Pollution's Grip on Our World



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Pollution word itself conjures images of smog-choked cities, rivers choked with plastic, and barren landscapes scarred by industrial waste. It's a pervasive problem, a complex web of interconnected issues that threatens not only the health of our planet but the very survival of its inhabitants. From the air we breathe to the water we drink, pollution's insidious reach touches every aspect of our lives.

The most visible form, air pollution, blankets our cities in a haze of harmful particles and gases. Vehicle emissions, industrial processes, and the burning of fossil fuels release pollutants like nitrogen oxides, sulfur dioxide, and particulate matter, leading to respiratory illnesses, cardiovascular problems, and even premature death. Children, the elderly, and those with pre-existing conditions are particularly vulnerable. The World Health Organization has declared air pollution a "silent killer," responsible for millions of deaths annually.

Water pollution is another critical concern. Untreated sewage, agricultural runoff laden with fertilizers and pesticides, and industrial discharge contaminate our rivers, lakes, and oceans. This pollution disrupts aquatic ecosystems, killing fish and other marine life. It also poses a direct threat to human health, as contaminated water sources can spread diseases like cholera and typhoid. The accumulation of plastic waste in our oceans is a particularly alarming aspect of water pollution, creating massive garbage patches that entangle marine animals and leach harmful chemicals into the food chain.

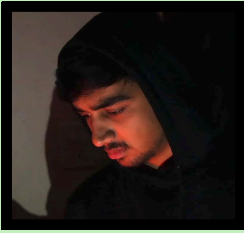
Land pollution, often overlooked, is equally damaging. Improper waste disposal, industrial dumping, and mining activities contaminate the soil with heavy metals and toxins. It can also seep into groundwater, contaminating drinking water sources and posing long-term health risks. The proliferation of landfills, overflowing with waste, is a stark reminder of our unsustainable consumption patterns and the urgent need for better waste management practices.

The consequences of pollution extend beyond immediate health risks. Climate change, driven largely by the emission of greenhouse gases from human activities, is inextricably linked to air pollution. Rising temperatures, extreme weather events, and sea-level rise are just some of the devastating impacts of climate change, further exacerbating the challenges posed by pollution.

Addressing the pollution crisis requires a multi-pronged strategy involving governments, industries, and individuals. Governments must implement stricter environmental regulations, promote cleaner technologies, and invest in public transportation and renewable energy. Industries need to adopt sustainable practices, reduce emissions, and embrace the principles of circular economy.

Education and awareness are also essential. By understanding the causes and consequences of pollution, we can empower ourselves to make informed decisions and advocate for change. We must recognize that environmental protection is not just the responsibility of a few, but a collective effort that requires the participation of all.

The Earth in Crisis: Understanding and Confronting Global Warming



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3rd Year

Global warming, driven by the relentless increase of greenhouse gases in the atmosphere, is an undeniable reality and one of the most pressing challenges facing humanity. The scientific consensus is overwhelming: human activities, primarily the burning of fossil fuels for energy, industry, and transportation, are the primary drivers of this warming trend. These activities release vast quantities of carbon dioxide, methane, and other greenhouse gases, which trap heat in the atmosphere, leading to a gradual but persistent rise in global temperatures.

The consequences of this warming are already being felt across the planet. We are witnessing a cascade of interconnected effects, including rising average temperatures, melting glaciers and ice sheets, rising sea levels, more frequent and intense extreme weather events, ocean acidification, and disruptions to ecosystems.

Rising temperatures are not just about warmer summers. They contribute to more frequent and severe heatwaves, posing significant risks to human health, particularly for vulnerable populations like the elderly and those with pre-existing conditions. Changes in precipitation patterns, including more intense droughts in some regions and more frequent and severe floods in others, threaten agricultural productivity and water resources, impacting food security and livelihoods.

The melting of glaciers and ice sheets, a direct consequence of rising temperatures, is contributing to rising sea levels. This poses an existential threat to coastal communities and island nations, displacing millions and inundating valuable land. Furthermore, the influx of freshwater into the oceans can disrupt ocean currents and salinity levels, with potentially devastating impacts on marine ecosystems.

Ocean acidification, another critical consequence of increased atmospheric carbon dioxide, occurs as the oceans absorb excess CO₂, becoming more acidic. This acidification threatens marine life, particularly shellfish and coral reefs, which are vital for marine biodiversity and provide essential ecosystem services.

The impacts of global warming are not isolated events. They are interconnected and often exacerbate each other. For example, droughts can lead to wildfires, which release even more carbon dioxide into the atmosphere, further accelerating warming. Extreme weather events can damage infrastructure, disrupt supply chains, and displace communities, creating cascading economic and social consequences.

The challenge of global warming is immense, but not insurmountable. It requires a fundamental shift in our thinking and behavior, recognizing the interconnectedness of human activities and the health of our planet. We need a global commitment to reduce emissions, invest in adaptation strategies, and foster international cooperation. The time for action is now.

Deforestation: The Destruction of our planet's lungs



Meenakshi
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3rd Year

Deforestation is one of the most pressing environmental challenges of our time, posing significant threats to the health of the planet and the future of life on Earth. Forests, often referred to as the "lungs of the Earth," are essential in maintaining the delicate balance of our ecosystem. They absorb carbon dioxide and release oxygen through photosynthesis, playing a critical role in regulating the climate. Unfortunately, the rapid destruction of these vital resources has far-reaching consequences that threaten not only the environment but also human survival.

The primary cause of deforestation is human activity. As the global population continues to grow, the demand for agricultural land, urban development, and industrial growth has increased, large areas of forest are cleared to make way for crops like soy, palm oil, and beef, as well as for urban expansion and mining operations. Logging, both legal and illegal, further exacerbates the issue, as timber and paper products are harvested without consideration for long-term sustainability.

The consequences of deforestation are far-reaching. One of the most immediate impacts is the loss of biodiversity. Forests are home to a vast array of plant and animal species, many of which are not found anywhere else on the planet. As forests are destroyed, these species are left without homes and are driven to extinction. In fact, it is estimated that nearly 137 species of plants, animals, and insects are lost every day due to deforestation. This loss of biodiversity weakens ecosystems.

Another critical consequence of deforestation is its role in climate change. Trees act as carbon sinks, absorbing carbon dioxide from the atmosphere and storing it in their biomass. When forests are cleared, this stored carbon is released back into the atmosphere, contributing to the greenhouse effect and global warming. Deforestation is responsible for approximately 10% of global greenhouse gas emissions, making it one of the largest contributors to climate change. As deforestation continues, the planet's ability to mitigate the impacts of global warming diminishes, resulting in more extreme weather events, rising sea levels, and disruptions to agriculture and food security.

In addition to its environmental effects, deforestation also has profound social and economic implications. Indigenous communities that have lived in and around forests for centuries rely on these ecosystems for their livelihoods, culture, and sustenance. The destruction of forests forces these communities to relocate, disrupting their way of life and exacerbating poverty. Furthermore, the degradation of forests contributes to soil erosion, desertification, and the disruption of local water cycles, which can have devastating impacts on agriculture and the availability of fresh water.

Efforts to address deforestation have been gaining momentum in recent years. Various international agreements, such as the Paris Agreement on climate change, have highlighted the importance of reducing deforestation to limit global warming.

Plastic Waste Crisis: A Threat to Environment and Health



Vanshika Virmani
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3rd Year

Plastic litter has turned into an international catastrophe, with millions of tons generated annually but recycling only a minor fraction. Plastics mostly wind up in landfill sites, water bodies, and roads, inducing extreme pollution and killing animals. Single-use products such as plastic bags, bottles, and straws take centuries to break down, resulting in long-term pollution. Marine creatures confuse plastic for food and end up getting injured or killed, and when plastic is burned, toxic fumes get released in the air that contaminates the atmosphere and damages human health.

Microplastics have also become part of our water and food and are threatening health seriously. Misuse of plastic in packaging and everyday products has further worsened the situation, particularly in urban regions where the waste management systems are already weakened. Plastic bags have already been banned in several countries, and reusable bags encouraged.



Source: UN Photo

Global action is still required, however. Industries have to learn to go sustainable, and consumers can encourage the production of green products. Schools and social communities can educate on the use of plastic responsibly and segregation of waste. Recycling facilities have to be upgraded so that plastic waste is dealt with effectively. Severe penalties for plastic pollution and rewards for environmentally friendly practices can make individuals shift to greener alternatives. We can limit plastic pollution and live in a cleaner, healthier world if we take action now.



Source: iStock

Changing Climate, Deteriorating Environment



Isha Shah
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3rd Year

The summer of 2024 was not like before but the heat waves havoc was such that it seems as if the earth would turn into a ball of fire. And this has happened because of climate change at alarming rate. This indicates how much damage we are causing to our nature and this is a matter of great concern for the future. The impacts are not restricted to high temperatures. Severe rains also created flash floods that destroyed adjacent communities in 2024. Streets became rivers, homes were drowned and the damage served as an intense example of the destructive potential of adverse weather situations. These were not surprising circumstances but are clear indicators of the tipping point of changing climate on our doorstep.

Climate change is no longer a trivial matter that we used to read only in our books but we are experiencing it ourselves. Now the matter is not limited to just bad weather but our nature is facing a huge disaster. In this article, we'll look at how climate change is affecting communities around the world and what we can do to lessen the effects.



Source: Transcend Media Services

According to World Health Organization (WHO) reports; between 2030 to 2050, climate change will likely to result in roughly 2,50,000 additional deaths per year and direct health damage expenditures estimated to be around 2.4 billion US dollars per year by 2030. Furthermore, the IPCC's (Intergovernmental Panel on Climate Change) Sixth Assessment Report (AR6) indicated that climate risks are emerging faster and becoming more severe than previously predicted, and that adaptation will be more difficult as global temperatures rise.

People usually believe that their single effort won't make much difference, however consider this; instead of tearing off the corner of a plastic packet to open it, I choose to leave it intact. While that small piece may appear insignificant, but remember that it is usually not recyclable. This small change along with the simple act of disposing plastic garbage in designated containers, cuts down on my carbon footprint. It's like throwing a pebble into a pond but I think the power to make a difference lies within each of us. By making our choices wisely and motivating others too, we can create a beneficial effect on the environment. As a wise man once said "Be the change you want to see in the world"

We all possess the ability to make a difference. Every step we take, from mode of transportation to the food we eat, every single move adds to our collective influence. By incorporating conscious sustainable behaviours into our daily lives, we can all contribute to a heal our nature mother. Let us begin now- for ourselves, upcoming generations and the planet we call our home

The Role of Technology in Sustainable Agriculture: Innovations for a Changing Climate



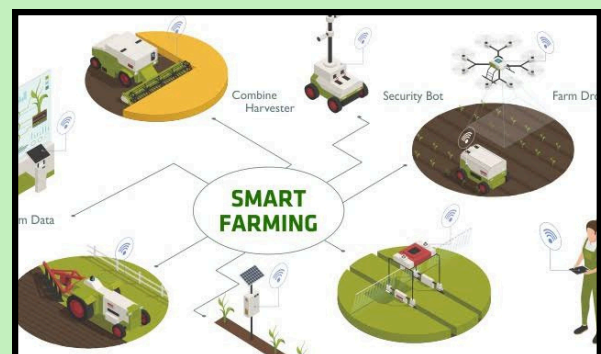
Yashika Lukher
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3rd Year

The role of technology in sustainable agriculture has become increasingly vital as the world faces the challenges of climate change, rising global populations, and the growing demand for food. Traditional farming methods are no longer sufficient to meet these challenges sustainably, but technological innovations are offering promising solutions. Precision agriculture, which uses GPS, IoT sensors, drones, and satellite imagery, allows farmers to monitor real-time data on soil health, weather patterns, and crop conditions, enabling them to make informed decisions about resource use, such as water, fertiliser, and pesticide application. This precision reduces waste and environmental impact while improving efficiency. Furthermore, advancements in biotechnology have led to the development of climate-resilient crops, such as drought-resistant varieties of maize and rice, which are crucial for maintaining food security in regions facing unpredictable weather patterns and water scarcity.

Artificial intelligence (AI) and machine learning (ML) also play a significant role, providing insights into crop yields, pest infestations, and optimal planting times based on data analysis. These technologies help farmers detect issues early, allowing them to take preventive actions and reduce the need for chemical interventions.

Water management is another area where technology has made a significant impact. With climate change causing more erratic rainfall patterns, smart irrigation systems, equipped with sensors that monitor soil moisture and weather conditions, enable farmers to use water more efficiently, ensuring crops receive the right amount without waste.

Renewable energy solutions, such as solar-powered irrigation and biogas, are also being integrated into farming operations, reducing reliance on fossil fuels and lowering carbon emissions. In urban environments, innovative farming methods like vertical farming and hydroponics are gaining traction as sustainable alternatives to traditional agriculture. These methods use less land and water, allowing for year-round production and efficient use of resources. Additionally, blockchain technology is being adopted to increase transparency and traceability in food production, enabling consumers to verify sustainable practices from farm to table. As these technological innovations continue to evolve, they offer a pathway toward more sustainable and climate resilient agriculture, helping to ensure a secure food future while minimising environmental impact.



Source: Polbangtan Malang

Unsustainable Consumption: The Overuse of Natural Resources



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Unsustainable consumption refers to the use of natural resources, goods, and services at a rate that exceeds their replenishment, leading to environmental degradation, resource depletion, and negative social impacts. This phenomenon is a major concern globally, as it threatens the well-being of both current and future generations. The consequences of unsustainable consumption are far-reaching, affecting not only the environment but also human health, economic stability, and social justice.

As the population grows, so does the demand for food, water, shelter, and energy. The focus on GDP growth and profit maximisation can lead to the exploitation of natural resources and the degradation of the environment. The culture of consumerism also encourages individuals to buy and discard products, contributing to waste and resource depletion. The constant pursuit of new and improved products fuels a cycle of consumption and waste.

Unsustainable consumption has severe consequences, including climate change, loss of biodiversity, and social injustices. The production, transportation, and disposal of consumer goods can lead to air and water pollution, soil degradation, and habitat destruction. Furthermore, unsustainable consumption perpetuates social injustices, such as unequal access to resources and environmental degradation in vulnerable communities.

Transitioning to sustainable consumption requires a fundamental shift in the way we produce, consume, and dispose of goods and services. Adopting circular economy practices, reducing waste and pollution, increasing resource efficiency and productivity, and promoting sustainable lifestyles and behaviours are all critical steps towards sustainable consumption. Policy and regulatory frameworks must also support sustainable consumption, through measures such as taxes on single-use plastics, subsidies for renewable energy, and regulations on resource extraction.

Individuals, communities, organizations, and governments all have a role to play in promoting sustainable consumption. Individuals can make informed choices about the products they buy and the way they live their lives. Communities can come together to promote sustainable practices and support local businesses that prioritize sustainability. Organisations can adopt sustainable practices and prioritise sustainability in their operations and supply chains. Governments can implement policies and regulations that support sustainable consumption and provide incentives for sustainable practices.

In conclusion, unsustainable consumption is a pressing issue that requires immediate attention. The consequences of unsustainable consumption are far-reaching, affecting not only the environment but also human health, economic stability, and social justice. Transitioning to sustainable consumption requires a fundamental shift in the way we produce, consume, and dispose of goods and services. By working together, we can promote sustainable consumption and create a more sustainable future for all.

The Zero-Waste Lifestyle: A Step Towards a Greener Future



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Every day, we throw away countless items—plastic packaging, food scraps, and disposable products—without thinking about where they end up. Most of this waste piles up in landfills or pollutes our oceans, harming wildlife and contributing to climate change. The zero-waste lifestyle offers a solution by encouraging people to reduce, reuse, and rethink their consumption habits.

At its core, zero waste means sending as little as possible to landfills. It starts with simple choices: bringing reusable bags to the store, using a refillable water bottle, composting food scraps, and choosing products with minimal or recyclable packaging. Small changes like these add up, reducing pollution and conserving natural resources.



Source: Google Images

Beyond personal actions, businesses and governments are also stepping up. More companies are adopting sustainable packaging, and cities are promoting recycling and composting programs. But real change happens when individuals make mindful choices every day.

Living a zero-waste lifestyle isn't about being perfect—it's about making progress. By consuming less and reusing more, we can protect our planet for future generations. A greener, cleaner world is possible, and it starts with the choices we make today.



Source: Lemon8 (Google Images)

Protecting Our Environment: A Responsibility for All



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The environment is the foundation of life on Earth, providing us with air, water, food, and shelter. However, human activities are causing significant harm to our planet, leading to deforestation, pollution, climate change, and the depletion of natural resources. Industrialisation, urbanisation, and excessive consumption have accelerated environmental degradation, putting the health of ecosystems and future generations at risk. The consequences of this destruction are evident in rising global temperatures, melting ice caps, extreme weather events, and the loss of biodiversity. Without immediate action, the damage to our planet may become irreversible.

One of the most pressing issues is climate change, driven by greenhouse gas emissions from burning fossil fuels. Carbon dioxide and methane trap heat in the atmosphere, leading to global warming. Additionally, deforestation reduces the Earth's ability to absorb carbon dioxide, worsening climate change and threatening wildlife habitats. Forests, which act as the lungs of the planet, are being destroyed at an alarming rate for agriculture, urban development, and logging.

Pollution is another major environmental concern, affecting air, water, and soil. Industrial waste, plastic pollution, and excessive use of chemicals contaminate our natural resources, posing severe health risks to humans and animals. Air pollution from vehicles and factories contributes to respiratory diseases, while plastic waste clogs oceans, harming marine life. Water pollution, caused by chemical runoff and improper waste disposal, leads to unsafe drinking water and damages aquatic ecosystems. If pollution continues at its current rate, the planet's ability to support life will be severely compromised.

Protecting the environment requires collective action from governments, businesses, and individuals. Governments must implement strict environmental policies, promote renewable energy, and regulate industries to reduce pollution. Companies should adopt sustainable practices, reduce waste, and invest in eco-friendly innovations. Individuals can contribute by conserving water, reducing plastic use, recycling, and choosing sustainable products. Planting trees, using public transport, and supporting environmental organisations are small but meaningful steps toward a healthier planet. Every action counts in the fight against environmental degradation. If we all take responsibility for protecting nature, we can slow down climate change, preserve biodiversity, and ensure a sustainable future. The Earth is our home, and it is our duty to safeguard it for future generations. By making environmentally conscious choices, we can create a cleaner, greener, and healthier world for all.

Ocean Conservation: The Health of Our Oceans



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The health of our oceans is in crisis. Oceans, which cover over 70% of the Earth's surface, play a crucial role in sustaining life on our planet. They regulate the climate, provide food, oxygen, and livelihoods, and are home to a vast array of biodiversity. However, human activities have put immense pressure on the oceans, threatening the delicate balance that supports marine life and, by extension, life on land.

The oceans are facing a number of environmental challenges that directly impact both marine life and human populations. Some of the most pressing issues include, pollution, overfishing, coral bleaching, Ocean Acidification.

Protecting the health of our oceans is not only vital for marine life but also for the well-being of humans. Oceans are the source of about half of the world's oxygen and are crucial for regulating the global climate by absorbing heat and carbon dioxide. They provide food and livelihoods for billions of people, especially those in coastal communities who rely on fish and other marine resources for their income. Moreover, healthy oceans are essential for maintaining biodiversity, which has intrinsic value and plays a key role in ecosystem services like pollination and soil fertility.

Efforts Toward Ocean Conservation
Thankfully, there are many efforts underway to protect and restore ocean health. Governments, NGOs, scientists, and individuals are working to address the myriad threats facing the oceans and some efforts through which ocean can be conserved is marine protected areas, sustainable fisheries management, plastic waste reduction, climate change mitigation and public awareness and education.

The health of our oceans is inextricably linked to the health of our planet and our own well-being. As stewards of the Earth, it is our responsibility to protect and preserve the oceans for future generations. By reducing pollution, practicing sustainable fishing, mitigating climate change, and supporting conservation efforts, we can help restore the balance of these vital ecosystems. The time to act is now—because a healthy ocean is essential not just for marine life, but for the survival of all life on Earth.



Source: Birdlife Malta (Google Images)

Why Are Deep-Sea Fish Moving to Shallow Waters?



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For a long time, the deep sea has been a safe and stable home for many fish. It is dark, cold, and full of creatures that have adapted to survive under extreme pressure. But today, deep-sea fish are moving closer to the surface, and scientists are trying to understand why. This unusual behaviour tells us that something is wrong with our oceans.

Deep-sea fish, like lanternfish and squid, are used to living in very cold waters. But as climate change causes the Earth to warm, the deep ocean is also getting warmer. The oceans absorb most of the heat from global warming, and this extra heat is spreading deeper into the water. Since these fish cannot survive in higher temperatures, they are being forced to move to shallower, cooler areas. This shift is not just a small change—it is a sign that the ocean is suffering.

Another big problem is ocean acidification. This happens when the ocean absorbs carbon dioxide from the air, making the water more acidic. While some marine animals, like corals and shellfish, are directly affected because they need calcium to build their shells, deep-sea fish also face changes in their environment. Acidic waters can affect their food sources and disrupt their ecosystems, making it harder for them to survive in their usual habitats.

Humans are fishing more than ever before. Since many fish populations near the surface have been overfished, large fishing industries have started targeting deep-sea fish. Trawling, a method of dragging large nets along the ocean floor, is destroying deep-sea habitats. With fewer places to hide and less food available, many deep-sea fish are moving toward shallower waters to find better living conditions.

Pollution is another invisible but deadly threat. Plastic waste, chemicals, and industrial toxins are sinking into the deep ocean, making it unsafe for marine life. In some areas, pollution is creating “dead zones” where oxygen levels are too low for fish to survive. As these zones expand, deep-sea fish have no choice but to move toward cleaner, oxygen-rich waters near the surface.

The movement of deep-sea fish to shallow waters is a warning sign. When fish that are meant to live in the deep sea start coming to the surface, it shows that their natural environment is no longer safe. This shift can disrupt the entire food chain, affecting marine predators, local fishing communities, and even global seafood supplies. The deep ocean plays an important role in balancing the Earth’s climate, and any disturbance can have long-term effects.

The problems facing the ocean are caused by human activities, but that also means we have the power to fix them. Reducing carbon emissions, stopping overfishing, cutting down on plastic waste, and protecting marine habitats can make a big difference. Governments, industries, and individuals all need to work together to save the ocean. By taking action now, we can protect marine life and ensure that deep-sea fish can stay in their natural homes for generations to come.

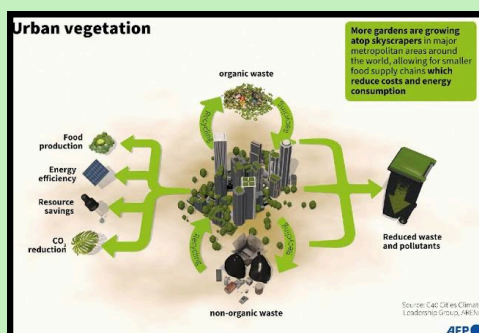
The Urban Jungle: How Cities Are Turning Green to Combat Pollution



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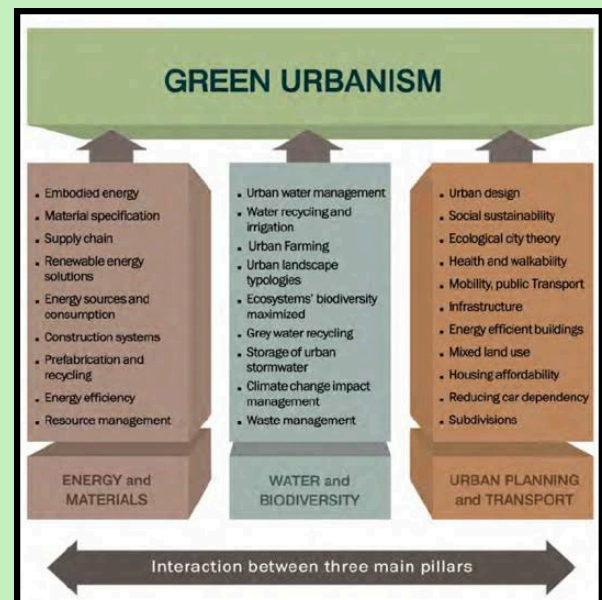
As the world's population continues to grow and urbanize, cities are facing unprecedented challenges in terms of pollution, climate change, and the loss of biodiversity. However, in response to these mounting environmental threats, many cities are embracing an innovative solution: turning green. From vertical gardens to expansive green roofs, urban forests, and sustainable architecture, cities around the world are increasingly integrating nature into their infrastructure to combat pollution and create healthier environments for their inhabitants.

As cities around the world grow rapidly, more and more urban areas are turning to green solutions to tackle pressing issues like pollution, climate change, and the loss of biodiversity. In places once dominated by concrete and steel, nature is making a comeback through innovative ideas like vertical gardens, green roofs, and urban forests. These green spaces not only help filter carbon dioxide and improve air quality but also provide a much-needed relief from rising temperatures.



Source: Tech Xplore (Google Images)

Cities like Singapore, New York, and Milan are setting the example, using these green infrastructures to cool down urban heat islands and create havens for wildlife. Green roofs are also helping to cut down on energy consumption by keeping buildings cooler in the summer and warmer in the winter. Meanwhile, urban forests offer city dwellers a peaceful escape, improve mental health, and encourage outdoor activities. These green areas not only provide essential environmental benefits but also strengthen community ties by offering spaces to relax and connect. While there are challenges, such as high costs and limited space, the long-term rewards cleaner air, a better quality of life, and a deeper connection to nature make these investments vital for building more sustainable, resilient cities.



Source: Google Images

Overpopulation and the Environment: An Overwhelmed Planet

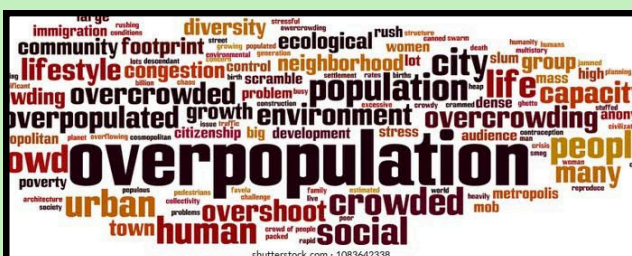


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The global population has now reached 8 billion, putting immense pressure on natural resources, ecosystems, and the climate. India, with over 1.4 billion people, is currently the most populous country in the world and is grappling with significant environmental challenges due to rapid urbanisation, industrial growth, and resource depletion.

Deforestation driven by agriculture and urban development exacerbates climate change. Over-extraction of groundwater has led to critical water shortages. Air pollution, especially in cities like Delhi, is primarily caused by vehicle emissions, industrial waste, and the burning of crops. Major rivers, including the Ganges, are plagued by untreated sewage and plastic waste, posing risks to public health and aquatic ecosystems.

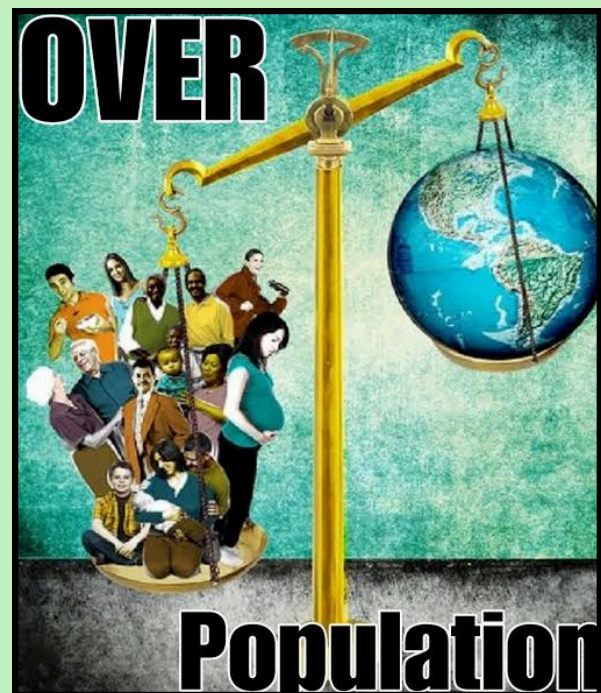
India faces a growing waste crisis, compounded by insufficient disposal systems, resulting in overflowing landfills and widespread plastic pollution. Climate change has triggered extreme weather events, such as floods and cyclones, which threaten agriculture and water security.



Source: Shutterstock

To address these issues, it is crucial to adopt renewable energy, enforce stricter pollution regulations, promote afforestation, and enhance waste management practices. Water conservation, sustainable agricultural methods, and the promotion of public transportation can help mitigate environmental damage. Additionally, education and family planning initiatives can play a vital role in stabilising population growth.

The environmental challenges facing India demand immediate action. By adopting sustainable policies and managing resources responsibly, the country can achieve a balance between development and ecological preservation, paving the way for a healthier future for upcoming generations.



Source: Pinterest

Space Junk: The Growing Environmental Threat Beyond Earth



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While environmental issues on Earth often take center stage, a growing threat is looming silently above us—space junk. Also known as orbital debris, space junk consists of defunct satellites, discarded rocket parts, and fragments from past space missions. These objects continue to orbit our planet at incredibly high speeds, posing serious dangers to operational spacecraft and satellites.

As more countries and private companies launch satellites and missions into space, the problem of space debris is escalating rapidly. Even a tiny piece of metal traveling at thousands of kilometres per hour can damage or destroy critical equipment in orbit. Collisions between debris create even more fragments, making space a hazardous zone—a phenomenon known as the “Kessler Syndrome.”

The impact of space junk isn’t limited to orbit. Damaged communication satellites can affect GPS, weather forecasting, and global connectivity. In the worst-case scenario, falling debris could even pose a threat to life on Earth. Addressing this issue requires global cooperation. Solutions such as space debris removal technologies, better tracking systems, and responsible satellite disposal methods must be prioritised. Just as we are learning to protect our environment on Earth, we must now extend that responsibility to the space beyond our planet.



Source: Shutterstock



Source: Google Images

Revitalising the Yamuna: Problems and Opportunities in Environmental Recovery



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The Yamuna River, being one of the most important rivers in India, has long been plagued with immense environmental deterioration. Running across numerous states and catering to millions of individuals, it is a much-needed lifeline for both the rural and urban communities. Rampant pollution, excessive abstraction of water, and encroachment have taken their toll, reducing the river to a battered form. Untreated sewage, industrial effluents, and agricultural runoff are responsible for its pollution, causing poor water quality, loss of biodiversity, and a decrease in its cultural and economic value. The problem of restoring the Yamuna is how to deal with these issues while meeting the demands of a constantly increasing population that relies on the river.

One of the biggest obstacles to restoring the Yamuna is the lack of adequate sewage treatment facilities. Most of the pollution is a result of untreated sewage that is dumped directly into the river, which overflows the few available treatment facilities. Besides, factories lining the river frequently dump poisonous chemicals and wastes into the river, further polluting it. To address this issue, massive investment in upgrading and increasing wastewater treatment plants is needed. In addition, enhancing environmental laws to avert industrial pollution and enhancing solid waste management are essential measures to lower the levels of pollution.

Another essential challenge is the unsustainable exploitation of the river's water resources. Excessive extraction for irrigation in agriculture, domestic use, and industry has significantly lowered the flow of the river, particularly during dry seasons. This not only deteriorates the quality of water but also inhibits the river's natural ability to purify itself. To revive the health of the Yamuna, improved water management practices are required, including effective irrigation methods, rainwater harvesting, and minimising water wastage in cities. It's also important to ensure that agricultural and urban communities' needs are fulfilled without disturbing the ecological balance of the river.

In spite of these daunting challenges, there are many opportunities for environmental restoration. There is a need for concerted efforts from the government, local communities, environmental groups, and industries to come up with an integrated approach to river management. Programs such as the National Mission for Clean Ganga, which also targets cleaning the Yamuna, provide a model for overall action. This involves improving waste treatment facilities, rejuvenating riverfronts, and improving biodiversity. Public involvement and awareness programs will be instrumental to the success of these initiatives, ensuring the revival of the Yamuna as a precious resource and an icon of India's natural heritage. Through sustainability, responsible water usage, and care for the environment, the Yamuna can be revived to its previous glory for generations to come.

The Role of Fungi in Environmental Restoration



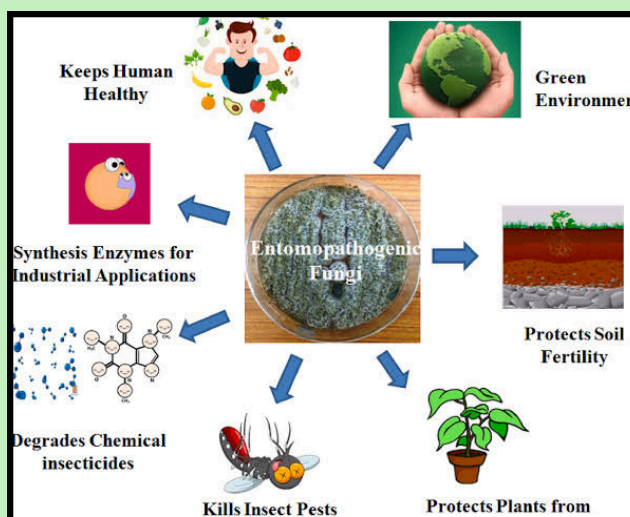
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Fungi play a pivotal and often overlooked role in environmental restoration, offering nature-based solutions to various ecological challenges. As natural decomposers, fungi are integral to the recycling of organic matter, breaking down dead plants and animals into essential nutrients that enrich the soil. This process is vital for ecosystems that have suffered degradation, such as deforested areas or polluted landscapes, where nutrient cycling is disrupted. By replenishing soil health, fungi enable plant growth, support biodiversity, and accelerate ecosystem recovery.

One of the most groundbreaking contributions of fungi in environmental restoration is mycoremediation, a process where fungi are used to degrade or remove pollutants from contaminated environments. Certain fungal species have the remarkable ability to absorb or break down hazardous substances like petroleum products, heavy metals, and pesticides. For example, fungi can digest complex organic compounds in oil spills, transforming them into non-toxic materials. This approach has been successfully applied to restore polluted soils and water bodies, offering a low-cost, sustainable alternative to traditional chemical cleanup methods.

Fungi also play a critical role in plant health through their symbiotic relationship with plants, known as mycorrhizal associations. Mycorrhizal fungi extend the root systems of plants, improving their access to nutrients like nitrogen and phosphorus. This partnership is especially beneficial in nutrient-poor or disturbed soils, promoting plant growth and supporting reforestation efforts. In degraded lands, mycorrhizal fungi help stabilize the soil, improve water retention, and enhance plant survival.

Additionally, fungi contribute to biodiversity by providing habitat and food sources for various organisms, from microorganisms to insects. By fostering robust ecosystems, fungi support long-term environmental sustainability. As research into fungal ecology advances, their role in environmental restoration continues to grow, offering a natural and effective way to heal ecosystems and promote ecological resilience.



Source: Heliyon (Google Images)

Climate Change Agreements and Treaties Between Countries



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Climate change is a global crisis that requires international cooperation. Over the years, several agreements and treaties have been established to reduce greenhouse gas emissions and promote sustainability. These agreements set targets, encourage financial aid, and hold countries accountable for their climate actions.

The Paris Agreement (2015) is the most significant global climate treaty, aiming to limit global warming to below 2°C, with efforts to keep it within 1.5°C. Countries submit Nationally Determined Contributions (NDCs), outlining their emission reduction plans, which are updated every five years. Developed nations also pledged \$100 billion annually to support developing countries.

Before Paris, the Kyoto Protocol (1997-2020) set legally binding targets for industrialized nations to reduce emissions based on 1990 levels. However, it excluded major developing economies like China and India, limiting its effectiveness.

The UN Framework Convention on Climate Change (UNFCCC) (1992) laid the foundation for climate action, introducing the principle of "common but differentiated responsibilities." This led to annual COP (Conference of the Parties) meetings, where global climate policies are negotiated.

The Montreal Protocol (1987) successfully phased out ozone-depleting substances like CFCs, indirectly reducing greenhouse gas emissions. It remains one of the most effective environmental treaties.

The Glasgow Climate Pact (COP26, 2021) strengthened global climate commitments, with countries agreeing to "phase down" coal usage and cut methane emissions by 30% by 2030. Developed nations also pledged to increase climate finance for vulnerable countries.

Regional initiatives like the European Green Deal (2019) aim to make Europe climate-neutral by 2050, cutting emissions by 55% by 2030. Other nations, such as China and the U.S., have also introduced independent policies to combat climate change.

Despite these agreements, challenges remain. Climate finance commitments often fall short, enforcement mechanisms are weak, and some nations prioritize economic interests over climate goals. However, urgent action is needed, as global temperatures continue to rise. Strengthening these agreements, ensuring accountability, and accelerating the transition to clean energy will be crucial in securing a sustainable future.



Source: Iberdrola

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