srishti

ARANYA- THE NATURE & ENVIRONMENT SOCIETY OF ZHDC

• ARTICLES

THE SOCIAL ENTREPRENEURSHIP
Student led initiatives

TRENDY BUT DEFILE
A take on fashion as polluter

A LOOK AT COP 27
Searching for a Silver Lining

• REPORTS

EXPLORING THE EXTREMES
A lecture by Prof. Dinabandhu Sahoo

AAGHAZ
Orientation 2022-23

PANKHUDI
The Annual Fest of **ARANYA**

The Blue Planet's CRISIS:
What does the future hold?

From the Principal's Desk

Sustainable development has been described as a way of meeting the needs of the present without compromising the ability of future generations to meet their own needs. Srishti's current edition focusses on sustainable development practices, at the level of individual, as well as society, which is the need of the hour.

One of the key benefits of sustainable development is its ability to reduce carbon emissions, which are a major contributor to climate change. By implementing sustainable practices, such as using renewable energy sources and reducing waste, we can significantly reduce our carbon footprint and slow the rate of climate change. Another important benefit of sustainable development is increased biodiversity, which is what Srishti looked at in its last year's edition. By preserving natural habitats and promoting sustainable farming practices, we can protect the diversity of plant and animal species that make up our planet's ecosystems. This is important not only for the health of the environment but also for the well-being of human societies, as we depend on healthy ecosystems for food, water, and other resources.

By reducing pollution and promoting healthy lifestyles, sustainable practices can help to prevent diseases and improve overall well-being, sustainable development practices can have a positive impact on one's health. I encourage students especially to use active transportation like biking and walking can improve air quality and reduce the risk of chronic diseases like heart disease and obesity. Small daily acts such as using public transport and recycling as well as reusing products can have a positive impact on the environment.

Overall, I believe sustainable development offers numerous benefits for both the environment and human society, and it is an important step towards a more equitable and sustainable future for all. It is pertinent that both older and younger generations, especially our students make themselves aware about these practices. I feel this edition of Srishti, with its focus on sustainability and green practices will generate the much needed awareness around it. The issue is very engaging in its format and I believe the student community of Zakir Husain Delhi College will benefit immensely from it. I sincerely hope that we are able to generate sensitivity towards the issue and sincere efforts are undertaken by everyone towards sustainable development. My heartiest congratulations to the editorial board for their efforts in this direction.

Prof. Narendra Singh
Principal

Convener's Note

We have been hearing for quite a while that Earth is in a state of emergency – a situation accelerated by constant unchecked use of our planet's resources globally that lead to what is popularly called the climate crisis. With a determination towards action that translates into something meaningful, Srishti 2023 is an endeavour in the direction of raising awareness about sustainable development. Involving students to think creatively about ways of mitigating the disaster that we are rapidly approaching, Srishti invited contributions from the students of our college on the theme – "The Blue Planet's Crisis: What does the future hold?", and we received an overwhelming response from the students in the form of their contributions – be it creative pieces, articles, artwork, or even research studies. In this magazine, readers will learn about waste management, exploitation of natural resources, policy decisions, lifestyle, and many such thought-provoking topics that can help in thinking about our environment and our role in preserving it. Thus, this magazine is a blueprint intended to inspire further action, especially in the young stakeholders of this world, and initiate conversation that results in greater engagement with our community and nature.

All of this could not have been possible without our college principal, Prof. Narendra Singh, and we owe our gratitude to him for his constant encouragement. The faculty team members have always lead from the front and guided the students through the year. And, the students involved with Aranya – the Nature and Environment Society, are part of a dedicated and highly motivated team – their biggest asset is their empathy for others and concern for our environment. With this kind of support, I have been able to manage several events, talks and a grand fest this year. All of these events are highlighted in this issue as well.

This is my last editorial for the magazine, and as I move on I hope that Aranya, along with Srishti, will also continue making strides in promoting the cause of environmental protection, sustainable development, and will set goals that help in sensitising the student community of the challenges that we face as a planet - after all, we are in it together!

Prof. Ratnum K. Wattal
Convener, Aranya ZHDC

Note from the Editor-in-Chief

"The earth is what we all have in common." -Wendell Berry
Welcome to the latest edition of our annual magazine **Srishti 22-23.**

Selfishly pursuing modernization, humans have frequently compromised with the obligation of a more sustainable environment. As a result, the increase in environmental depletion is evident with the prevalence of deforestation, pollution, greenhouse gases, climate change, etc. Everything from the roots of trees underground to the air we breathe is a part of the environment, and the health of each part affects the health of the whole. I have always felt the dearth of pertinent solutions to these problems. Srishti 22–23 attempts to bring about a psychological paradigm shift by heeding more on the vital solution than merely talking about the issues. The perception that individuals can't affect change is a myth. Every person has to make his or her own choices about protecting the environment.
Academics from different disciplines, like arts, commerce, science, psychology, etc., have contributed to the magazine.

THEME OF MAGAZINE:
The Blue Planet's crisis:
What does the future hold.

Keeping the practical theme animate, Srishti expounds on topics like e-waste, nanotoxicology, environmental psychology, overfishing, and many more. We also have a dedicated section on fashion as a polluter and the truth about brands that are "ECO-FRIENDLY".

Talking about the solutions, the board concerted a section on social entrepreneurship where we interviewed diverse societies of the DU circuit and wrote about their sustainable student led projects. The well-articulated poems, artworks, photographs, etc. of creative hues show the ethereal beauty of the nature.

Srishti 22–23 wouldn't have been possible without the immense hard work of the editorial board and the design team, who put in hours of editing, meticulous researching, collating, and designing exquisite content that will mesmerize Srishti's readers.

On behalf of the entire board, I would like to thank Prof. Narendra Singh, Principal, Zakir Hussain Delhi College, Professor Ratnam Kaul Wattal, Convener of Aranya, Ms. Deeksha Yadav and Ms. Shraddha Adityavir Singh, Department of English, for their constant guidance and support in this fruitful student-led endeavour. I also thank all the writers who have contributed to this edition. My heartfelt gratitude to the core team and all the other teams at Aranya, whose assistance made this magazine a reader's delight.

Editor-in-Chief
Manav Aggarwal
B.Sc.(Prog.) Life Sciences

Teacher's Thought

Kedarnath Singh, the well known Hindi Poet proclaims in one of his poems- "Yeh Prithvi rahegi." (translation: This earth shall remain). It is a claim that has risen out of the crisis of rampant development, a claim that is meant to wake us up from our slumber, take responsibility for the Earth, and act for the future of the blue planet. The future of the Earth is closely linked to the impact of human activities on the environment, including environmental degradation and global warming. If we continue to rely on unsustainable practices, the future of the planet looks bleak. Climate change, loss of biodiversity, water scarcity, and other environmental problems could significantly impact human societies, and even threaten the survival of some species.

However, there are solutions to these challenges. We can implement sustainable development practices, invest in renewable energy, reduce waste and emissions, and protect natural habitats. Srishti's 2023 edition focusses on precisely that. It ruminates on the challenges we are facing with thoughtless development that does not take into consideration the needs of the planet as a whole.The issue specifically focusses on waste management, such as e-waste, as well as has contributions from various societies across Delhi University, and the initiatives taken by its student members' towards the well-being of our planet. It not only looks at policies at the level of the State but also what can we contribute as a community towards building a sustainable future. The future of the Earth depends on our ability to implement sustainable development practices that prioritize the health of the environment and the well-being of human societies. Through collective action and a commitment to sustainable practices, we can create a more equitable and sustainable future for all. Srishti, with its wide focus, ensures that there is everything for everyone, and that we can all take certain measures at the individual level for the betterment of our planet. The student team of Srishti deserves all the praise for creating an environment magazine that would appeal to a wide range of audience, that promises to generate some kind of reflection and discussion for its readers.

Miss Deeksha Yadav
Department of English

MANAV AGGARWAL
Editor-in-Chief

BRHAMJOT SINGH
Senior Editor

DRISTI JAIN PATNI
Section Editor

AMULYA JAIN
Associate Editor

SMRITI JOSHI
Senior Editor

LAKSHITA SHRIVASTAVA
Section Editor

PRACHEE DASH
Associate Editor

EDITORIAL BOARD

2022-2023

DESIGN TEAM

DESIGNERS FOR THE MAGAZINE 2022-23

RISHABH YADAV
Head of Design

SANSKAR JAIN
Senior Designer

DESIGNERS FOR THE SESSION 2022-23

PRINCE SAHARAN
Designer

PRANTAP UPRETI
Senior designer

2022-2023

table of Content

NANOTOXICOLOGY

Can you guess what is so tiny that it can't even be seen through a microscope? Something as small as 1/70th the width of a human hair! A nanoparticle is so small that it has the potential to revolutionize many industries, but there are also concerns about its significant environmental and human health impacts.

Now you must be wondering why I chose to write about something so insignificant in a nature magazine.It is fascinating to know that a particle so small that even our eyes cannot comprehend ,can have fatal side effects on the environment and can cause pollution. Nanoparticles are extremely small particles that have unique physical and chemical properties due to their small size. They are used in a variety of products, including sunscreens, cosmetics, and electronics. They have a greater ability to travel through the human body than other toxic particles, and they can cause heart problems in the organism. Nanoparticles harm not only humans but also agriculture. It can pollute soil and groundwater and then eventually get into the food chain, cross into the gut lymphatics, and redistribute to other organs more easily than larger particles can. The molecule can then accumulate in plants, animals, and humans, thereby causing deadly diseases.

Research has shown that some nanomaterials can be the root of genotoxicity (damage to DNA), mutagenicity (the ability to cause genetic mutations), or carcinogenicity (the ability to cause cancer). They have also been shown in other studies to cause inflammation, oxidative stress, and other toxic effects in cells or tissues. Air is also subject to the detrimental effects of nanoparticles in addition to living things.

Image Credits: *Shutterstock*

Atmospheric nano-pollution is caused by the burning of fuels such as biomass, coal, etc. Larger nanoparticles fall to the ground and contaminate the water. While the smallest nanoparticles increase chemical concentrations in the air, when inhaled, they can cause health adversities and disrupt the blood flow and harm other organs in humans and animals.

The field of nanotoxicology aims to understand the potential toxicities of nanomaterials and evaluate the risks associated with their use in various applications, including medicine, electronics, cosmetics, and other consumer products. Researchers in this field use a variety of tools and techniques, including cell culture systems, animal models, and computational models, to study the toxic effects of nanomaterials on living organisms and the environment. The study of nanotoxicology is a very complex process that involves many technicalities.

The most critical challenge is monitoring and

Sonal Bhura
B. Com (Honours)

Image Credits: *istockphoto.com*

assessing the impact of nanoparticles precisely, as materials change their properties and behaviour in the nanoscale dimensions.

I believe that efforts to untangle science and science fiction regarding the risks from nanotechnology are needed and that a focus on the potentially harmful effects of nanoparticles is both timely and necessary.

The importance of nanotechnology to the economy and to our future well-being is beyond debate, but its potential adverse impacts need to be studied along the same lines. A nanotoxicology discipline would make an important contribution to developing sustainable and safe nanotechnology and taking steps to minimize their release into the environment when using products that contain them.

Reference

1. https://www.frontiersin.org/articles/10.3389/ftox.2019.00001/full.
2. https://www.nature.com/subjects/nanotoxicology
3. https://pubs.acs.org/page/virtual_issue/nanotoxicology.
4. https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/nanotoxicology
5. https://www.tandfonline.com/journals/inan20.
6. https://www.tandfonline.com/toc/inan20/current.
7. https://ec.europa.eu/health/scientific_committees/opinions_layman/en/nanotechnologies/l-2/1-introduction.htm.
8. https://www.nano.gov/nanotech-101/what/definition.
9. Nanotechnologies: 6. What are potential harmful effects of nanoparticles?.

TIME TO MAKE A CHOICE

IT'S HIGH T

Lakshita Shrivastava
BSc. Life Science

Image Credits: *Medium.com*

After decades of delay, we cannot wait anymore. There is no time left to waste. The irreversible environmental changes have already begun. The ecological crisis is not just a threat- we are living with the outcome of centuries of climate and wildlife destruction. The hopeful vision of the future is blurred if the current irresponsible and careless disposition continues.

The only unified way to conserve the environment is the science of sustainability. The debate over economy versus environment should resolve to achieve sustainable development goals. Development and conservation can be made counterproductive. Tracking carbon emission and tackling it is the need of the hour. A scientific temperament to preserve the environment has to inculcate among people. The use of cleaner technology has to be promoted not just at industrial levels but also at grassroots levels. Judicious use of energy and agricultural technologies to enhance crop production for the growing population has to develop.

Under this business-as-usual scenario, we can expect the global temperature to increase by 3.2°C; worsened air pollution to affect 4.9 billion more people; overfishing by 84 percent of fish stocks; and more water stress

to affect 2.75 billion people. Habitat loss continues, leaving less than 50 percent of native grasslands and several types of forests intact. The loss of biodiversity and the rising ocean temperatures are a matter of grave concern. We cannot take the flora and fauna around us for granted anymore. The mountains of garbage around us are already resulting in the spread of various diseases. Food and water security is already a matter of concern to many communities. Essential services to mitigate climate change and conserve biodiversity, should be put to immediate effect.

Before the wrath of nature takes a toll on us, we have to start respecting the self-healing mechanisms of nature that have protected us since the dawn of life. Evolution has taught us about the survival of the fittest. But we cannot forget that in the end, it is nature that always wins. The world has already seen five mass extinctions. We are not far away from dire consequences. Cities like the Ridgecrest, and New Delhi turn into gas chambers, with people struggling to breathe and schools and offices being shut down. If we don't take these warnings seriously, soon we will be carrying oxygen cylinders on our backs.

With the ever-increasing rates of pollutants and only agreements to curb them, it is high time we choose to act. The dreams we hold for our future will turn into a nightmare. A closer look at prospects is inhabitable and unimaginable. According to experts, if the global temperature rises above 2°C, heatwaves higher than 50°C will become common. As a result, wildfires will be spreading rapidly across most countries, cities will be submerged, droughts and desertification will be expanding. All of this by 2050, and this is only a vivid view of what the earth will be like. The pace we are working with cannot give us a future in which we can survive.

To change all of this and protect our future we have to reinvent the system. The system we are trying to change is fundamentally broken. We have to recreate and rethink all inherent methods of living. This won't be easy, but we all owe nature a second chance. And all of this is because of who we have been, greedy and selfish. We should take this opportunity and create a future that the coming generations deserve. We cannot only rely on policies, but we also have to take responsibility for every action we take. We have to make a conscious choice for day-to-day living. We have to choose to act and make thoughtful choices using reason and logic. The future is unwritten. We have to choose the future we want.

Reference

1. https://www.un.org/en/climatechange/what-is-climate-change
2. https://www.un.org/en/climatechange/science/causes-effects-climate-change
3. https://byjus.com/biology/environmental-issues-solutions/
4. https://en.wikipedia.org/wiki/Industrialisation
5. https://www.toppr.com/ask/question/rapid-industrialisation-is-needed-in-india-why/#:~: text=Rapid%20industrialization%20is%20important%20for,national%20income%20of %20the%20country.
6. https://www.earthday.org/take-action-now/?gclid=CjwKCAiAh9qdBhAOEiwAvxIokxQIMET4Gj0QTb2MKDK-OTbe2MRV2vpTqb78QM2W9pa8AGMqppscuhoCs64QAvD_ BwE

Urban Sprawling and its impact on sustainability

Anushka Tyagi
B.A. (Hons.) Political Science

Urban sprawl or the spread of urban development into surrounding rural areas, is a major problem that is being faced by many cities around the world. As population continues to grow and urban areas expand, the amount of land that is being developed for residential, commercial, and industrial use is also increasing. This expansion often comes at the expense of natural habitats and agricultural land, leading to a loss of biodiversity and deficits in food production.

One of the main challenges posed by urban sprawling is that it is not sustainable. As cities spread out, the infrastructure required to support them becomes more expensive to build and maintain. This includes roads, utilities and public transportation systems, all of which require a significant amount of energy and resources to operate. In addition, the more dispersed a city becomes, the more difficult it is for people to access essential services and amenities, leading to an increase in car usage and air pollution.

Another negative impact is that it often leads to the development of low-density, single-use neighborhoods, which are not conducive to walking or biking. This can contribute to a lack of physical activity and an increase in obesity and related health problems.

One solution to the widespread problem of urban sprawling is to focus on creating more compact, walkable communities. This can be achieved through the use of higher-density zoning and the development of mixed-use neighborhoods, which combine residential, commercial, and recreational uses in a single area. These types of communities are more efficient to serve in terms of infrastructure and are often more sustainable in the long run.

Another innovative solution is the use of green infrastructure, which integrates natural systems into the built environment. This includes the use of green roofs, permeable pavement and rain gardens, which helps to mitigate the negative impacts of urbanization by reducing stormwater runoff and improving air quality.

Overall, it is important for cities to address the problem of urban sprawling in order to ensure long-term sustainability. By focusing on compact, mixed-use development and the integration of green infrastructure, it is possible to create more liveable and sustainable communities for everyone.

The Declining Wildlife of Bihar: How Human Activity is Impacting Nature

Sushant Vivek
B.A (Hons.) Economics

Once covered with thick jungles and crystal-clear lakes, the Indian state of Bihar has seen a massive decline in its flora and fauna, leaving only 10.3% of the land covered in natural vegetation.

Owing to a massive population explosion in the past few decades, Bihar is currently one of the most densely populated states in the nation. Rapid urbanization in order to habilitate the growing population has led to the emergence of numerous cities in the state. As a result, most of the forests have been cut down to make way for urban development. In the 80s and 90s, many of Bihar's cities were surrounded by jungles and lakes, and people were living in close proximity to nature and its wild animals, birds, and other species. Unfortunately, due to deforestation, most of these animals and birds lost their habitats and are now on the verge of extinction.

Deforestation in Bihar is occurring at an alarming rate, with two distinct types happening simultaneously. In urban areas, rapid urbanization is leading to the cutting down of forests to make space for development. Meanwhile, in the villages, farmers are cutting down forests to make more space for agricultural activity, driven by the high population growth, which requires more food. This has caused a significant depletion of forests in the region in recent decades.

Climate change is another major factor contributing to the decline of wildlife in Bihar. Due to heavy rainfall, floods are a common occurrence in the state, leading to the destruction of habitats of wild animals.
The condition of natural water bodies is not commendable either. Owing to the commercial use of these water bodies for industries, transportation, and fishing, the state now witnesses the extinction of numerous aquatic species.

Found in the river Ganga is the rare species of dolphin known as the Gangetic River Dolphin. Unfortunately, these creatures are becoming increasingly rare and difficult to spot due to the degradation of their habitats and the disruption of their food sources. In addition, they face the threat of being preyed upon by larger animals, such as crocodiles. Conservation efforts are underway to protect the Ganges River Dolphin, including legislation to reduce pollution and other human activity in their habitats and the introduction of protective measures such as fishing restrictions. Additionally, research and monitoring of their populations are ongoing in order to better understand their needs and develop more effective conservation strategies. With the help of these efforts, there is hope that the Ganges River Dolphin can be saved from extinction.

Fortunately, with the rise of internet connectivity, more people are becoming aware of the need for the preservation and conservation of wildlife and are taking action to protect the environment. Government projects to save wildlife and local initiatives such as reforestation, making lakes to store water, and creating groundwater recharge wells are being implemented.
It is going to be a challenging task for Bihar to maintain wildlife conservation and mitigate the effects of climate change in the coming years. To make a real difference, the government needs to create strong and effective policies that will have real results. With continued effort and dedication, we can look forward to a changing Bihar in the near future.

Reference

https://www.wti.org.in/programs/india/forest-and-wildlife-conservation/deforestation-in-bihar/

https://www.worldwildlife.org/species/ganges-river-dolphin

https://timesofindia.indiatimes.com/city/patna/bihars-wildlife-on-the-verge-of-extinction/articleshow/73166010.cms

https://india.mongabay.com/2020/02/how-deforestation-and-climate-change-threaten-indias-wildlife/

https://www.ibef.org/states/bihar.aspx

The Impending Climate Crisis and the need for ACTION.

Amulya Jain
B.A. (Hons.) Economics

It cannot be denied. Even though the world is currently experiencing a climate emergency, there is still hope. If nothing is done, the conditions for life on Earth will likely worsen in the planet's potential future, even if we greatly delay global warming and lessen its effects. Hunger, droughts, storms, fires and other climate catastrophes would become the 'new normal'. In addition to rising ocean temperatures potentially decimating our fish stocks by 2050, pollution may be so awful that there won't be any clean air left to breathe.The global area and extent of croplands will gradually decrease, which will cause our food costs to soar and further exacerbate food poverty. Because of the sea level rise and extreme environmental conditions , millions of people would have to relocate. Mass migration, escalating sickness, and armed conflict would all destabilize the planet. But is this really necessary? No, this does not have to be the case. If we act now, we can still avoid the worst-case scenario. It will be difficult, but we can make a difference if we work together.

Every human activity affects the environment. An environment is a place where humans and animals perform their daily activities and survive. The environment is never constant; it constantly changes, necessitating our awareness of the causes of these changes.

Before we focus on the causes, it is important to know the issue. Without knowing the problem, a solution is useless. One of the most discussed problems is climate change. The reason it is so talked about is that it is a threat in today's time as it leads to long-term temperature shifts. Primarily, it is caused by human activities like burning fossil fuels, cutting down trees, and increasing consumption. Climate change leads to another problem, global warming. Global warming is when the temperature rises globally, resulting in the melting of glaciers, changes in seasonal timelines, and epidemics. The rising temperature is trapped inside the earth's atmosphere, making the environment much warmer. This is called the greenhouse effect. The combustion of fossil fuels, automobile emissions, and chlorofluorocarbons contribute to the increase

in greenhouse gasses in the atmosphere.
Well, the causes for global warming are not modern-time issues since these have been the key reasons since the 1800s. But the reason it has gotten worse now is that pollution and climate change have adversely affected the ozone layer. Humans are shielded from the sun's ultraviolet rays by the ozone layer, a stratospheric layer made of highly concentrated ozone gas. A hole was spotted in this layer and its depletion has made it easier for climate change and global warming to flourish. Humans and wildlife are exposed to harmful UV rays because of the hole in the ozone layer, which increases the chances of skin diseases and cancer.

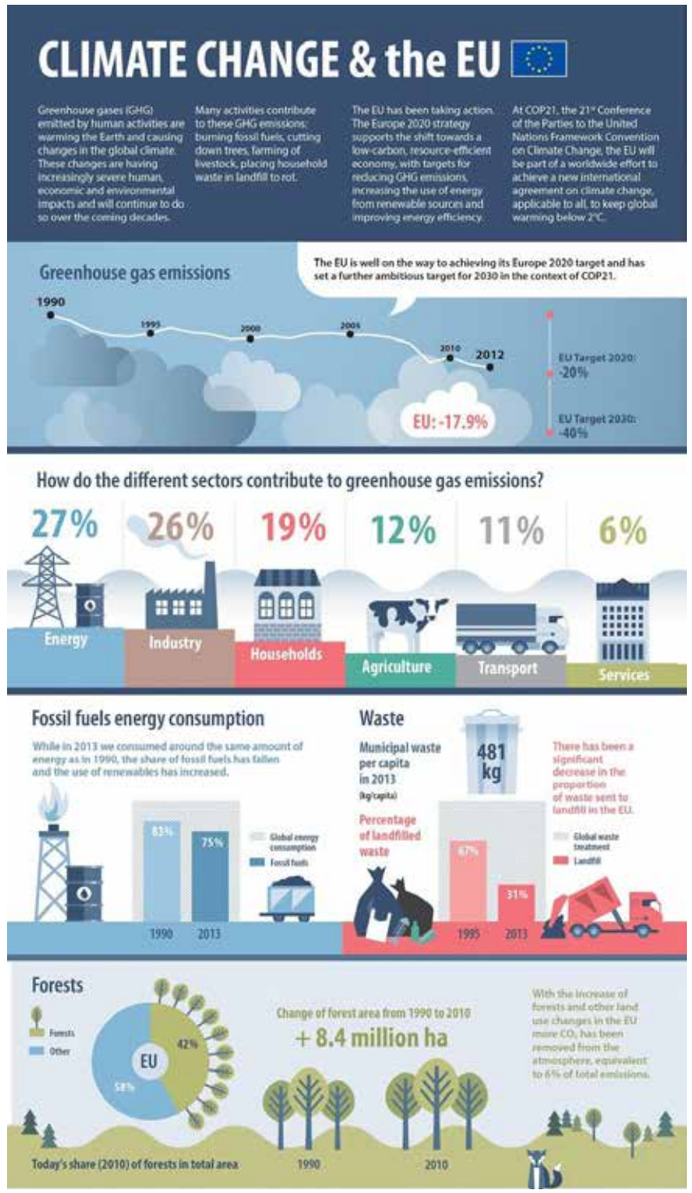


Image Credits: *Blake Perdue, Pinterest*

Along with these major issues, there are numerous minor issues such as water pollution, air pollution, deforestation, overpopulation, and so on.

All of the above-mentioned environmental changes are a result of rapid industrialization and the technology boom. These two are interconnected and one can not grow without the other. To provide employment and meet the increased demand, more and more industries need to be set up. This has increased employment opportunities, promotion of education and national income of the country, but at the cost of polluted and poisoned air. Where industrialization grows, there emerges a need for advanced technology to boost efficiency. As the world is globalizing, it has become very easy for technology and ideas to travel. Without technology, industries can not be set up, and without industries, technology can not advance. It is a vicious cycle that is harming the planet.

This planet needs to be saved. The steps taken should not be excessively large, but rather consistent. The concept of sustainable development has the potential to bring about significant change over time. Plastic should be avoided, carpooling should become more popular, no deodorants or perfumes should be worn, only clean fuels such as CNG should be used for cooking, sustainable fashion should be promoted, fans and lights should be turned off when not in use, taps should not be left open while bathing, brushing teeth or washing utensils and so on. By doing all of these things, we are reducing our consumption, which

Image Credits: *visual.ly, Pinterest*

will affect the demand. If there is no demand, there will be no production.

It is time to act. Act for climate justice and a green future that benefits everyone. The steps taken today will increase the chances of a world with clean air and a world with more space for wildlife by the time we reach 2050. We need to prevent the poison of climate change from spreading , not just for us but for the coming generations as well.

Reference

1. https://www.un.org/en/climatechange/what-is-climate-change
2. https://www.un.org/en/climatechange/science/causes-effects-climate-change
3. https://byjus.com/biology/environmental-issues-solutions/
4. https://en.wikipedia.org/wiki/Industrialisation
5. https://www.toppr.com/ask/question/rapid-industrialisation-is-needed-in-india-why/#:~:text=Rapid%20industrialization%20is%20important%20for,national%20income%20of%20the%20country.
6. https://www.earthday.org/take-action-now/?gclid=CjwKCAiAh9qdBhAOEiwAvxIokxQI MET4Gj0QTb2MKDK-OTbe2MRV2vpTqb78QM2W9pa8AGMqppscuhoCs64QAvD_ BwE

Shreya Dixit
BSc. Life Science

E-waste
Potential Resource

Lack of awareness and lack of infrastructural facilities are crucial issues related to e-waste disposal in India. India is the fifth largest producer of e-waste after the US, China, Germany, and Japan. The main problem with e-waste is an informal waste segregation system. In developing countries like India, 95% of e-waste is dumped informally, according to a UN report presented at the World Economic Forum on January 24, 2019. Informal wastes are harmful to the environment and people because of toxic substances like metals and persistent organic pollutants. In India, e-waste is recycled informally, for example, if it meets the need for cheap secondhand electrical equipment, it is sold at menial prices.

Recycling thus becomes necessary for developing countries because of the important metals in e-waste, such as cobalt, iron, aluminum, copper, zinc, nickel, lead, and precious metals such as silver, gold, and palladium. India already has a scarcity of valuable mineral resources, so there is an urgent need for a well-designed, safe and regulated e-waste recovery regime that can regenerate minerals.

Since 2011, India has had a law requiring only licensed collectors to dispose of e-waste. The 2016 and 2018 e-waste management laws to stop the informal waste disposal system have been created to curb illegal practices. Further, 80 percent of waste is vulnerable to the environment and human health.

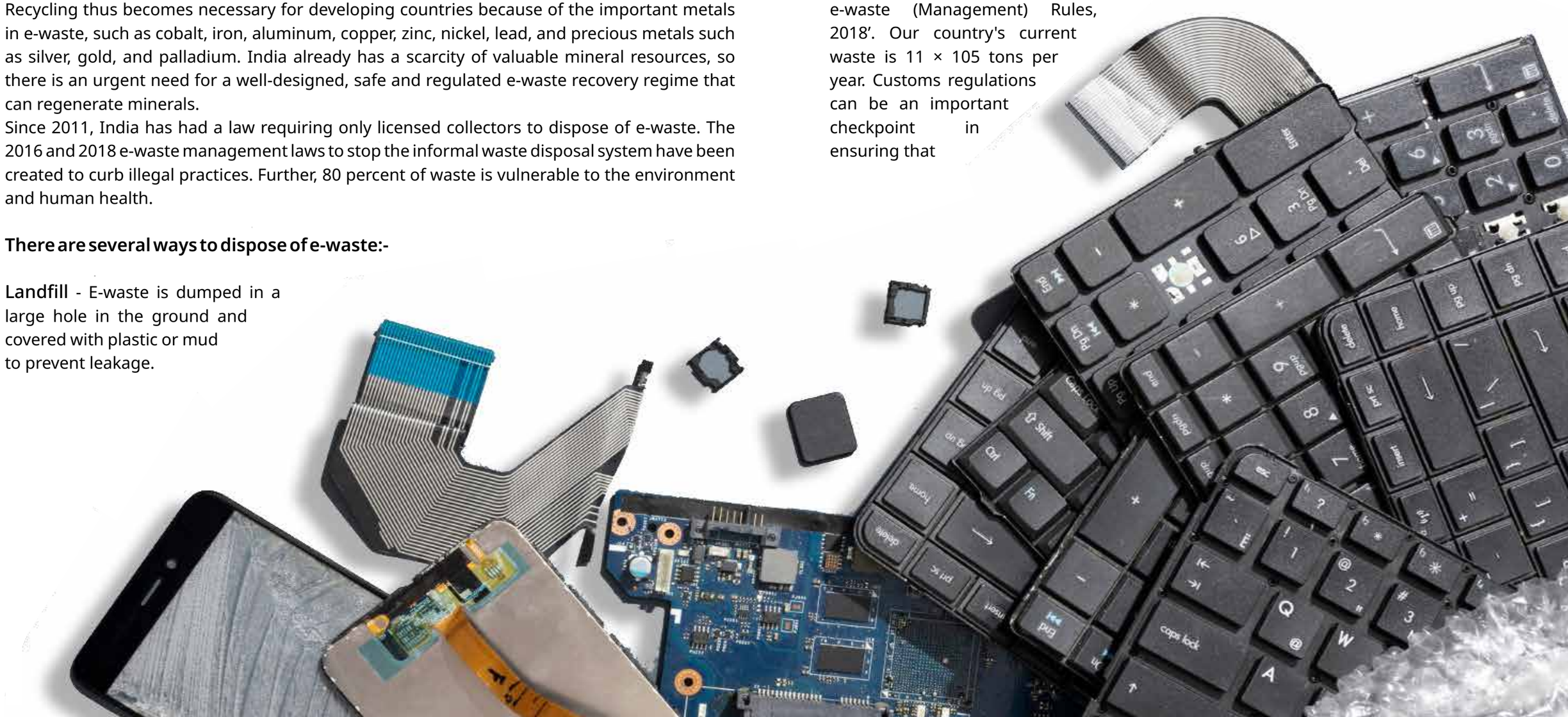
There are several ways to dispose of e-waste:-

Landfill - E-waste is dumped in a large hole in the ground and covered with plastic or mud to prevent leakage. But dangerous metals such as lead, cadmium, and mercury leach into the ground, contaminating groundwater and nearby soils.

Acid Bath - E-waste is soaked in strong sulfuric acid, nitric acid, or hydrochloric acid, which removes the metal from the chain. Metals are thus recycled to form new products, recycled metals are more energy efficient than mine, but harmful acids must be disposed of carefully. Contaminated acid usually enters water bodies and thus pollutes them.

Incineration - Incineration is the burning of electronic waste at very high temperatures. The double benefit of incineration is that it reduces the amount of E-waste, and the energy produced can be used for other applications. But the gases released into the atmosphere when burned are dangerous.

But these are conventional methods of discarding E-waste that is hazardous to the environment. Enforcement of the law is significant to reduce and recycling this E-waste. There should be strict regulations and monitoring for the 'Implementation of the amended e-waste (Management) Rules, 2018'. Our country's current waste is 11 × 105 tons per year. Customs regulations can be an important checkpoint in ensuring that



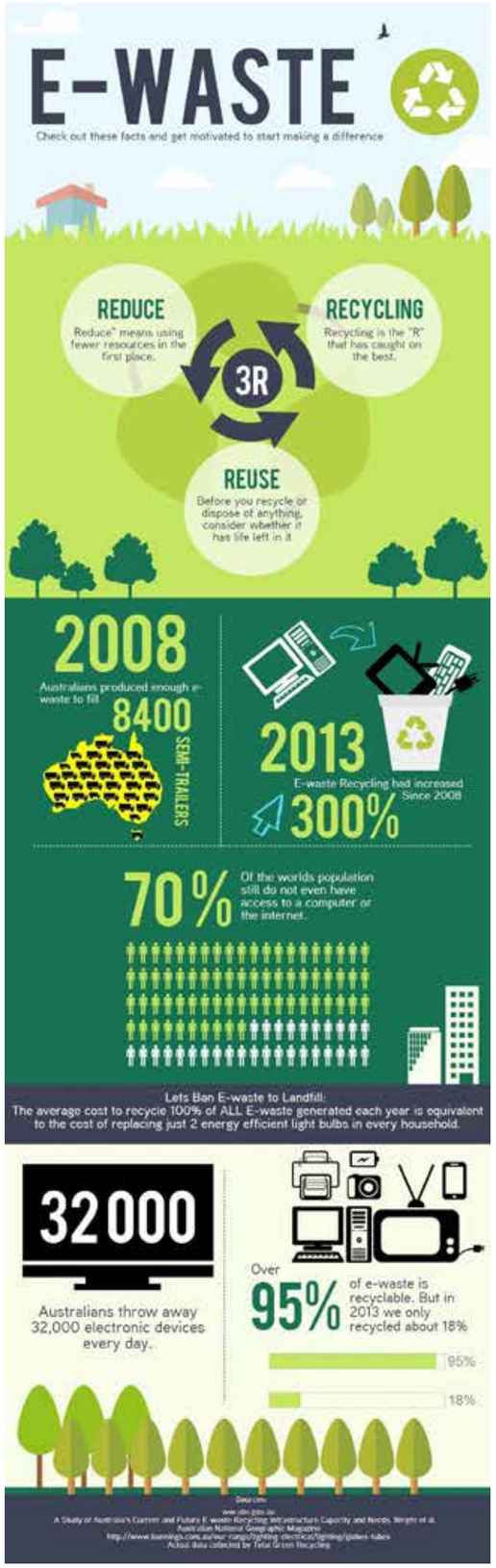


Image Credits: *Pinterest*

goods flow freely and cheaply into global supply chains.

Recycling e-waste can be of significant use. Recycling saves natural resources by recovering valuable materials from old electronics that can create new products. As a result of extracting fewer raw materials from the earth, we save energy, reduce pollution, reduce greenhouse gas emissions, and conserve natural resources. E-waste recycling protects the environment by properly handling and managing toxic chemical substances present in e-waste, such as mercury, lead, and cadmium. E-waste recycling creates new jobs for professional recyclers and a secondary market for recycled materials. E-waste recycling reduces the need for unnecessary dumps and landfills. GCL Recycling & Refining helps the Turkish economy by recovering a large number of valuable metals from its recycling operations. Copper, gold, silver, and palladium are a few of these metals.

A very recent example that shows the true potential of e-waste recycling was in the Olympics. For the first time in Olympic history, medals were made of recycled E-Waste. The Tokyo Medal Project was launched and worked for two years to collect enough recycled waste to produce medals for the Olympics. About 80 tons of microelectronics is enough to create 7,700 pounds of silver, 4,850 pounds of bronze, and 70 pounds of gold. Let's examine the extent of e-waste recycling solutions associated with e-waste recycling in India.

The waste stream reached 48.5 MT in 2018, according to a report on e-waste that the United Nations (UN) presented at the World Economic Forum on January 24. It is anticipated that this number will double. E-waste recycling has a promising future because there is so much e-waste produced annually.

E-waste recycling in India has also gotten a boost

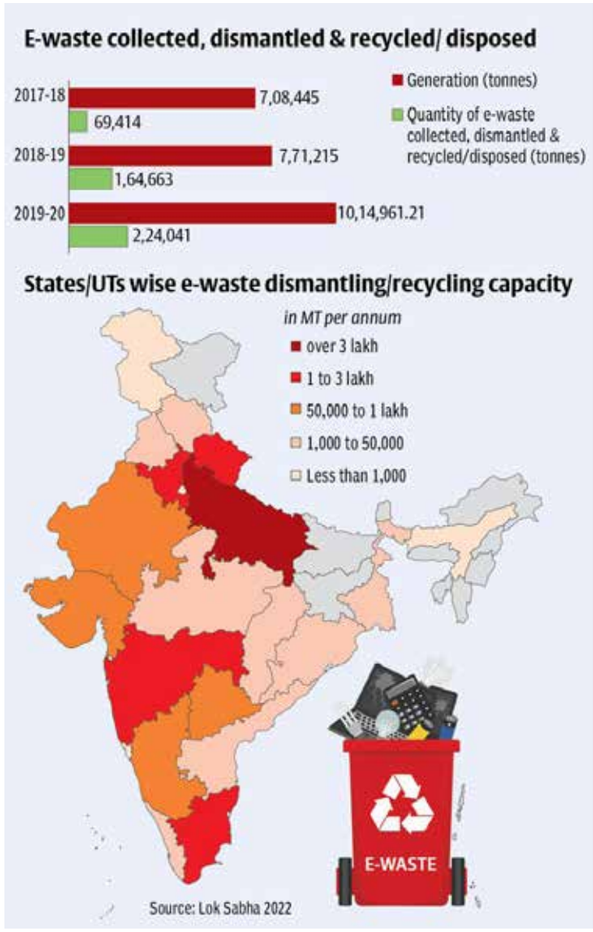


Image Credits: *Pinterest*

from the legislature. Even though India has had e-waste management rules in place since 2011, they were updated recently to restrict the ability to collect e-waste to only authorized dismantlers and recyclers.

The E-waste (Management) Rules, 2016, which went into effect on October 1, 2017, expanded the list of products covered by the rule to over 21 (Schedule-I).

Along with its products, it also expands its scope to include consumables, spares, and parts of electrical and electronic equipment (EEE). To strengthen EPR even more, the idea of a Producer Responsibility Organization (PRO) was also included.

As a result, India has a lot of potential for recycling e-waste. It is not only a way to lessen the problems with e-waste management but also creates employment. The number of e-waste recycling facilities has increased, as needs workers with all levels of education and experience. Useful metals and minerals can be restored from this. As India relies on other nations to meet its metal needs, this recycling will help increase domestic production. Additionally, recycled metals use 2 to 10 times less energy during production than metals made from ore.

Hence, recycling e-waste is a potential way for conserving our resources.

Reference

1. https://m.timesofindia.com/life-style/spotlight/tokyo-2020-olympic-medals-made-of-old-electronic%251%24s&aoh=16737157527784&referrer=https%3A%2F%2Fwww.google.com
2. https://dx.doi.org/10.1016/j.aogh.2014.10.001
3. https://dx.doi.org/10.1080/23311975.2020.1814503
4. https://dx.doi.org/10.1016/j.wasman.2020.04.041
5. https://dx.doi.org/10.1016/j.chemosphere.2022.134340

SYNERGISM: CLIMATE CHANGE AND LAND DEGRADATION

PRACHEE DASH
B.A.(Hons.) Psychology

World headed for climate catastrophe without urgent action

UN Secretary-General Antonio Guterres

The reality of the unprecedented climate crisis began to sink in as we read this headline which bombarded all global newspapers. Let's delve deep and understand one of the deeply entrenched roots of this cataclysmic disaster. Does the term 'land degradation' ring any bell? Land degradation is the deterioration or loss of the productive capacity of the soils for the present and the future. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable. The much-discussed threat of climate change originated because of global actions which bolstered ecosystem destruction.
A Tahitian proverb says 'The life of the land is the life of the people.' It seems like we are squeezing the life from our own lungs, wreaking havoc by seriously damaging our land resources. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems (IPBES) report finds that land degradation is a major contributor to climate change, with deforestation alone contributing about 10% of all human-induced greenhouse gas emissions. Since 1990, around 129 hectares of forest -an area roughly the size of South Africa – has been chopped down by humans. Such widespread deforestation has led to the shrinking of carbon sinks that absorb excess carbon dioxide from the atmosphere, thereby contributing towards the climate crisis.

Climate change activist Greta Thunberg aptly describes the severity of the climate crisis-" I want you to act as if your house is on fire. Because it is." This powerful statement speaks volumes about the urgency of this environmental issue and the fear of the drastic consequences that should predispose humankind to take mass corrective actions. The forest fires in Australia that led to unimaginable destruction and a shocking study by a group of researchers which says that trillions of plastic particles fall along with snow in Switzerland are reminders of the looming climate catastrophe.

Desertification is a relatively new form of land degradation predominant in dryland ecosystems and its growth is driven by climate change. The most alarming instance of desertification was witnessed in the Sahel region of North Africa. Deterioration of vast swathes of soil and vegetation formed an incredibly large area of barren land which has become unfit for ecological restoration. An insightful article in the journal-Nature postulates that anthropogenic climate change has driven over 5 million km2 of drylands towards desertification. Thereby, it has become a pressing cause of concern that has been worrying governments and various organizations across the world.

It is now becoming increasingly understood that a linkage exists between the original global environment change components determined back in 1992 at the Rio Earth Summit- climate change and land degradation. Climate change is both a cause and an effect of land degradation. Innovative technologies are being set in motion like SCoPEx (Stratospheric Controlled Perturbation Experiment), a solar geoengineering experiment led by Harvard which seeks to reduce the effects of global warming. Artificial intelligence and cloud computing technologies are being wielded to shape change-makers as in the instance of the project Global Forest Watch which is being implemented by the World Resources Institute to track tree cover in real-time. The UN has declared 2021-2030 as the decade for ecosystem restoration which requires concerted global effort with multilateral agencies, researchers, and international and civil society organizations collaborating to find sustainable solutions to realize the 17 SDG. UN Secretary-General Antonio Guterres rightly said-"Making peace with nature is the defining task of the 21st century."

References

1. https://www.thegef.org/what-we-do/topics/land-degradation.
2. https://www.sei.org/featured/ipbes-land-degradation/.
3. https://www.carbonbrief.org/deforestation-has-driven-up-hottest-day-temperatures/.
4. https://www.nature.com/articles/s41467-020-17710-7.
5. https://www.researchgate.net/publication/227659761_Land_Degradation_Control_and_Its_Global_Environmental_Benefits.

Image Credits: *He Junhui, Unsplash*

COMBATTING WASTE

RECYCLING FOR A SUSTAINABLE FUTURE

KANISHK RAIKWAR
B.A. HONS. ENGLISH, RAMJAS COLLEGE

We are living in a consumer-centric world governed by the likes of fast-paced manufacturing and industrial innovations peaking to their zenith. It is a globally sound world – with technological advancements and interconnectedness in spheres of production and manufacturing. Nevertheless, in such a sandbox of design and production, we have left a legacy of an unfit behemoth. Our inability to combat waste and manage it with a mostly funded comity of both consumption and global vision.

The current state of our production and manufacturing on a civil scale is at no par with what we can achieve by disposing of waste produced by it and the byproducts of manufactured goods. Emphasis on waste management has been put to an easy outlook in the public domain, or at least it seems so – given the mountains of garbage we have in cities, the lifeless rivers floating with mercury and lead. Delhi and its landfills in her outskirt areas will cite a perfect example here, and how river Yamuna has become a symbol of excessive debate and turmoil for its rather carefree approach. But for once now, we need to redirect our vision towards a common goal – addressal of the malaise which has produced tons of waste material every single day since the Industrial Revolution began. One way is by recycling, out of the commonly known 4Rs: reduce, reuse, recycle and refuse. But why only recycle when we have the other three R's to wonder over? The answer to this is brought up by how pragmatic and utilitarian 'recycling' is – it is not based on just asking the general population to follow such a notion, but rather it gives everyone a chance to participate in shaping possibilities. In a nutshell, recycling is the process of using up parts formed from the dismantling of materials and various objects while they undergo waste segregation. Such a concept relies on the idea of recovering potentially reusable media, often which is discarded as a result of our daily usage. Recycling is an alternative to other forms of handling waste such as by – incineration, landfills, and bio-generation – which produces some forms of waste effluents such as gasses, chemicals, or a mix of both the compounds along with toxic fumes. While these forms of waste management pose a direct threat to the living ecosystem, precisely the environment, there must be a more 'safer bet' to do away with the pile-up of centuries of human ignorance; this is where recycling helps.

This form of waste management and tackling prevents the formation of further goods and products in certain scenarios. For eg. vehicles, metals, electronics, or iron articles that end up in scrapyard are generally used up by segregating, melting, and recasting for industrial purposes – some of which is cycled back into the market

Image credits: *Pinterest*

after being manufactured. There are earthly resources saved if articles undergo recycling because manufacturing relies on electricity, water, minerals, and other metals; there is a significantly less impact on Earth due to the non-production of affluents which are brought up while producing new goods.

Harnessing energy by means of cogeneration, reuse of agricultural materials, or recovery of massive energy-depends upon materials such as aluminum, reduces the release of greenhouse gasses. Cycling materials for use in other production processes reduces the life cycle impacts, when compared with virgin materials that must be extracted from the earth and then transformed and transported through numerous stages.

Recycling paper, more or less, encourages energy conservation and contributes to forest oxygen replenishment benefits. According to undergo recycling because manufacturing relies on electricity, water, minerals, and the EPA (USA), by recycling one ton of paper we save 17 trees, 7,000 gallons of water, and 463 gallons of oil. Recycling of paper may include: waste cardboard material, newspapers, shredded paper media, inked papers, and pulp substitutes. Metal recycling involves – scraping metallic items- commonly found in junkyards, end-of-life vehicles, demolition of waste, catalytic converters, and more. Not only commonly found metal can be recycled several times (except for aluminum and others), but it can also create employment opportunities and thus benefit the economy.

Lastly, there needs to be a stringent outlook on plastic recycling. Although plastic has grades – indicated by its ISI mark which tells us about its recyclability, we need to curb the use of plastic in our daily usage. Plastic is the most stubborn and it is present everywhere – in oceans, rivers, land, food materials, and even in our intestines; a major component of waste produced every day, we need to think on a global level and devise strategies and tech to cope up with this alarming situation on plastics outside of just landfills. Recycling is the best alternative to any other form of waste handling, and it helps foster a future that is not deprived of resources and the bounty of natural systems of the earth. Technologically sound and rich nations have already achieved an edge in recycling, but it should not be too late for developing nations – such as ours – to commit late for a future that is sustainable and worthy of leading an enriched life.

Reference

1. (UN Chronicle - https://bit.ly/3G1TJz7)
2. (https://bit.ly/3hAZfiM)
3. (https://bit.ly/3uY kZIn)

OVERFISHING

A THREATENING CATASTROPHE

Smriti Joshi
B.A. (Hons) Psychology

More than fifty per cent of the world's population lives within 120 miles (193 kilometres) of the ocean, but even people who live far from the sea rely on the vast saltwater ecosystem that covers nearly three-quarters of the globe. The biodiversity of the sea is simply astonishing. Researchers have discovered approximately 200,000 marine species but believe that there are actually millions more who call oceans their home. Several seafloor ecosystems are so remote and difficult to access that we know as little about them as we do about Mars' surface. All the same, the ocean is quite acquainted with more than three billion individuals whose homes and lives are directly dependent on marine and coastal ecosystems—about 8% of the world's population is a fisherman. And three billion individuals rely on marine organisms as their primary protein source.

Until recently, most people thought the seas were an infinite resource, so huge and abundant that it was outside humanity's power to deplete it of fishes or substantially damage its waters. Today, we are well aware that is not the case. Scientists have long warned of an impending doom caused by ocean overfishing—the harvesting of species from the water at rates that are too high for organisms to renew themselves. However, leaders of the world have been at a standstill in their attempts to restore the damage caused for the past two decades. Marine biologists have a pretty good idea when, if left unaddressed, it is going to end quite badly.

Overfishing has evolved into a major issue around the world today. As a result, many species of fish are becoming vulnerable continues. One of the most common causes of overfishing is that people simply lack enough knowledge about it. Commercial fleets have been travelling deeper in the ocean and farther down the food chain for viable catches, as a response to the collapse of large-fish populations. This has triggered a chain reaction that is upsetting the ancient and delicate balance of the sea's biologic system. An increased demand for fish, combined with ever-growing global populations our oceans cannot keep up with the rate at which we are fishing our seas.

The health of the coral reefs is greatly affected. Overfishing has the potential to harm or destroy these delicate ecosystems. When there aren't enough plant-eating fish in a reef, algae can grow over and suffocate the coral. This renders the reef more vulnerable to extreme weather patterns and climate change. Sharks and tuna are especially vulnerable to overfishing because they are targeted for their meat and fins. When these organisms are removed from their natural habitats, it can have severe consequences for marine life further down in the food chain. As a result, many other fish species that are depending on that one species suffer from a shortage of food and die. Ocean ecosystems face an unclear future as a result of overfishing.

To be able to maintain adequate ecological balance in water bodies, fishermen must be equipped with not only the proper instruments, but also the appropriate scientific knowledge. However, due to a lack of adequate scientific information, aquaculture techniques are considerably wrong and unsustainable. If we are to effectively maintain our natural resources for subsequent generations, greater emphasis must be paid to adequately providing fishermen with the required instruments – and know-how – for sustainable aquaculture operations. Only a little more than 1.5% of the oceans have been designated as protected zones, and the majority of them are still accessible to fishermen. As a result, places may be injured or exhausted. Governments and international organisations must collaborate to halt illicit fishing, adjust subsidies to promote sustainable fishing, and implement regulations to prevent overfishing. Promoting and supporting the rights of small-scale fishing communities, as well as learning from them how to safeguard marine life correctly, can help to improve ecosystems around the world. When done effectively, fish farming can result in a sustainable method of delivering resources and foods to the world's population.

Reference

1. https://www.nationalgeographic.com/environment/article/critical-issues-overfishing
2. https://www.researchgate.net/publication/338406247_Overfishing_pressure_on_our_oceans
3. https://www.conserve-energy-future.com/causes-effects-solutions-of-overfishing.php
4. https://www.semanticscholar.org/paper/The-Environmental-and-Socioeconomic-Effects-of-Due-Jones-Gibbonbe1fdf6a7dc7eeca1f0863a3b16119ba3b93867e

भारत में अपशिष्ट प्रबंधन: उभरती चुनौती।

अपशिष्ट प्रबंधन का अर्थ है उचित तकनीकों और सफल प्रणाली द्वारा कई प्रकार के कचरे को अलग अलग करना और उसका परिष्करण करना । भारत का नागरिक होने के नाते हम खुद इस बार से परिचित हैं कि यहां अपशिष्ट प्रबंधन की समस्या हर दिन तेज़ी से बढ़ रही है। भारत में 1991 से नई आर्थिक नीति अपनाई गई जिसने उपभोक्तावाद को बढ़ावा दिया है और इससे प्लास्टिक उत्पादों का प्रयोग भी बढ़ा है। खासकर देश की राजधानी दिल्ली(जहांगीरपुरी) में जगह जगह कूड़े के ढेर से आम जनता को दिक्कत होती है।

आंकड़े (कुछ विश्वसनीय वेबसाईट्स से लिए गए हैं)

आंकड़े बताते हैं कि केवल भारत में एक साल में 62 मिलियन टन कचरा निकलता है जिसमे से 70% कचरा इकठ्ठा किया जाता है। इसमें से भी 12 मिलियन टन को परिष्कृत करते हैं और 31 मिलियन टन को निर्माण

स्थलों पर डाला जाता है।

एक अनुमान के अनुसार 2030 आते आते कचरे की मात्रा 165 मिलियन टन हो जायेगी ।

वर्तमान में भारत में हर साल ई–अपशिष्ट की मात्रा 31% की दर से बढ़ रही है।

इनके बीच एक राहत देने वाली खबर यह है कि वित्तीय वर्ष 2022 में कुल निष्कासित कचरे का 73% भाग परिष्कृत कर लिया गया है जोकि पिछले सालों की तुलना में अधिक है।

विधि निर्माण(Legislation)

हालांकि भारत सरकार इस बढ़ते खतरे के प्रति सजग है और इसके लिए जरूरी कानूनी प्रबंध भी कर रही है जो आगे दिए गए हैं।

भारत सरकार ने 'स्वच्छ भारत मिशन' 'राष्ट्रीय जल मिशन' आदि कार्यक्रम चलाए हैं ताकि अपशिष्ट प्रबंधन हो सके ।

सबसे पहले 2000 में म्युनिसिपल ठोस अपशिष्ट कानून बनाए गए जिसके बाद 2016 में उन्हें संशोधित करते हुए 'union ministry of environment, forests, and climate change' ने नई ठोस अपशिष्ट प्रबंधन नीति (SWM) 2016 को मंजूरी दी है। इसमें 6 प्रकार के अलग अलग कचरे के लिए अलग अलग नीति का प्रावधान है। 2021 तक भारत में परिष्करण के लिए 2285 प्लांट लग चुके थे।

अपशिष्ट प्रबंधन में समस्याएं

भारत में अपशिष्ट प्रबंधन में कई समस्याएं हैं जैसे कि यहां अधिकतर कचरे को अनौपचारिक रूप से एकत्र किया जाता है। ऐसे लोगों के पास ठीक से उसे रखने का उचित प्रबंध नहीं होता है जिससे कि कूड़े का सही उपचार नहीं हो पाता।

एक समस्या जागरूकता का न होना भी है। क्योंकि लोगों को पता ही नहीं है कि उनके फेंके गए कचरे का उनके लिए कितना नुकसान है इसलिए वे उसे गंभीरता से नहीं लेते।

सरकार ने सभी उचित कदम उठाए हैं पर ग्रामीण क्षेत्रों में अज्ञानता के कारण ये परियोजनाएं असफल हो जाती हैं।

एक समस्या भारतीय मध्य वर्ग में बढ़ रहा उपभोक्तावाद है । हर एक वस्तु प्लास्टिक की पन्नी में मिलती है।

उपाय

कोई भी समस्या , यदि लोगों के समर्थन से खत्म करना चाहें तो संभव है। जब तक कि भारत की आम जनता अपशिष्ट प्रबंधन में अपनी भूमिका नहीं जानेगी तब तक कानूनों का कोई असर नहीं पड़ेगा।

भारत में इस मुद्दे से जुड़े नियमों की कमी नहीं है मगर उन्हें ठीक से लागू करने और आम आदमी तक पहुंचाने का काम अभी बाकी है। क्योंकि अधिकतर लोग पहले से मौजूद सुविधाओ के बारे में नहीं जानते , वे उनका प्रयोग भी नही कर पाते ।

सबसे सफल उपाय यही है कि प्रत्येक व्यक्ति, अपने स्तर पर और परिवार में स्तर पर उपभोग को कम करने का प्रयास करे और उचित परिष्करण में अपना पूरा योगदान दे और यह तभी संभव होगा जब सरकार लोगों को जागरूक करेगी।

निष्कर्ष

कोई भी समस्या जानता के सहयोग की शक्ति से बड़ी नही हो सकती। यदि आम जनता चाहे तो अपशिष्ट प्रबंधन की यह बढ़ती समस्या भी खत्म कर सकते हैं। हमें जरूरत है तो केवल उचित प्रयासों की।

INDIA'S CHALLENGES IN WASTE MANAGMENT

Dinkar Singh
B.A. Programme

Waste management rules in India are based on the principles of "sustainable development", "precaution" and "polluter pays". These principles mandate municipalities and commercial establishments to act in an environmentally accountable and responsible manner— restoring balance, if their actions disrupt it. The increase in waste generation as a by-product of economic development has led to various subordinate legislations for regulating the manner of disposal and dealing with generated waste. They are made under the umbrella law of the Environment Protection Act, 1986 (EPA). Specific forms of waste are the subject matter of separate rules and require separate compliances, mostly in the nature of authorizations, maintenance of records, and adequate disposal mechanisms.

With rapid urbanization, the country is facing a massive waste management challenge. Over 377 million urban people live in 7,935 towns and cities and generate 62 million tonnes of municipal solid waste per annum. Only 43 million tonnes (MT) of the waste is collected, 11.9 MT is treated and 31 MT is dumped in landfill sites. Solid Waste Management (SWM) is one of the basic essential services provided by municipal authorities in the country to keep urban centres clean. However, almost all municipal authorities deposit solid waste at a dump yard within or outside the city haphazardly. Experts believe that India is following a flawed system of waste disposal and management.

The key to efficient waste management is to ensure proper segregation of waste at source and to ensure that the waste goes through different streams of recycling and resource recovery. The reduced final residue is then deposited scientifically in sanitary landfills. Sanitary landfills are the ultimate means of disposal for unutilized municipal solid waste from waste processing facilities and other types of inorganic waste that cannot be reused or recycled. The major limitation of this method is the costly transportation of MSW to far-away landfill sites.

A report by IIT Kanpur (2006) found that there is a potential of recovering at least 15 percent or 15,000 MT of the waste generated every day in the country. This, the report said, could also provide employment opportunities to about 500,000 rag-pickers. The report added that despite the immense potential of big cities in this area, participation from non-profits or the community is limited.

In some urban centres, people working in the informal sector collect solid waste for each doorstep to get a collection fee and derive additional income from the sale of recyclables. The informal recycling industry plays a major role in waste management. It also ensures that less waste reaches the landfill.

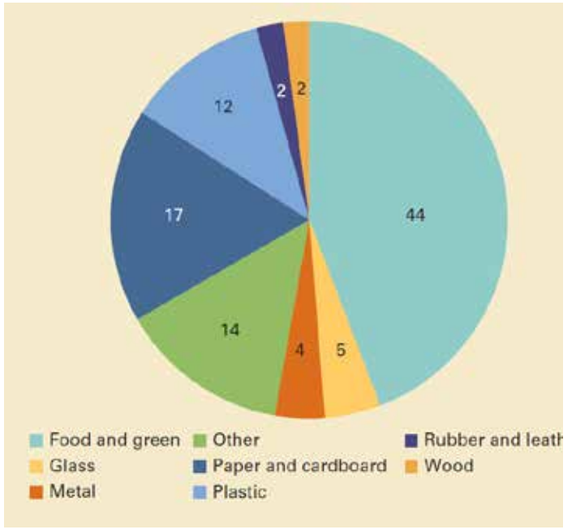


Image credits: *thedesigngesture.com*

big cities in this area, participation from non-profits or the community is limited.

In some urban centres, people working in the informal sector collect solid waste for each doorstep to get a collection fee and derive additional income from the sale of recyclables. The informal recycling industry plays a major role in waste management. It also ensures that less waste reaches the landfill.

There have been technological advances in the processing, treatment, and disposal of solid waste. Energy-from-waste is a crucial element of SWM because it reduces the volume of waste from disposal and also helps in converting the waste into renewable energy and organic manure. Ideally, it falls in the flow chart after segregation, collection, recycling, and before getting to the landfill. But many waste-to-energy plants in India are not operating to their full potential.

The installation of waste-to-compost and biomethanation plants would reduce the load of landfill sites. The biodegradable component of India's solid waste is currently estimated at a little over 50 percent.
Bio-methanation is a solution for processing biodegradable waste which also remains underexploited. It is believed that if we segregate biodegradable waste from the rest, it could reduce the challenges by half. E-waste components contain toxic materials and are non-biodegradable which present both occupational and environmental health threats including toxic smoke from recycling processes and leaching from e-waste in landfill into local water tables.

The concept of a common waste treatment facility (ENVIS Newsletter, December 2010) is being widely promoted and accepted as it uses waste as a resource by either using it as a co-fuel or co-raw material in manufacturing processes. This has led to a rise of Public Private Partnership (PPP) models in waste management which has opened doors for doing business in waste management.

Bio-medical waste (management and handling) rules, 1998 prescribe that there should be a Common Biomedical Waste Treatment Facility (CBWTF) at every 150 km in the country. CBWTFs have been set up and are functioning in cities and towns. However, the establishment of a functional CBWTF throughout the country must be ensured. Integrated common hazardous waste management facilities combine secured landfill facilities, solidification/stabilization, and incineration to treat hazardous wastes generated by various industrial units. According to a report from the environment ministry, they are responsible for generating 88 percent of the nation's incinerable hazardous waste and 97.8 percent of its landfill garbage.

The way forward, around 100 cities are set to be developed as smart cities. Civic bodies have to redraw long-term vision in solid waste management and rework their strategies as per changing lifestyles. They should reinvent garbage management in cities so that we can process waste and not landfill it (with adequate provisioning in processing and recycling). To do this, households and institutions must segregate their waste at the source so that it could be managed as a resource. The Centre aims to do away with landfill sites in 20 major cities. There is no spare land for dumping garbage, the existing ones are in a critical state. It is reported that almost 80 percent of the

Image Credits: *Photo by Francesco Paggiaro www.pexels.com*

waste at Delhi landfill sites could be recycled, provided civic bodies start allowing ragpickers to segregate waste at the source and recycle it. Compost pits should be constructed in every locality to process organic waste. Community participation has a direct bearing on efficient waste management. Recovery of e-waste is abysmally low, we need to encourage the recycling of e-waste on a very large scale so that the problem of e-waste disposal is contained.

References:

1. https://www.google.com/amp/s/www.downtoearth.org.in/blog/waste/amp/india-s-challenges-in-waste-management-56753
2. http://ijariie.com/AdminUploadPdf/Study_on_the_Importance_of_Waste_Management__to_Environment_ijariie13567.pdf.
3. https://pib.gov.in/newsite/printrelease.aspx?relid=138591.
4. https://www.millenniumpost.in/indias-challenges-in-waste-management-178385.

VERSOVA SAVIOUR

Palak Sharma
B.Sc. Life Sciences

Beautiful, peaceful, aesthetically pleasing- this is what comes to our mind when we think of beaches. But is it the truth now-a-days? No! One of the beautiful locations has turned into dumping grounds and what do we do about it? Nothing at all. We sit back and blame the governmental authorities. We are busy with our life and work but people like Afroz Shah don't hold back. Despite being a lawyer, he is behind the clean-up project of world's largest beach, Versova beach in Mumbai. He was awarded with the title of Champion of the Earth in 2016 for this clean-up project.

It started out as manual hard work of picking up the trash by Afroz and his neighbour Harbansh Mathur who were disappointed by littering the beautiful Versova beach. They taught sustainable waste practices to villagers and people in slum areas along the coastline. They worked together for eight weeks when two men joined them.

Afroz is a lawyer and proceeded legally by complaining to the Municipal Corporation and continued their work until any action was taken. He said, "We have to change ourselves. Why wait for others to do it? We have to believe that the solution lies with us."

He went an extra mile by rallied residents and fisherfolk by knocking on doors. He believed in working within rather than to blame others. On the other hand, social media played an important role and helped Afroz to ensure active participation of the volunteers. Among all the platforms, WhatsApp played a vital role especially for communicating the date, time, venue of the cleanup effort. It was a coordination tool with various core groups associated with the cleanups which include the civic bodies, corporates and Extended Producer Responsibility (EPR) groups.

It was a weekend clean-up project in which volunteers from different backgrounds joined together and enthusiastically participated in this life saving beautification concept. Rich or poor, student or teachers, individual or group, everyone worked as a whole.

He spread awareness about the damage and destruction to the marine ecosystem by the garbage and trash.

Amongst all, the efforts and hard work of Afroz was also praised by PM Narendra Modi during the radio programme 'Mann ki baat' on 28 May 2017 for transforming Versova beach from filth and garbage to clean and beautiful.

His efforts inspired many organisations and similar groups to take a step in different cleaning campaigns.His work in Mumbai inspired another WhatsApp group 'Beach Please' to gather every week, mostly on the weekends, to clean the stretch of beach around Chaitya Bhoomi, Shivaji Park etc.,

Spotting the Olive Ridley turtle after the cleanup of Versova beach by Afroz Shah and volunteers proved their work to be a great success! At least 80 Olive Ridley turtles made their way into the Arabian Sea from nests on the southern end of Versova beach.

On this journey, Afroz's work was recognised internationally and he was honoured by several awards and titles like - United Nations Champion of the Earth Award in 2016, CNN-News18 Indian of the Year in 2017, CNN named him amongst its list of Top 10 Heroes of Year in 2019 and GQ awarded the trophy for Eco Warrior of the Year in 2019. After the successful clean-up drive in Mumbai's Versova Beach, Afroz Shah has fastened his belt to clean the city's longest river - Mithi.

Afroz said, "We have to believe that the solution lies with us." He not only said but did it with actions, efforts, determination and hard work and proved that, If the intentions are firm, even a straw can become a sword!

Image Credits: *hindustantimes.com*

SEARCHING FOR A SILVER LINING

Ronjinee Chattopadhyay
St Xavier's College, Kolkata

Image Credits: freepic

Rome was not built in a day. Definitely, it takes many a stumble to build an empire, but every brick counts. The recently-concluded 27th Conference of Parties (COP27) needs to be seen in that light. Reports of the final agreement formulated at the climate summit expressed dismay at the failure to evolve plans of action with respect to regulating global temperature and limiting fossil fuel usage. However, a landmark agreement made at the summit was the one to create a loss and damages fund, a measure that a number of developing countries, especially island states, had been demanding for over three decades. Although a framework is yet to be laid out for its implementation, the ideological stance that the international community has taken by agreeing to create this fund is an achievement in itself. The measure holds potential to bring discussions surrounding climate justice and intersectionality to the fore in international circuits, taking into account the historicity of the climate issue, and the politico-ecological implications of the same.

A 2013 paper published by the Institute of Environment and Human Security, United Nations University, collated proof of local-level damages effected by climate change in nine developing countries Of the numerous examples, one is of Gambia, where the drought-prone North Bank region saw crops failing in 2011, and people had to look for alternative sources of money. Selling off property, availing food relief measures and acquiring alternate forms of employment proved only partially successful, as prices rose indiscriminately and people had to modify food consumption, reducing portions and consuming cheaper products. Another instance was that of Burkina Faso, where pastoralists had to resort to occupations other than their traditional one, having lost their herds to droughts. These occurrences exemplify the concept of 'loss and damage', and the necessity of having a fund that accounts for these. 'Loss and damage', thus, refers to the harm caused by anthropogenic climate change that cannot be recovered or addressed entirely through measures of mitigation and/or adaptation. Climate reparations, or payments accounting for loss and damage that take into consideration historic records of emission, have long been suggested as the ideal measure to deal with the issue. As of 2015, it had been found that developed states of the Global North had contributed to 92% of global carbon emissions. Such findings only warrant the fairness of the demand made by least developed and developing countries for reparations to be made to them.

The issue was first raised in 1991, by the AOSIS (Alliance of Small Island States), which demanded the creation of an international insurance pool to help the island states deal with the rising sea levels. A country's contribution to this pool was to be based on its contribution to global emission and its share of the global Gross National Product. This was followed in 2007 by the first formal reference to loss and damage being made in the Bali Action Plan after the Climate Change Conference held there. 2013 saw the creation of the Warsaw International Mechanism for Loss and Damage, and the 2015 Paris Agreement, too, acknowledged a need for the measure. However, the language of liability and compensation was conveniently eliminated from the texts, thereby positing the issue of loss and damage as one lacking any historical cause. The COP27 deal on the Loss and Damages Fund is therefore significant, in that it acknowledges the complex role played by historical, politico-economic forces such as colonialism and imperialism in shaping present-day climate realities. Such a stance by the international community makes one hopeful of the resolutions that can be arrived at in terms of other questions of climate justice, marked by other stratifiers.

That climate change affects different communities or groups of people disproportionately is a fact that has been discussed quite a bit in public fora, but has not been decisively acted upon yet. For instance, in the report of the Bali Climate Change Convention, the very one where the Bali Action Plan was formulated, the need to recognize

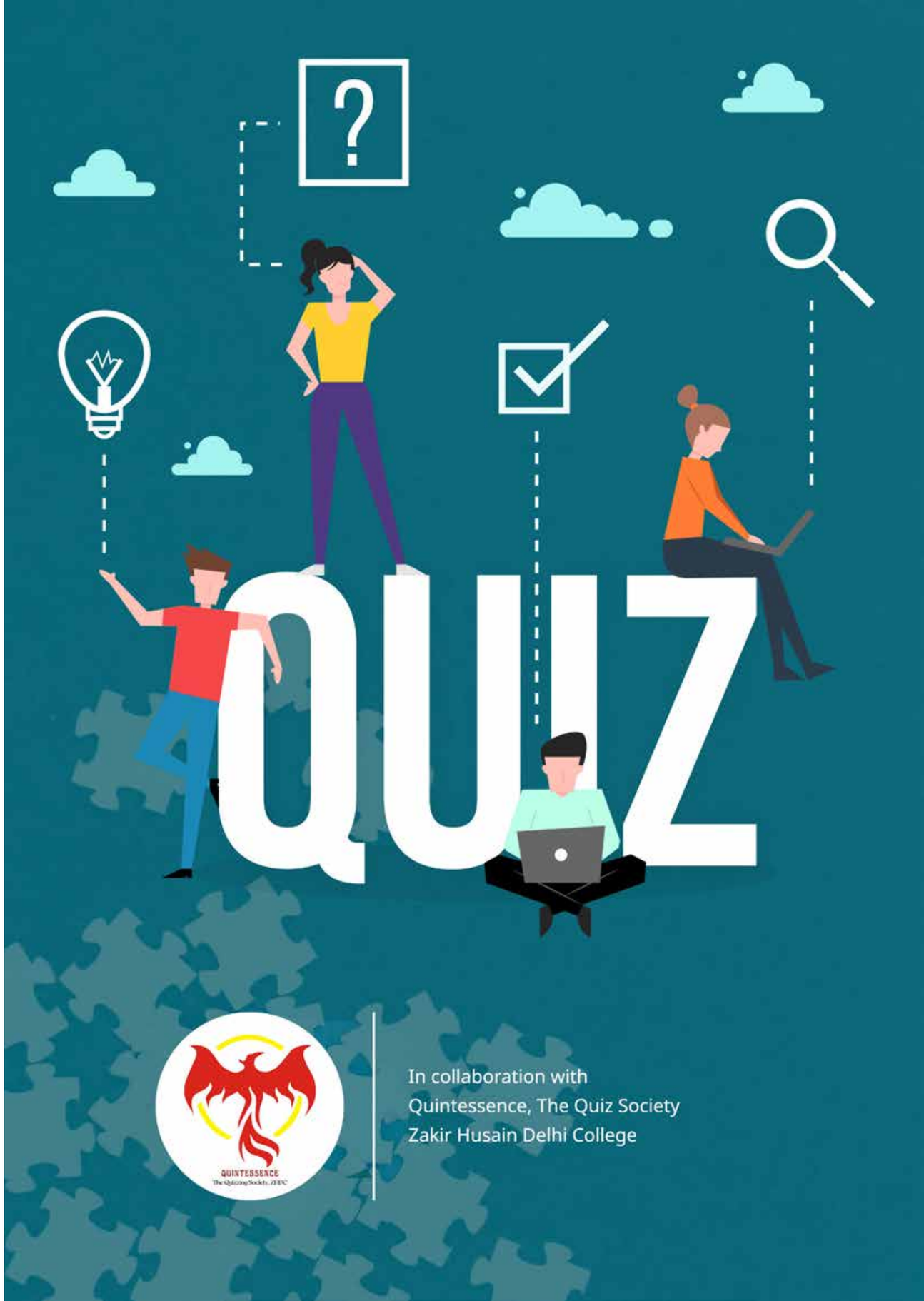
"also that the needs of local and indigenous communities should be addressed when action is taken to reduce emissions from deforestation and forest degradation in developing countries" was acknowledged. It has also been realized that involving indigenous communities in climate justice action plans helps to put to use the communities' traditional knowledge about the environment, and thereby, work towards the goal of sustainability. A number of climate justice organisations have been instituted with the very same purpose, such as the Indigenous Climate Organisation (ICA) in Canada and the Indigenous People's Organisation in Australia. The 26th Conference of Parties also saw the nomination of twenty-eight indigenous persons as knowledge holders and indigenous experts. While involvement in decision-making is one path, the need for material reparations for the communities that have been historically deprived of access to natural resources, and thereafter thrust into the world plagued by a climate crisis, has to be met. Despite the Indigenous People's Policy being adopted by the Green Climate Fund under UNFCCC , one of the major objections raised by indigenous groups after COP26 was that their reparation demands had not been sufficiently met by the final deal, with developed countries coming in the way. The materialization of the Loss and Damages Fund agreement could be seen as paving the way for some progress in this regard.

The marker of gender, too, has emerged as an important basis of campaigning in international discussion surrounding climate change. Decades of scholarship on ecofeminism and the gendered consequences of climate change, along with incessant efforts by organisations and individuals have made it possible for the world to talk about gender-responsive climate financing. The Green Climate Fund, set up under the UNFCCC (United Nations Framework Convention on Climate Change) to help developing countries tackle the problems posed by the climate crisis, is notable in having attempted to make mainstream the gender question. The Gender Policy and Action Plan (2018-2020) adopted under the mechanism talks of maintaining a gender-responsive approach to strategies of adaptation and mitigation in developing countries. Questions of reparation remain on the sidelines, and the recent acknowledgement of loss and damages may, once again, lead to some overtures in terms of gender justice. However, the sheer underrepresentation of marginalized genders at the COP27 makes one doubtful of the integrity of the formal policy initiatives.

To conclude what may be seen as a rather hopeful account of the implications of what transpired at COP27, it is necessary to mention, in the very least, some of the major glaring contradictions that adorned the Conference. It took place in the midst of blatant human rights violations, including curbs on protests and blocking of internet access during the Conference. The under-representation of marginalized groups, and the evasion of the question of curbing fossil fuel usage were some other points of major contention. Given these controversial aspects, the outcomes of COP27 cannot be conceived of in terms of a binary, but require nuanced evaluation.

Refrence

1. https://www.bbc.com/news/science-environment-63677466.
2. https://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf.
3. https://unfccc.int/news/cop26-strengthens-role-of-indigenous-experts-and-stewardship-of-nature.
4. https://www.greenclimate.fund/sites/default/files/document/ip-policy.pdf.
5. https://www.greenclimate.fund/sites/default/files/document/gcf-b20-07.pdf.
6. https://www.bbc.com/news/science-environment-63636435.
7. https://www.theguardian.com/environment/2022/nov/07/cop27-wifi-egypt-blocks-human-rights-key-news-websites.
8. https://feminisminindia.com/2022/11/25/a-cop27-overview-hypocrisy-and-hope-in-climate-justice/.



1

Storytelling about the climate crisis–called climate fiction or X –has generally focused on end-of-the-world stories that serve as a warning. X has typically been made up of “Dystopian and pre-/post-apocalyptic worlds of the past, present, or future stricken by a myriad of climate change calamities. These end-of-the-world stories may serve as a warning of why we should address the climate emergency. Give X

2

Shawn Seipler, an ex vice president of sales of an e-commerce company quit his job over a decade ago when we got super frustrated about a global problem that people in the poorer countries faced. This caused a lot of deaths each year and no one seemed to be able to do anything much. So he took an initiative and launched his own company where he started charging hotels a very nominal fee to take out a specific kind of waste from their establishments, which Shawn would later process and give away to the people in these poor countries for an unbelievably cheap price or even for free. What did he take away from the garbage of the hotels, something that might not end up in hotel garbage by asian people?

3

____ ____ __, featuring top A-list stars, released around Christmas last year revolves around the theme that human beings are so easily distracted by pop culture and goofy memes that they can no longer focus on what is important, such as anthropogenic climate change. The movie was received with rave reviews. One critic explained the plot as “____ ____ __” as a “lurching 145-minute catchall for the ills of American society.” FITB/ give the name of the movie.

4

The term X was coined by New York environmentalist Jay Westerveld in a 1986 essay about the hotel industry’s practice of placing notices in bedrooms promoting reuse of towels to “save the environment”. He noted that often little or no effort toward reducing energy waste was made by these institutions, although towel reuse saved them laundry costs. He concluded that often the real objective was increased profit, and labeled this and other profitable-but-ineffective “environmentally-conscientious” acts. The term X comes from another concept in which someone is made to believe (usually) a radical ideology

5

The concept derives its name from a similar ecological concept developed in the 1990s . However it was popularized by a large advertising campaign of the fossil fuel company BP in 2005, designed by Ogilvy. Oil producer BP hired Ogilvy to create an “effective propaganda” campaign to shift responsibility of climate change-causing pollution away from the corporations and institutions. This strategy, also employed by other major fossil fuel companies borrowed heavily from previous campaigns by the tobacco industry and plastics industry to shift the blame for negative consequences of those industries onto individual choices.The term “_ _ _ (6)_ _ _ _ _ _(9) _ _ _ _ _” itself was also popularized by BP. ID the term

6

X is an arboretum made in the 16th century which is Delhi’s first place where trees and plants are grown for scientific and educational purposes.By now, over 21,000 saplings have been planted. It has nearly 300 tree species, many of which are rare. This place is home for around 80 beautiful bird species. It is situated in X Nagar and has been named amongst the 100 World’s Greatest Places of 2018 by TIME Magazine.Name X.

7

In January 1932, Dian Fossey, a conservationist studied the mountain gorilla groups in Rwanda for 20 years. Her studies led to a better understanding of the gorilla's intelligence. She was part of a group of women who were doing such studies under Louis Leakey. The other two were Jane Goodall, who studies chimpanzees, and Birute Galdikas, who studies Orangutans. They were known by a clever nickname which referred to the fact there were three of them and they studied this particular order of mammal (under which humans fall too). What is the nickname?

8

X is an environmental activist group in the United Kingdom using civil resistance and direct action with the aim of ensuring the British government commits to halting new fossil fuel licensing and production. It launched on 14th February 2022 and held a month of oil terminal disruptions across Southern England in April 2022. The group has garnered criticism for their protest methods, which have included blocking roads and vandalism of a very popular Oil on canvas painting at National Gallery, London.

9

Connect
Agra Cadabra
Aye-Aye
Boops-Boops
Gorilla Gorilla Gorilla

10

____-Free Rings are beautiful jewellery made by Daan Roosegaarde with a certain entity from the air in cities such as Beijing. If you were to gift this ring, you are in fact gifting 1000 m^3 of clean air. The main component of this ring is collected by towers erected in the heart of the city. What is the jet-black cube in the middle of the ring made of?

11

The name of the collective group of this bird is considered a crime everywhere in the world. These birds have been known to be one of the smartest birds and close to even chimpanzees in terms of using tools. They have been known to hold funerals for their dead and even recognize humans and play a role in the final rites of a human in Hindu Culture. Which birds are we talking about?

ANS

Q1. Cli- fi, Q2. Used Soap, Q3. Don't look up, Q4. Greenwashing, Q5. Carbon footprint, Q6. Sunder Nursery, Q7. Trimates, Q8. Just Stop oils, Q9. Weird names of real life organisms, Q10. Smog, Q11. Crows

THE SOCIAL ENTREPRENEURSHIP

Student Led Initiatives

Dristi Jain Patni
B. Com (Honours)

enactus
Dyal Singh College

enactus
RAMJAS

Connecting Dreams

enactus
Hans Raj College

राष्ट्रीय सेवा योजना
NATIONAL SERVICE SCHEME

From stubble till solution!

Every hour, 800 people die due to air pollution around the world. It has carpeted the entire planet with noxious air. According to the Global Burden Disease, air pollution was responsible for 17.8% of all deaths in India in 2019. The presence of chemical, biological, or physical pollutants in the atmosphere is what renders it and makes the air unfit for humans and other living beings.

Though human bodies are designed in such a way that they can adapt to environmental changes, the degree of change is also important. In just two days, Delhi's air index rose from 331 to 412. The AQI in Delhi has reached alarming levels, and considering the above data, it would not be inaccurate to say that the city has devolved into a gas chamber at this point.

Numerous factors have contributed to Delhi's high level of pollution, but stubble burning is one of the most significant, yet under-discussed reasons. It is the process of burning crop residue that has been left over after harvesting grains such as rice, wheat, and maize. When a large amount of straw is burned, it emits harmful gases that make the air difficult to breathe, resulting in smog.

To address this issue, one of Enactus Hansraj's initiatives, Project Vriddhi, was launched in 2018. Vriddhi is an initiative that began with the goal of improving air quality. In 2019, the air quality in Delhi plummeted, and schools were granted special holidays because the air was too dangerous to breathe. This was the incident that made the founders of Vriddhi realise that it was past time to do something about it. It took a lot of work to begin and

Image Credits: *Enactus of Hansraj College*

Image Credits: *Enactus of Hansraj College*

required extensive preparation. During the investigation, they discovered that stubble burning was the primary and consequential cause and decided to challenge it. Instead of burning it, their main goal was to focus on other effective ways to use stubble in agriculture.

With this in mind, they came up with the idea of growing mushrooms with the stubble. It is not the first time that stubble burning has been targeted, and the Government has been doing everything it can to persuade farmers not to burn their stubble. But what did Vriddhi do to get the farmers to agree? The student body revealed, the local administration played a vital role by convincing the farmers to try an alternative method of disposing of their after-harvest waste. They organised small gatherings of social workers and farmers to educate them. In the initial stage, it was a group of 12 farmers, which later turned into a big cohort of 245 farmers.

How were so many farmers attracted to this project you might ask. From a monetary standpoint, the farmers now have an additional source of income from selling mushrooms, whereas before all they got from the stubble was a cloud of toxic fumes. The revenue earned from mushroom farming is subjective because the financial investment and commitment put in varies from farmer to farmer. It is also relative because it is determined by the number of sets sold by a farmer. After growing the mushrooms, they sell them directly to Mandis (local vegetable vendors) or mushroom production hubs in Harsana Kalan, Sonipat, North India. In fact, some large farmers have collectively established their own packing facilities and handle the entire process from production to vending on their own. This is only one aspect of overcoming stubble burning; Vriddhi has begun a number of assignments concurrently to address the problem.

Talking about Vriddhi's other vertical, let us shed light on the installation of biogas plants. , They collaborated with Enactus Germany in order to combat indoor pollution. The national winners from Germany specifically designed technology for India and chose Vriddhi as a compere. They successfully planted the biogas stations in targeted areas. This product's USP (unique selling proposition) is that it is a compact-based individual household biogas plant specifically created for individual household needs using IBC tanks. The project is still ongoing,

and there are two well-established setups in a gaushala, only one in use. The main objective of this plant is to collect stubble and cow dung and convert it into animal food and fodder.

Stepping out of the agricultural zone, they established Shilpkari, a program that gravitated towards handicrafts. They joined forces with an IIT partner with the technology to turn stubble into paper. This paper was then either sold in the market or taken to Janakpuri, where they taught NGO workers how to make handicrafts out of it, eventually focusing on only brown paper bags due to the market's size. It was running smoothly until the hit from Corona forced them to switch to online mode during the second wave. The online store is now doing well and is focused on listing eco-friendly products made from crop residue, such as paper straws made out of rice husk. Now approaching the latest and second most successful endeavour of vriddhi, which is earmarked for open defecation.

The project focuses on the construction of washrooms in areas that lack such facilities. 13 restrooms have been built as a part of this project. The first one was in Arthala, the second in Rajendra Nagar in collaboration with the Delhi Government, and the remaining 11 washrooms are in the Delhi NCR. They are a huge help to people who have to defecate in the open, as well as bus and auto drivers whose jobs require them to travel.

To sum it up, Vriddhi is an entrepreneurial program led by today's youth that is making its way up to making the planet a better place to live. It has provided farmers with an extra source of income and with a sense of awareness about the repercussions of their actions on the environment. The journey of starting their project from an unknown village to having successful biogas plants, a handicraft website, and a team of diligent social workers gives us hope that continuous efforts can bring about a change in the environment of this planet.

Image Credits: *Enactus of Hansraj College*

BAMBOO: Antidote to Plastic Predicament

'Plastic, plastic everywhere
This ecological nightmare
Morphed from oil out of the ground
Hard to dispose of, it's all around'

It's horrifying that these lines from a famous childhood poem have begun to shape our present reality, contributing towards the alarming environmental crisis. Globally, plastic production has increased exponentially from 2 million tons in 1950 to over 390 million tons in 2021! At this dismal rate, all inhabitants of our planet will be choking on plastic as the recent predictions by UNEP suggests that plastic pollution is set to triple by 2040, adding 23-37 million metric tons of waste into the world's oceans each year and by 2050, virtually every seabird species on the planet will be eating plastic. These statistics draw a dreary picture of the future state of our 'plastic planet'.

Image Credits: *Enactus of Dyal Singh College*

The roots of this catastrophic nightmare are deeply intertwined with the phenomenon of plastic pollution. So what is plastic pollution? It's the accumulation of hazardous plastic waste and disposable plastic products that adversely affect humans as well as the natural environment. A viable solution would be developing systematic strategies for efficient plastic waste management by promoting sustainable alternatives.

Enactus Dyal Singh College is acting as a beacon of hope for sustainability by deriving creative solutions and working in tandem with small business ventures.Their team initiated Project Nawah in 2019 with a prime focus on ever-increasing plastic consumption and its sustainable management through entrepreneurial initiatives that revolve around the concept of plastic substitution and plastic recycling. A recent study has confirmed that plastic

Image Credits: *Enactus of Dyal Singh College*

production and consumption in copious amounts is a major contributor to the global issue of unprecedented climate change, as 99% of plastics are made from fossil feedstocks. Plastics are also threatening the ability of the global community to keep global temperature rise below 1.5°C, as greenhouse gasses (GHG) are emitted throughout the plastic life cycle.

It's a shocking revelation that scientists have recently discovered microplastics embedded deep in the Arctic ice! This signifies the extent of microplastics' prevalence and how deeply it is embedded in our ecosystem which should serve as an alarm bell for global citizens to take corrective actions. According to the Centre of International Environmental Law, plastic production has been forecast to grow by 60% by 2030 and to treble by 2050. Project Nawah is a twin-fold initiative which seeks to abate the deleterious impacts of the plastic crisis.The first vertical of Project Nawah was initiated in order to combat this escalation of plastic use and to take a step towards securing the health of our planet. It entails the vision of substitution of single-use plastic products with sustainable eco-friendly alternatives. The initiative involves managing and implementing the process of production of bamboo products. It's fascinating that even Thomas Edison used bamboo in the first light bulb, as a filament!

The raw material i.e. bamboo is ethically sourced in a sustainable manner so as not to cause any harm to the environment. Bamboo is also bought from local vendors who lack an established market base due to fierce competition, thereby providing support to small business ventures. The Enactus team oversees the production of bamboo cutlery, straws, planters, dustbins, bamboo containers,toothbrushes, baskets and myriad utility products. These are curated by beneficiaries belonging to marginalized communities who are presented with requisite training programmes to facilitate efficient production. Collaborations are initiated for skill development and training, equipment handling, operating machinery and creating systematic inventories. In this manner, novel employment opportunities are created to empower the unprivileged and make them Atma Nirbhar. Thus, ensuring the development of a trainer-trainee model, as the already skilled beneficiaries can further impart their knowledge

Image Credits: *Enactus of Dyal Singh College*

in bamboo carving to the new beneficiaries,

When the project was born, the initial beneficiary base consisted of 16 women belonging to backward societies where patriarchy was prevalent and women weren't allowed to work. With the sheer hard work and determination of the team, the project is on the crest of a wave and has been expanding to include the transgender community as well. The current beneficiary base has been showing an exemplary trend of expansion which has been helpful in serving more unprivileged individuals.The society works as a mediator by creating a mechanism for supply of the sustainable recycled products in the market and the entire revenue generated goes directly for the upliftment of the beneficiaries. The products are also sold through social media platforms as Project Nawa has its own Instagram page and a website to carry out online business and expand its reach to each nook and corner.

The second vertical centers around the current trends of plastic pollution and involves the collection of disposable plastics and it's conversion into utility products through innovative recycling endeavours.The process of plastic waste collection is diligently implemented through collaboration with a plethora of organizations working for sustainability and organizing large-scale cleanliness drives which facilitates coordinated groundwork. The recycled commodities entail plastic desk clocks, key chains, alarm clocks and a wide array of multipurpose products. The Enactus team is working tirelessly to enable the expansion of the product range with the infusion of fresh perspectives of entrepreneurial minds.

It's mind-boggling that the average revenue generated through this initiative currently amounts to 7,75,000!

Enactus Club of Dyal Singh College is doing incredible work to eliminate plastic consumption by combining green economic initiatives with social entrepreneurship. The environment will reap the benefits of what they sow today. As global citizens, it's our responsibility to prevent unchecked plastic accumulation and let the planet heave a sigh of relief. So, ask yourself today- are you willing to be a part of the global community to promote sustainability?

References

1. https://www.plasticsoupfoundation.org/en/plastic-facts-and-figures/.
2. https://www.thehindu.com/news/international/un-plans-to-drastically-expand-plastic-waste-management-in-india/article37818461.ece.
3. https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-climate/.
4. https://www.sas.org.uk/our-work/plastic-pollution/plastic-pollution-facts-figures/.

Project Waraq

Stubble burning is one of North India's biggest pollution contributors. Millions of tonnes of stubble (parali) is burned, predominantly in the Haryana and Punjab regions of North India, around October and November, which coincide with the withdrawal of the monsoon. This leaves the Delhi-NCR region with a thick blanket of smog, resulting in a degraded AQI and causing serious health issues for the residents.

To tackle this issue, Enactus Ramjas came up with a fantabulous project, WARAQ, which solves three-fold issues of food insecurity, air pollution, and unemployment. Enactus Ramjas processes stubble into disposable biodegradable plates with vegetable seeds embedded in them. After being used, these plates can be planted in the soil so that the embedded seeds can sprout into saplings. The seeds used are of lettuce and tomato, which can be grown and can later be consumed, helping the underprivileged, some of whom are not even blessed with even one meal a day. This is a positive step towards tackling the hunger poverty of India. The stubble

Image Credits: *Enactus of Ramjas College*

Image Credits: *Enactus of Ramjas College*

is now used for making plates instead of being burned into ashes hence preventing tremendous air pollution. The manufacturing unit also creates employment, bringing about the triple benefit.

So let's talk about how Project Waraq was started. The original idea was to help reduce hunger in India. So, getting inspiration from other organisations and communities, they came up with the idea of using stubble to make biodegradable plates with seeds embedded in them.

Convincing farmers to give up stubble was not such a hard task as the farmers needed to put up capital (around 2.5k-3k) for burning stubble, which includes the cost of gasoline, labour, etc. and also makes farms uncultivable for days. In exchange for their stubble, they are also getting a nominal price, which makes it a win-win situation for them.

The plates are manufactured in the Majnu ka Tila region of Delhi. Currently, there are around 26 workers. The manufacturing process is predominantly labour-intensive instead of machine-intensive, making the setup easier and more sustainable. The labourers are paid a fixed amount of money along with 50% of the profit margin. This project was set-up with the help of college funding. It's now making sales and has won some competition grants, which ensure the smooth running of the project. Currently, the plates are sold to school canteens. The plates can then be disposed of in School gardens and their produce can then be used in mid-day meal schemes of the school.

Project Waraq intends to grow in the future by establishing B2C and diversifying its cutlery. After plates, they are aiming to make bowls, spoons, glasses, etc. If they receive additional funding, they will expand their manufacturing by adding more machinery and laborers, as well as for research and development, allowing them to impact more lives. They also participated in the Enactus World Cup and made it to the top four out of 100 Enactus projects.

Using stubble for cutlery helps immensely in reducing air pollution. The population of Delhi NCR suffers a lot due to stubble burning practices. The air quality has dropped to very bad levels, leading to various health hazards. The burning of straw and husk also has a negative impact on soil fertility. The government is making guidelines for not burning stubble, but due to a lack of economical alternatives, the farmers are left with no other option. But projects like these are a start to putting an end to it. Making stubble cutlery not only reduces air pollution, but it also reduces the use of plastic and thermocol cutlery, which are huge polluters. This stubble cutlery is biodegradable which makes it an excellent alternative to plastic and thermocol disposables. With a little more effort from the government, the scale of such projects can be increased, which solves multiple environmental, social, and economic problems.

Arpan: The Tale of Flowers

Arpan
LOW-SMOKE INCENSE STICKS

Floral waste is notably the most overlooked problem in India. More than 800 tonnes of flower waste are generated in India every year. They are used widely over the globe for various purposes like decoration, medicine, dyes, fertilizers, beauty products, clothing, and food. But, after completing their purpose, where do they go? They are either dumped in the trash or drained into rivers in large quantities as a religious activity. It has the potential to pollute and clog water bodies. In addition, aquatic animals are harmed and can encourage algae formation. There are numerous ways in which it can have harmful effects on the environment, but with a strategic plan for utilizing these flowers, we can recycle them and create something worthwhile.

There is a wide range of colors, sizes, shapes, and anatomical arrangements of flowers that they come in, but they are mostly known for their delicate beauty. Flowers, in addition to being visually appealing, are also extremely functional. Their functionality can be found in

Image Credits: *CDS SRCC*

every area and is used in a variety of products such as perfumes, cosmetics, food, liquor, and the textile industry. Many small-scale businesses have identified and are addressing the problem of floral waste. People have found many productive ways to convert this unproductive waste into useful items, such as shampoos, soaps, jewelry, resin art, and home decor. Arpan, a student-led entrepreneurial business that converts flower dum into incense products, was one of these initiatives.

The project aims to address two societal issues. First is the primary issue of the floral waste produced in India as a result of ceremonies or offerings made to temples,

Image Credits: *CDS SRCC*

and the second is the social elevation of the group living on the fringe. Arpan has managed to earn a revenue of over 10 lakhs and a profit of over 4 lakhs by managing the two-fold issues of floral waste and assisting the underprivileged groups of society while developing eco-friendly solutions and generating livelihood.

They have partnered with NGOs to help them amass flowers using their volunteer networks from Varanasi, Mathura, UP, and Delhi NCR. Some standalone organizations also collect junk and contact the workers to pick it up from them. The waste is then exported to the Delhi-based manufacturing facility via their supply chain, and after gathering the material, it is processed and packaged there. During the journey covered till now, Arpan has recycled over 1000 kg of flowers and continues to do so. These flowers are repurposed to make incense sticks and other incense products, which are then sold to customers.

To better serve their environmentally conscious customers, they have partnered with over 40 organic brands. The business model applies to both offline and online stores. Offline stores, such as One Green World and Our Good Planet, are primarily located in Mumbai and Bangalore. In contrast, some stores, such as Brown Living, Ullisu, Amala Earth, and Goli Soda, are only available online. Corporate gifting and bulk orders during Diwali are other sources through which they earn revenue. Though profit-making is important for Arpan, along with that it is also an impact-driven project. It is not only addressing an environmental issue but also assisting the underprivileged members of society.

Uneducated women, disabled workers, child laborers, and many other kinds of groups exist around us but are not given as much respect. They are not provided with a safe environment to work in, are highly underpaid, and do not have the dignity of labor. Arpan delivers them an opportunity by employing these communities and creating financial income for them. They have experienced a 150% increase in their income and hope to continue to assist their workers like this in the future, too.

There are very few organizations that prioritize employee development while also prospering. Arpan is not only fulfilling its social responsibility to underprivileged people, but it is also focusing on environmental matters such as floral waste. Organic matter from the decomposition of flowers leads to water pollution. Rotten flowers can release chemicals into the water, making it toxic. It is harmful not only to aquatic life but also to humans, who will use the water for daily chores. They are susceptible to skin diseases, respiratory problems, and mild allergies. We live in an era where there are no bounds to progress. As we grow, so do the problems that surround us. Whether a big or small problem, it can lead to serious environmental issues if not addressed at the right time. With the joint efforts of the community, projects like Arpan can bring about tremendous change.

Saving the planet, one piece of cloth a time!

Image Credits: *NSS of LSR College*

Honestly, how many of the items in your closet have you stopped wearing because they are no longer in style? Open your closet and tell me how many. Everyone owns at least two of these items, which you likely purchased because they were popular or because the color was at the time. or your favorite influencer wore something similar.

Like humans, fashion has evolved with time and is now creating a possible threat to the environment. Nobody denies that the fashion industry, and in particular the idea of fast fashion, is to blame for the climate problem and for the devastation caused by landfill overflow. We won't even begin to explain how much water is consumed and contaminated in the production of a pair of jeans. Despite having read about it, being aware of it, and possibly wanting to take action, you still go shopping for something 'trendy'. Don't worry, I'm not pointing the finger or pretending to be smarter; I'm only highlighting the obvious and asking you to think about it.

Numerous small- and large-scale initiatives that support sustainable fashion and encourage clothing recycling are active on a local, national, and international level. But you'll be shocked to learn of a student-led initiative that is not only addressing the aforementioned environmental concern but also financially benefiting a group of women. Let's discuss Project Aaghaz!

The project, which was begun about 4 years ago by the National Service Scheme unit of Delhi University's prestigious Lady Shri Ram College, focuses on the equitable development of women while safeguarding the environment. This projected

Image Credits: *NSS of LSR College*

was inspired by Basta, a group recognised by the United Nations.They identify a user group of poor women in urban slums as their stakeholders and entrepreneurs. Prior to Covid, the students offered assistance to three user groups spread throughout the Delhi NCR. At the moment, they are concentrating on a user group in Surajkund, Badarpur Border. Three to four women who are committed to being independent make up this user group.

They receive their raw materials and resources from the NSS unit, which includes sewing machines, thread, buttons, and clothing which are gathered during donation drives conducted on the college campus. Additionally, the clothes are gathered from factories that would have otherwise thrown away the material because it is "scarp." As a result, the most crucial raw material, which is the fabric, is not even purchased but rather procured ecologically. These are then made into accessories like earrings, hair bands, scrunchies, tote bags, and dreamcatchers.

The student group trains the women in necessary areas and provides them sample products. They subsequently place large orders, which are thereafter collected and sold at stalls set up in various colleges and institutes. Additionally, the project has an Instagram page where you can continuously place orders. The women receive all of the money made from the selling of these goods. These women receive not just financial support, but also emotional support from these girls.

These few college ladies are devotedly striving to improve their own lives and ensure that the world continues to breathe for a little while, with a little assistance from the college administration and students. I am aware that the three Rs—Reuse, Reduce, and Recycle—are frequently discussed. However, the three Rs are genuinely implemented in this project's core. They are reusing and minimizing the waste produced by the apparel industry, and this venture undoubtedly has a lot of room for growth.

Projects like this give us hope that there are people working for a better tomorrow. Next time you decide to throw a piece of cloth just because it is not trendy enough, think again. What is waste for you is a means to earn for someone. On a lighter note if you are planning to gift something to your friend, partner or maybe a family member, do order from Aaghaz!

FASHION FASHION FASHION FASHION FASHION FASHION FASHION FASHION FASHION FASHION

TRENDY BUT DEFILE

OF ALL
IG

2% OF
RMENT

80% OF
GARMENT
WORKERS

WASHING
SYNTHETIC
FABRIC SENDS
MILLIONS OF PLASTIC
PARTICLES
INTO THE OCEAN

FASHION AND POLLUTION

HOW IS SHEIN AS A FAST FASHION COMPANY DESTROYING OUR ENVIRONMENT?

Shreeya Badhwar
B. Com (Honours)

OVERVIEW: What is shein? Shein is not just fast fashion, it's ultra-fast. Gen Z has gone head over heels over this company. It exists entirely on social media, has no physical stores and its operations are a big black box.

Shein targets mostly young women. It adds thousands of new things to its inventory every day. At any one time, it has over 6,00,000 products mostly ranging from Rs400 - Rs 5000 making it half as cheap as other fast fashion giants like Forever 21, Gap, etc. It has made a whopping revenue of $10 billion, catching up with other big fast fashion brands like H&M with $24 billion and Zara with $19 billion. So, the question is, in the era of growing climate consciousness, how is it even working?

EFFECTS ON THE ENVIRONMENT

USE OF CHEMICALS: These chemicals poison our soil and water, resulting in harm to the marine life as well as the human population. The chemicals, primarily pesticides, are also used by farmers to grow the materials needed to produce all these trendy fast fashion items. This results in additional harm to the planet, let alone the farmers themselves. There is no evidence that the brand has taken meaningful actions to reduce or eliminate hazardous chemicals. More chemicals mean more cancers, tumours, and deaths on the farmers, and poisons the soil and nearby bodies of water.

RECYCLING PROGRAMS BEING NON–EXISTENT: The company claims to recycle their products, but is not transparent about what is happening to their clothing, how much of it they recycle or re-sell, or what they are being recycled into. It would not be a wonder to find that they end up being trashed.

USE OF ANIMAL PRODUCTS: These chemicals poison our soil and water, resulting in harm to the marine life as well as the human population. The chemicals, primarily pesticides, are also used by farmers to grow the materials needed to produce all these trendy fast fashion items. This results in additional harm to the planet, let alone the farmers themselves. There is no evidence that the brand has taken meaningful actions to reduce or eliminate hazardous chemicals. More chemicals mean more cancers, tumours, and deaths on the farmers, and poisons the soil and nearby bodies of water.

IMPACT ON ENVIRONMENT:

The fashion industry is responsible for 8%-10% of greenhouse gas emissions. This is because the garment industry is so unregulated, it is hard to say how much it is contributing to climate change. According to the research, 100 million tons of textiles get dumped in landfills every year. Most of it goes to the global south, where locals face the environmental consequences. Shein offers low quality products, therefore these products tear within months of use and end up being trashed. Encouraging such a company to continue its operations means only more harm will befall the planet since they will only end up in landfills. This concludes that Shein is not cruelty-free. They are a hurtful brand and their hurt is subjected to the farmers, customers, their workers, and the environment in general. Carbon emissions are at the heart of global warming, meaning every tonne of CO2 released into the atmosphere is making our planet increasingly unliveable.

IS THERE A SOLUTION?

In order to fix fast fashion, companies like Shein need to start being more transparent about their sustainability practices. Being honest forces companies to acknowledge that sustainability is a work in progress and puts pressure on the overall system to improve. It also ensures that the waste companies produce is out in the open. Most consumers that care about sustainability are aware that not every practice a company uses is perfect. But misleading consumers who are looking to buy from ethical companies makes matters worse and invites even more criticism.

THRIFT SHOPPING–A POSSIBLE REMEDY:

In recent years, thrift shopping has grown in popularity due to its affordable prices, the unique pieces you can't find anywhere else, and positive impact on the environment. Thrifting or shopping second-hand is a great way to reduce your environmental footprint while finding some unique items that you would not be able to get elsewhere. Not only fewer resources are used when we thrift something, but overall, less things are thrown away as well. It leads to less chemical pollution as no additional manufacturing takes place, no labour is required to make the clothes, no carbon is used up in transportation and so on. By shopping for things second hand, you are voting with your money as a consumer to not support the industries that cause pollution and tons of waste.

Reference

1. https://www.conserve-energy-future.com/is-shein-bad-for-environment.php#:~:text=The%20production%20relies%20on%20harmful%20chemicals,-To%20produce%20their&text=These%20chemicals%20apoison%20our%20soil,these%20trendy%20fast%20fashion%20items.
2. https://www.euronews.com/green/2022/10/17/how-are-shein-hauls-making-our-planet-unlivable.
3. https://www.youtube.com/watch?v=U4km0Cslcpg&t=159s
4. Three Reasons Why Thrifting is Better for the Environment - Goodwill Industries International.
5. https://topicinsights.com/sustainability/thrift-shopping-sustainability/
6. https://www.2ndavestores.com/blog/how-thrifting-is-good-for-the-planet/

Wearing the Planet Thin: The Environmental Impact of Fashion

Brhamjot Singh
BSc Life Sciences

OUTLIERS:

- Fashion and its supply chain is the third largest polluting industry, after food and construction. It emitted 10% of global greenhouse emissions, releasing 1.2 billion tonnes of carbon dioxide per year, more than the shipping and the aviation industry combined.
- The $2.5 trillion fashion industry is one of the biggest polluters and the second-biggest consumer of water.
- The major issue is that most of the fabrics in cheap garments are synthetics and polyesters, which are derived from oil and petroleum production.
- According to the UN, the industry is responsible for 20 percent of water pollution worldwide.
- The apparel and footwear industry account for over 8 percent of total global greenhouse gas emissions, and by 2030, the industry's CO_2 emissions are projected to increase by more than 60 percent.
- More than 60 percent of fabric fibres are now synthetics, derived from fossil fuels, so if and when our clothing ends up in a landfill (about 85 percent of textile waste in the United States goes to landfills or is incinerated), it will not decay.
- Furthermore, the textiles and fashion industry has caused a 7% decrease in local groundwater and drinking water globally, and especially in water stressed manufacturing countries such as India and China.
- Clothing production has roughly doubled since 2000.While people bought 60% more garments in 2014 than in 2000, they only kept the clothes for half as long.
- In Europe, fashion companies went from an average offering of two collections per year in 2000 to five in 2011.
- Some brands offer even more. Zara puts out 24 collections per year, while H&M offers between 12 and 16.

Fashion has had an impact on how human civilisation unravels in due course from clothes which were first meant for protection against the cold to now where each piece of clothing defines one's individuality. Why is the idea of "Fashion" so impactful when it comes to Humans and How is this industry impacting our environment? Answers to these might be better understood after we first understand what in actuality Fashion is.

Fashion has the ability to change and shape lives by establishing a personal connection with the consumers. . We all have to wear clothes and every piece of clothing we buy represents a personal choice-it is this intrinsically

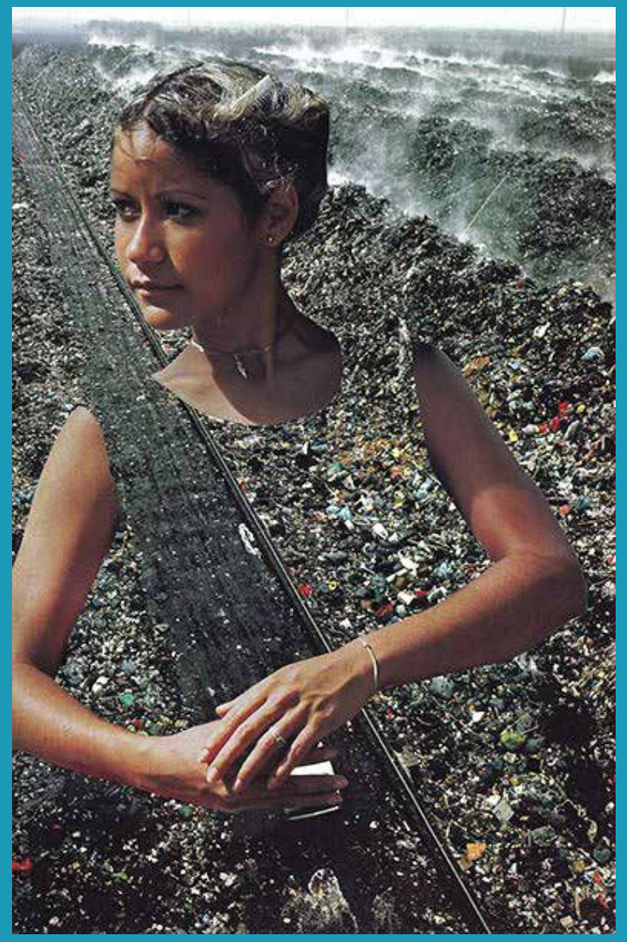


Image Credits: *morgaenmunoz.com, Pinterest*

human relation between us and our fashion that makes it political. Whether you are wearing a pink pussy knitted hat on march, wearing an item of dress that represents your beliefs, or using your business to improve your working conditions, fashion can play a significant role in your belief. What we choose to wear reflects how we view the world and how we want the world to view us. Fashion has been and always will be a constant part of our existence. Many people see fashion as ephemeral and frivolous but I see it as a creative, enterprising, multifaceted industry that is vital to our economic and personal well being. Fashion really does matter. But despite all this we tend to overlook the facts that this industry's effect on the environment is alarmingly devastating.

Currently, it is well known that several aspects of modern living hurt the environment. Examples include travelling abroad, using plastic disposables, and even travelling to and from work. The effects on our clothing, however, are less visible. The global market for cheap goods and new trends is expanding as customers buy more clothing, which is having a negative impact on the environment. In 2014, shoppers purchased 60% more clothing than they did in 2000. Water resources are depleted, rivers and streams are polluted, and 10% of humanity's carbon emissions come from the fashion industry. Additionally, 85% of all textiles ends up in landfills every year. Additionally, washing some clothing kinds releases hundreds of pieces of plastic into the ocean.To really understand the cost of Fashion let's take for example the most used item in industry over the course of decades; T-shirts. Every year more than 2 billion T-shirts are sold worldwide. Most T-shirts are made of a blend of polyester, nylon and cotton.

Polyester is a petroleum by-product. The production of polyester results in the emissions of heavy metals, greenhouse gases and nitrous oxide. Most polyesters use antimony as a catalyst which are carcinogenic in nature. Not only are the carbon emissions for T-shirts very high , the washing of polyester and nylon clothes release half a million micro tons of microfibres annually. These tiny particles of fibres add to the plastic levels in our oceans and pose a threat to marine life.Apart from this Cotton is a thirsty crop whose production has serious repercussions on land as well as water 2.5% of the world's arable land is dedicated to grow cotton. Cotton consumes approximately 198 trillion litres of water annually and 11% of the pesticide used globally. From the assembly of raw material to distribution, production of such a basic article results in significant damage to the environment. Apart from this, clothes are hard to recycle due to limited options available to recover the non-biodegradable fibres present in them.

Image Credits: *Anneofcarversville.com, Pinterest*

As we dive deeper, we realise, this big glamorous fashion industry has quite a list of various harmful impacts on nature. "Fashion is on par to become a quarter of the global footprint of carbon. That's astounding," said Michael Stanley-Jones, co-secretary of the UN Alliance for Sustainable Fashion. "The industry isn't headed in the right direction." Fast fashion is a serious culprit. In order to provide customers with fresh designs and collections every few weeks rather than once a season, major, low-cost international clothing firms are continually increasing production and inventory turnover.

FAST FASHION: THE "CHEAP" CULPRIT

A business model that is "focused on copying and recreating high end fashion designs" is referred to as "fast fashion" and is extremely successful and unethical. The clothing is mass produced, with often harsh labour conditions, and is purposely made to be fragile with a short lifespan since styles change frequently and are inexpensive to create. Additionally, because they are worn out more quickly, less people anticipate the clothes to last as long, which raises a number of ethical and environmental concerns. Fast fashion pollution not only damages the environment over time and may even be irreparable, but it also exacerbates the consequences of climate change. Producing clothes uses a lot of natural resources and creates green-house gas emissions which are responsible for climate change.

Fast Fashion is fast in more ways than one. The rise of fast fashion is intertwined with the rise of social media and influencer culture. Consumer demand and tastes have become insatiable and ever-changing, leading to fast

Image Credits: *Oola.com, Pinterest*

Growing calls for sustainable clothing that's less harmful to the environment could be a catalyst for change in the fashion industry. Sixty-two percent of Gen Z consumers, those who were born after 1995, prefer to buy from sustainable brands, according to one recent survey.

Consumer pressure over the industry's pollution has led companies such as Nike and H&M to announce plans to reduce carbon emissions or use more recycled materials in clothing. Meanwhile, larger retailers are getting into used clothing as the second hand market boom Nordstrom last week launched a resale shop, citing consumer demand for more sustainable options.

SUSTAINABLE FASHION? IS THERE SUCH A THING?

Although the marketing for the fashion industry may be green, the reality is quite different.
According to Edited, a London-based retailer analytics company, over the past four years, the proportion of apparel and accessories marketed as "sustainable" has quadrupled across online retailers in the US and the UK. According to the business, related terms like "vegan," "conscious," and "environmental" have also witnessed a rise in popularity.
Where progress is made, brands are ready to announce it. Previously uncommon, organic and recycled fibres can now be found in designer collections and at H&M. Everything from Adidas jogging trousers to Prada nylon bags now contain yarn spun increasingly promote not just the opulence of their materials, but also whether they meet certain environmental certifications. More importantly, companies over the past decade have begun to quantify the impact across their full supply chain and take strides to reduce it.

In the midst of public backlash against cheap, throwaway products, many retailers say they are addressing sustainability. Some companies have started addressing textile waste and synthetic fabrics that don't biodegrade and looking at ways of sustainably sourcing fabrics and recovering or recycling clothing.

For instance, fast-fashion brands H&M and Zara, which sell low-priced items in large amounts, have both raced to make a sustainability remittance.

H&M has a garment collection initiative that allows customers to drop off used clothing in its stores for reuse and recycling. About 57% of its materials are currently either recycled or sourced in a more sustainable way, an increase from 35% in one year, a company spokesperson told CNBC. The company's goal is to have all materials recycled or sourced sustainably by 2030.
Inditex, the retail giant that owns Zara, announced that all of its clothes will be organic, sustainable or recycled by 2025, and that renewable sources will power 80% of energy used by the corporation's distribution centres, stores and offices.

However, these sustainability initiatives have been met with some scepticism, with critics pointing out that the business model of fast fashion and sustainability are simply incompatible.
The idea is that, regardless of whether the

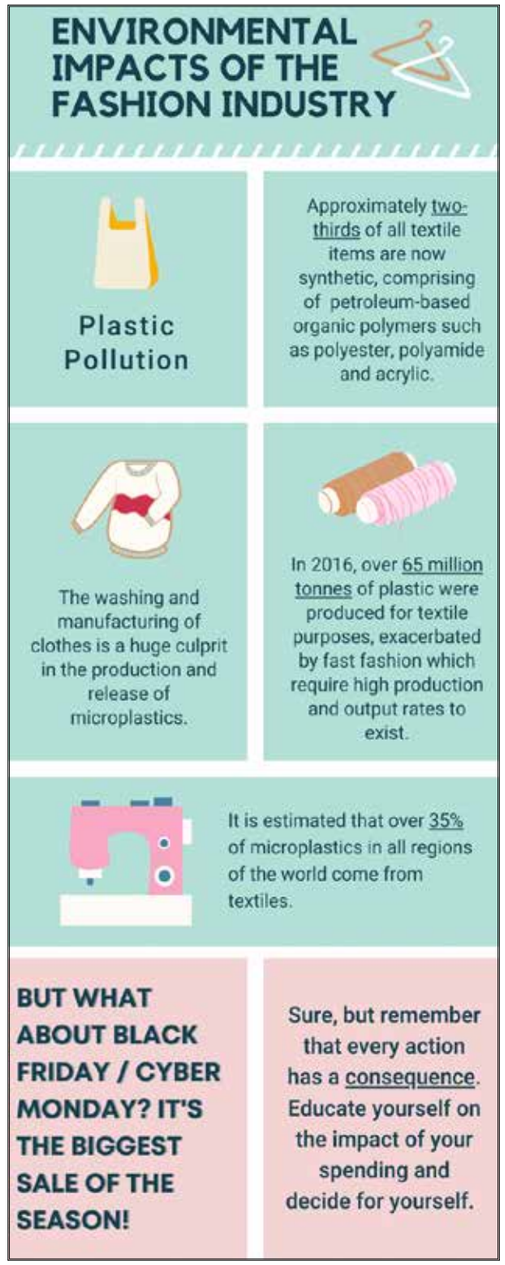


Image Credits: *sustainibabe.com, Pinterest*

companies use more ecologically friendly stores or materials, when a business is built on such a quick turnover of designs, the creation of those items is particularly energy demanding. Customers may do their part to reduce the environmental impact of their clothing by reading clothing labels, learning about the manufacturing process before making a purchase, and purchasing pre-owned items from thrift shops or shopping apps. The consumer is searching for a business that is truly making the world a better place, not just the ideal blouse. It's a component of their brand identity and a narrative they will use.

References

1. https://www.npr.org/2019/07/27/745418569/can-fast-fashion-and-sustainability-be-stitched-together.
2. https://news.un.org/en/story/2019/03/1035161
3. https://www.newstandardinstitute.org/welcome .
4. https://www.nytimes.com/2019/09/03/books/review/how-fast-fashion-is-destroying-the-planet.html .
5. https://www.worldbank.org/en/news/feature/2019/09/23/costo-moda-medio-ambiente#:~:text=Every%20 year%20the%20fashion%20industry,needs%20of%20love%20 million%20people.&text=The%20s fashion%20industry%20is%20responsible,flights%20and%20 maritime%20 shipping%20combined.
6. https://www.weforum.org/agenda/2020/01/fashion-industry-carbon-unsustainable-environment-pollution/.
7. https://earth.org/what-is-fast-fashion/
8. https://www.cnbc.com/2019/11/27/as-the-secondhand-market-booms-used-clothing-is-an-acceptable-gift.html.
9. https://www.cnbc.com/2020/02/05/nike-to-dress-2020-olympic-athletes-in-uniforms-made-of-recycled-shoes.html.
10. https://earth.org/fast-fashion-pollution-and-climate-change/.

CREATIVE HUES

- *Artworks (Handmade+Digital)*
- *Poems (English & Hindi)*
- *Namami Gange Project Timeline*

Image Credits: Brinda sharma
B.A. (Hons) Psychology

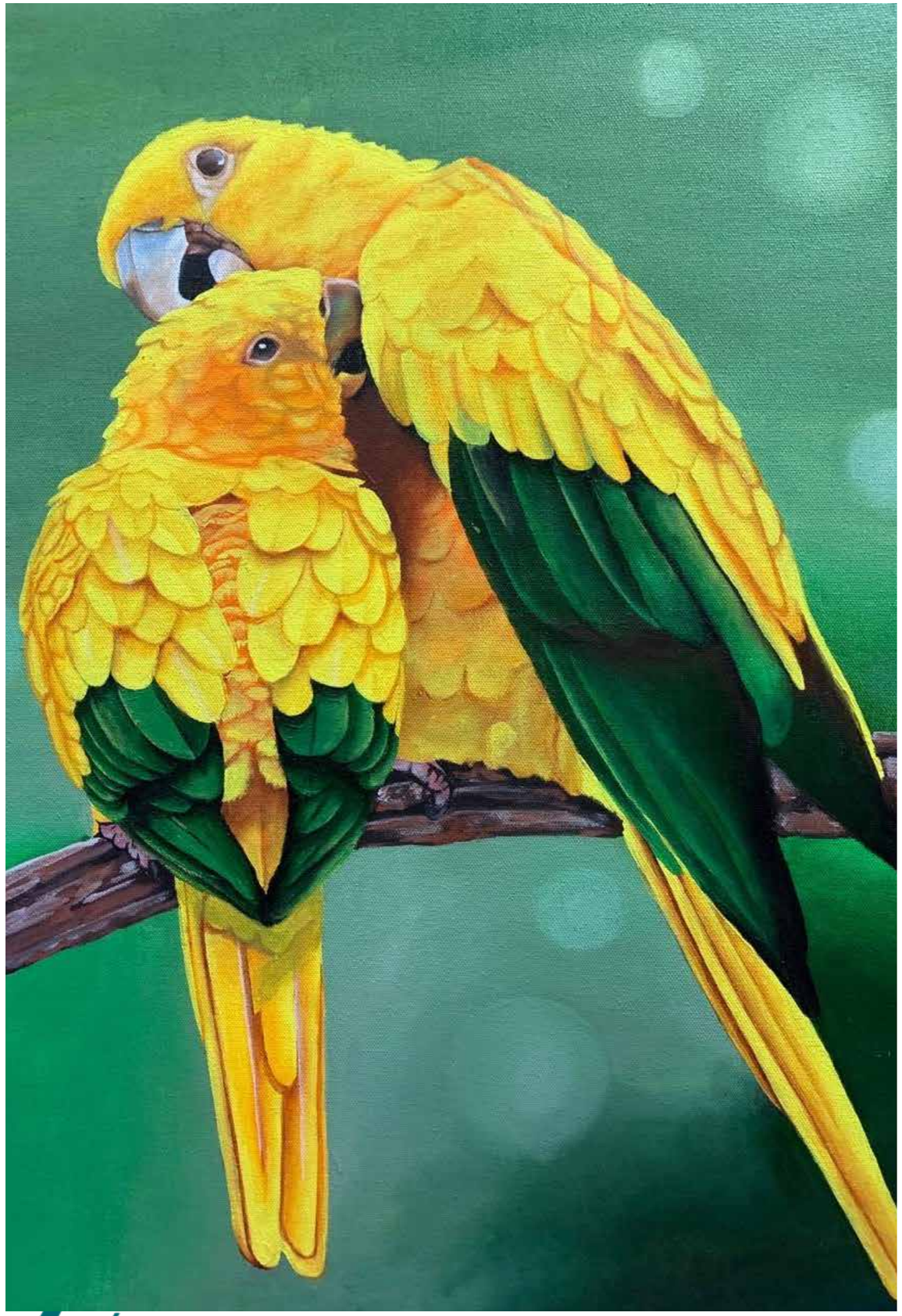


Image Credits: Daksh Tyagi
B.A. Program

Image Credits:Himanshi Pandey
B.A. (Hons) Psychology

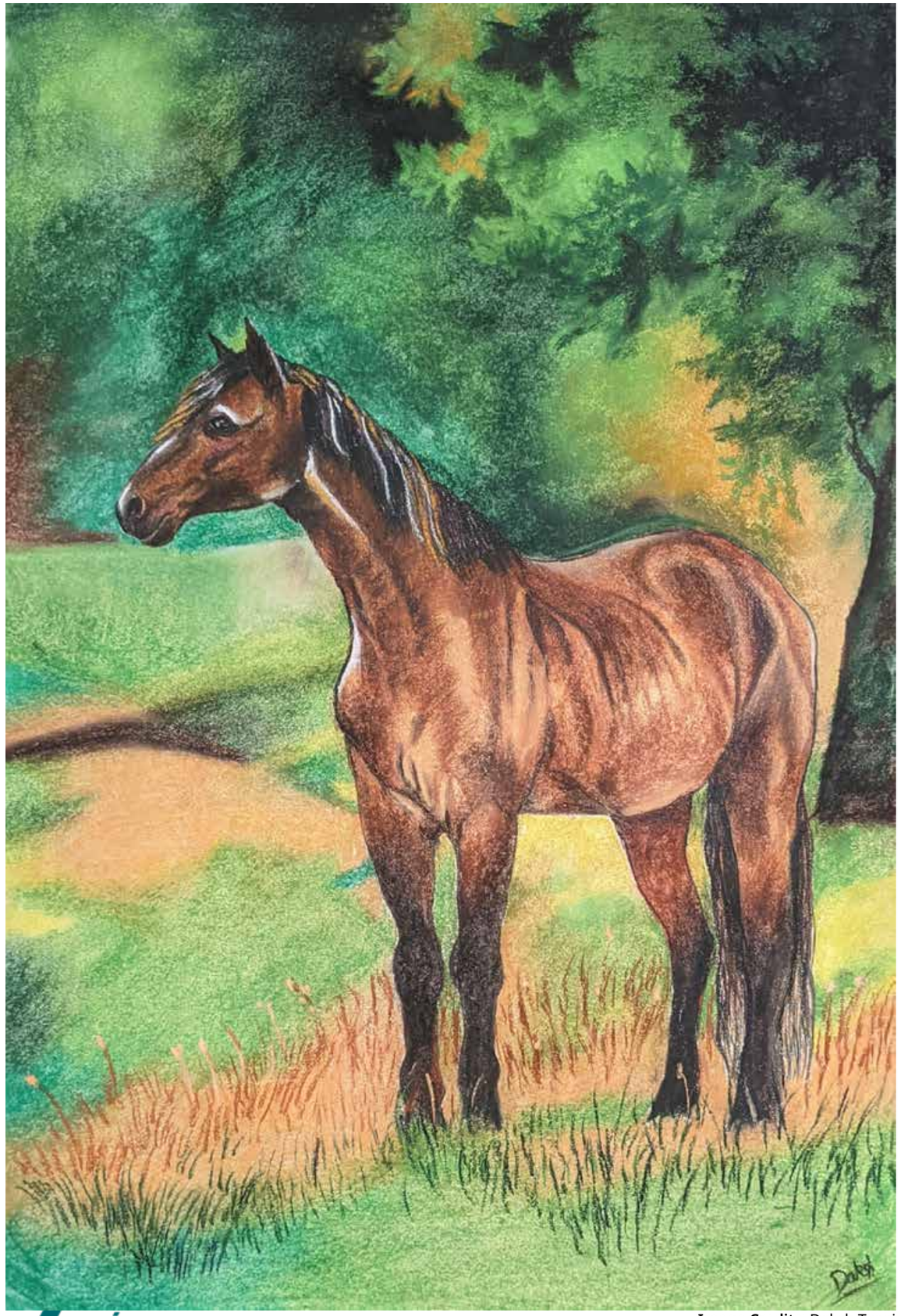


Image Credits: Daksh Tyagi
B.A. Program

Image Credits: Daksh Tyagi
B.A. Program

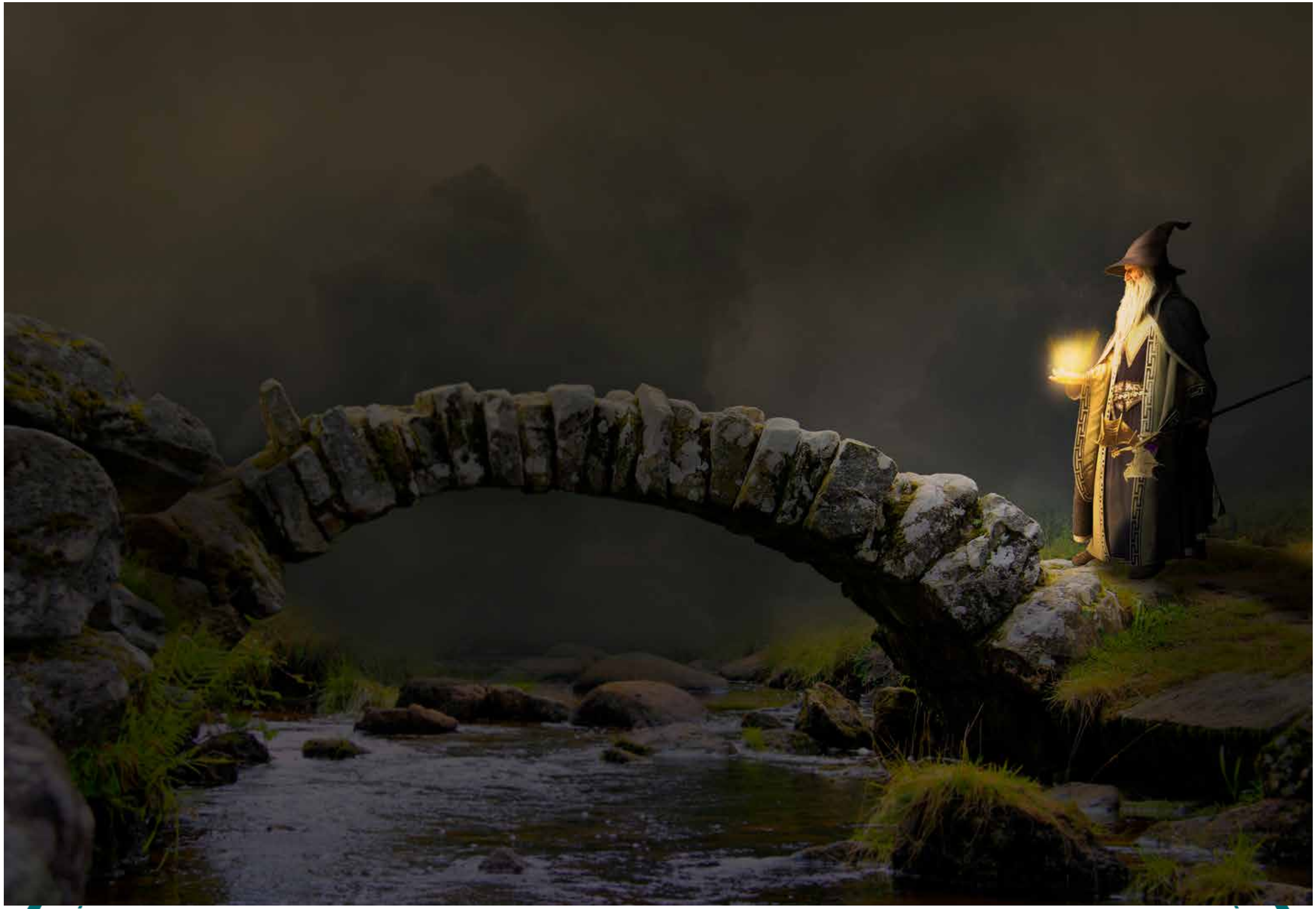


Image Credits: Manipulation by Rishabh Yadav
B.Sc. (Hons.) Electronics

Image Credits: Manipulation by Rishabh Yadav
B.Sc. (Hons.) Electronics

Image Credits: Manipulation by Rishabh Yadav
B.Sc. (Hons.) Electronics

Image Credits: Manipulation by Rishabh Yadav
B.Sc. (Hons.) Electronics

Blue Planet Crisis

The planet crisis out in despair
As we ravage and strip without care
Forest fall, oceans rise
Climate change before our eyes
We ignore the warnings and signs
As we continue to pollute and grind
But the earth is not endless, not strong
It will not last forever, this is wrong
We must change our ways, take action
Reduce our impact, seek satisfaction
In knowing we did what we could
To save our planet, for the good
It's not too late, there's still hope
But we must act before it's too late to cope
Let's make a difference, a change for the better
For the sake of our planet, and forever

Masira Noor
B.A. (Hons.) Psychology

I See

The future I see isn't dark.
It comprises of appealing colours;
green for the greenery around,
blue for the essential water we drink.
I see a place pristine;
where everyone is free.
Where we don't have to wear masks to breath,
where we don't have to look at PM charts to go for a walk
where kids can play as and when they want.
Where clean water is available for all,
where we live close to nature, with nature,
where we look at real world through our own eyes,
where plastic is not costing a life.
Where we don't eat medicines like candies,
where status is for happiness we feel, not the vehicles we drive.
Where animals feel home,
where asthma isn't a daily occurrence,
where eyes are filled with tears of joy, not watered with bad air.
The Blue Planet i See is Alive,
and the Residents say we made it.

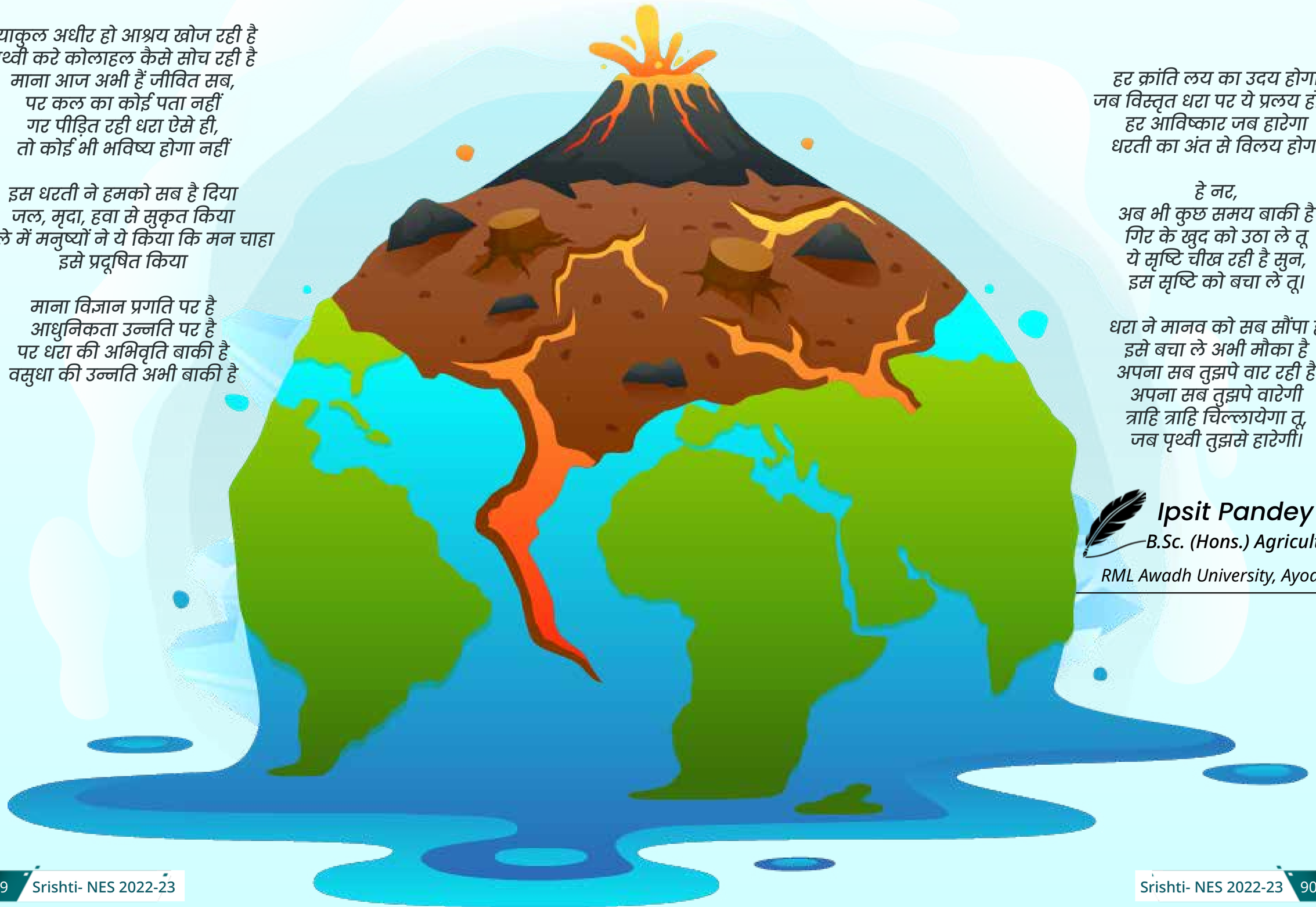
Anjali Yadav
B.Sc. (Hons.) Zoology

इंसान

शोहरतें हजार है, फिर भी ख्वाहिशें हर बार है,
इंसानों की बढ़ती जरूरत का यह हाल है।
क्या बढ़ता लालच इसके लिए जिम्मेदार है?
या यह इंसान की सोच का परिणाम है।
कहते है इसे विकास,क्या यही विज्ञान का चमत्कार है?
वातानुकूलक में बैठ के, कहते हो की इस बार गर्मी बेहाल है,
ऊपर से घुलता सांसों में ज़हर आधुनिकता का परिणाम है,
घोल के यमुना में भी मैल कहते हो सरकार इसके लिए जिम्मेदार है?
मुमकिन ही यह इंसानों की सोच का परिणाम हैं।
प्रगति की राह पर चलते पर्यावरण विरोधी विकास का यह कमाल है,
और हर एक इंसान इसका जिम्मेदार है।
इंसानों की बढ़ती जरूरत का यह हाल है।

Amaan
B.A. (Hons.) History

पृथ्वी जब हारेगी



व्याकुल अधीर हो आश्रय खोज रही है
पृथ्वी करे कोलाहल कैसे सोच रही है
माना आज अभी हैं जीवित सब,
पर कल का कोई पता नहीं
गर पीड़ित रही धरा ऐसे ही,
तो कोई भी भविष्य होगा नहीं

इस धरती ने हमको सब है दिया
जल, मृदा, हवा से सुकृत किया
बदले में मनुष्यों ने ये किया कि मन चाहा
इसे प्रदूषित किया

माना विज्ञान प्रगति पर है
आधुनिकता उन्नति पर है
पर धरा की अभिवृति बाकी है
वसुधा की उन्नति अभी बाकी है

हर क्रांति लय का उदय होगा
जब विस्तृत धरा पर ये प्रलय होगा
हर आविष्कार जब हारेगा
धरती का अंत से विलय होगा

हे नर,
अब भी कुछ समय बाकी है
गिर के खुद को उठा ले तू
ये सृष्टि चीख रही है सुन,
इस सृष्टि को बचा ले तू।

धरा ने मानव को सब सौंपा है
इसे बचा ले अभी मौका है
अपना सब तुझपे वार रही है
अपना सब तुझपे वारेगी
त्राहि त्राहि चिल्लायेगा तू,
जब पृथ्वी तुझसे हारेगी।

Ipsit Pandey
B.Sc. (Hons.) Agriculture
RML Awadh University, Ayodhya

क्या मिला? क्या मिलेगा?

इन धुओं ने छुआ आसमान को कुछ ऐसे
कि वो सुनहरा सूरज भी छुप गया।
उस तपती गरमी से
उम्मीद का आखिरी रेशा भी गिर गया
महकती राहों में कुछ कंकड़ मिले
आज की दशा देख सब घरों के अंदर छुपे।
बाहर क्या है?
बाहर तो बस ज़मीन समतल मिले।

भरा है अंदर जो सागर
बाहर मन खाली कर दे;
ये बड़े बड़े समुद्र भी
आज मनमानी कर लें।

चारों ओर की धूल
ये बता रही तुम्हें
रेत हो जाएगी जल्द
अगर जो न पानी मिले।
तेज़ाब सी बारिश है
फसलें भी रूठ गईं;
तुमने छेड़ा जिसको,
वो आडम्बर बन टूट रही।

यूँ गर्म न मौसम थे
न यूँ तपती धूप थी,
पहले हरियाली मुकम्मल
हर जगह मिलती भरपूर थी।

आज ये जो रूप बदला दिख रहा
कुछ गलती हमारी है
जो ये दहला दिख रहा।

अगर जो न होती
इस कदर छटाई पेड़ की
अगर जो न होती तुमने
चादर चढ़ाई श्वेत की

मिल रही होती छाँव
हर गली हर मोड़ पर
यूँ न तरसते हुम
किसी बंज़र के वीरां छोर पर

न बची अब साँस है
न देने को आवाज़ है,
देख इस धरती की हालत
न खेत है न घास है।

मिट गई उपजाऊ मिट्टी
मिट गई वो भोर भी
अंधेरी रात आई है
लेकर अनगिनत शोर भी।

क्या खाएँ, क्या खिलाएं किसको
कोई हकीकत से मिलाए खुद को,
ये जो हो रहा सही नहीं
वक़्त है, पर घड़ी नहीं।
करना होगा कुछ अभी
वरना न मिलेगा कल कभी

अंत में बस ये कहूंगी
कि अंत आएगा जल्दी
जो न रुके ये द्वंद
जो न रुके ये काम फ़र्ज़ी।

मेरा काम था बताना
धरती का ये हाल,
अभी करना होगा,
इस परिस्थिति में सुधार,

वरना वो रात आएगी
जब सवेरा न होगा
बितते बिताते भी
ज़िन्दगी का बसेरा न होगा।

Kirti Pandey
Allahabad University

मुझे अपने जीने का हक़ चाहिए

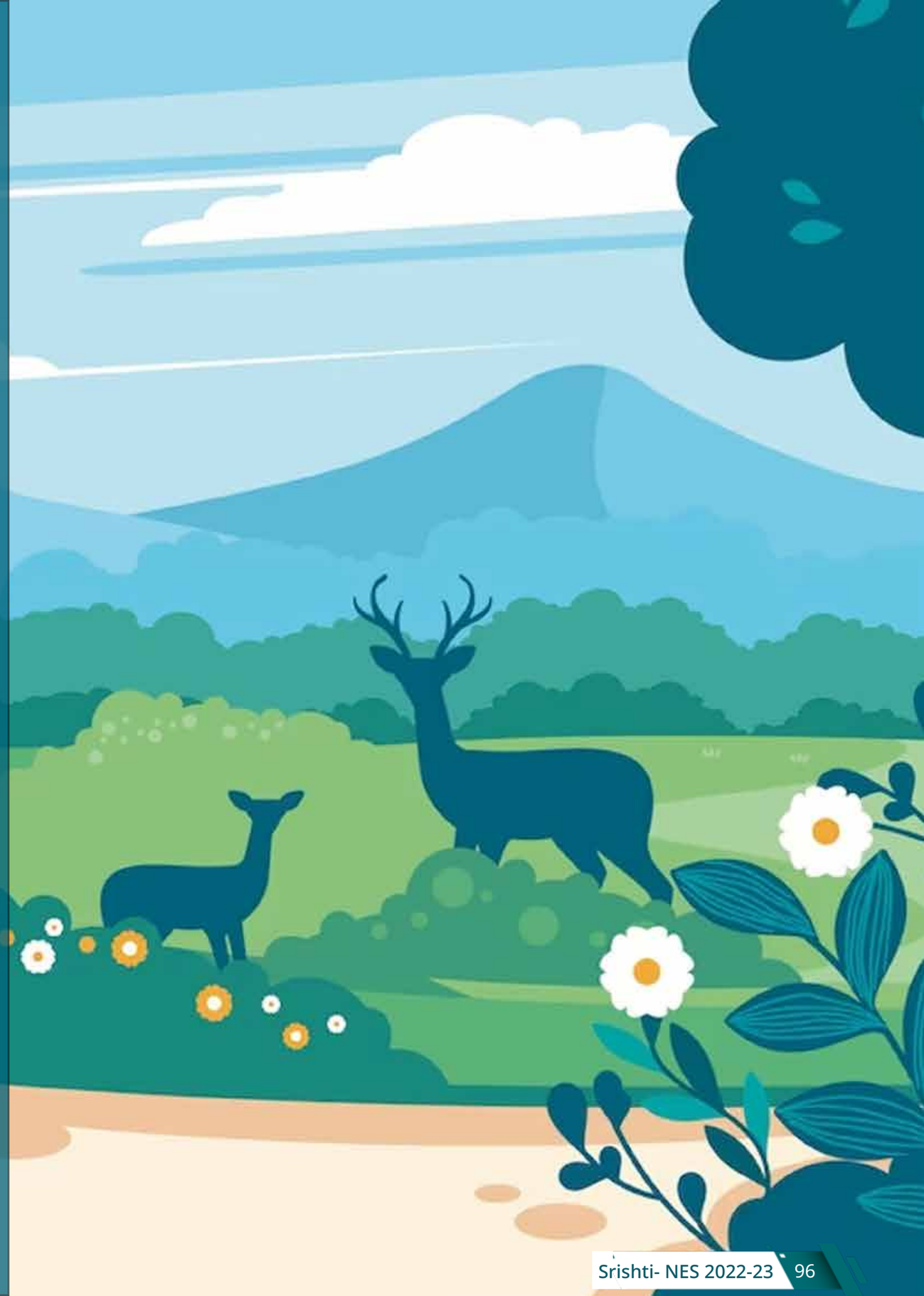
मुझे अपने जीने का हक़ चाहिए
ज़मीन जिस पे मेरे कदम टिक सके
और तारो भरा कुछ फलक चाहिये
मुझे अपने जीने का हक़ चाहिए
नेमते जो मेरे रब ने धरती को दी
साफ़ पानी हवा बारिशे चाँदनी
ये तो हर इब्न-ए-आदम की जागीर है
ये तो हमारी तुम्हारी किसी की नहीं
मुझ को तालीम सेहत और उम्मीद की
साथ रंगो भरी एक धनक चाहिये
मुझे अपने जीने का हक़ चाहिए
ना हवा साफ़ है ना फ़िज़ा साफ़ है
वो अब-ए-बाका था वो ना साफ़ है
ज़मीन हो समुंदर हो या आसमान
ज़रा सोचिए अब कि क्या साफ़ है
मौत से पुर-ख़तर है ये अलेदगी
दोस्तों दिल में थोड़ी कसक चाहिये
मुझे अपने जीने का हक़ चाहिए

Masira Noor
B.A. (Hons.) Psychology

निशान की तरह!

एक एक कर सबकुछ, यहां से रुखसत हो रहा...
कोई बचाने वाला चाहिए, भगवान की तरह!
ये जहां,जो है खुबसुरत मकान की तरह....
उजड़ जायेगा किसी रोज, शमशान की तरह!
यूं कुदरत की तौहीन से कहर बरसेगा...
बरबादी लिपटेगी जहां से,थकान की तरह!
ये हवा,दरख़्त,दरिया है इनायतें सभी...
इनको लूटिए ना सराफा दुकान की तरह!
परिंदो की उड़ान भी खत्म हो जाएगी...
बादल भी ना लगेगा...आसमान की तरह!
रहेगा दिन में आफताब,"सूरज"की शाम होगी...
सब मतलबी हो जायेंगे,इंसान की तरह!
खैर अपना छोड़िए,अपनी नस्लों का सोचिए साहिब...
कुछ छोड़िए उनकी खातिर, निशान की तरह!

Rudra Alok
B.A. (Hons.) History



पृथ्वी संरक्षण

वह गृह है, जहा पौधे है, जीव है, प्रतिपल जीवन है

पर्वत, सागर, झील, झरने नदिया भाती भाती के पेड़ पौधे कलियां।

सूर्य की लालिमा, चंद्रमा की धवल चांदनी ।

रात की कालिमा राग और रागिनी

सब इस धारा पर ही संभव है

धरती का अर्थ ही होता है धारण करने वाली ।

इसलिए हम धरती को माता कहते है समस्त सृष्टि का भार अपने भार अपने शरीर पर उठाते अद्भुत धैर्य का परिचय देती है यह रत्नगर्भा है जो बहुत रत्नों का विशाल भंडार अपने तय में छिपाए हुए है

साग, सब्जी, फल और अन्य और औषधीय भी धरती की सतह पर हैं

अपनी विभिन्न आवस्कत्यावो की पूर्ति के लिए हम लगातार इसका दोहन करते जा रहे है।

इसके सरक्षण और संतुलन हेतु सभी को प्रयास करना चहिए ।

किंतु, कभी कभी प्रकृति से अनावश्यक छेड़छाड़ की प्रतिक्रियास्वरूप बाढ़, सुखा भूकंप जैसी आपदाएं भी आती है

अस्तु, प्रकृति के सुंदर मनभावन दृश्य इस जीवनदायिनी धरती पर ही संभव है

ईश्वर की इस अनूठी देन को हमें दूषित होने से बचाने के लिए संकल्प लेना चाहिए ।

Vibhav Rai
B.Sc. Life Sciences

NAMAMI GANGE PROJECT

When rivers such as Ganga, Yamuna saw a rise in the pollution levels due to lack of proper waste disposal system, THE NAMAMI GANGE project was introduced in 2014. The project began the cleaning drive in 5 locations- Varanasi, Kanpur, Allahabad, Mathura and Patna.

Aditi Jain
B.Sc. (Hons) Botany

1

May 2015

A budget of 20,000 crore was allocated by the centre for the next 5 years and introduced a 3 tier mechanism to improve the initiative.

2

November 2015

The Union Water Resources Minister, Uma Bharti assured the public that river Ganga would be one of the cleanest rivers by the year 2018.

3

January 2016

To ensure that the public does not pollute the river, the central govt assigns the Ganga Task Battalion at Garhmukteshwar.

4

July 2016

The Namami Gange initiative is launched with 300 projects in more than 103 locations in the 5 basin states of river Ganga by Water Resources Minister, Uma Bharti in the presence of Union ministers.

5

September 2016

Secretary of Drinking Water and Sanitation Ministry, Parameswaran Iyer announces that all the villages across Ganga will turn open defecation free [ODF] by the end of 2016. 1300 villages have already gained ODF status.

6

October 2016

People contaminated the river with toxic elements like lead, mercury despite appeals from Bihar State Pollution Control Board. It is reported that more than 5000 idols were immersed in the water during Durga puja in Bihar alone.

7

October 2016

National Green Tribunal (NGT) says central and state officials clueless on the amount of waste generated in the Ganga and do not know how many drains are polluting the river.

8

October 2016

Uttar Pradesh Pollution Control Board blames residential and commercial building for a poor waste management system.

9

December 2016

NGT orders Uttar Pradesh authorities to compile industries operating between Haridwar and Unnao.

10

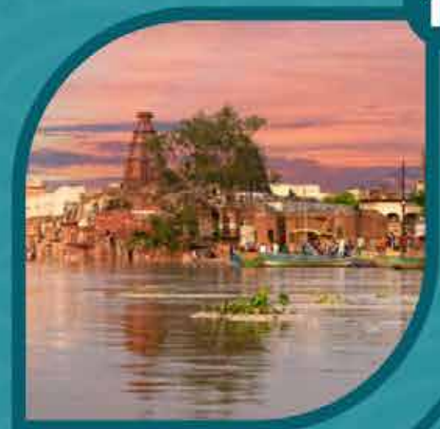
December 2016

The government seeks to introduce a new bill to punish those who pollute Ganga under the Ganga Act.

11

January 2017

The central govt is asked to prepare a fresh report on the status of the Ganga cleaning programs by the Supreme court.



12

January 2017

A Rs 10 crore project in which 20,000 youth known as swachta doots, the volunteeres for cleaning the river are deployed in Uttrakhand, UP, Bihar and West Bengal by the Union Water Resources Ministry. The project aimed to to train the youth to motivate people to stop polluting the river.

13

January 2017

As part of CSR activities, corporate India joins the Namami Gange project.

14

February 2017

Copper and chromium level rises in several tributaries of Ganga due to illegal processing of electronic waste.

15

March 2017

An additional 1050 crores are allotted under the Namami Gange project for building sewage treatment systems.

16

March 2017

National Mission for Clean Ganga launches a mass movement 'Ganga Swachhata Pakhwada to create awareness and a sense of ownership among the people living along the banks of River Ganga about cleanliness and sanitation.

In 2017, Uttarakhand High Court grants a legal human status to River Ganga and Yamuna.

References

1. https://nmcg.nic.in/NamamiGanga.aspx
2. https://www.pmindia.gov.in/en/government_tr_rec/namami-gange/

ARANYA
We CAN- Care, Aware, Nurture

THE *Milestones*

The Various events and achievements of **ARANYA** for the session 2022-23

aranya.zhdc

E-Waste Collection Workshop

24th August, 2022

ARANYA, The Nature and Environment Society of Zakir Husain Delhi College, University of Delhi, organised an E-waste workshop under the aegis of IQAC in collaboration with ATTERO, on August 24th, 2022. Prior to this event, an E-waste collection drive was held on college grounds from August 10th to August 23rd.

The hosts for the event were Manav Aggarwal and Rishabh Yadav. The ceremony began with the lighting of the lamps by our distinguished guests, Mr. Shiv and Mr. Akash from Attero, our principal, Prof. Narendra Singh, Prof. P.K. Shishodia, IQAC Convenor, and Dr. Ratnum Kaul Wattal, Aranya Convenor. Prof. P.K. Shishodia and the Principal presented a souvenir to the guests.

Mr. Shiv took the floor to talk about the importance of e-waste recycling and the hazardous impacts of improper and careless disposal of e-waste. The speaker emphasised that E-Waste contains several precious metals, and that to recover them, they are frequently burnt in the open in an irresponsible manner, ignoring the fact that many toxic metals are also present in that E-Waste. Attero ensures proper disposal of all kinds of e-waste under proper scientific and controlled settings. They look at e-waste as an important resource that can be made useful instead of shunning it as a social and environmental burden. Attero is currently operating in 7 cities across the country.

World Rivers Day

16th September, 2022

ARANYA, the Nature and Environment Society of Zakir Husain Delhi College organized an event on the occasion of World Rivers Day on 16th September, 2022. The event commenced with a warm welcome of, the society's convener, Dr. Ratnum Kaul Wattal and the event's 3 judges. This was followed by Preeti Mathpal, Aranya's Vice president, providing information about our country's rivers and the need to conserve the same. The event was taken forward by Sonal and Utkarsh.

Three exciting events were planned for the students, 'What if'- A situation based narration, Poster Making competition and Meme Making competition. The theme of the poster making competition was - 'Jal Hai Toh Kal Hai'. Students participated enthusiastically and everyone was excited to show their creativity through their posters. There were 3 judges for the poster making competition. The main idea behind 'What if' was to provide the students with an opportunity to talk about environmental issues by adopting any of their favorite character's dialogues, behaviour, thoughts etc. All the students were confident while enacting their respective characters.

The program ended on a great note with a message from the society's convener, Dr. Kaul, for all the students. The Judges also enjoyed the program thoroughly. Overall, the event was a great success!

EXPLORING THE EXTREMES

03rd November, 2022

Exploring Antarctica by the first Indian student who travelled there.
ARANYA- The Nature and Environment society, in collaboration with NARGIS- The Botanical Society of Zakir Husain Delhi College, organized a lecture on "Exploring the Extremes: Journey of a Botanist" on 3rd November 2022. The lecture was delivered by Prof. Dinabandhu Sahoo.
He is the first Indian student to explore Antarctica during 1987-88. He is a senior professor in the Department of Botany at Delhi University and Director at the Centre for Himalayan Studies.
Prof. Dinabandhu took to the podium to narrate his life stories and the challenges he faced while exploring the regions of Antarctica and North East with witty anecdotes and humour. He talked about his academic journey and the difficulties he faced due to the lack of academic counselling and guidance in his time.

In his 25-day journey to Antarctica, he explained the physical challenges like nausea, seasickness, hydration issues, blizzards and frostbites, tough exploration for samples, and emotional challenges like loneliness.
Their journey had two objectives, setting the first permanent station of India and exploring in order to aid scientific research. He is one of the members who built the Maitreyi station at a very strategic location near Indra Priyadarshini Lake. He has also published a book, "I Have a Dream", narrating his story.
He has also explored the seven North Eastern states of India, researching and studying fermented food, cherry blossom trees, and orchid plantation. Furthermore, he has worked towards Women Empowerment by providing jobs to women in seaweed cultivation. He also initiated the only Cherry Blossom Festival in Meghalaya in 2015, which is now held annually in November.
Always aiming to do something unique, **Prof. Sahoo** is the epitome of relentless determination

@aranya.zhdc

srishti ENTRIES

23rd September 2022

The annual publication of Aranya: The Nature and Environment Society of Zakir Husain Delhi College, opened its arms to students from across DU to submit their entries for the magazine on 23rd September, 2022.
We received an overwhelming response and collected over 50 different pieces that included multi-lingual articles, poems, stories, art work and comics. The magazine is set to be published in the month of March.

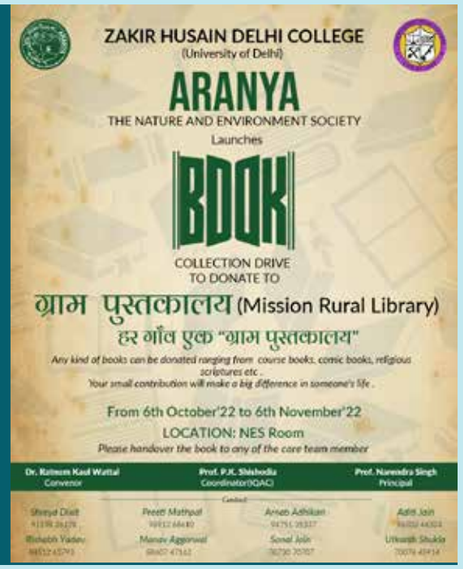
BOOK COLLECTION DRIVE

6th October 2022

Aranya: The Nature and Environment Society of Zakir Husain Delhi College organized a book collection drive on campus from 6th October, 2022 onwards.

Books from all genres were collected. These books were submitted to Mr Ranveer Tanwar, popularly known as the Library Man of India.

These books have been used to establish libraries in rural areas of the country and provide access to education and resources to countless children.



INDUCTION DRIVE: 2022–23

12th December, 2022

The Nature and Environment Society of Zakir Husain Delhi College- Aranya, organized an induction drive to recruit new members to the society on 12th December 2022.

The entire process which was conducted under the supervision of our convenor Prof Dr Ratnam Kaur Wattal included form screening, interviews and submission of statements of purpose. The new members were recruited and ready to work by the end of December.

DEBATE COMPETITION

14th November, 2022

Aranya - The Nature and Environment Society organised a conventional Debate Competition on 14th November 2022, near the science block. The topic for the debate was "Human Extinction will be a blessing for the nature". The registrations were opened four days prior to the event and it attracted nearly 65+ registrations. Although the event was intra-college, several queries were received from other colleges as they were intrigued by the topic. The idea of organising the event in an open area was well received by the audience and participants. The debate was organised by Members of society and adjudicated by Editorial Board of Srishti along with President of Hindi Debsoc.

Each participant tuned in the vibe in his own way. The enthusiasm that they exuberated was an experience of a kind. Their speech was followed by a short Q&A by the participants and the adjudicators, which opened new dimensions of interpretation for the topic. At the end of the debate it was a tough task for the adjudicators to decide a winner due to the number of draws, which was resolved by their factual correctness, the utilisation of time-limit and other aspects. The audience that gathered around stopped by and enjoyed the interesting dogma that each participant knitted. The prize for best three speakers of the event was a potted plant and a hand-made/ prize-winning poster depicting adversities of nature. An E-Certificate was also provided to all the winners and participants.

MUSHROOM CULTIVATION WORKSHOP

27th January, 2023

On 27 January 2023, an informational seminar on ' cultivation technique of *Pleurotus* mushroom' was organized by **Aranya -The Nature & Environment Society** in collaboration with **Nargis - The Botanical Society** of Zakir Husain Delhi College.

The event had Prof. Rajni Gupta, from the Dept. Of Botany, Kirori Mal College, University of Delhi as the speaker. It was organized in the AV room from 11 am onwards. The event began with the felicitation of the speaker by a potted plant by Dr Zeeshan Ur Rahaman and with a handmade portrait by Ghania.Further Prof Ratnum Kaul Wattal, convenor of Aranya, shared her thoughts on the workshop. And then the mic was passed on to the speaker, who through her insightful words regarding the conservation of environment and especially the plantation of mushrooms and how they are related to environmental conservation made the event truly enlightening. She shared amusing slides of different types of mushrooms grown all over the world and some very interesting facts.

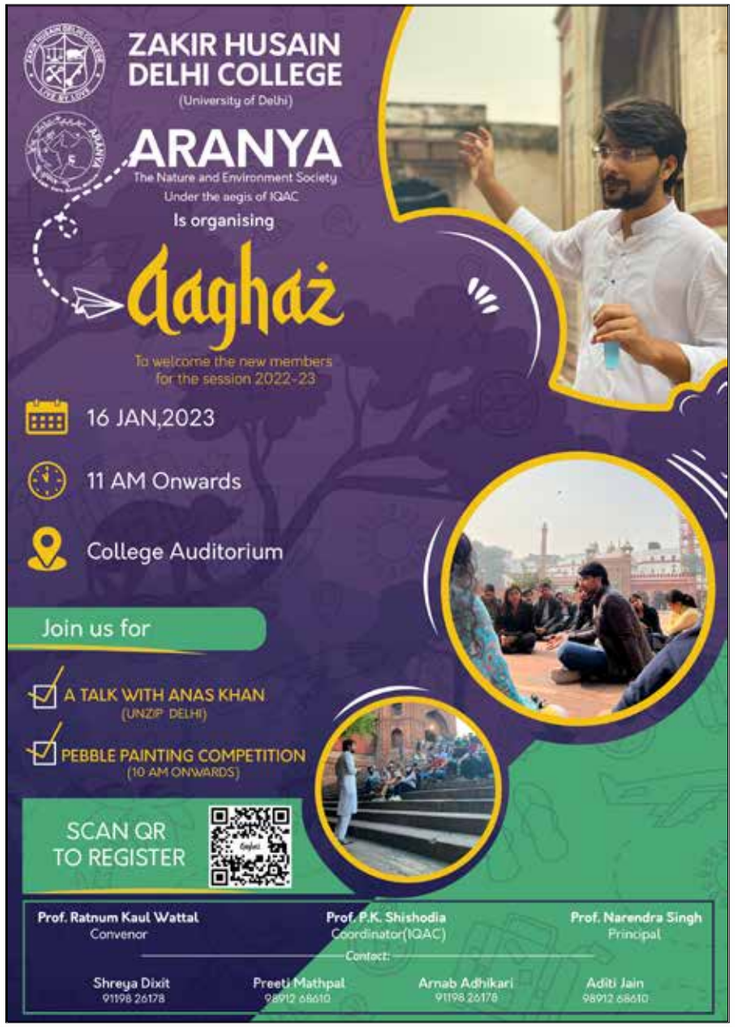
As a nature enthusiast especially interested in the field of mushroom cultivation, the workshop was filled with facts & tales of mushroom. Most importantly the procedure of growing pleurotus mushrooms was explained in detail. We all then went to Botany Lab for the hand on workshop where the demonstration of cultivating mushrooms was done. The workshop ended with a vote of thanks.

Prof. Rajni Gupta
Department of Botany,
Kirori Mal College,
University of Delhi

Aaghaz

To welcome the new members
for the session 2022-23

16th January, 2023



AAGHAZ started with Music. Dhwanik- The Indian Music Society in collaboration with Aranya kickstarted the event with two amazing performances. A slide-show presentation of a montage of various events organised by the society as in Nest-making Workshop, Pankhudi-the annual fest of Aranya etc. portrayed its aim which is to create a future where we don't need to protect the environment anymore. As the event moved to its major act, we had the opportunity to hear a few words of motivation, a few words of appreciation and a gentle reminder to always strive to do better from our convener, Prof. Ratnum Kaul Wattal.

And then there was him, the guest of honour, Mr Anas Khan, a 26 year old anthropologist. He was welcomed with a token of gratitude from our team. Anas managed to capture the minds and hearts of the audience with a talk that started with a history lesson on Delhi's heritage and how it is on the brink of losing the centuries old legacy. The connection between history and the present may be a key to a better future. How we manage to learn from the past, correct our mistakes in the present and hope for a better tomorrow. The event gradually paced towards a brief Q&A Session with Audience. Results for the Pebble Painting Competition were also announced during the event. The Event concluded with a Vote of Thanks on behalf of the Society.

Seed ball Making Workshop

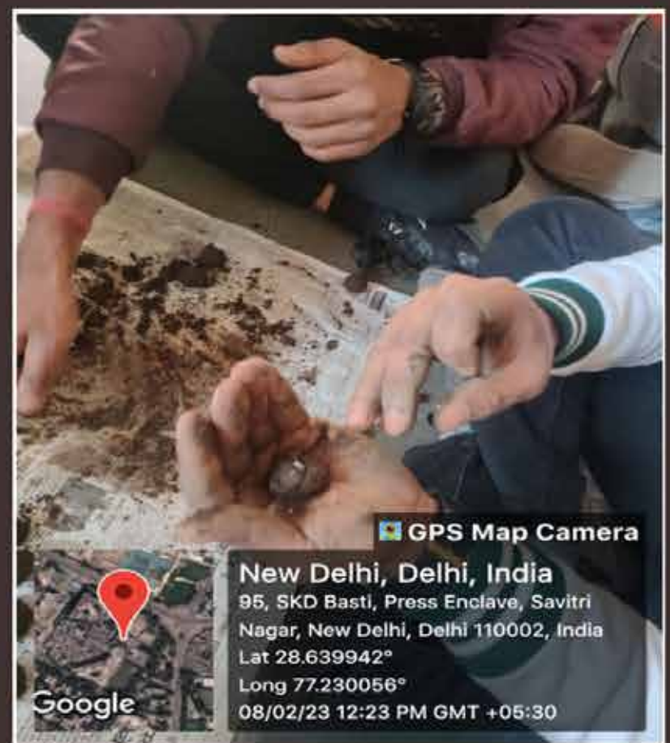
08th February, 2023

On the 8th of February, 2023, 'Aranya'-The Nature and Environment Society of Zakir Husain Delhi College, University of Delhi in collaboration with the Garden and Greening Committee organized a 'Seed- Ball Making Workshop' by Mr. MOHIT RELAN who is the founder of 'YeMeraGaon' and Co-founder of NGO- Say Earth.

The workshop gave the participants a hands- on experience on how to make seed balls with the soil and students along with the faculty enthusiastically took part in the workshop.

In the end, Mr. Mohit Relan spoke to the participants about the benefits of this method of plantation and enlightened the participants about the recent government initiatives for the conservation of Indian ghats and efforts for afforestation.

The workshop was a success with the active participation of students and faculty with a huge learning value for all.



Pankhudi

ANNUAL FEST

16th- 17th Feb, 2023

ARANYA'S annual fest Pankhudi was organized on the 16th and 17th of February 2023. It was the biggest fest organized in ZHDC. This fest was highly appreciated by the audience and renowned faculty of DU. The fest began with the inaugural ceremony which had mesmerizing performances that created an atmosphere of enthusiasm among the participants and the audience. This was followed by a singing competition and the Mandala Art competition simultaneously. The talent of the participants stunned the audience. Day one of the fest also witnessed a Nukkad Natak competition with amazing performances by the students.

To energize the fest there were mouth watering food stalls and colorful handicrafts stalls selling cloth bags and beaded jewelry. To remind of the theme of the fest, that was 'Sustainability', the pottery stall organized by Aranya was a hit. Creativity was rampant in the decorations showcased in the fest- the vibrant twirling drapes, handmade streamers curated through reusing paper, tons of floral as well as eco-friendly details along with an impressive photo booth certainly added zest to the festivities. The excitement for self made diyas and pots boosted the energy among the spectators.

With the successful completion of the first day, the second day invited immense enthusiasm and widespread participation. The event began with a lecture by young environmentalist Palakh Khanna. She's the Founder/CEO of Break The Ice organization, a World Record Holder, Regional Officer for the Asia Pacific and an active environmentalist working towards Sustainable Development Goals. She represents the voice of the youth and her experience as well as incredible work in the quest for sustainability was indeed inspiring. This insightful lecture paved the way for the next event.

COP-ZHDC commenced on the agenda-deliberation on eco-capitalism to achieve the sustainable development goals. It was a highly intellectual event with young delegates advocating for sustainability.
A Paperless Artistry Competition was also organized which sought to wield the expressive techniques of creativity and art to support and promote sustainable behaviours. The theme of the competition was 'Greens of Earth' and budding artists created artistic compositions that revolved around the bounties of nature. The concluding event for the day was the Stand-up Comedy Competition in which humour was inculcated in advocacy to bring environmental issues in the limelight. The theme for the event was- Environment and Introspection and the performances were hilarious as well as enlightening.

These myriad events marked the last day of the fest- PANKHUDI and the successful organization as well as smooth implementation is indeed admirable. Both days of the fest were thriving with exhilaration and sparked feelings of excitement. Pankhudi'23 was surreal and enchanting with an approximate footfall of 12000.

aranya.zhdc 3w
Glad you guys liked it
Reply

im_ashishsharma_13 3w
East and West....Aranya's fest is best!!✨🤌
4
Reply

shreyadix02 3w
Wasn't it the best fest of ZHDC 🥹🥹🥹🥹🥹🥹🥹🥹
7
Reply

singh..2623 3w
Amazing experience.....😍my first ever fest enjoyed a lot ..... especially the pottery section..... good job 👌 team aranya 💚
3
Reply

tomar_harshit230 3w
Blessed to the part of the biggest fest of ZHDC..😍 working with amazing n wonderful seniors
3
Reply

anukanwar05 3w
Thankfully, we were also part of Aranya at this time. The effort , the fun , the learning is added to the highlight of my college life . 🥰🥹❤️
3
Reply

ARANYA | The Nature and Environment Society

is on social media

/aranyazhdc /aranya.zhdc /aranya - NES