



KAMALA NEHRU COLLEGE



APRIL 2020-21

ANNUAL
MAGAZINE

GREEN TALK



SPECIAL FOCUS:

"SAY NO" TO SINGLE-USE PLASTIC



VISION STATEMENT

For more than two decades, *Green Beans Society of Kamala Nehru College* has been working towards sensitizing and encouraging students to protect and preserve the environment and also inculcates in them the idea to spread awareness so as to make the world a more sustainable place. Our efforts are eco-kaleidoscopic in nature ranging from working at grassroot levels to participating at National level seminars and collaborating with international organizations like World Wildlife Fund for nature.

We aim to inculcate the idea of a sustainable lifestyle and reduction of wasteful consumption among students.

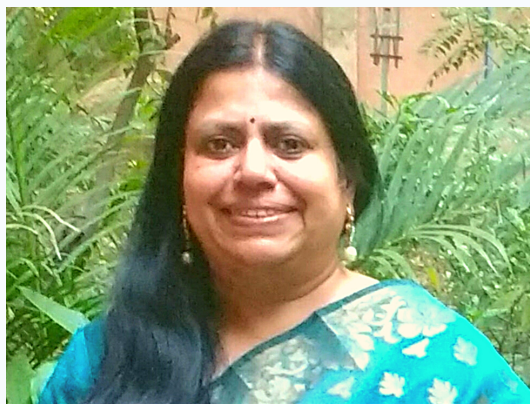
PRINCIPAL'S ADDRESS

Prof Kalpana Bhakuni



Today, the human society is facing multiple challenge of all dimensions around us. In an effort to keep up with everything hi-tech, the basics of life are lost somewhere. Appreciating the simple forces of nature, like clean water, can bring about a lot of positive changes in the society. Fresh water, wherever available has been exploited to an extent that its replenishments are at stake. In such times, traditional knowledge and modern techniques of water conservation can be instrumental. Making people aware of water loss prevention and use of environment friendly substances that are easily treatable can have long term impacts on freshwater availability. Similarly, conservation of fresh water through rainwater harvesting methods at the household and institutional level can have long term impacts on ground and surface water recharge. We can have safe, green and healthy future only when all of us, especially the youngsters, come together in a sincere attempt to conserve water for the sake of all the generations to come who would need the water as much as we do.

CONVENOR'S NOTE...



In the modern world, the large amount of usage of plastics in various items has led to a corresponding rise in the need to handle the disposal of plastics after their usage as waste. Plastic waste is a major challenge and has resulted in a large number of problems including contamination of soil and groundwater, clogging of drains, harming fauna, polluting water bodies, etc. Hence, as an attempt to control this problem of plastic waste a focus in recent periods has been on reducing or elimination of the use of single-use plastics. Single-use plastics are only used once before being disposed and are a major contributor of plastic waste and are contrary to the idea of environmental sustainability. It is the need of the time to find and use alternatives to single-use plastics in our day to day life to minimise environmental degradation and help in sustainable development. My best wishes to the students for bringing out this magazine of the Green Beans Society.

Prof. Pratibha Bhalla

Society convenor, Green Beans Society



Table of Contents

01	FROM THE EDITOR'S DESK	1
02	(GBS) GREEN BEANS SOCIETY TEAM AT A GLANCE	3
03	ANNUAL REPORT BY CONVENOR..... AN ONLINE SURVEY CONDUCTED ON SINGLE-USE PLASTICS"	5
04	GREEN PENS: expressions on environment	13
05	GBS ART AND FUN CORNER	34





“Plastic will be the main ingredient of all our grandchildren’s recipes.” - Anthony T. Hincks

The world is filled with plastic-like never before and this quote reminds us to look at it with a sense of urgency. While plastic has many valuable uses, we have become addicted to single-use or disposable plastic which has led to severe environmental consequences.

Single-use plastics include products from straws, bags and bottles to pretty much any plastic item that’s made for temporary use. Although we might not think much before we buy bottles of our favourite drink or ask for plastic bags while shopping, but these choices have a serious impact on the health of our planet and ourselves. It’s time to call for action to change and adapt to sustainable eco-friendly alternatives.

Keeping this in mind, we present to our readers the annual magazine of the green beans society, Green talk for the year 2020-21. The theme for this year’s magazine is "SAY NO TO SINGLE-USE PLASTICS". We have put in a lot of effort to bring to you inspiring articles, creative poetry, eyeopening researches and aesthetic photographs. We hope you enjoy reading the magazine, we wish that our efforts inspire you to think about plastics and the environment differently.

Maanya Chaudhary & Sheljal Choudhary



02

EDITORIAL TEAM AT GLANCE



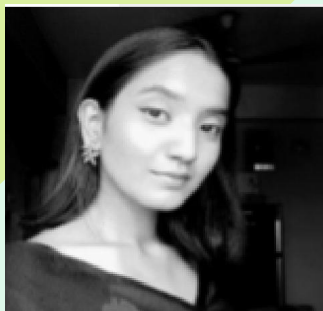
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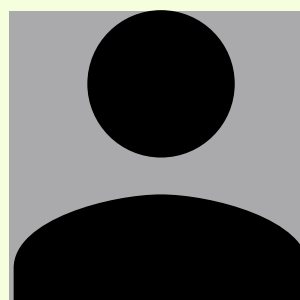
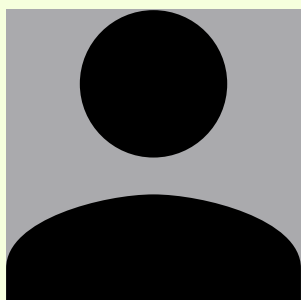


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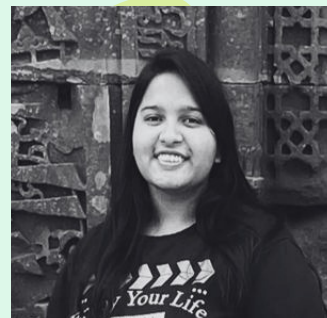
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03 ANNUAL REPORT BY
CONVENOR
"SAY NO TO SINGLE-
USE PLASTICS"

Report on a survey by Green Beans Society for a reduction in the use of Single-Use- Plastics

Introduction

In today's world, the single-use-plastics are one of the most used materials and is also a cause of grave concern. Plastics have found a way to travel in our environment and penetrated every corner of our planet. Plastic waste is filling up landfills, clogging drains, piling filth in rivers and oceans, and generates pollution through open burning. To make things worse, bottles, bags, and other plastic junk gradually break into smaller pieces known as microplastics, although invisible to the naked eye but small enough to enter the food chain as well.

Single-use plastics are goods that are primarily made from petrochemicals and are meant to be disposed of right after use. They are most commonly used for packaging and service ware, such as bottles, wrappers, straws, and bags. Structurally, most of the single-use plastics are made of LDPE (Low-Density Poly Ethylene), HDPE (High-Density Polyethylene), PET (Polyethylene Terephthalate), PE (Polyethylene), PP (Polypropylene), PS (Polystyrene) and EPS (Expanded Polystyrene). Polyethene was first created in 1898 but it was not until the

the mid-1950s that a high-density polyethene was invented which was the "breakthrough" that enabled the production of cheap, yet strong plastic bags.

Since the 1950s, the production of plastic has outpaced that of almost every other material. And today, we produce 300 million tons of plastic each year worldwide, half of which is for single-use items. That's nearly equivalent to the weight of the entire human population. (NRDC, 2020)

According to Greenpeace, the non-governmental organisation working across the world, only 9% of plastic waste generated globally, gets recycled. Even in developed countries, the recycling rate for plastics collected by households is often far less than 50%, with very little of that converted back into the packaging. Most "recycled" packaging waste is downcycled into lower value or unrecyclable products, meaning that the process is only delaying the plastic's inevitable journey to the landfill. The majority of this pollution comes from countries lacking the infrastructure to properly manage waste, particularly in Asia.

With the largest population, China produces the largest quantity of plastic at nearly 60 million tonnes followed by the United States at 38 million, Germany at 14.5 million and Brazil at 12 million tonnes (Ritchie and Roser, 2018).

The Central Pollution Control Board's (CPCB) report Implementation of Plastic Waste Management Rules (2018-19) puts the total annual plastic waste generation in India at a humungous 3.3 million metric tonnes per year i.e., a national average of 8 grams per capita per day. The Plastic Waste Management Act (2016) was passed by Parliament with the ultimate aim of reducing plastic waste generation in the country and eliminating single-use plastic completely by 2022. But as India enters 2021, this target seems unrealistic.

As a response to this growing problem Green Beans Society of Kamala Nehru College has taken the initiative to study the priority use of plastic among different groups of people around the country.

Research Methodology

The data collection for analysing the behaviour of people towards the use of single-use plastic and their level of awareness was carried through the questionnaire method

of data collection.

A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from the respondents. The following questions were included in the questionnaire (the complete questionnaire is available in annexure below):

- 1) City of Residence
- 2) Gender
- 3) Age Group
- 4) What is the most common single-use plastic do you use?
- 5) Would you like to skip the use of single-use plastic if another option is available?
- 6) Do you think regulations imposed by the government help reduce the use of plastics?
- 7) Are you aware about the Plastic Waste Management Rules, 2016?
- 8) According to you, which single plastic use can be conveniently avoided?
- 9) What factor can motivate you the most for the use of eco-friendly alternatives?
- 10) What factors prevent you from using use eco-friendly alternatives?
- 11) In your opinion what should be done to make eco-friendly alternatives more popular?

The survey was conducted from February to March 2021. A Pan-India survey was done where responses came from different tiers of cities such as Indore, Delhi, Guwahati, Imphal, Jammu and Kashmir, Bangalore, Nainital, Alwar, Leh etc. Each member of the society had to distribute the questionnaire among at least 7

participants and a comprehensive sample size of 1100 were collected.

As a response to this growing the problem, the Green Beans Society of Kamala Nehru College has taken the initiative to study the priority use of plastic among different groups of people around the country.

Results and Discussion

Among our 1500 responses, the survey received the highest input from females i.e., 75% and recorded 25% male respondents. (Figure 1)

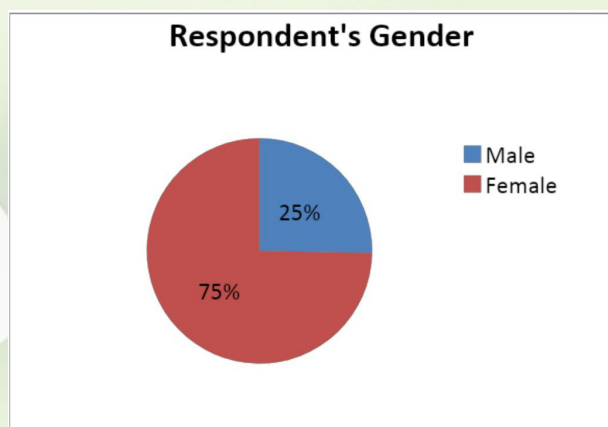


Figure 1: Graph showing the distribution of gender of the respondents

The major share of the age group of this survey is from 18-30 years old people consisting of 79.3%. The second-highest share is from below 18 years which consist of 12.3%, the third-highest share are from 40-50 years old people and the second last is from 50-60 years old people. And our last age group which has the lowest share in the age group is from the age group of 30-40 years old. (Figure 2)

Out of three the major categories of single-use plastic i.e. - Water Bottles,

Plastic Carry Bags, Packaging Material, the usage of plastic carry bags are the most (38%).

Almost every person uses plastic carry bags on a daily basis. They are used for containing and transporting goods such as foods, produce, powders, ice, magazines, chemicals, and waste. According to the survey results, the second most common single-use plastic used by respondents is water bottles (32%) (Figure 3).

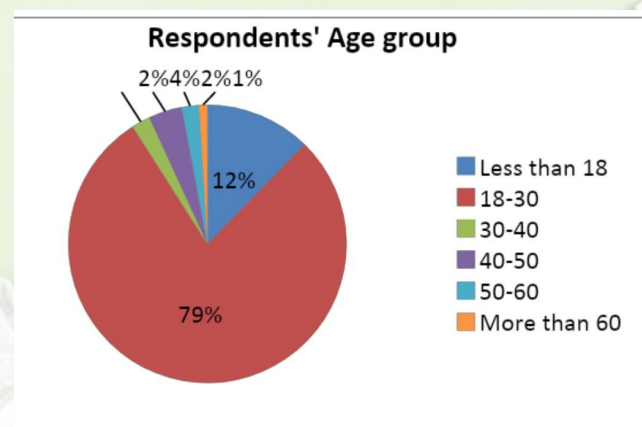


Figure 2: Graph showing the distribution of age of the respondents

It can be interpreted from the survey that the majority of people are not in favour of single-use of plastic and have agreed to go for some alternative, if available. The proportion of respondents who feel for using alternative is 90.4% and only a small proportion (8.7%) of respondents may think for the same (Figure 4).

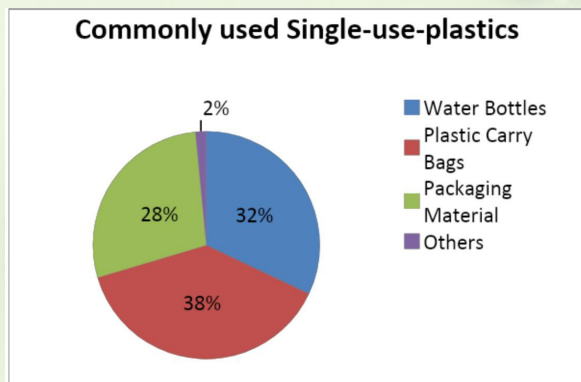


Figure 3: Graph showing the commonly used single-use plastics by respondents

On this note, we must not forget that the sample conducted was amongst students, who have ample knowledge of environmental threats and factors degrading the environment, it does not portray how society will react to this change and its acceptance.

It was also recorded and was interesting to know that 54% of our respondents were not aware of the Plastic Waste Management Rules, 2016 given by the Indian government (Figure 5).

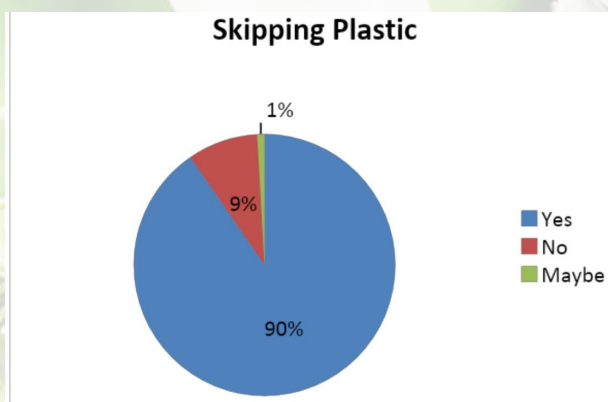


Figure 4: Graph showing the preferences of respondents to switch to alternatives of plastics

The majority of the respondents were not sure if strict regulations imposed by the government will help reduce plastic use whereas 34% thought, it will (Figure 6).

This is a matter of concern as it indicates a lack of ground action that should have been taken by the government due to which results are not visible, leaving people under uncertainty. But proper steps taken by the government will ensure a significant change.



Figure 5: Graph showing the awareness level of plastic waste management rules among respondents

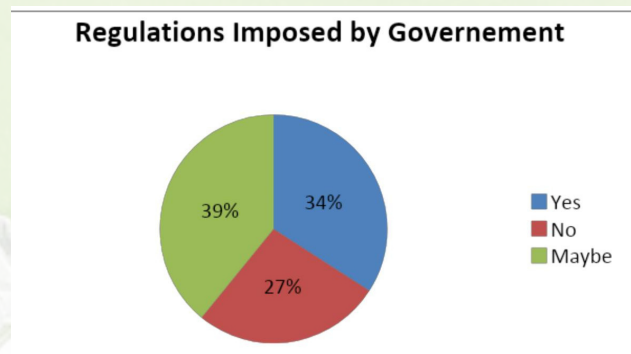


Figure 6: Graph showing the respondents awareness of regulations by government

People are of the opinion that carrying their own bags for groceries and vegetables can be significantly used so as to avoid the use of single-use plastics with 77.9% of people supporting this. 19.8% of people are of the opinion that single-use plastic packaging material in online shopping can be conveniently avoided. Some people also have the opinion that both should be avoided. (Figure 7)



Figure 7: Graph showing the perception about single-use plastics

Rest 2.3% of people have diverse opinions on Single-use Plastics that can be easily avoided. Some of them are food storing plastic bags, plastic straws, condoms etc.

In the survey conducted 13, out of every 20 people are concerned about the environment and find it a good enough reason to be eco-friendly. (Figure 8).

Whereas 3 of every 20 people demand free eco-friendly bags to be provided by stores and 2 of every 20 wish for proper government regulation such as fines and a strict ban on the production of plastic bags. Though, one of every 20 believes there is a lack of awareness and information should be spread through advertisement. There are some factors that prevent us from using eco-friendly alternatives and forcing us to rely on single-use plastics. With reference to the survey, the most important factor that prevents people from using eco-friendly alternatives is the habit of using single-use plastics. The second demotivating factor is the cost of eco-friendly

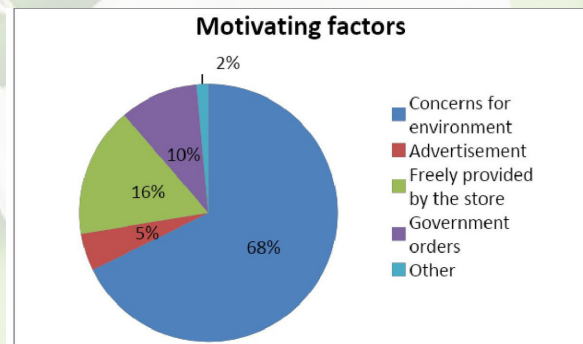


Figure 8: Graph showing the factors that can motivate to use eco-friendly alternatives

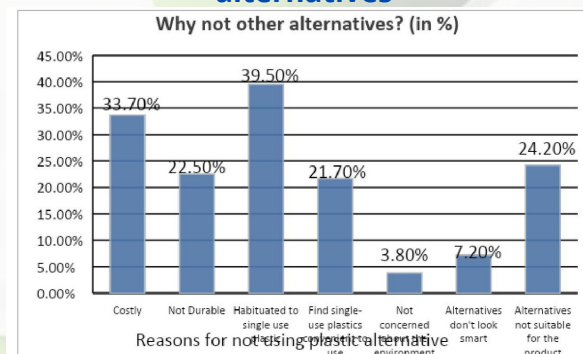


Figure 9: Graph showing reasons for not using plastic alternative

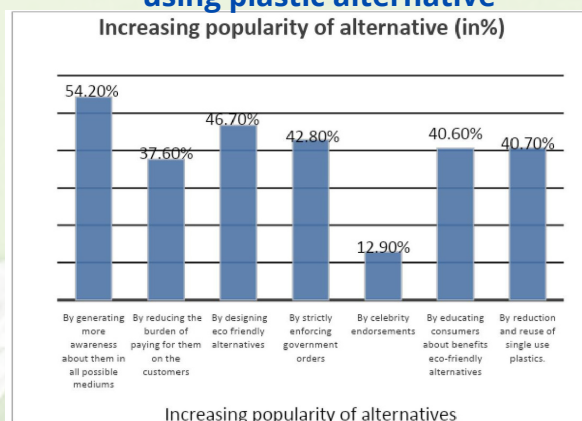


Figure 10: Graph showing means to make alternatives to plastics more popular

alternatives that attract people towards single-use plastics.

Out of 1059 responses, 256 believe that alternatives are not suitable for the products, 237 believe that alternatives are not durable and 230 believe that alternatives aren't convenient to use. Whereas, hardly any of the respondents believe that alternatives don't look smart. (Figure 9)

In order to reduce the use of single-use plastic and making eco-friendly alternatives more popular, there are a large number of alternatives. The majority of the respondents, i.e., around 54.3% feel that we can generate more awareness about them in all possible mediums.

The next most popular method among the respondents (46.8%) was by designing eco-friendly alternatives. A lot of respondents also think that we can achieve the goal by educating consumers about the benefits of eco-friendly alternatives. Reduction and use of single-use plastic is also a good option to make eco-friendly alternatives popular. However, very few respondents think that celebrity endorsement could be a good way of achieving the above goal. (Figure 10)

Conclusion

Plastics, in any form, are a necessary evil. There have been many inventions in human history that were made possible only because of plastics and at the same time, this also remains a fact that the first plastic that was ever made on the earth is still lying somewhere, contaminating the environment. Single-use plastics have certainly proved to be beneficial in terms of saving money and natural resources, but the scale of generation and

environmental concerns have surpassed its benefits.

In the survey conducted by the Green Beans Society, we found that there is a lot of scope of promotion of alternatives and the restrictions imposed by the government. There is a willingness in the users to switch to more environmentally friendly products, provided the alternatives are conveniently available at a cheaper rate. The need of the hour is to be more considerate towards the environment and take one step at a time towards conservation.

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Annexure

Questionnaire

GREEN BEANS SOCIETY: Survey to study "single-use plastics" usage pattern

This form is strictly for understanding the usage of the single-use plastic behaviour pattern among different groups of people. The email IDs and any other data related to individuals would be kept strictly confidential.

- 1) Email ID
- 2) Name
- 3) City of residence
- 4) Gender
 - a) Male
 - b) Female
- 5) Age Group
 - a) Less than 18 years(60y)
 - b) 18-30 years
 - c) 30-40 years
 - d) 40-50 years
 - e) 50-60 years
 - f) More than 60 years (>60y)
- 6) What is the most common single-use plastic do you use?
 - a) Water Bottles
 - b) Plastic carry bags
 - c) Packaging material
 - d) Other
- 7) Would you like to skip the use of single-use plastic if another option is available?
 - a) Yes
 - b) No
 - c) Maybe
- 8) Do you think regulations imposed by the government help reduce the use of plastics?
 - a) Yes
 - b) No
 - c) Maybe
- 9) Are you aware of the Plastic Waste Management Rules, 2016?
 - a) Yes
 - b) No
- 10) According to you, which single plastic use can be conveniently avoided?
 - a) Carry bags for vegetables/ groceries
 - b) Packaging material used in online shopping.
 - c) Other
- 11) What factor can motivate you the most for the use of eco-friendly alternatives?
 - a) Concern for the environment
 - b) Advertisements
 - c) Freely provided by the store brand
 - d) Government orders Other:
- 12) What factors prevent you from using use eco-friendly alternatives?
 - a) Costly
 - b) Not durable
 - c) Habituated to single-use plastics
 - d) Find single-use plastics convenient to use
 - e) Not concerned about the environment
 - f) Alternatives don't look smart
 - g) Alternatives not suitable for the product.
- 13) In your opinion what should be done to make eco-friendly alternatives more popular?
 - a) By generating more awareness about them in all possible mediums.
 - b) By reducing the burden of paying for them on the customers
 - c) By designing eco-friendly alternatives
 - d) By strictly enforcing government orders
 - e) By celebrity endorsements
 - f) By educating consumers about the benefits eco-friendly alternatives
 - g) By reduction and reuse of single use plastics.



GREEN PENS

04 A COLLECTION OF WORKS
BY GBS MEMBERS

STUDENT CONVENOR'S COLUMN

THE PLASTIC CRISIS

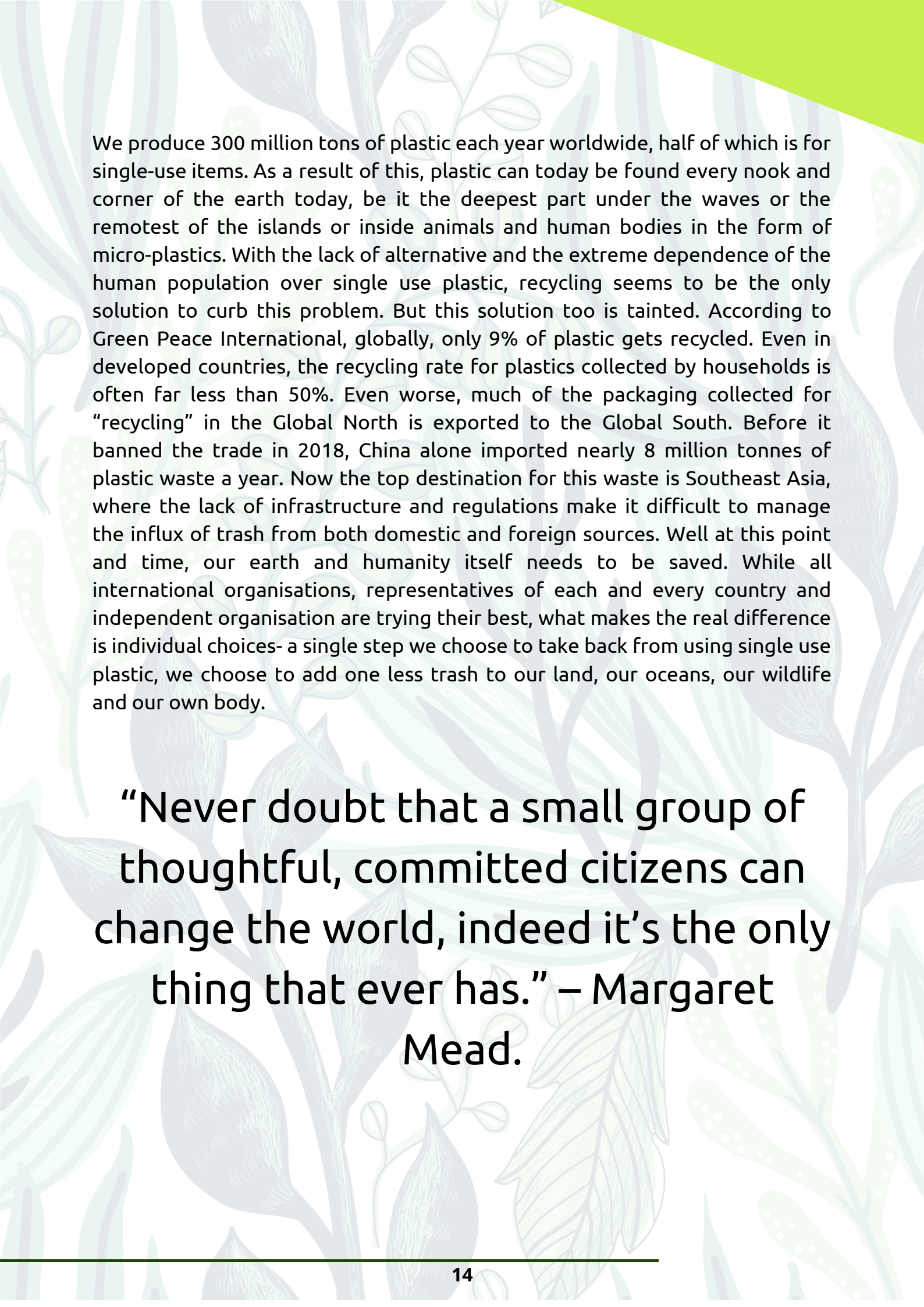
Taveri Rajkhowa

BA (Hons.) Geography, Year III

"But this is only one straw!"- Cried all 8 Billion people

Right now, if we just take a moment and think about our modern conveniences; that plastic bag to carry our groceries, that straw with our coffee, that milk pouch, doesn't go unnoticed. What happened to be an accident of 1933, turned out as one of the most used materials in the world today, Plastic! Since 1950s, 8.3 billion metric tons of plastic were produced, used and thrown away so quickly, we do not even realize the presence of that same number even today in some place or the other, be it our landfills, water bodies or the human body itself. According to the Natural Resource Defence Council, Single-use plastics are a glaring example of the problems with throwaway culture. Instead of investing in quality goods that will last, we often prioritize convenience over durability and consideration of long-term impacts. Our reliance on these plastics means we are accumulating waste at a staggering rate.





We produce 300 million tons of plastic each year worldwide, half of which is for single-use items. As a result of this, plastic can today be found every nook and corner of the earth today, be it the deepest part under the waves or the remotest of the islands or inside animals and human bodies in the form of micro-plastics. With the lack of alternative and the extreme dependence of the human population over single use plastic, recycling seems to be the only solution to curb this problem. But this solution too is tainted. According to Green Peace International, globally, only 9% of plastic gets recycled. Even in developed countries, the recycling rate for plastics collected by households is often far less than 50%. Even worse, much of the packaging collected for “recycling” in the Global North is exported to the Global South. Before it banned the trade in 2018, China alone imported nearly 8 million tonnes of plastic waste a year. Now the top destination for this waste is Southeast Asia, where the lack of infrastructure and regulations make it difficult to manage the influx of trash from both domestic and foreign sources. Well at this point and time, our earth and humanity itself needs to be saved. While all international organisations, representatives of each and every country and independent organisation are trying their best, what makes the real difference is individual choices- a single step we choose to take back from using single use plastic, we choose to add one less trash to our land, our oceans, our wildlife and our own body.

“Never doubt that a small group of thoughtful, committed citizens can change the world, indeed it’s the only thing that ever has.” – Margaret Mead.

MOTHER NATURE IS A BALM

Naina Jain

BA (Hons.) Geography, Year II

She sat on the grass; that caret
garden
Beside the flowers like a queen
She did not play as she was unwell
But watched her friends at play.

The beautiful trees and greenery
around
The chirping birds; that pleasant
sound
T'was better than any joy
And her heart filled with joy.

The blue skies with birds that sing.
The setting sun with an orange ring
Was the gentle breeze from the
park's swings?
Nature indeed is a beautiful thing.

When unwell, the merry cries
Of happy children playing nearby
The pleasing sights, the peace, the
calm
Mother Nature applies her balm.



MICROPLASTICS

Soumya Gulati
BSc Mathematics, Year III

A little fish, shimmers and sings,
Floating upon the surface,
With colourful wings.
I caught her and held her,
Beside the boat,
But to my surprise,
She didn't fight at all.
Her body was rough,
Wings were speckled
I looked into her eyes
Which had no hope to rise.
While her gills were breathing,
The terrible oxygen left,
I could imagine,
The amount of man-made heft.
Microplastic is drastic
And we must fear,
Of what our eyes cannot see,
Can bring our end near.
They are ingested by fishes,
Fishes are ingested by us
We face the consequences,
Of this self-made fuss.
So, it's a wakeup call,
To avoid the tremendous fall,
That we must realise, else
Plastic will outlive us all.



TREES

Sakshi Jha
BA (Hons.) Geography,
Year I

Trees are there everyday
Under them we can play
Because their leaves are
usually green

You and I need to keep them
clean

Otherwise, they will die
Keep them fresh and alive
So, they help us thrive

Let's plant a sapling a day
So that the planet gets O₂ for
the rest of its lay.



पानी की बचत, दिल्ली की जरूरत

प्रीति मीना

बी0ए0 (ऑनर्स) भूगोल, तृतीय वर्ष



एक समय था जब दिल्ली शहर पानी नियंत्रित के लिए जाना जाता था। जोहड़, झील, बावलियां, तालाब दिल्ली की जल संपत्ति थे। दिल्ली में घरेलू उपयोग के लिए पानी निकालने के लिए कुओं का उपयोग किया जाता था। जल संसाधनों को नियंत्रित करने के लिए हाइड्रोलिक इंजीनियरिंग की एक प्रणाली स्थापित की। दिल्ली नागरिकों को पानी के एक निरंतर आपूर्ति प्रदान करने के लिए बनाए गए वर्षा और भूजल को विशाल टैंकों में संग्रहीत किया गया जीने होज , और बावड़ी , या कदम कुओं भी करते थे। बाद में, मुगलों के दौरान, पूरे शहर में नहरों का निर्माण किया गया था। ब्रिटिश शासन के अधीन आने के बाद, अंग्रेजों ने पुरानी व्यवस्था को ध्वस्त करते हुए उन्हें " पीछे " कर दिया। उचित प्रबंधन के बिना, नहरें सूख गईं, और नागरिकों ने सीधे यमुना नदी के पानी का उपयोग करना शुरू कर दिया। जब तक नई दिल्ली का निर्माण हुआ था, तब तक केवल नए शहर को आधुनिक नगरपालिका जलापूर्ति व्यवस्था दी गई थी। यह असमानता आज भी मौजूद है, और दिल्ली के कई निवासियों के पास अभी भी स्वच्छ पानी की लगातार पहुंच नहीं है।

बनाए गए वर्षा और भूजल को विशाल टैंकों में संग्रहीत किया गया जीने होज , और बावड़ी , या कदम कुओं भी करते थे। बाद में, मुगलों के दौरान, पूरे शहर में नहरों का निर्माण किया गया था। ब्रिटिश शासन के अधीन आने के बाद, अंग्रेजों ने पुरानी व्यवस्था को ध्वस्त करते हुए उन्हें " पीछे " कर दिया। उचित प्रबंधन के बिना, नहरें सूख गईं, और नागरिकों ने सीधे यमुना नदी के पानी का उपयोग करना शुरू कर दिया। जब तक नई दिल्ली का निर्माण हुआ था, तब तक केवल नए शहर को आधुनिक नगरपालिका जलापूर्ति व्यवस्था दी गई थी। यह असमानता आज भी मौजूद है, और दिल्ली के कई निवासियों के पास अभी भी स्वच्छ पानी की लगातार पहुंच नहीं है।

पिछले कुछ वर्षों में, दिल्ली तेजी से एक मेगासिटी में बढ़ी है, जिसके परिणामस्वरूप शहर के संसाधनों, बुनियादी ढांचे और पानी की आपूर्ति पर भारी दबाव पड़ा है। दो मुख्य जल स्रोतों-भूजल और यमुना से पानी की मात्रा में गिरावट एक व्यापक और आसन्न चिंता है। भूजल भंडार तेजी से घट रहा है और दिल्ली की जनसंख्या तेज़ी से बढ़ती जा रही है, इस व्यापक जनसंख्या वृद्धि को देखते हुए, नेशनल इंस्टीट्यूट फॉर ट्रांसफॉर्मिंग इंडिया (NITI) की एक रिपोर्ट,

चेतावनी देती है कि दिल्ली 2020 तक पेयजल स्रोत के रूप में भूजल से बाहर निकल सकता है।

यमुना नदी से पानी की आपूर्ति बहुत बेहतर नहीं है: कृषि और जलविद्युत के लिए पानी के अपस्ट्रीम के मोड़ ने पानी की उपलब्धता को गंभीर रूप से समाप्त कर दिया है, और वर्तमान में शहर के अधिकांश ताजे पानी का उपयोग पीने के पानी के लिए किया जा रहा है। विभिन्न नगरपालिकाएं अब कानूनी रूप से पानी से जूझ रही हैं।

दुनिया के दूसरे सबसे ज्यादा आबादी वाले शहर दिल्ली के लिए पानी की कमी अब एक सालाना रिवायत बन गई

अगर शहर की जल नीति में जरूरी बदलाव नहीं किये तो आने वाले समय में सभी दिल्लीवासियों को जरूरत भर का पानी मिलने की संभावना न के बराबर है.

दिल्ली में पानी की बर्बादी को रोकने, बारिश के पानी को संरक्षित करने, और गंदे पानी का प्रबंधन करने के उपाय कर लिए जाएं तो कोई कारण नहीं कि इसके रहवासियों को दिन में 24 घंटे सीधे नल से पिया जा सकने वाला पानी उपलब्ध न कराया जा सके.

दिल्ली जैसी ही हालात 1965 में सिंगापुर के जल प्रबंधन की भी थी. आज वहां के आंकड़े कहते हैं कि उनकी आपूर्ति का सिर्फ पांच फीसदी हिस्सा ही ऐसा है जिसका हिसाब उनके पास नहीं है. और यह करिश्मा पानी के पुनर्उपयोग, वर्षा जल भंडारण और जल संरक्षण के कई प्रयासों से संभव हो सका है. दिल्ली ने भी रेनवॉटर हार्वेस्टिंग के लिए अनिवार्य नियम तय तो कर दिये हैं और ऐसा करने पर यहां आर्थिक प्रोत्साहन देने का भी प्रावधान है. लेकिन निगरानी के अभाव में ये प्रयास सिर्फ प्रयास ही बनकर रह गये हैं.

बात साफ है कि परेशानी का हाल तो हैं बस जरूरत है जागरूक होने की और सही दिशा में काम करने की । ये काम अकेले सरकार नहीं कर करती ,सभी दिल्लीवासियों को जो इस परेशानी से ना भी जो झ रहे उनने भी इस पानी की परेशानी को अपनी खुद की परेशानी समझ कर एक साथ इसके लिए काम करना होगा।



OLD POLICY

Sheljal Choudhary
BA (Hons.) Psychology, Year II

The wind blew like I never imagined
it was more like a roar to be precise
My understanding of nature as beautiful
and calm

experientially changed to a surprise
which approached with no alarm
Reading and hearing news of disasters
horrified me and turned me sympathetic
But nearly experiencing one

petrified me and transformed me to being
empathetic

The roar of the nature is like no other
because it's a cry of our earth mother

it shakes us
breaks us and tears apart
in spite of the pain that we see in her cries

we choose the joy of the luxury offered as
materialistic bribes

So, at least I need to transform
I can't wait till the world will change
As it has an old policy to
Procrastinate and act strange.



SOME SUSTAINABLE LIVING IDEAS TO GET YOU STARTED

Kriti Madan

BA (Hons.) Economics, Year II

Surprisingly, the greatest threat to our planet is our belief that someone else will save it. It is high time we realise the fact that it is the responsibility of each one of us to take care of our environment and the least we can do is switching to a sustainable lifestyle. Sustainability is important to nourish and rejuvenate the earth.

Sustainable living traditionally means “meeting the needs of the present without compromising the needs of the future generations”. Sustainable lifestyle should be the latest way of life. A sustainable lifestyle impacts our eating habits, transportation, socialising, energy use and disposal.

There are numerous ways using which we can switch to an eco-friendly lifestyle which helps in saving non-renewable resources. Small changes in our way of living can have a great impact and can influence and inspire others for a change.

Some ways that we can adapt in various walks of life are listed.

SUSTAINABLE LIVING

- Using LED/ CFL bulbs which work for longer and are energy efficient.
- Utilizing natural light during the day rather than turning on lights indoors.
- Switching to water saving shower heads or bucket baths.
- Turning off main switches of T.V, Wi-Fi modem, and other appliances at night to save energy. Avoid keeping appliances on standby mode.

SUSTAINABLE COMMUTING

- Using bicycle for shorter distances.
- Preferring public transport.
- Using carpools to workplaces and other activities.
- Switching to stairs rather than an elevator wherever and whenever possible.

SUSTAINABLE SHOPPING

- Supporting ethical and conscious brands.
- Avoid buying plastic packed products.
- Stop buying bottled water.
- Carrying own bag to market place.

SUSTAINABLE FASHION

- Reducing the frequency of washing clothes
- Shop at sustainable clothing outlets.
- Transforming old clothes into new ones.
- Repurpose old / worn out clothes to rags.

SUSTAINABLE WORKING

- Opt for digital letters, notices and bills.
- Use phone to take notes.
- Always use both sides of paper whenever possible.
- Use eco- friendly printers for business cards.

Thus, these small but useful changes in our way of life can be very useful and can help bring a change that we desire. We all must take these small initiatives after all,

“IT IS THE EARTH THAT WE ALL HAVE IN COMMON”



MY ODE TO CLIMATE CHANGE

Shruti Verma
BA (Hons.), History, Year II

I walked up to penalty today,
and what was looking at me?
White and yellow daisies,
for all world to see!

I peered up to the sky and said,
"It is winter here, you know?"
It should be frosty, cold, hailing
and fluttering with flakes of snow.
The climate is all changing and
we are all getting very confused.

Animals, plants, humans
none of are amused.
Who is playing these tricks?
I really don't know!
We need to prepare ourselves,
things are no longer just so!



GOODBYE PLASTIC WATER BOTTLES!

Navya Agarwal
BA Program, Year II



By the year 2050, it is estimated that there could be more plastic than fishes in the oceans. Every year, eight million tons of plastic waste are dumped into the oceans. Yes, that truly is the annual amount.

Imagine a product that can match plastic bottles in terms of convenience, availability, price and be environment friendly at the same time. Imagine Oho, a delightful water blob that would change the way you imagine future bottles.

This is oho, created in the Skipping Rocks Lab this water ball is completely edible and can be made at home as well. These water bubbles kick out plastic bottles out of the equation. Oho is made of algae and calcium chloride, at a very low cost.



To drink the water, you just have to break the sphere and sip the water inside. Oho is available in the market at a low cost of 2 cents that is equal to 0.084659 Indian Rupee. In a mere 0.1 INR these little spheres can quench thirst, save water and the environment.

Here is a list of everyday items that you can change in your life to contribute your part to the environment:

COMMON ITEM	SUSTAINABLE ALTERNATIVE
Plastic Bottle	Bamboo Bottle
Shampoo Bottle	Shampoo Bars
Plastic Comb	Wooden Combs
White Paper	Recycled Paper
Plastic Pen	paper pen
Sanitary Napkins	Menstrual cup
Books	E-books
Paper Napkins	Cloth Napkins



DOOMSDAY CLOCK

Sharanya Singh
BA (Hons.) Geography, Year I

The doomsday clock is a symbol which represents the likelihood of a man-made global catastrophe. Maintained since 1947 by the members of the Bulletin of the Atomic Scientists, the clock is a metaphor for the threats to humanity from unchecked scientific and technical advances. The clock represents the hypothetical global catastrophe as a number of minutes to midnight. The factors influencing the clock are nuclear risk and Climate change. The minute hand hasn't been moved since 2018 and is currently at 11:58 pm. This is the closest the clock has ever been to "midnight".

The doomsday clock was first introduced in the 1940s. It was set at a whopping 17 minutes before midnight in 1991 – the maximum it has ever been.

Technicalities aside, why do you think this is our condition? Global carbon dioxide emissions, major countries pulling out of climate treaties, and the end of the Intermediate Range Nuclear Forces Treaty (INF), etc., are some events to blame. However, the real blame lies on the human race as a whole. It is on you; it is on me and on everyone around us. If we don't take any concrete steps at this point, the doomsday clock will strike a quarter minute to midnight – the tipping point.



ENVIRONMENTAL ISSUES

Anusha Popli
BA (Hons.) Geography, Year I

Look around yourself. Are you satisfied? Are you satisfied with the fact that we have exploited the nature to the brim of its extinction? We have abused nature to its fullest potential and used it for the benefit of human kind. Which, ironically, is the smartest and most intelligent specie on earth; but not smart enough to foresee the disastrous consequences that lay ahead of the excessive use.

To completely understand the environmental problems and work for the betterment, we need to trace back to the time in history before humans selfishly started using the nature and exploiting the natural laws. It is that time in the history when humans were completely dependent on nature for their basic, day to day activities. A time preceding the development of technology and modern science.

This was a phase where the level of socio-cultural and technological development was low and humans were greatly influenced by nature and adapted to the dictates of it. The knowledge of nature indicated the technological development and helped to create technology. This phase of ***ENVIRONMENTAL DETERMINISM.***



People begin to understand their environment and the nature with the passage of time and with the social and cultural developments, humans developed better and more efficient technology and moved from a state of necessity to a state of freedom. They created possibilities with the resources obtained from the environment and created cultural landscapes. The imprints of human activities are seen everywhere- ports on coasts, satellites in space, oceanic routes on ocean surfaces, health resorts on highlands and so on. This current phase is called **POSSIBILISM**.

Creating possibilities within the environment was always a productive and efficient method. But the problem began when we overlooked the needs of future generation and were inconsiderate about the condition of natural environment. We mindlessly used the products offered by the nature and didn't bother to replenish what we took.

Several campaigns and rallies are organised these days to prevent the nature from detreating further. But are these effective enough? No. They cannot be until we genuinely spend some quality time in the natural environment and observe what all damage is caused. This retrospection will further lead to solutions.

Now looking towards the solutions, we could minimise the use of plastic. This can be done by using steel or aluminium bottles and lunch boxes. We can try to use cloth handbags and handkerchiefs instead of plastic bags and tissues. Since water is also a major concern, let's reuse the water used in domestic works to water the plants. We can go on foot instead of vehicles to reach closer destinations. This will also keep us fit!

Let's encourage each other to leave our screens and go outside and cherish the nature before it is too late.



WATER CONSERVATION



Shiksha

BA (Hons.) Economics, Year II

NATIONAL WATER POLICY

The National Water Policy 2002 stipulates water allocation priorities broadly in the following order: drinking water, irrigation, hydropower, navigation, industrial and other uses. The policy stipulates progressive new approaches to water management.

Key features include:

- Irrigation and multipurpose project should invariably include drinking water component wherever there is no alternative source of drinking water.
- Providing drinking water to all human beings and animals should be the priority first.
- Measures should be taken to Limit and regulate the exploitation of groundwater.
- Both surface and groundwater should be regularly monitored for quality. A phased program should be undertaken for improving water quality.
- The efficiency of utilisation in all diverse uses of water should be improved.
- Awareness of water as a scarce resource should be fostered.
- Conservation consciousness should be promoted to education regulation incentive and disincentives

A CASE STUDY ON WATERSHED DEVELOPMENT

Ralegan Siddhi is a small village in the district of Ahmednagar Maharashtra. It has become an example for watershed development throughout the country. In 1975, the village was caught in the web of poverty and illicit liquor trade. The transformation to place when a retired army personnel settle down in the village and took up the task of watershed development. He convinced villages about the importance of family planning and voluntary labour preventing open grazing spelling lands and liquor prohibition.

Voluntary labour was necessary to ensure minimum dependence on government for financial aids. Even those who were working outside the village contributed to the development by committing a month's salary every year. Work begins with the percolation tank constructed in the village. In 1975, the tank could not hold water and the embankment wall leaked. People voluntarily repaired the embankment and seven Wells below it filled with water in summer for the first time in the living memory of the people. The people reposed their faith in him and his vision. A Youth Group called Tarun Mandal was formed.

The group work to ban on the dowry system, caste discrimination and untouchability. Liquor distilling units were removed and prohibition imposed. Open grazing was completely banned with the new emphasis on stall feeding. The cultivation of water intensive crops like sugarcane was banned. Crops such as pulses oil seeds and certain cash crops with low water requirements were encouraged. A new system of sharing labour grows up in the infusion of pride and voluntary spirit. People volunteered to help each other in agricultural operations landless labourers also gained employment. The village plans to buy land for them in adjoining villages.

At present, water is adequate, agriculture is flourishing though the use of fertilizers and pesticides is very high. Thus, prosperity also brings in the question of ability of the present generation to carry on the work.



कुछ पुराने दोस्त

सौम्या गुलाटी

BSc Mathematics, Year III

चलो कुछ पुराने दोस्तों के
दरवाज़े खटखटाते हैं,
देखते हैं उनके पंख थक चुके हैं
या अभी भी फड़फड़ाते हैं।

वो बेतकलुत्फ होकर
बेरहमी से पेड़ों को काटते हैं,
या अभी भी उनकी छाया में बैठकर
उनसे बातें किया करते हैं।

वो अनजान बनकर
प्लास्टिक का प्रयोग करते हैं
या स्वयं के अलावा,
पर्यावरण के बारे में भी सोचते हैं।

सिर्फ दूर खड़े होकर देखते हैं
किसी को जल दूषित कर्ते हुए,
या बोल उठते हैं, अपने दिल की बात
प्रदूषण को रोकने के लिये।

चलो कुछ पुराने दोस्तों के
दरवाज़े खटखटाते हैं,
स्वयं को हानी पहुंचाने वाली को
जागरूक करते हैं।

GREEN BEANS MEMBERS' INDEPENDENT RESEARCH



Sheljal Choudhary & Anuja Sharma
BA (Hons.) Psychology, Year II

To gain insight on awareness, attitude and management approaches towards Single-use plastic by consumers

The paper studies the awareness, attitude and management approaches towards Single-Use Plastics by consumers using survey questionnaire methods. It identifies the problem towards SUP's, how to tackle such issue in India based on results obtained from questionnaire. The study might be helpful to implement the management techniques with public perception. Plastics are a wide range of synthetic or semi-synthetic materials that use polymers as a main ingredient. Single-use plastics are intended to be used only once before they are thrown away or recycled. This single-use material makes up between 26-36 percent of world's plastic. Avoidable or replaceable single-use plastic items includes carry bags, plastic drinking bottles, bottle caps, etc. Just 9% of the world's nine billion tonnes of plastic have been recycled. Most of our plastic ends up in landfills, oceans and waterways, and the environment. Plastics do not biodegrade contaminating our food supplies, soils, water and wildlife. India currently produces 25,940 metric tonnes of plastic per day. In response to this India would phase out single-use plastics by 2022, under, the ban on single-use plastic bill, 2019.

There is need to understand the awareness, attitude and management approach to control the single use plastic by consumer. The report presents method to use such awareness, data collection and results from significant sampling.

The research was designed using survey research method to get perception of users on awareness, attitude and management approaches towards Single-Use Plastics by consumers. The research questionnaire was designed and data was collected on wide age range of user from 15 to 60 years old, all over India. Quantitative data was collected on a sample size of 74 participants. The data was collected and analysed from the surveys, which included charts and tables in google forms.

The interpretation and discussion are done thematically as follows:

- The maximum number of respondents ranges from the 19 and 20 years of age and are mostly females.
- 37.8% of all respondents are completely familiar, 36.5% very familiar, 21.6% somewhat familiar of the environmental concerns of SUP's.
- Most people agreed that the biggest problem with plastic is the long time to decompose.
- The awareness regarding plastic pollution in the respondent's locality is mostly moderate. The awareness about schemes in their locality to reduce plastic to which most of them are aware.
- Most respondents are aware about The Ban on Single-Use Plastic Bill, 2019.
- This study results are similar to the study by Adekunle Oke in 2017 in Scotland.
- A majority of the respondents considered SUP being important while 24% considered it be not at all important with little importance (22%). This notion presents a similar perspective with a study by A.Khoironi, et al. (2018) on community behaviour and single-use plastic bottle consumption.
- 66% people responded to use alternatives very likely while no respondent showed discouragement to using alternatives. 54% people said that they often avoid using single-use plastic because of its impact on environment which shows the attitude of concern and care for the environment.

- An article on Sustainability Assessment of a Single-Use Plastics Ban by Timo Herberz, et al.,(2020) showed that a single-use plastics ban would decrease plastic marine pollution in the EU by 5.5% which equates to a 0.06% decrease.
- Respondents had mixed responses on the of difficulties that prevent using environmentally friendly alternatives with 43% people saying that its not easy for them to get reusable options. 24% people said that reusable products are not durable, with 20% claiming that the store they purchase from wouldn't pack food in reusable bags. A small percentage of 4% believed that its not their responsibility while 33% said that it is not at all difficult for them to use alternatives.
- Among reasons to encourage the reduce the usage of single-use plastics chosen by people were stricter government policies (54%) and if cashier asks to give a reusable option or alternative (40%), Paying less for the reusable products or alternatives (32%), reusable products or alternatives offered first (40%) With not often chosen option of use is likely to decrease only if no single-use plastics are available (23%). Overall attitude of people showed that their concern for the use of single-use plastic.

The study has explored that most of the consumers have moderate awareness about SUP's, and a positive attitude toward changing their behaviour and family is the biggest influencer. The study concludes that more awareness of management techniques should be introduced in public dissemination.

TO READ THE COMPLETE PAPER, VISIT:

<https://drive.google.com/file/d/1BqMF3oMGRjh6zb5YUYybRYhKFQop0QUB/view?usp=sharing>



05 GBS
ART & FUN
CORNER



01

GREEN QUIZ

1. Name the atmospheric layer closest to the ground

- Troposphere
- Mesosphere
- Thermosphere

2. The most abundant gas on the earth's atmosphere is

- Oxygen
- Carbon
- Nitrogen

3. What atmospheric layer has most of the clouds?

- Thermosphere
- Exosphere
- Troposphere

4. An altitude of 100 kilometres (62 mi; 330,000 ft) above the Earth's Sea level marks the beginning of space where human travellers are considered astronauts. What is it called?

- Appleton–Barnett layer
- Karman line
- Van Allen belts

5. The study of weather is called?

- Meteorology
- Climatology
- Aeronomy

6. Which one of the following is NOT a primary layer of the atmosphere?

- Mesosphere
- Troposphere
- Exosphere

7. A millimetre of mercury is a manometric unit of pressure, defined as precisely 133.322387415 pascals. What is the symbol for a millimetre of mercury?

- hhMg
- mmHg
- inHg

8. Name the atmospheric layer that is completely cloudless and free of water vapor.

- Exosphere
- Troposphere
- Thermosphere

9. The ozone layer or ozone shield is a region of Earth's atmosphere that absorbs most of the Sun's ultraviolet (UV) radiation. Which layer of the atmosphere contains the ozone layer?

- Mesosphere
- Thermosphere
- Stratosphere

10. What is the average atmospheric pressure at sea level as defined by the International Standard Atmosphere?

- 101325 pascals
- 14.6959 pascals
- 1013 pascals

11. Who coined the word 'ecology'?

- Ernst Haeckel
- Charles Darwin
- Gregory Mendel

12. What are saprophytes?

- Living beings that feed on the sap from tree bark
- Living beings that feed on dead or decayed organic matter
- Living beings that feed on other living beings.

13. Who are ethologists?

- Scientists who study about ethos
- Scientists who study about the behaviour of wild animals
- Scientists who study about the behaviour of animals in a particular eco system.

14. What are terricolous animals?

- Animals that live in a particular territory
- Animals that live on high mountains
- Animals that live in the soil

15. What are arboreal animals?

- Animals living in trees
- Animals living in water
- Animals living in marshy lands

16. Who is known as the father of evolution?

- Gregory Mendel
- Charles Darwin
- Albert Einstein

17. Which of the following is an amphibian?

- Salamanders
- Lizards
- Fish

18. What is the safe level of noise intensity for humans?

- Up to 90 decibels
- Up to 70 decibels
- Up to 80 decibels

19. What are planktons?

- Plants living in water
- Very small plants and animals living in water
- Very small animals living on land

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ANSWERS FOR THE GREEN QUIZ

1. Name the atmospheric layer closest to the ground

Answer: Troposphere

2. The most abundant gas on the earth's atmosphere is

Answer: Nitrogen

3. What atmospheric layer has most of the clouds?

Answer: Troposphere

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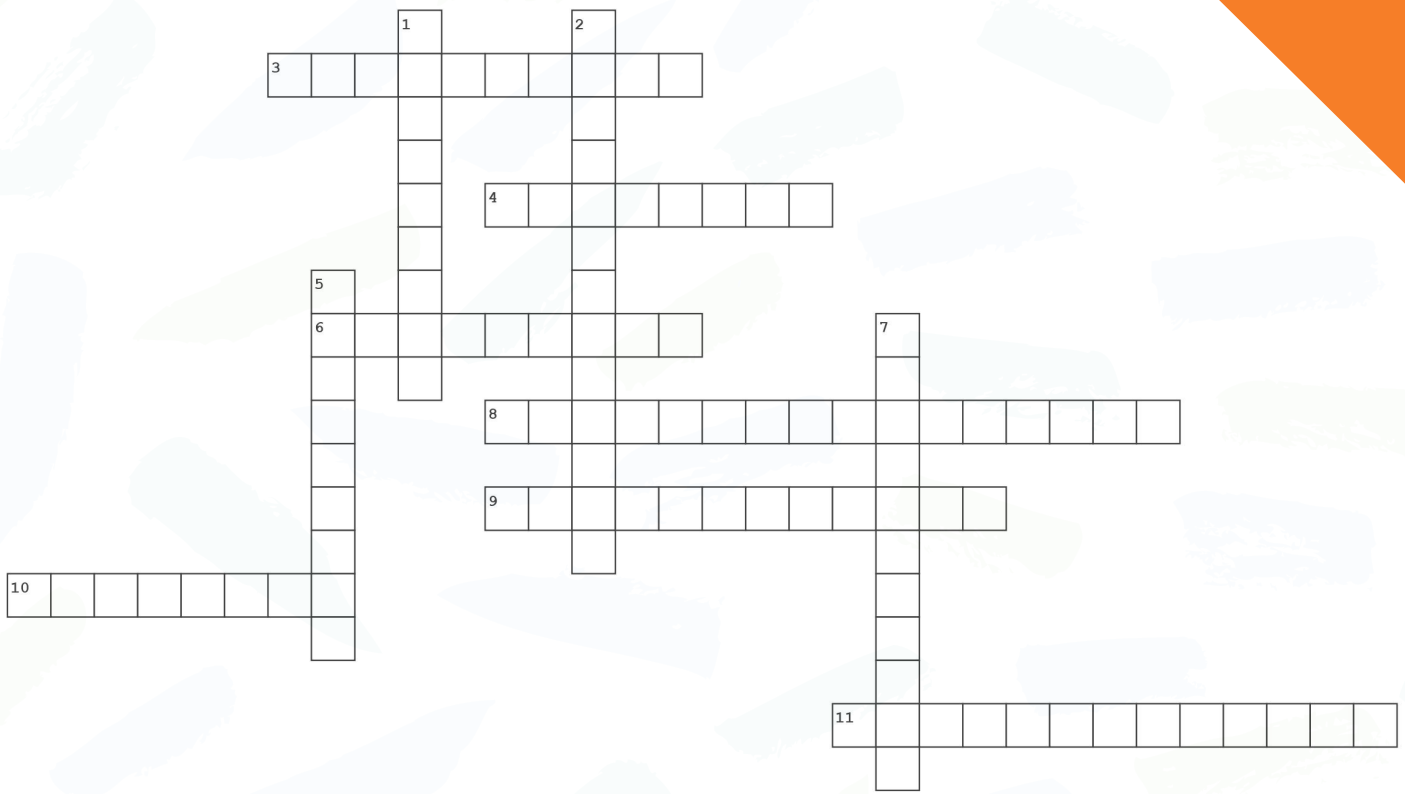
18. What is the safe level of noise intensity for humans?

Answer: Up to 80 decibels

19. What are planktons?

Answer: Very small plants and animals living in water

02 CROSSWORD



ACROSS

3. The envelope of gases surrounding the earth or another planet
4. 22nd April
6. A biological community of interacting organisms and their physical environment.
8. Materials or substances occurring in the nature which can be exploited for economic gain.
9. The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable
10. Any form of precipitation with acidic components
11. A gradual increase in the overall temperature of the earth's atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide, CFCs, and other pollutants.

DOWN

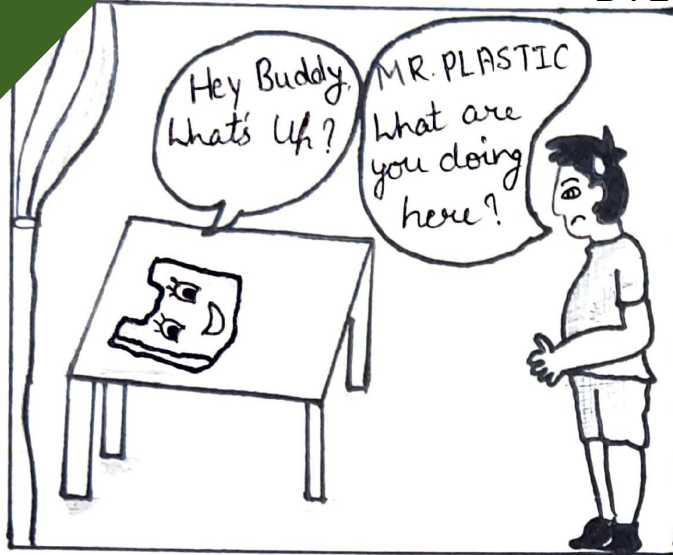
1. The presence in or introduction into the environment of a substance which has harmful or poisonous effects
2. The act of cutting down or burning the forests
5. The action or process of converting waste into reusable material
7. A natural fuel such as coal or gas, formed in the geological past from the remains of living organisms

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BYE MR. PLASTIC!



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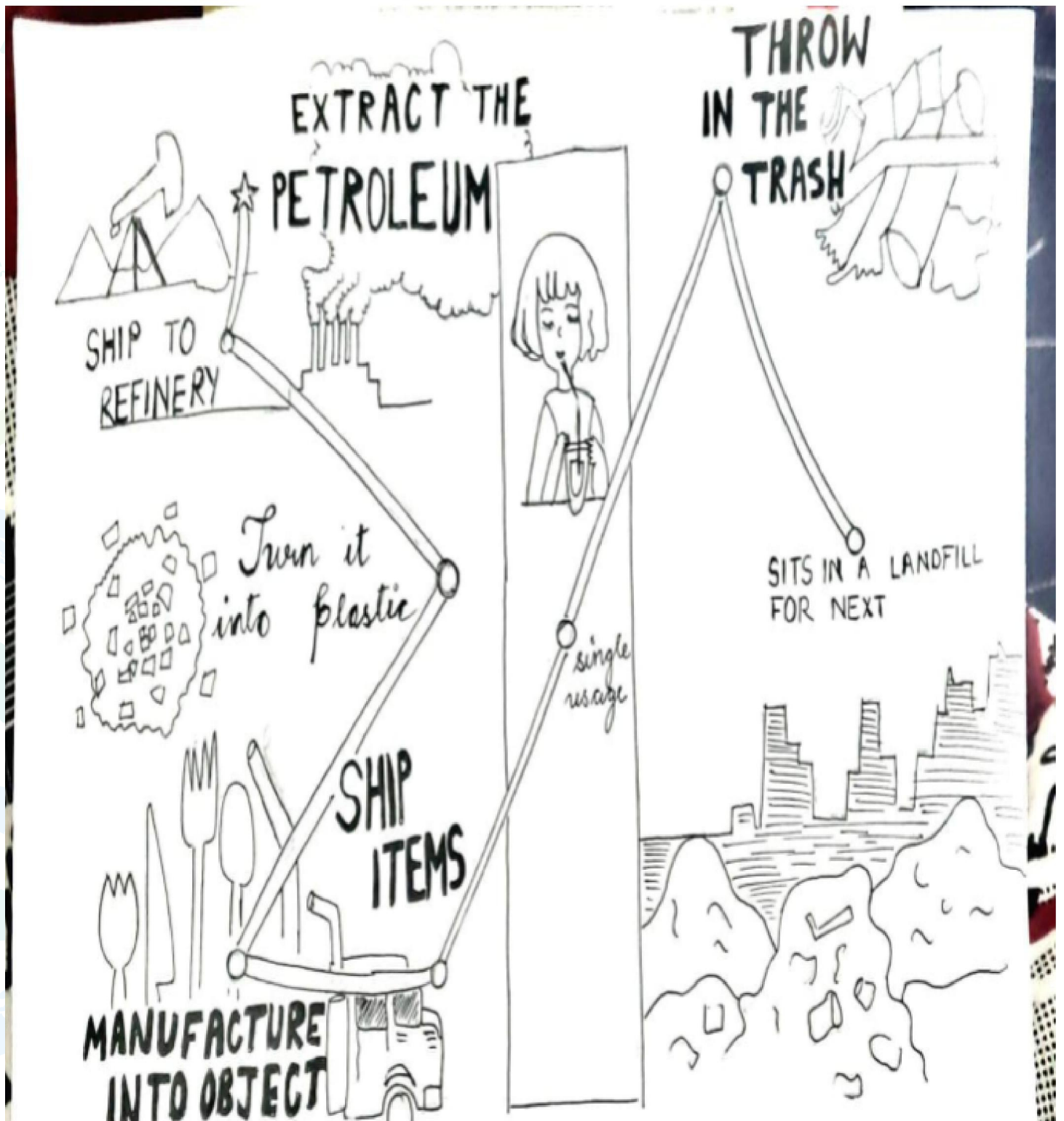
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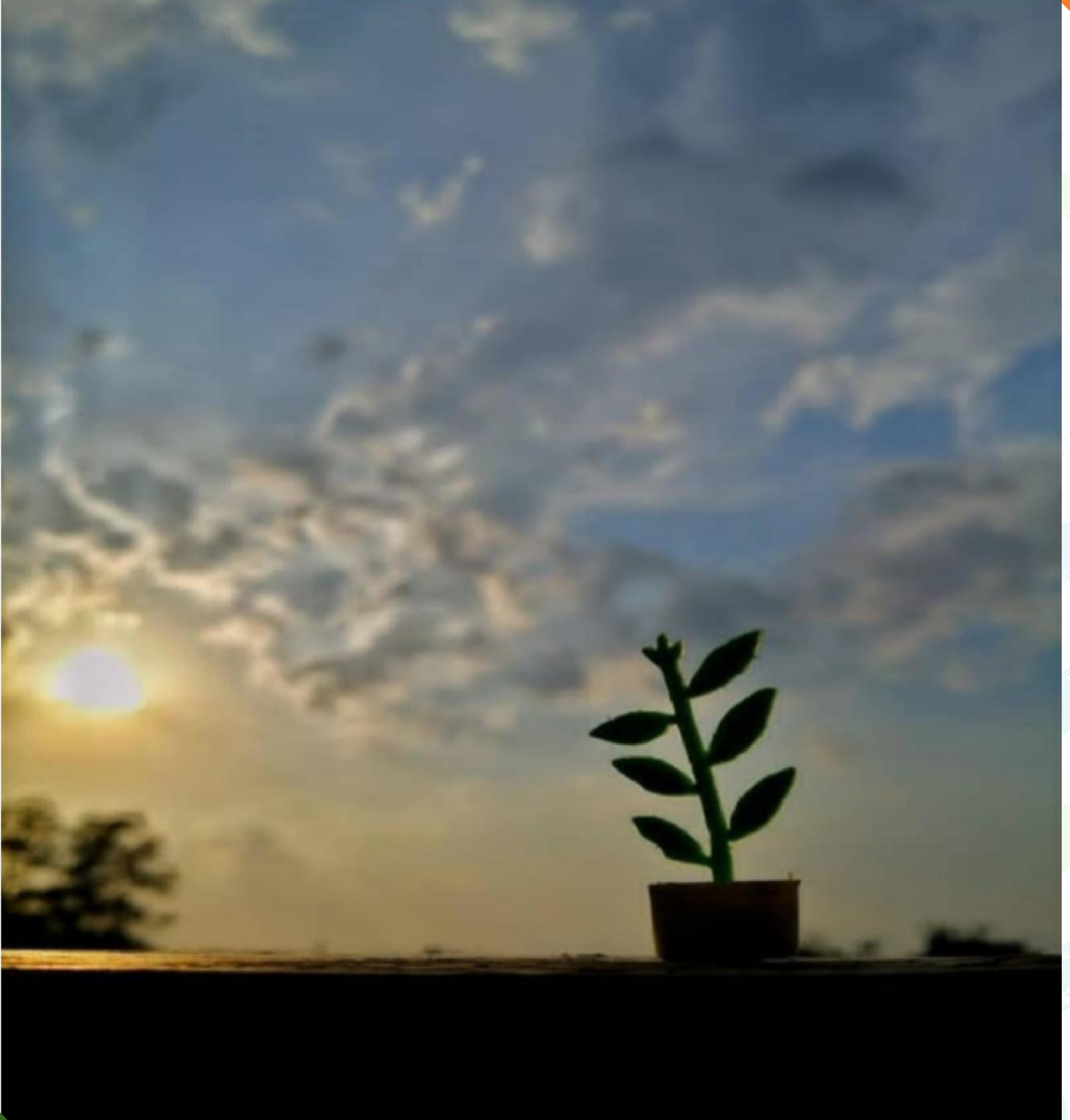
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“It is the worst of the times but it is the best of the times we still have a chance.” - **Sylvia Earle**

