UN environment programme

The Young Leaders Plastic Challenge

WWF

CEE
Centre for Environment Education

TIDE TURNERS PLASTIC CHALLENGE

INDIA TOOLKIT

UN environment programme

UKaid from the British people

Ministry of Environment, Forest & Climate Change

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Acknowledgement

UNEP's Tide Turners Plastic Challenge was launched in India in 2019.

The implementation partners, World Wide Fund for Nature- India and Centre for Environment Education adapted, strategized and implemented the challenge across India.

Since 2019, the campaign has transformed into a movement with engagement of over half a million youth across India, generating inspiring stories from the ground. Responding to the challenges brought about by the COVID 19 pandemic, several strategic partnerships and collaborations such as with the Ministry of Environment, Forest and Climate Change, State governments and many other youth organisations have sparked a cascading effect on activating youth to contribute to the movement against single use plastics and the cause of plastic pollution at large.

Content: WWF - India and CEE

Design: PPAL Studio

Foreword

The problem of plastic in nature, particularly in our oceans, is a global crisis. Affordable, durable and flexible, plastic pervades modern life, appearing in everything from packaging to clothes to beauty products. Unlike other materials, plastic does not biodegrade. It can take hundreds of years to break down, so when it is discarded, it builds up in the environment until it reaches a crisis point. This pollution chokes marine wildlife, damages soil and poisons groundwater, and can cause serious health impacts.

In 2022, UN Member States agreed on a resolution to end plastic pollution. An Intergovernmental Negotiating Committee is developing a legally binding instrument on plastic pollution, with the aim of having it finalized by the end of 2024. Current commitments by governments and industry are not enough. To effectively tackle the plastic pollution crisis, human behavior and habits need to be amended, systemic change is needed, every step counts.

In this challenge, we're going to take you on a journey where one will learn about the problem of plastics, lead change by influencing others, and get encouraged to bring concrete change on the ground, aiming to rethink and reduce our plastic consumption.

Our planet is under the threat of plastics. By 2050 there will be more plastic than fish in our oceans. Planet Earth is home to us and many more wondrous plants and wildlife species. Let's join hands to protect and preserve our home from plastic pollution.

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About the challenge

The Tide Turners Plastic Challenge is a global youth movement to fight plastic pollution around the world. It is designed to inspire young adults to reflect upon their plastic consumption, discover solutions to reduce this consumption, and lead change in their home, communities and institutions.

By joining the challenge, you will be part of an entire generation of young leaders who are changing the world, one action at a time!

Level 1:

Enhancing Knowledge about Single-Use Plastics

The activities are designed to get you thinking about your own consumption and what simple actions you can take to reduce single-use plastics from your day-to-day life.

Level 2:

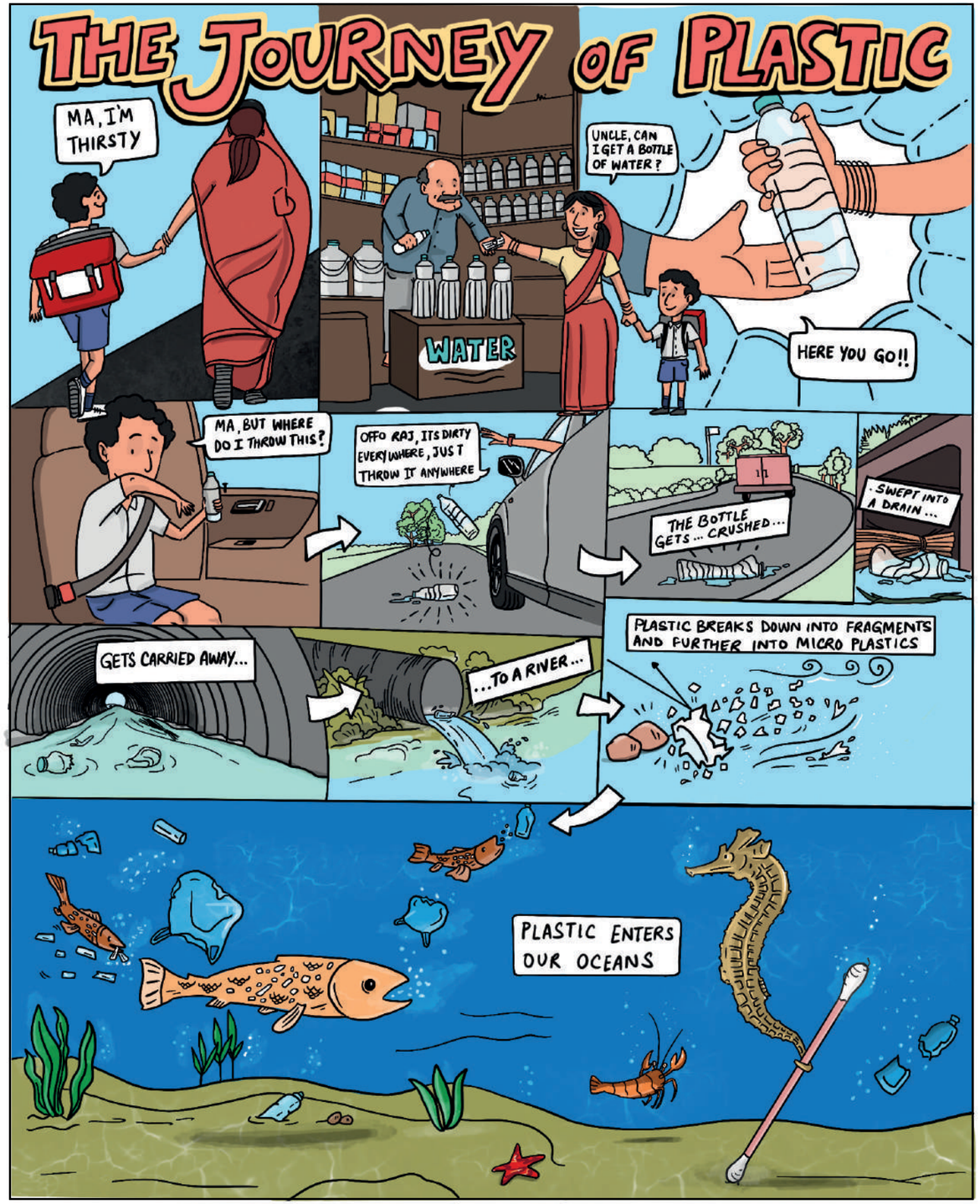
Community Outreach and Communication

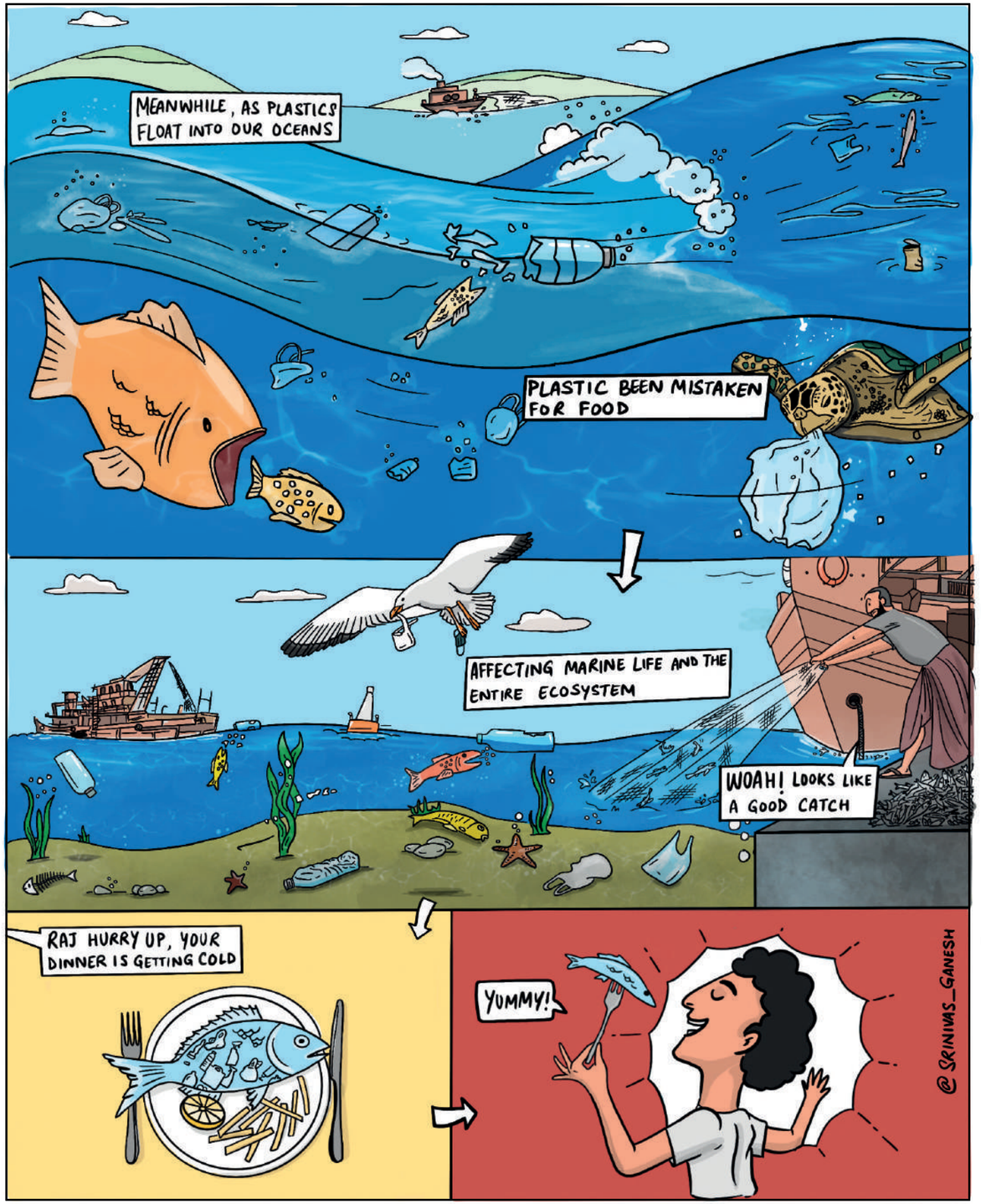
Having the information and knowledge about single-use plastics and its impact, you can reach out to your friends, family and many more in the community and disseminate the message and create awareness about the issue of single-use plastics. You can educate others and continue your efforts by turning your learnings into actions.

Level 3:

Community Action and Advocacy

In this level, you can scale up your efforts to make a greater impact. Activities would include cleanliness and Single Use Plastic collection drives and rejuvenating water bodies, connecting to recyclers, local governments such as Panchayat or Municipal Ward offices.


THE JOURNEY OF PLASTIC
MA, I'M THIRSTY
UNCLE, CAN I GET A BOTTLE OF WATER?
WATER
HERE YOU GO!!
MA, BUT WHERE DO I THROW THIS?
OFFO RAJ, ITS DIRTY EVERYWHERE, JUST THROW IT ANYWHERE
SWEPT INTO A DRAIN...
THE BOTTLE GETS... CRUSHED...
GETS CARRIED AWAY...
...TO A RIVER...
PLASTIC BREAKS DOWN INTO FRAGMENTS AND FURTHER INTO MICRO PLASTICS
PLASTIC ENTERS OUR OCEANS


MEANWHILE, AS PLASTICS FLOAT INTO OUR OCEANS
PLASTIC BEEN MISTAKEN FOR FOOD
AFFECTING MARINE LIFE AND THE ENTIRE ECOSYSTEM
WOAH! LOOKS LIKE A GOOD CATCH
RAJ HURRY UP, YOUR DINNER IS GETTING COLD
YUMMY!
@SRINIMS_GANESH

Try This: Look around you carefully for a minute. How many of the things you spot are made of plastic? **Write down the number.**

From toothbrushes to toys to food packaging and even clothing - a surprising amount of things we see or use everyday is either made of plastic or have some plastic component to them. And yet, plastic is connected to the pollution of land and ocean, human health, wildlife, climate change, and much, much more.

So how did we end up using so much plastic? Is plastic all bad? **Let's find out.**

BACKGROUND INFORMATION: SECTION 1

PLASTIC PLASTIC EVERYWHERE!

Many properties of plastic make it an extremely useful and versatile material that can be used for many products and purposes across industries.

What makes plastic so useful

- Does not degrade easily
- Does not react with chemicals
- Lightweight but tough
- Affordable
- Mouldable
- Insulating and waterproof
- Resists fire
- Does not shatter
- Non-biodegradable

Where is plastic used?

- Electrical and electronic applications
- Packaging
- Construction
- Transport
- Defence
- Household products
- Medicine and healthcare
- Energy generation

Plastics Hide-and-Seek

Did you know?

The flavoured chewing gum we like to chew is partly made of plastic! Many other everyday things contain plastic but do not look like they do! How many do you know about?

Disposable paper cups

lined with plastic to make them waterproof

Face scrubs and other cosmetics

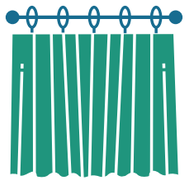
include microbeads of plastic

Cartons for beverages

lined with plastic to prevent moisture from getting in or out and to keep the contents fresh

Cigarette filters

made of tiny plastic fibres



Nylon, polyester, and acrylic fabrics

synthetic fibres made of plastic

Tea bags

made of paper with plastic fibres added to give them strength and shape

Glitter

made from a combination of aluminium and plastic

Aluminium cans

lined with plastic to prevent the liquid from reacting with the metal

Did you know?

766 million kgs of waste

The used cigarette butts that are so casually thrown to the ground make up around 766 million kilograms of trash every year. In fact, cigarette butts are the most discarded waste item worldwide!

Source: https://www.unep.org/technical-highlight/unep-secretariat-who-fctc-partner-combat-microplastics-cigarettes

Try This: Find out two other examples of everyday items that contain hidden plastic. Think of plastic-free alternatives or methods you could use.

1. _____ **Alternative:** _____

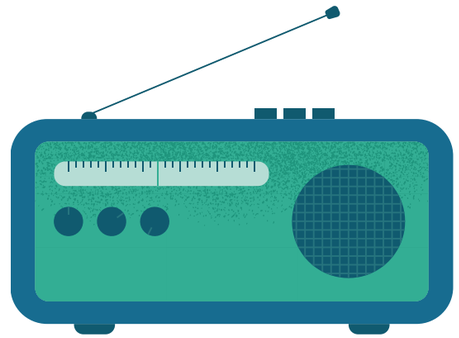
2. _____ **Alternative:** _____

KNOW YOUR PLASTICS!

Where does plastic come from?

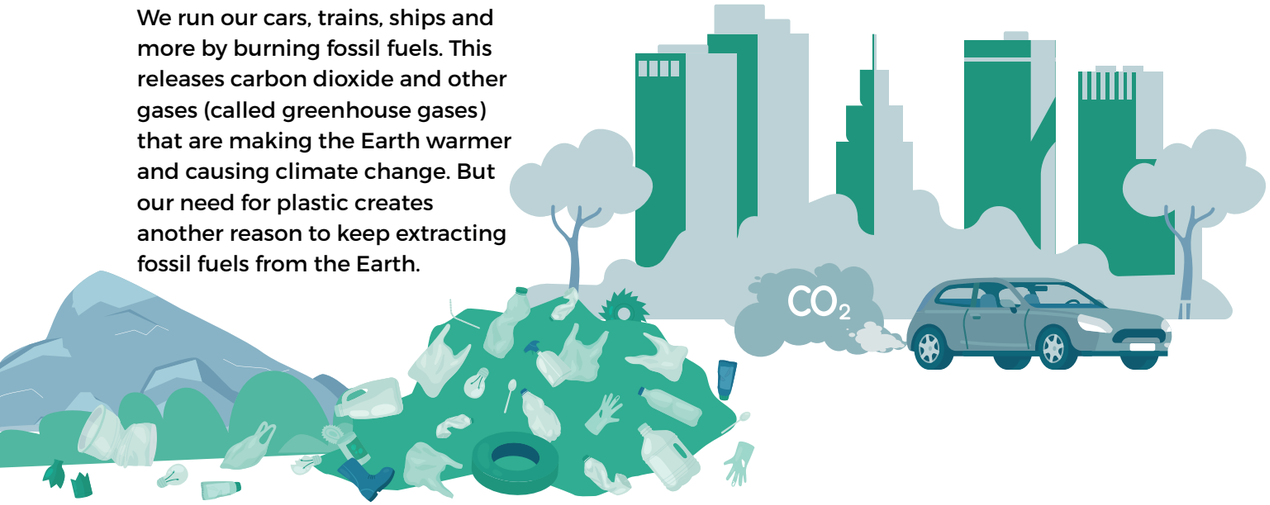
Almost all the plastics we commonly use is synthetic and made from substances that we get by processing fossil fuels - mostly coal, crude oil or petroleum, and natural gas.

The first synthetic plastic, Bakelite, was invented in 1907 by Belgian Chemist Leo Bakeland. You might find old radios and telephones that have parts made of Bakelite!



Plastics and Climate Change: What's the Connection?

We run our cars, trains, ships and more by burning fossil fuels. This releases carbon dioxide and other gases (called greenhouse gases) that are making the Earth warmer and causing climate change. But our need for plastic creates another reason to keep extracting fossil fuels from the Earth.



Plastic products also release of more greenhouse gases during their life cycle—from the time they are made from fossil fuels, to when plastic waste is discarded. Plastic waste that ends up in the environment releases more gases as it breaks down and affects many organisms that help combat greenhouse gas emissions. Even recycling plastic involves generating such greenhouse gases!

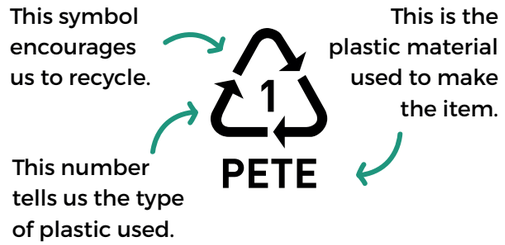
So, the more plastic we make, the more we contribute to climate change.

Is all plastic the same?

No, there are different kinds of plastic. Some plastics can be melted and transformed into new things easily while others cannot. This is why only some plastic items in our trash can be recycled and made into new things but others need to be disposed of differently.

Let's have a look at the table and get to know your plastic.

The symbol on a plastic product helps recyclers to sort plastic waste correctly by type so that it is recycled properly.



Try This: Check out the different grades of plastic. Identify the symbol on any three plastic items around you and make a note of its grade.

1 PETE	**Polyethylene Terephthalate (PET or PETE)** Bottles used for soft drinks, mineral water, cooking oil, and food trays	The most widely recycled plastic
2 HDPE	**High-Density Polyethylene (HDP)** Milk jugs, bottles, and containers for cleaning agents, laundry detergent, bleaching agents, shampoo, and shower gel	One of the easiest plastics to recycle
3 PVC	**Polyvinyl Chloride (PVC)** Piping, panelling, garden hoses, bottles, blister packs, clear packaging and shrink wrap for commercial products	Not commonly recycled
4 LDPE	**Low-Density Polyethylene (LDPE)** Packets for bread, produce, and other groceries, shopping bags, garbage bags, squeeze bottles	Not commonly recycled
5 PP	**Polypropylene (PP)** Drinking straws, packing tape, medicine bottles, furniture, luggage	Not commonly recycled
6 PS	**Polystyrene (PS)** Disposable cups and food containers, egg cartons, packaging "peanuts"	Sometimes recycled, but it is challenging and expensive to do so
7 OTHER	**Other Plastics** Baby bottles, large water cans, large plastic containers, mixed plastic materials polycarbonate, acrylic, nylon, and fiberglass	Not commonly recycled

sources: https://orf.od.nih.gov/EnvironmentalProtection/WasteDisposal/Pages/PlasticResinCodes.aspx , https://plasticactioncentre.ca/directory/plastic-by-the-numbers/

WHAT'S UP WITH SUPs?

Single-use plastic products, also known as SUPPs or SUPs, are meant to be used just once or for a short time and then thrown away or recycled. These plastics are most commonly used in disposable items that should not be reused.

SUPs are widespread because they are extremely convenient to use and have become a part of our daily lives.

Without being collected from garbage and recycled or disposed of properly, any plastic—single-use or otherwise—is a big problem for our planet. But because single-use plastics are so easy to use and throw, they pose a particular challenge.

Did you know?

We produce over 400 million tonnes of plastic every year worldwide. Around half of all this plastic produced every year is meant for single use. That's almost the same as the weight of the entire human population!

400

million tonnes of plastic

sources: https://ourworldindata.org/plastic-pollution ; https://www.unep.org/interactives/beat-plastic-pollution/

The True Cost of a Bottle of Water

All the plastic bottles sold in a day globally would form a pile almost as high as the Statue of Unity in Gujarat.

Wrapped in Plastic

Completely nuts or totally bananas!!

So many things we buy—from food items to appliances—come wrapped in plastic packaging. Plastic packaging includes food packaging such as food wrappers, packets, and takeaway containers. These are single-use plastic products too. Average lifespan of a plastic packaging is less than a year before it is discarded.

According to data from 2018, packaging makes up 46% of plastic waste globally. And where does this packaging waste end up? Around 40% ends up in landfills and 32% is lost in the environment. Only around 10% is recycled.

sources: https://www.science.org/doi/10.1126/sciadv.1700782 ,https://www.unep.org/resources/report/drowning-plastics-marine-litter-and-plastic-waste-vital-graphics , https://wedocs.unep.org/bitstream/handle/20.500.11822/41263/Plastic_Science_E.pdf

Did you know?

According to the report 'Global Plastics Outlook: Policy Scenarios to 2060', the world produces 460 million tonnes of plastic a year (based on 2019 data). Without urgent action, this is set to triple by 2060.

Source: https://www.oecd.org/environment/global-plastic-waste-set-to-almost-triple-by-2060.htm

SUPs As Healthcare Helpers

Single-Use Plastics are invaluable in healthcare. Many medical items are made from single-use plastics and are specifically designed to be used only once. This prevents cross-contamination and infection.

Disposable face masks and N95 masks

Disinfectant wipes and swabs

Disposable gloves

Bags, pouches, and tubes

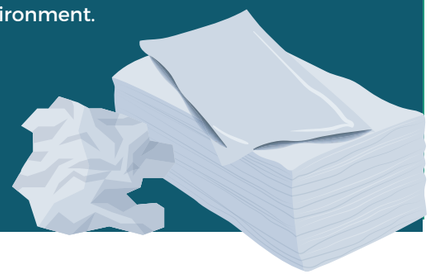
Did you know?

Microplastics are added to some hand sanitizers as a thickening agent!
A recent study found that 83% of 138 sanitizer and hand gel brands contained microplastics.

Source:
https://www.unep.org/news-and-stories/story/inside-clean-seas-campaign-against-microplastics

Fact check

- Wet wipes or perfumed tissues are very soft and feel like fabric, but they are not made of cotton. They are made of sheets of plastic fibres.
- Some types of surgical gloves are made of synthetic rubber. Although this is not a type of plastic, it is still bad for the environment.



Such plastic products are indispensable in healthcare because they help to save lives! So to curb the problem of plastic pollution, we must cut down on plastic products used for non-essential purposes in other industries and our homes and communities.

Plastics and the COVID-19 Pandemic

Plastic became indispensable during the peak of the COVID-19 pandemic over 2020-2022. To reduce the transmission of the virus that causes COVID-19, face masks, gloves, Personal Protective Equipment (PPE), and hand sanitizers came into common use for medical and healthcare professionals as well as the general public. But this also boosted the demand for and manufacture of single-use plastics and their disposal.

A study estimated that, up to August 2021:

More than

8 million tonnes

of pandemic-associated plastic waste were generated globally.

More than

25,000 tonnes

of plastic waste had leaked into the oceans.

This is around the weight of

2,000

double decker buses!

Source: https://www.pnas.org/doi/10.1073/pnas.2111530118

SO, WHAT'S THE PROBLEM WITH PLASTIC?

A.

Plastic is non-biodegradable.

Unlike fruit and vegetable peels, plastic cannot be broken down naturally by microbes such as bacteria and fungi into useful substances that are returned to nature. Instead, plastic takes hundreds of years to break down, releasing harmful chemicals in the process.

How Long Until It's Gone?

- Apple core **1 month**
- Paper tissue **2-4 weeks**
- Newspaper **6 weeks**
- Cardboard **2 months**
- Cotton T-shirt **2-5 months**
- Plywood **1-3 years**
- Plastic straw **200 years**
- Disposable wet wipe **100 years**
- Aluminium can **80 years**
- Foamed plastic cup **50 years**
- Plastic bag **15 years**
- Cigarette butt **2.5 years**
- Plastic water bottle **450 years**
- Plastic cup **450 years**
- Surgical face mask **450 years**
- Disposable diaper **500 years**
- Plastic toothbrush **500 years**

Note: How long items in the garbage last depends on where they end up and what the conditions are. Also, plastic breaks down into tiny pieces but never fully disappear. So, the timeline reflects how long it takes for these items to break down until they are no longer visible.

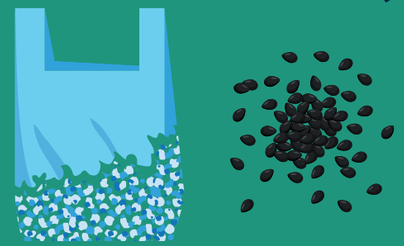
Sources:
https://www.statista.com/statistics/781901/decomposition-rates-of-select-materials/, https://www.statista.com/statistics/1192549/lifecycle-selected-plastic-product/ , https://oceanconservancy.org/wp-content/uploads/2017/05/4.-How_Long_chart.jpg , https://www.researchgate.net/figure/Estimated-degradation-time-of-polypropylene-face-masks-and-gowns-in-comparison-with-other_fig2_354199906 ,https://www.sciencedirect.com/science/article/pii/S2667010021002468

B.

Over time, plastic breaks down into tiny pieces, called microplastics, that gets everywhere!

Microplastics are less than 5 millimetres in length—that's about the size of a sesame seed! This makes them tough to clean up.

Today, microplastics are found everywhere - in the soil, air, and oceans - even in the table salt we sprinkle on food!

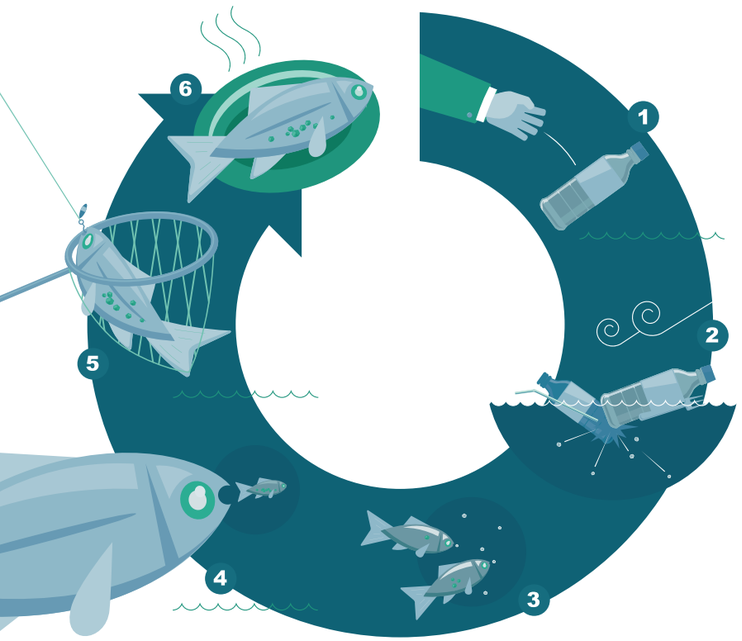


Microplastics **Sesame Seed**

Did you know?

In 2022, scientists found microplastics in fresh snow in Antarctica for the first time. It is believed some of them could have come from up to 6,000 km away! How do you think they travelled so far?

Source: https://tc.copernicus.org/articles/16/2127/2022/tc-16-2127-2022.html



C.

Microplastics collect in the environment and make their way into living things, including humans!

Plants take up microplastics from the soil through their roots. Fish and other aquatic organisms in rivers and the oceans eat microplastics in the water, mistaking them for food. Since one animal eats the other, microplastics and the harmful chemicals that release from them collect in their bodies. Eventually, microplastics reach our plates in the fruits, vegetables, and fish that we eat!

Scientists have found microplastics and nanoplastics (smaller than microplastics) in major human organs like the lungs and liver, in donated blood, and mother's milk.

Did you know?

A global study showed that, on an average,

a person might be eating 5 grams of microplastics a week!

That's roughly equal to the weight of one debit card or five paper clips.

Source: https://wwfint.awsassets.panda.org/downloads/plastic_ingestion_web_spreads_1.pdf

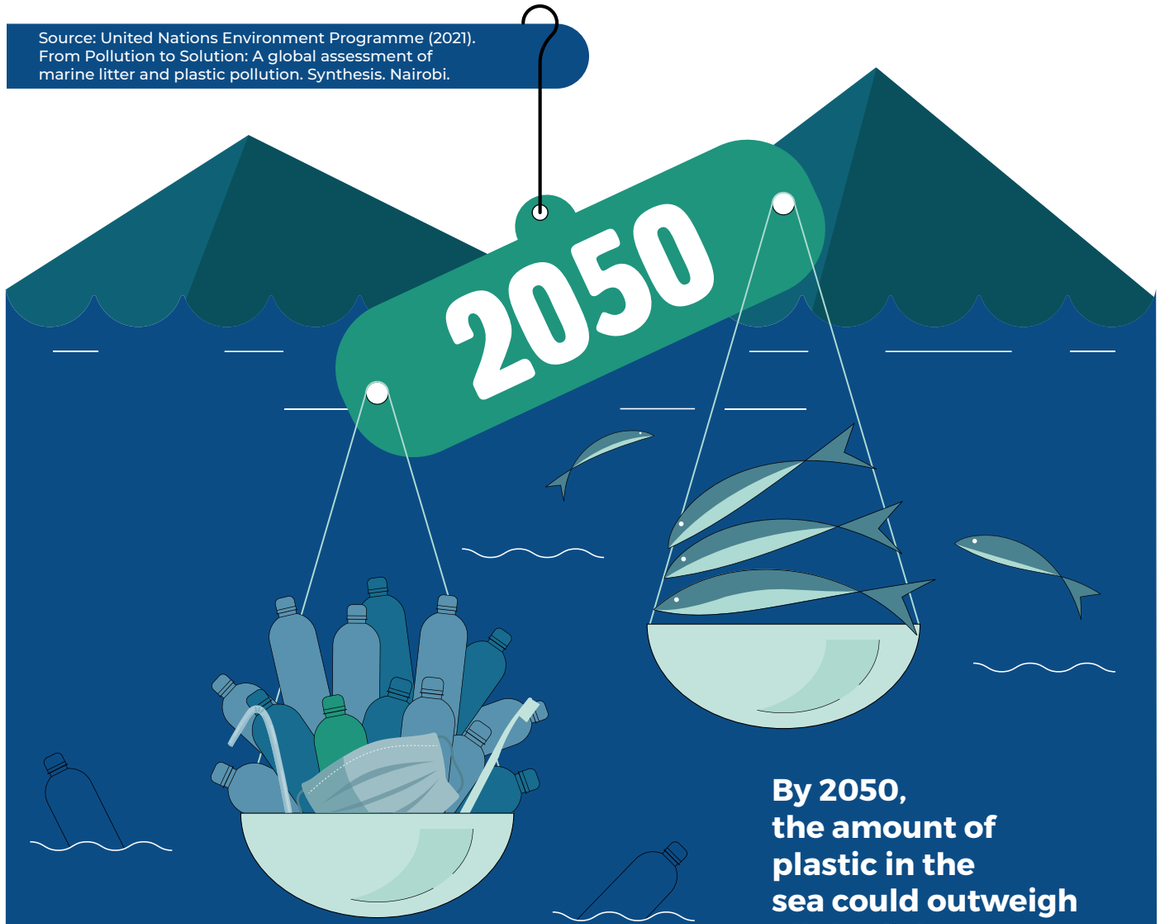
D.

Plastic waste remains in the environment while we keep adding more and more!

Because plastic lasts for so long, most of the plastic ever made still exists in the world in some form today. And it will last for decades or centuries more!

Despite this, we continue to make and use new plastic products, including SUPPs. During the past 40 years, global plastic production has more than quadrupled. Plastic pollution of the oceans and other water bodies is expected to be more than double by 2030.

Source: United Nations Environment Programme (2021). From Pollution to Solution: A global assessment of marine litter and plastic pollution. Synthesis. Nairobi.



By 2050, the amount of plastic in the sea could outweigh all the fish!

Source: https://www.weforum.org/press/2016/01/more-plastic-than-fish-in-the-ocean-by-2050-report-offers-blueprint-for-change/

E. **Plastic waste is not managed properly.**

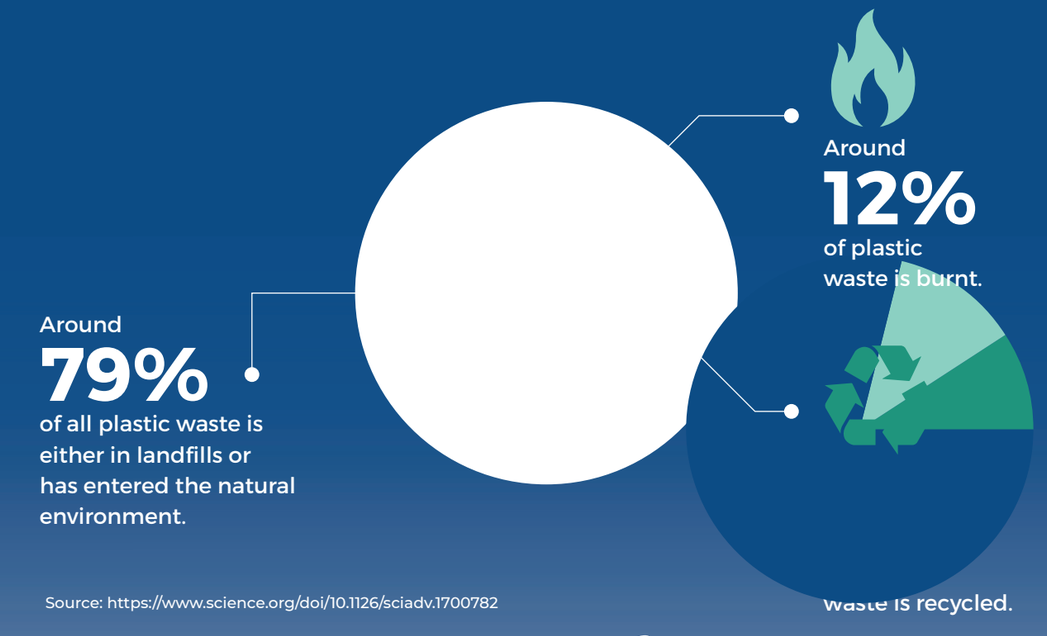
Most of the plastic we throw away ends up on roads or open lands, buried in soil, or in drains. Drains and sewage systems may lead to ponds, lakes, and rivers, or into the ocean. Trash piled up in huge trash dumps near a water body could overflow into the water body. Landfills are designated sites where solid waste should be dumped after all the waste that can be recycled or composted is segregated. But plastics that are recyclable end up there too!

THE FATE OF PLASTIC WASTE

Globally, in 65 years between 1950 and 2015:

8.3 billion tonnes
of plastic were produced.

6.3 billion tonnes
of the total became plastic waste.



Source: https://www.science.org/doi/10.1126/sciadv.1700782

The numbers seem scary. But there's good news! We can turn the tide on plastics. Each one of us can do something to tackle plastic pollution. And we're going to start right now.

Let's get started with the Tide Turners Plastic Challenge and begin your journey of change!

CHALLENGE CATEGORIES:

Which of these groups do you belong to?

- **Individual**
- **Groups:** Schools, Eco-Clubs, Youth Groups or Youth Institutions
- **Special Category:** Institutions/Groups working with youth from marginalized sector, Indigenous communities, differently abled
- **National Cadet Corps (NCC)**
- **Youth in the Workplace**

Individual:

Sign up as an Individual on **www.tide-turners.org** and begin your journey

Level 1: Entry Level

Read the toolkit and take the Plastic Literacy Test (PLT)
Qualify for the next round by scoring minimum 50% marks

Level 2: Leader Level

Step 1: Conduct a survey with at least 10 stakeholders to record the level of awareness and implementation of the SUP ban in your area. You can target any of the following areas:

- Option 1: Hotels / Restaurants / Food stalls / Hospitality
- Option 2: Households / Residential area
- Option 3: Vegetable or Fruit Markets or any other market complexes

Tip: Download the survey questionnaire from your dashboard

Step 2: Analyse the survey findings and identify possible solutions

upload:
i. Upload action photographs with stakeholders
ii. Upload a short report of the survey findings

Level 3: Champion Level

Complete any one of the following activities to become a champion!

Activity 1: Encourage the implementation of the SUP Ban:

Note: Remember to take photos of your interactions with stakeholders and changes in the SUP use practices

Step 1: Sensitize and influence the target group reached out to during the leader level to implement a SUP Ban in their establishments. You can use the resources from the library section (tide-turners.org) to generate awareness.

Step 2: Encourage stakeholders to adopt processes and color bin systems as per the waste management rules at the premises.

Step 3: After a week, evaluate how your intervention has affected the practices and behaviors in the target group.

Step 4: Make the establishment owner sign a pledge to implement SUP ban.

Upload:
i. Brief report on your intervention with the target group
ii. Upload up to five photographs of SUP ban implementation (Before)
iii. Upload up to five photographs of SUP ban implementation (After)

Note: Remember to take before and after photos of the clean-up site.

Activity 2: Conduct a clean-up drive.

Step 1: Organize a clean-up drive and engage various stakeholders

Step 2: Measure the amount of plastic waste collected

Step 3: Handover the collected waste to authorized waste recyclers or waste collection centers in your area

Step 4: Connect the waste recyclers/ collection centers with the stakeholders for ensuring sustainability of the initiative

Upload:
i. Upload up to 5 photographs from the clean-up (Before)
ii. Upload up to 5 photographs from the clean-up (After)

BACKGROUND INFORMATION: SECTION 2

Before you get started on the next level of challenges, let's take a closer look at plastic pollution and its impact on our environment.

HOW PLASTIC HURTS THE PLANET?

Plastic pollution has real effects on land, air, and water, with a domino effect that impacts all living things on Earth.

Plastic waste blocks storm water drains and sewage systems, causing floods in towns and cities.

Burning plastic waste as a means of disposal releases harmful gases into the air. Other processes linked to the life cycle of plastic release greenhouse gases that warm the Earth and cause climate change. Microplastics pollute the air as well.

Plastic waste changes the properties of soil and leaks harmful chemicals. These affect the quality of soil and the health of plants including our crops, and soil-dwelling organisms.

Plastic in waterbodies contaminates water with harmful chemicals and microplastics. Chemicals that leak from plastic waste in landfills also contaminate groundwater, affecting our drinking water supply.

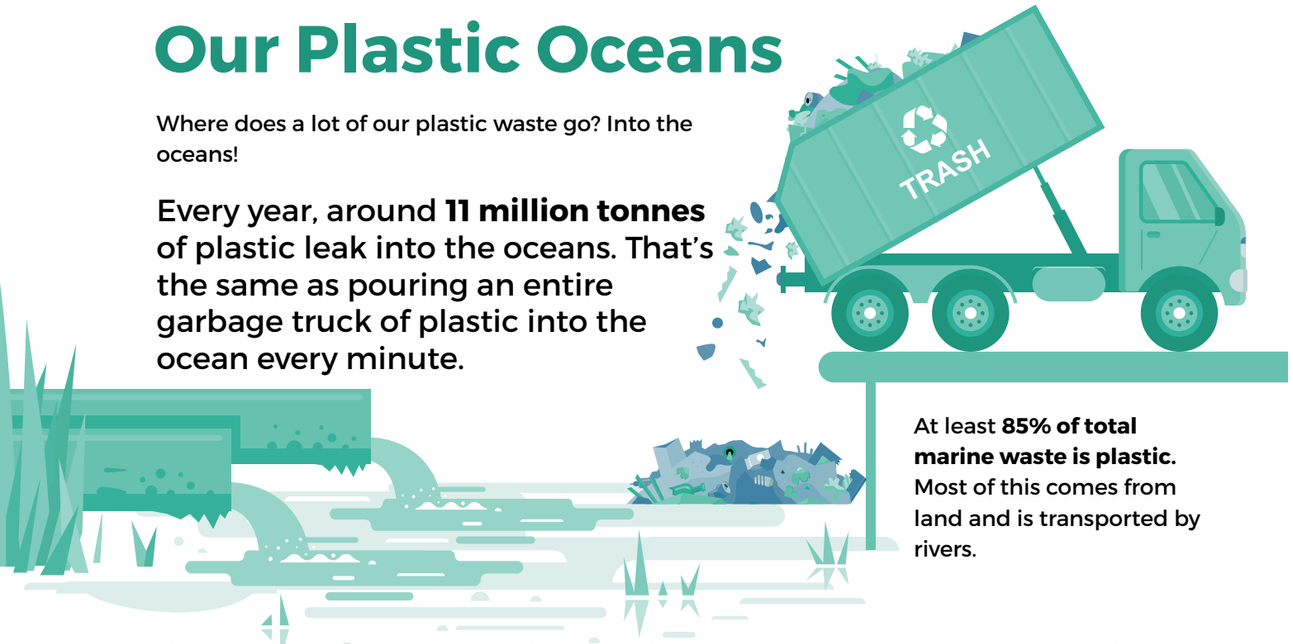
Plastic in the ocean is degraded by sunlight and seawater. It releases greenhouse gases and chemicals that harm marine life.

Many animals get entangled or trapped in plastic waste and die. Many animals eat plastic mistaking it for food. As floating plastic absorbs chemicals from the water, it passes them on to the animals too! All this harms marine life!

Our Plastic Oceans

Where does a lot of our plastic waste go? Into the oceans!

Every year, around **11 million tonnes** of plastic leak into the oceans. That's the same as pouring an entire garbage truck of plastic into the ocean every minute.



At least **85% of total marine waste is plastic.** Most of this comes from land and is transported by rivers.

Plastic waste is now so widespread, it is found in all the world's oceans and seas. **Plastic has even been found in the Mariana Trench, the deepest point in the ocean!**

This has massive impacts on animals such as sea birds, fish, dolphins, turtles, and more. Over 800 species of animals are harmed by marine litter either when they swallow it or when they get entangled in it. Scientists predict that by 2050, around 99% of sea birds would have swallowed plastic.

Sources: https://www.unep.org/interactives/pollution-to-solution/?lang=EN ; https://www.pnas.org/doi/full/10.1073/pnas.1502108112 ; https://news.un.org/en/story/2016/12/547032

Did you know?

Fishing gear like nets and traps that have been lost or abandoned in the oceans continue to 'fish' for animals by entangling them. This is known as 'ghost fishing' and causes an unnecessary loss of marine life!

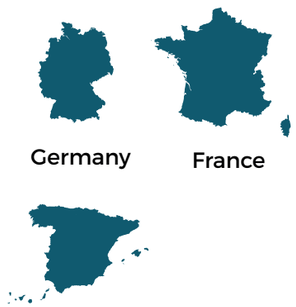
About 10% of marine debris is lost or abandoned fishing gear, which is called 'ghost gear'. Ghost gear affects 66% of marine mammals and 50% of seabirds and all species of sea turtles. It also damages coral reefs and other habitats.

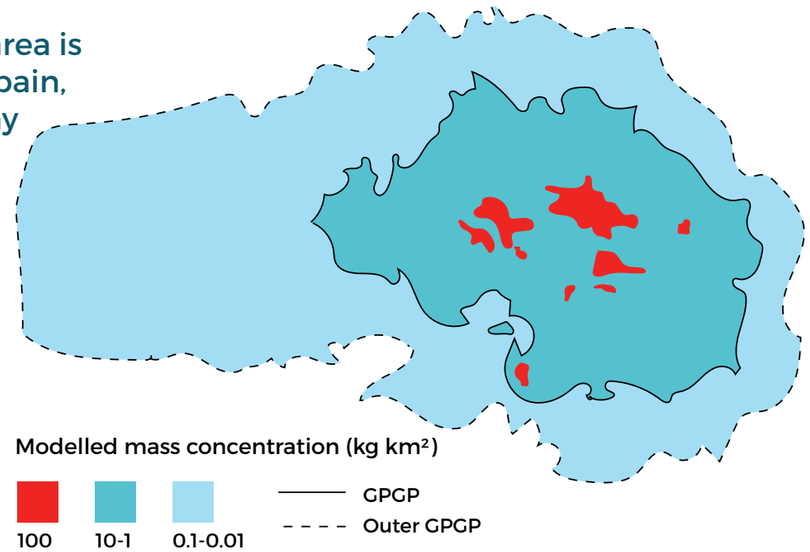
Source: https://tc.copernicus.org/articles/16/2127/2022/tc-16-2127-2022.html ; https://files.worldwildlife.org/wwfcmsprod/files/Publication/file/3c1g4qur2t_ADVOCACY_REPORT_singles.pdf?_ga=2.216641302.1449930867.1665414123-384548275.1665414122

The Oceans' Garbage Dumps

Plastic waste in the oceans moves with the wind and ocean currents. Rotating ocean currents, called gyres, collect this debris into large soup-like patches of garbage. These oceanic garbage patches can contain debris ranging in size from microscopic fragments of plastic to bundles of fishing gear and large objects. **There are five gyres in the world's oceans.**

The largest garbage patch is **the Great Pacific Garbage Patch.** Its area is more than that of Spain, France, and Germany combined!





HOW PLASTIC HURTS PEOPLE?

Plastic waste doesn't just affect our environment and other species—its domino effect can impact people too.

It affects health

With microplastics found everywhere, we are now breathing them in with the air and ingesting them through food and water, and even absorbing nanoplastics from skincare products through our skin!

It is not yet completely clear what the long-term impacts on our health could be. Scientists are finding out. But chemicals that leak from plastic waste do affect our health, causing various illnesses and cancer.

It affects economies

The impacts of plastic pollution on our natural environments and their species also affect the activities that drive our economies and provide people with livelihoods.

Agriculture, tourism, ships and ports, fishing, aquaculture, and more - many economic activities are impacted by plastic waste. For example, polluted beaches discourage tourists from visiting, and large-scale clean-ups are expensive for coastal communities to conduct. Plastic debris damages ships and boats and affects their movement through waterways and harbours. By contaminating water, plastic affects the fish that many depend on for their food and livelihoods.

It affects communities

Many communities that lack government support and funding find it difficult to take action against plastic pollution. So, these communities end up suffering vast amounts of plastic waste.

Specific groups - women, children, waste workers, coastal communities, indigenous groups, and people who depend on the ocean - experience the impacts of plastic pollution more. This is how plastic pollution can affect everyone's quality of life.

Groups: Schools, Eco-clubs, Youth Groups Or Youth Institutions

You can participate in the challenge activities as a team. Form a group of at least five members, with every group having a leader/ coordinator. Sign up as a group on **www.tide-turners.org** and begin your journey!

Level 1: Entry Level

Step 1: Listen and learn- Organize a talk for group members based on content in the challenge toolkit

Step 2: Download the Plastic Literacy Test from the dashboard

Step 3: Conduct the Plastic Literacy Test for the group members

Step 4: Evaluate the individual response sheet, and you're done!

Tell us how your group performed:
i. How many members took the Plastic Literacy Test?
ii. How many members qualified by scoring minimum 50% marks?

Tip- You can either print or project the questions or write it on the classroom blackboard

Do not forget to capture and share photos of the awareness talk and the Plastic Literacy Test.

Level 2: Leader Level

Organize awareness drive on single-use plastics in your school/institution or at a community level. For a better impact, organize the activities for at least two days. Complete a minimum of two activities to qualify for this level!

Here are some options that one group can consider for your awareness drive:

Option 1: Set up an exhibition on SUPs.

Option 2: Hold competitions such as debate, quiz, song, poetry, poster, rangoli, etc.

Option 3: Organize an awareness rally, nukkad-natak, or street play

Option 4: Create a Tide Turners Plastic Challenge Display Board in your institution or community. Display information on plastic pollution, the single-use plastics ban, and practical alternatives to plastics.

Option 5: Invite an expert for an interactive session on SUPs.

Option 6: Any other activity that helps you raise awareness.

Did you enjoy the activity?
Tell us all about it to progress to the next level.

i. How many activities did you conduct?
ii. What kinds of activities did you organize and when?
iii. How many group members were engaged in conducting the activities?
iv. How many people were reached through your awareness drive?
v. Whom did you engage in the activities?

Take your action to the next level by getting media coverage. Do share photographs of all the impact you have created!

Level 3: Champion Level

Option A: Conduct a clean-up drive

Make sure to take necessary permissions in advance and implement safety measures for sanitation and health before conducting the clean-up.

Step 1: Identify an ecologically significant area impacted by plastic waste

Step 2: Organize a clean-up drive engaging all your group members.

Step 3: Measure the amount of plastic waste collected

Step 4: Handover the collected waste to authorized waste recyclers or waste collection centers in your area.

Tell us more about your achievements to ace the champion level:

i. Which location did you choose for the clean-up activity?

ii. How many group members conducted the clean-up drive?

iii. Which stakeholders did you engage in the drive?

Ragpickers, Kabadiwalas, Municipal workers, vendors, etc.

iv. How many kilograms of plastic waste did you collect?

(Tip- Look for a coastal area, river bank, lake or pond, a forest, national park or a city forest)

Do not forget to take photos with the before and after look of the clean-up site as well as the plastic waste collected.

Option B: Set up a SUP collection and disposal system.

Step 1: Create a system of SUP collection and disposal.

Step 2: Reduce SUP use or find alternatives and start an enterprise.

Step 3: Take any other necessary action to bring about a change on-ground.

Report: Draft a report that includes

i. The solutions and alternatives identified under this activity.
Ii. A description of the disposal system and alternatives.

Upload:

i. Upload up to 5 photographs

Special Category

Institutions/Groups working towards the upliftment of youth from marginalized sector, Indigenous communities, differently abled can sign up as a group on **www.tide-turners.org**

Level 1: Entry Level

Step 1: Host an orientation session for your group members

Step 2: Conduct a Plastic Literacy Test for group members

Step 3: Evaluate the individual response sheet, and you're done!

Tell us how your group performed:

i. How many members took the Plastic Literacy Test
ii. How many members qualified by scoring 50% marks?

Level 2: Leader Level

Organize an awareness drive on single-use plastics in your community. Here are ideas for awareness activities. (It is mandatory to conduct one activity.)

Activity 1: Organize an awareness rally, nukkad-natak, or street play in your institution, neighbourhood , sabha charcha etc

Activity 2: Invite an expert such as an innovator, teacher, municipal official, or local NGO for an interactive session on SUPPs.

Activity 3: Any other activity that helps raise awareness

Did you enjoy the activity? Tell us all about it to progress to the next level

i. The number of participants engaged
ii. The total number of activities conducted
iii. The total number of people reached out to

Level 3: Champion Level

Group can conduct any one or both of the following activity suggestions.

Activity 1: Conduct a plastic clean-up.

Step 1: Plan a clean-up drive engaging all your group members at your institution with the help of teachers or institutional staff.

Step 2: Request the teachers or institutional staff to collect and segregate the waste and connect with a Recycler to send the SUPs for recycling.

Tell us more about your achievements to ace the champion level:

i. The type of site selected for the clean-up drive
ii. The number of members engaged in the clean-up
iii. The amount of plastic collected in grams or kilograms

Activity 2: Take the TTPC pledge
Do share photographs of all the impact you have created!

BACKGROUND INFORMATION: SECTION 3

The plastic problem is enormous, but it can be solved. Let's explore some solutions and learn about how countries and communities are tackling the plastic problem.

SO, WHAT CAN WE DO ABOUT PLASTIC WASTE?

A. Reduce the Waste We Create

The most important step we can take to curb plastic pollution is to turn off the tap on plastic waste. Simple substitutions can help us avoid using single-use and problematic plastic products and reduce the plastic waste we generate.

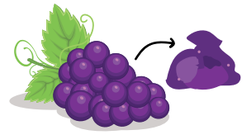
If using a plastic product is unavoidable, reusing it for as long as possible and later repurposing it for other uses extends its life before it becomes waste.

What makes it challenging: With plastic being so cheap and widespread, a lot of things we use every day are either made of plastic, packaged in plastic, or have some plastic components. This makes it difficult for consumers to go completely plastic-free.

B. Find Alternatives to Plastic

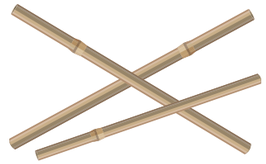
Plastic, being durable and versatile, is hard to replace. To stop plastic at its source, we need to find suitable alternatives that have less of an impact on the environment and are sustainable. New materials with similar properties are being researched and developed as alternatives. Let's take a look at some interesting examples.

A protein found in milk can be treated to make a packaging film that is degradable, edible, and much better at preventing food spoilage than plastic.



Grape waste that is left after grapes are squeezed for juice during wine-making can be used to make a synthetic leather. This could be an environment-friendly option to plastic-based synthetic leathers.

Various companies have launched edible cutlery in India. This may be made from multigrain flour, millets, wheat bran, and so on, and is biodegradable too!



Plastic-free rice straws that biodegrade within 60-90 days are being made using rice flour and tapioca starch. Fruit or vegetable juice is added for colour. Wheat is used to make pasta straws too!

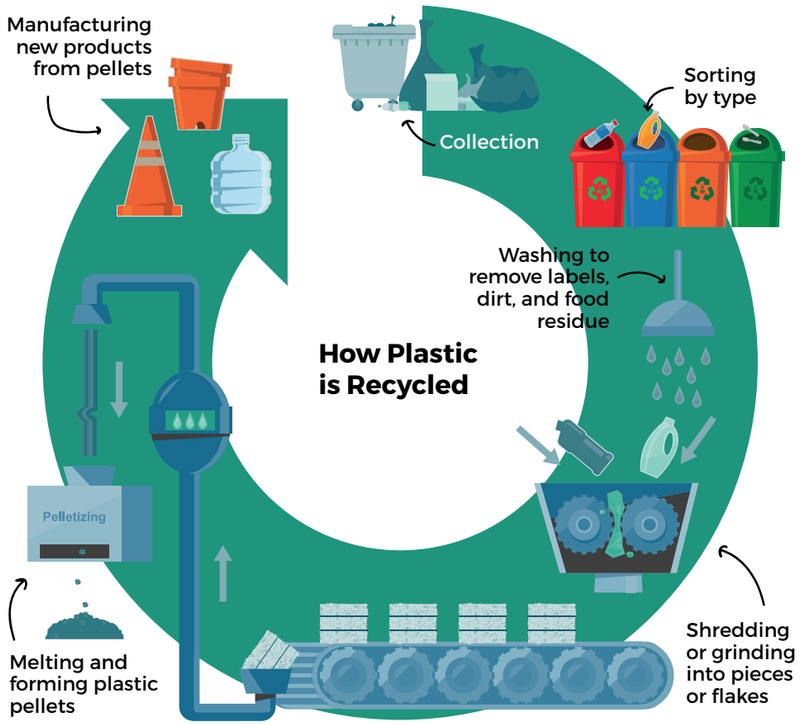
What makes it challenging:

Many sustainable alternatives to plastic can be expensive to manufacture on a large scale. We need to find economical ways of producing them and ensure we have systems to dispose of them correctly after use.

C. Recycle Plastic Waste

We do not yet have enough sustainable alternatives to plastic available easily. So we should use plastic that can be avoided responsibly and recycle it as far as possible.

Some types of plastic can be recycled by melting and processing it into new plastic products. Other plastics can be broken down chemically. Some plastics cannot be recycled at all and are simply burnt. If plastic waste is not recycled, most of it ends up in a landfill or littering the environment.



Fact check

Burning or incineration is a harmful way of disposing of plastic as it releases many polluting and toxic gases, as well as carbon dioxide, the main greenhouse gas that causes global warming.

Waste-to-energy plants burn waste, including plastic waste, to generate electricity. But studies have shown that recycling waste saves more energy—by reducing the need to extract fossil fuel and make new plastic—than burning waste can generate.

Source:
https://www.nationalgeographic.com/environment/article/should-we-burn-plastic-waste

We can do our part to make recycling efficient by cleaning our plastic waste as well as possible and segregating it from household garbage. This would go a long way towards making plastic recycling easier.

What makes it challenging:

The process of recycling needs a lot of resources and effort. Plastic waste needs to be properly separated from other garbage, grouped by type correctly, and cleaned thoroughly before recycling. Not all plastic is recyclable either and some products are a mix of different plastics! This makes recycling an expensive process while new plastic is cheap to make, which is why the demand for recycled plastic is low. So, while recycling helps manage some plastic waste, it is more important to reduce or stop our use of plastic altogether.

Did you know?

Every time plastic is recycled, its quality decreases. Most plastic can be recycled only a few times before it becomes unusable. Therefore non-recyclable plastics will eventually end up in dumpsites or landfills.

Fact check

Products such as garbage bags and grocery bags are labelled as ‘compostable’, ‘biodegradable’, or ‘oxo-degradable’ and are said to be environment-friendly alternatives to plastics. But that’s not necessarily true. Here’s why.

Biodegradable and compostable plastics can be made either from fossil fuels (like conventional plastics) or from natural materials. They may be biodegradable but only under specific conditions, and this too may be possible only in a recycling plant! At other times, these plastics might biodegrade slowly or not at all or break down into microplastics.

Oxo-degradable plastics can break down into microplastics or break down chemically under certain conditions. They are not biodegradable by microbes.

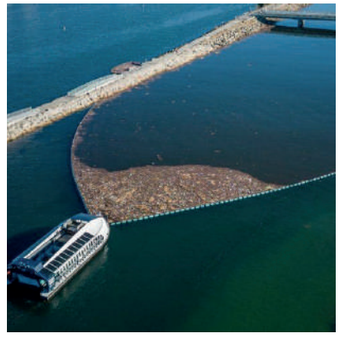
If these products are not separated from other plastic waste, they actually contaminate the plastic waste and make recycling difficult. These need to be segregated and treated separately from plastic waste. So you see, plastics labelled as environment-friendly can be just as polluting and difficult to manage as conventional plastics!

Source:
https://www.eea.europa.eu/publications/biodegradable-and-compostable-plastics#:~:text=Although%20biodegradable%20and%20compostable%20plastics,conventional%20plastics%20when%20collected%20together.

D. Clean Up Plastic Waste

Many communities, businesses, and organisations globally are working to clean up plastic waste from the environment. Efforts range from community clean-ups to large-scale campaigns to innovative inventions!

The Ocean Cleanup, a non-profit organisation is cleaning the ocean of floating plastic waste using a special U-shaped net pulled by boats. It has so far removed 194,092 kg of trash from the Great Pacific Garbage Patch.

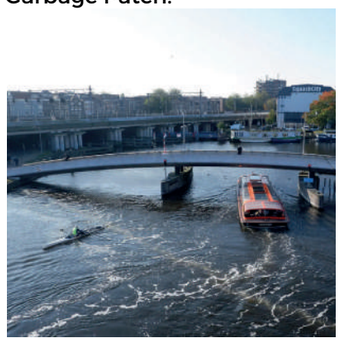


The Ocean Cleanup has also placed unique vessels and barriers, called interceptors, on certain rivers to trap trash before it enters the ocean.

© the ocean cleanup

A machine called Mr. Trash Wheel at Baltimore Harbor, USA, uses solar and hydro power to trap trash from the water.

© Dicklyon, Wikimedia Commons



In Amsterdam, the Netherlands, a 'bubble barrier' or stream of rising bubbles across a canal is being used to push plastic waste to one side for collection.

© The Great Bubble Barrier®

An Indian company makes stainless steel mesh fences that direct river trash towards the shore for collection. Thirty-four fences are currently installed in eight Indian cities.

What makes it challenging: Cleaning up microplastics is tough as they are very tiny and difficult to separate from other particles like silt, clay, and plant debris.

Did you know?

Microplastics can be tracked from space! Data from satellites may tell us where the ocean surface is smoother, which might indicate the area that has more microplastics.

Source: https://www.nasa.gov/feature/esnt2021/scientists-use-nasa-satellite-data-to-track-ocean-microplastics-from-space

Try This: Put on your thinking cap and design an invention that helps clean up plastic waste in your community. Build a model using cardboard or other easily available materials.

E. Regulate Plastic Products

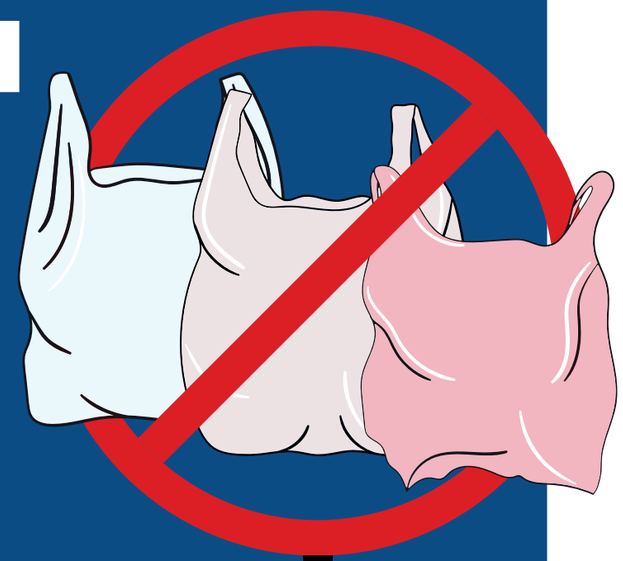
Countries around the world are taking the challenge of plastic pollution seriously. According to a 2018 report, as of July 2018, at least 127 countries had adopted laws or rules to regulate plastic bags—ranging from bans to phase-outs to laws that encourage the use of reusable bags. At least twenty-seven countries have enacted some type of ban on single-use plastics—either on products such as cups and straws, or materials, or production.

source: https://www.unep.org/resources/report/legal-limits-single-use-plastics-and-microplastics

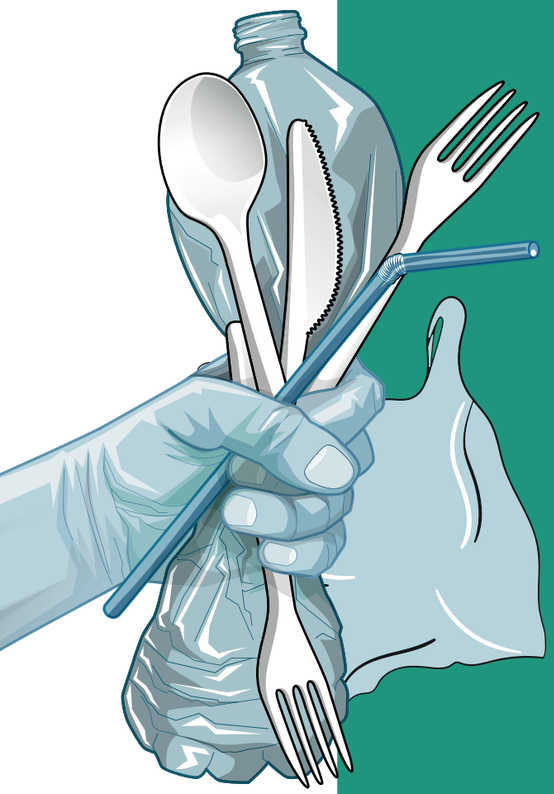
What makes this challenging: Many countries have not outright banned all plastic bags. Very few restrict plastic bag manufacturing or production. There are also many exemptions and exceptions under various Plastic Waste Management rules, which is why plastic bags and other single-use plastic products are often still allowed. Countries need to improve the design and implementation of laws to protect the planet as well as industries and livelihoods.

Did you know?

In India, under the Plastic Waste Management Amendment Rules, 2021, plastic carry bags having a thickness of less than 120 microns have been banned.



Plastic Regulations around the World



In Africa, 34 countries have some type of ban or restriction on the manufacture or production, importation, and retail distribution of plastic bags.

In July 2021, a ban on single-use plastics came into effect in the European Union. All plastic packaging on the EU market will be recyclable by 2030!

New York City, USA, banned all Styrofoam products in 2019.

Norway has a unique deposit return model that has allowed 97% of all its plastic bottles being recycled! When a consumer buys a plastic bottle, they are charged a small additional fee. This is returned to them when they return the bottle!

From April 2022, the UK has enforced a plastic packaging tax on plastic packaging with less than 30% recycled plastic.

Japan has no ban on single-use plastics, and instead is the second largest generator of plastic packaging waste on a per-capita basis after the USA. But with a very effective waste management system and a high degree of awareness amongst people, the country is responsible for only a limited leaking of single-use plastics leak into the environment.

Sources: Legal Limits on Single-Use Plastics and Microplastics: A Global Review of National Laws and Regulations, UNEP;
https://environment.ec.europa.eu/topics/plastics/single-use-plastics/eu-restrictions-certain-single-use-plastics_en#:~:text=The%20EU%20is%20acting%20against,of%20the%20EU%20Member%20States ;
https://edition.cnn.com/2019/07/01/business/new-york-styrofoam-ban-trnd/index.html ;
https://www.sciencealert.com/norway-s-recycling-scheme-is-so-effective-92-percent-of-plastic-bottles-can-be-reused ;
https://www.gov.uk/guidance/check-if-you-need-to-register-for-plastic-packaging-tax#:~:text=Packaging%20should%20only%20contain%20recycled,tonne%20from%201%20April%202022 ;

India Takes Action on SUPPs

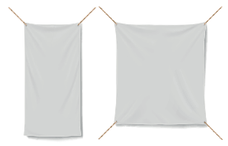
In 2022, India imposed a ban on identified single-use plastic items, such as plastic cups and straws, that have low utility and high littering potential. The manufacture, import, stocking, distribution, and sale of these single-use plastic products were declared prohibited from 1 July 2022.

Single-use plastic items prohibited in India from 1 July 2022


Straws

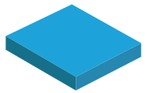

Ear buds with plastic sticks


Stirrers


Plastic or PVC banners less than 100 micron


Plastic sticks for balloons


Plastic flags


Polystyrene or thermocol for decoration


Plastic Ice cream sticks


Wrapping or packing films used around sweet boxes, invitation cards, and cigarette packets


Candy sticks

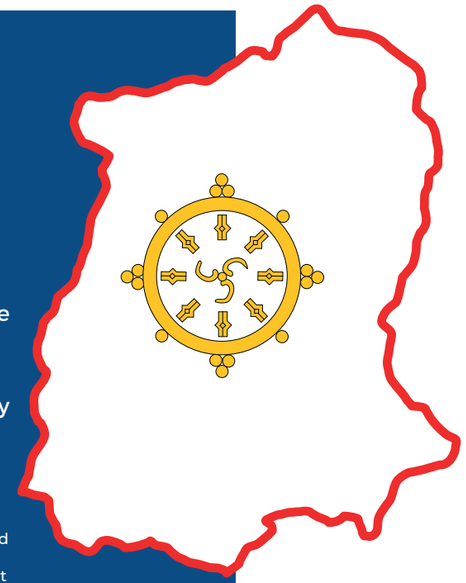

Plates, cups, glasses, and cutlery such as forks, spoons, knives, and trays

Source: https://pib.gov.in/PressReleasePage.aspx?PRID=1837518

Did you know?

In 1998, the state of Sikkim banned disposable plastic bags, becoming the first state in India to do so. It later banned the use of packaged drinking water in government offices and events as well as disposable plates and cutlery made of Styrofoam and thermocol in the entire state. From 1 January 2022, plastic water bottles of capacities 2 litres and below were banned too.

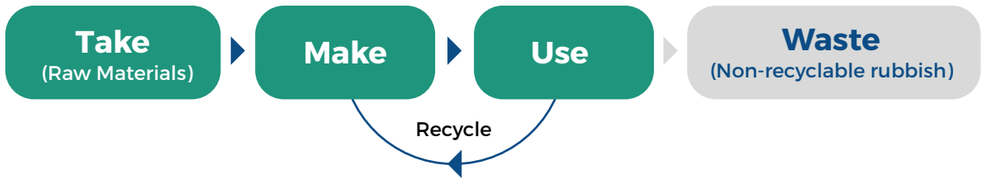
Source:
https://www.unep.org/news-and-stories/story/how-indian-state-sikkim-working-end-plastic-pollution ;
https://www.telegraphindia.com/states/sikkim-ban-on-use-sale-of-plastic-water-bottles-of-capacities-of-2-litres-and-below-implemented/cid/1845799



THE CIRCULAR SOLUTION

Most economies work in a linear way. Resources are extracted from the Earth and made into products that are used and then discarded. Such products become waste or may cause pollution if the waste is not managed properly.

The Linear Economy Model



A circular economy is more sustainable because it follows a model similar to the cycles of the natural world. Resources and products are circulated for as long as possible, waste is prevented and as a result, nature regenerates.

To benefit from plastics while also protecting our planet from harm, we must rethink and change the way we design, make, use, and dispose of plastics to create a circular economy.

The Circular Economy Model

According to the Ellen MacArthur Foundation, to create a circular economy for plastic, we must take three actions:

Eliminate
all problematic and unnecessary plastic items

Innovate
to ensure that the plastics we do need are reusable, recyclable, or compostable.

Circulate
all the plastic items we use to keep them in the economy and out of the environment

Source:
https://ellenmacarthurfoundation.org/plastics-vision

WHAT DO GOVERNMENTS NEED TO DO?

Governments are the key to ensuring a change in our relationship with plastics. There are several things they can do to help curb plastic pollution.

- Cut down on plastic items that we can easily avoid.
- Ensure all plastic products are properly labelled so that everyone knows what can be recycled and how.
- Encourage and invest in research and innovation for new solutions to the plastic problem.
- Raise awareness of how cutting out single-use plastics is essential for the health of our planet.
- Create strong policies that encourage everyone—from oil processing corporations to plastic manufacturers, recyclers, and consumers—to adopt new systems and designs that ensure a circular model of plastic production and use.

But that's not all. To tackle plastic pollution effectively and make government efforts a success, everyone has to do their part. Businesses, institutions, and communities need to make sure government policies are enforced locally and that plastic is used responsibly and waste is managed properly.

WHAT ARE WORLD LEADERS DOING ABOUT PLASTICS?

Plastic pollution affects places far beyond national borders and needs an internationally coordinated response.

The United Nations Environment Assembly is an international body with 193 member countries that meet every two years to make important decisions on the environment. In March 2022, at the fifth UN Environment Assembly, 175 countries agreed to develop a legally binding agreement on plastic pollution by 2024. This agreement will cover different aspects of the life cycle of plastics and will be a major step forward towards solving the plastic pollution puzzle!

National Cadet Corps:

Level 1: Entry Level

Step 1: Listen and learn- Organize a talk for group members based on content in the challenge toolkit

Step 2: Download the Plastic Literacy Test from the dashboard

Step 3: Conduct the Plastic Literacy Test for the group members.

Tell us how your group performed:

i. How many members took the Plastic Literacy Test
ii. How many members qualified by scoring 50% marks?

Level 2: Leader Level

Complete at least one of the following activities to progress to the champion level

Tip: You can innovate and implement any other activity of your choice to create impact at community level

Activity 1- Organize a rally/Street Play/Nukkad Natak/ Sabha Charcha or a similar community awareness activity

Activity 2- Cadets can conduct one-on-one discussions with community groups such as fishers (in coastal states), shopkeepers in markets, and the public. Connect your work with the Puneet Sagar Abhiyaan.

Did you enjoy the activity? Tell us all about it to progress to the next level

i. What kinds of activities did you organize and when?
ii. How many group members were engaged in conducting the activities?

Take your action to the next level by getting media coverage. Do share photographs of all the impact you have created!

How many people were engaged in the activities?

iii. Who all participated in the activities?
iv. How many activities did you conduct?

Level 3: Champion Level

Step 1: Identify an ecologically significant area impacted by plastic waste

Step 2: Organize a clean-up drive engaging all your cadets

Step 3: Measure the amount of plastic waste collected

Step 4: Handover the collected waste to authorized waste recyclers or waste collection centers in the targeted area.

(Tips- Look for a coastal area, riverbank, lake or pond, a forest, valleys, hills, national park or a city forest)

Step 5: Take the TTPC Pledge with your cadets or group members.

Tell us more about your achievements to ace the champion level:

i. Which location did you choose for the clean-up activity?
ii. How many group members conducted the clean-up drive?
iii. Which stakeholders did you engage in the drive? (Ragpickers, Kabadiwalas, Municipal workers, vendors, etc.
iv. How many kilograms of plastic waste did you collect?

Do not forget to take photos with the before and after look of the clean-up site as well as the plastic waste collected.

Challenge Activities For Youth In The Workplace

Sign up on **www.tide-turners.org** as a group of at least 10 or more members, to begin your challenge journey

Level 1: Entry Level

Step 1: Be a bookworm and learn all about plastics from this toolkit

Step 2: Download the Plastic Literacy Test from the dashboard

Step 3: Conduct the Plastic Literacy Test for the group members

Step 4: Evaluate the individual response sheet, and you're done!

(Tip- You can either print or project the questions or write it on the meeting board)

Tell us how your group performed:

i. How many members took the Plastic Literacy Test
ii. How many members qualified by scoring 50% marks?

Level 2: Leader Level

You can innovate and implement any other activity of your choice to create impact at community level

Complete at least one of the following activities to progress to the champion level

Activity 1- Organize an exhibition in your office to sensitize your colleagues about Plastics and its impact on the environment. You can set up an exhibition on alternatives to Single-Use plastic Products

Activity 2- Organize a marathon, Cyclothon or any similar activity to promote community action against usage of SUPs

Activity 3: Conduct a talk or organize a movie screening in your office for the families of your colleagues. Do not forget to invite the children!

Did you enjoy the activity? Tell us all about it to progress to the next level

i. What kinds of activities did you organize and when?
ii. How many group members were engaged in conducting the activities?
iii. How many people were reached out through the activities?
iv. Whom did you engage in the activities?
v. How many activities did you conduct?

Take your action to the next level by getting media coverage. Do share photographs of all the impact you have created!

Level 3: Champion Level

Step 1: Identify an ecologically significant area impacted by plastic waste.

Step 2: Organize a clean-up drive engaging all your cadets

Step 3: Measure the amount of plastic waste collected

Step 4: Handover the collected waste to authorized waste recyclers or waste collection centres in the targeted area.

Step 5: Take the TTPC Pledge with your cadets or group members.

(Tips- Look for a coastal area, riverbank, lake or pond, a forest, valleys, hills, national park or a city forest)

Tell us more about your achievements to ace the champion level:

i. Which location did you choose for the clean-up activity?
ii. How many group members conducted the clean-up drive?
iii. Which stakeholders did you engage in the drive? (Ragpickers, Kabadiwalas, Municipal workers, vendors, etc.
iv. How many kilograms of plastic waste did you collect?

Do not forget to take a selfie with the before and after look of the clean-up site as well as the plastic waste collected.

Annexure

PRO-TIPS FOR CREATING BEHAVIOURAL CHANGE

As a Champion, you'll be taking on challenging projects. You might find that most people are slow to change. For your work to be successful, you'll need to get people on your side and work as a team and support one another.

Before getting started, take a look at these tips.

Be specific. E.g., instead of saying "Use less plastic," you could advise others to "Start carrying a reusable water bottle around."

Action planning. Help the people you're working with create a realistic plan that can work.

Paying attention to current behaviour. It helps when people start thinking about how they do things and how they could/ should change.

What's getting in the way? Everyone has a ton of excuses. No time, no money, and not enough information. Be prepared for this and arm yourself with helpful alternatives and information.

Putting words into action. Talking about things isn't enough. Encouraging others to try things out for themselves helps them get started and has more impact.

Spending time in nature. Get your friends to spend time in nature. Feeling more connected with nature makes people want to help look after the planet.

Saying it out loud. Try to get others to make public commitments to tackle plastic pollution. Making promises makes it more likely they will keep their word.

Share, share, share. Encourage everyone to spread the word through their networks and communities. People are more likely to listen to what a friend has to say than a politician or some random official.

Keeping an eye on things. Making a start is great, but we need to make sure people keep up their good behaviour. Follow up with them, send them reminders and prompts, and maybe even start a system of rewards.

Adapted from **Making It Count - Increasing the Impact of Climate Change and Food Security Education Programmes.**

WHY THIS CAMPAIGN?

The plastic problem is a tough challenge to beat. But we can do something about it provided we understand the challenge, work together, and take the right steps to make a lasting impact.

The Tide Turners Plastic Challenge aims to provide people—of all ages and from various backgrounds—with information that helps them understand the issues and the action needed, and guidelines that help them make a real-world change. This campaign aims to inspire everyone—from students to professionals to indigenous leaders—to lead the change in their lives and communities.

How are plastics linked to the **Sustainable Development Goals?**

The Sustainable Development Goals (SDGs) are a set of 17 goals that countries in 2015 agreed to achieve by 2030. The goals are meant to help us end poverty, reduce inequality and overall ensure people around the world live better while still protecting the planet.

Several SDGs are directly impacted by plastics.

source: https://www.plasticsoupfoundation.org/en/plastic-problem/sustainable-development/individual-sdgs/

So by taking action on plastic pollution together, we can help our country and the world as a whole progress towards achieving the SDGs. Remember that even one person can always make a difference!