



Pradnya Niketan Education Society's

**THE ORCHID SCHOOL**

Baner, Pune

# YOUTH SUMMIT COMPENDIUM 2022-2023

## CLIMATE AND ME





# YOUTH SUMMIT

2022 - 2023

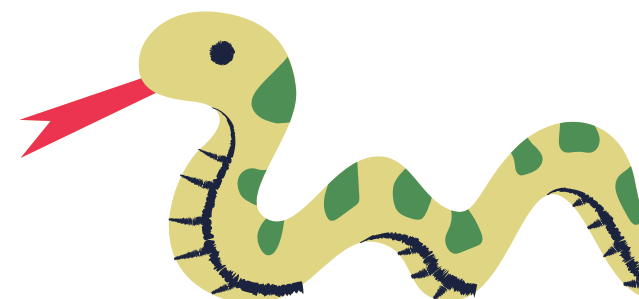


The second edition of the Youth Summit, “Youth Summit 2022-23”, held on the 30th of August 2022 was undoubtedly a much anticipated and highly awaited event.

It was based on the theme ‘Climate and Me’ which is most relevant in today’s day and age. We can see the dangerous effects of the worsening climate around us, and therefore, it is imperative that a change is brought about immediately.

But change comes from within each one of us, and that is exactly what Youth Summit 2022 - 23 aspired to do - bring about individual change.

On the day of the event, we were delighted to host Dr. Sanskriti Menon from CEE India as our honourable guest and keynote speaker. She spoke about carbon handprints and the need to recognise the actions we have to take to have a positive impact on the climate.



# CLIMATE AND ME

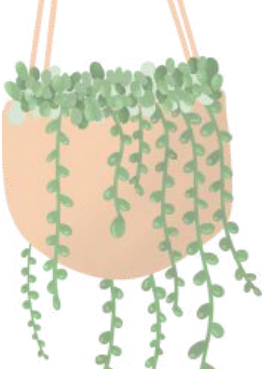
Climate Change is identified as one of the greatest challenges of our time. Its adverse impacts undermine the ability of countries to achieve sustainable development. It is an inevitable and urgent global challenge with long term implications for the sustainable development of all countries.

Sustainable Development Goal 13 aims to take urgent action to combat climate change and its impact, while acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.

The main objective of having discussions on this issue was to understand the big picture and the general impact while changing for the better through individualistic contributions.

The speakers have talked about climate change and its detrimental effects on different sectors. Through their speeches, they urge us to take immediate action to combat climate change by implementing easy to follow solutions in our daily lives.





Dear Students,

Heartiest congratulations for the second edition of the Youth Summit.

The theme on climate is well timed and the need of the hour.

Climate is not going to be an outdated topic. On the contrary, that's going to smack us on our face. Our hope is that someday you as young people will own it so you can personalize our life choices on the climate. Hence we are sowing the seeds of thought, sensitivity, awareness and actions at a personal level. The reason why we need to personalize this, going beyond the campaigns and rhetoric is because it's going to affect the generations that are to come.

We must act ! Now ! All the intellectual deliberations must get converted to lifestyle choices.



As an educator , it is my professional and ethical responsibility to bring this into the fold of curriculum practices so these seeds will germinate when you are in your space of youthhood and adulthood. All of you become mindful of switching off the fans, closing the taps, looking at every responsible consumption, thinking about actions and how it contributes to climate chaos.

That's my hope and I know it will happen. Someday you will connect the dots and see the value of real learning come out with the solution to small and big problems.

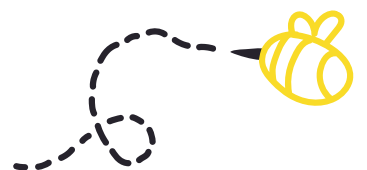
**DR. LAKSHMI KUMAR**

Founder Director,  
The Orchid School





While Prime Ministers and presidents are discussing what governments can do or will not do in Glasgow or in Egypt later this year, it's equally important to explore and understand what we can do locally. Climate change is a challenge that not only governments have to take on, but we have to explore within ourselves and within our communities. I sense hope of course, and also a sense of anger or despair. But I think there's also increasingly much greater engagement. I think that is what is going to be most important to hold on to. We need to raise our voice and also need to do a little bit more research where we can engage with policy makers and decision makers. I feel that it's important that we understand not only the phenomenon but try to locate reasons behind it and understand which part of the system we need to work on. It's imperative in order to figure out what's failing, where are the gaps, and what exactly is it that we need to do. It's important to keep looking at that sort of systems analysis to find out what the issue is and then trying to advocate for the next steps which might drive a positive action. So figuring out these dimensions and trying to see more benefits that can accrue from a single solution also becomes quite important.



I feel that it's important that in our studies, we understand not only the phenomenon but try to locate reasons behind it. In doing so, we understand which part of the system we need to work on. It's important to start with a personal action at the root of it because that leads us to greater and greater thinking.

It gives us some clues of what the actions could be, how do we proceed and once we think of a solution, can we try and run through with the systems again to see what might be the impacts. This way we can see if the action we take will actually solve a problem or create a new problem. The footprint is the ecological impact we have. The carbon footprint which measures how much carbon emissions our actions lead to. Handprint depicts the positive actions to improve the environment and people's well-being. We have to look at hand prints again, policy actions and personal actions.

I'd like to leave Orchid school with just a potential to draw upon and something to trigger the other things that we can do with genetic diversity. I'm looking forward to all your suggestions for how we increase our handprint and decrease our footprint.

Thank You.

**SANSKRITI MENON**

Sr. Program Director,  
Centre of Environment Education







In today's modern world when we humans are continuously upgrading ourselves to the modern lifestyle and in that race of uplifting the standard of living, we humans compromise a lot on the environment. It is the responsibility of each individual and the educational institutions to bring awareness amongst the students and guide them to be responsible towards their actions.

Youth Summit is the forum where the students of Class IX and X are given the exposure of organising the whole summit. Through this summit students learn the skills of leadership, doing research, writing research papers, data analysis, presenting the data, public speaking, organising the event at professional level, publishing a compendium, appreciation for the environment, visual presentation in the form of art, and many more.



This year the theme for Youth Summit was integrated with Sustainable Development Goals. This compendium consists of the gist of the Youth Summit. After understanding the SDGs through a session in detail, each student went on the spree of research and then presented their research paper expressing their views. I am sure each one involved had the experience and learning for life.

The effort of us as educators is to imbed the thought in the young minds of being a responsible and mindful citizen. It's our hope that these young adults will impact the surroundings and the mankind with their thoughts and practices and when they grow and mark their presence in the professional spaces, they will lead the change.

**SANGEETA KAPOOR**

Principal,  
The Orchid School





Over the years, as an educator, the one thing that I have realised is that for any idea to work, give it to the younger generation. They question it, deliberate on it and then come up with solutions to make things better. Our trust in gen Next is all they expect from us. So when I got to be the event mentor for Youth Summit 2022, my joy knew no bounds. I was once again lucky to work with new minds who would move heaven and earth to make the event a grand success. This year, The Orchid School's theme is 'Climate Change'. And needless to say, our Youth Summit too would involve this topic. However, to notch up things slightly higher, we decided on dwelling upon four United Nations Sustainable Development Goals, and have papers submitted on each of these topics by our very own gifted students.



After the initial selection of the Youth Summit Organising team, I had with me a dynamic team of 23 young and energetic Class IX and X graders. Leading them all were two dynamic students Kiara Welde and Arushi Srivastava, the Chair and Co Chair of the Summit. Their enthusiasm, energy, organisation and leadership skills are worth mentioning. Teaming up with them to plan, organise and execute this Youth Summit has been a great learning for me as a mentor too.

The 4 pertinent SDGs selected after gruelling sessions of deliberation and planning were

- Responsible Consumption & Production
- Climate Action
- Clean Water & Sanitation
- Reduced Inequalities

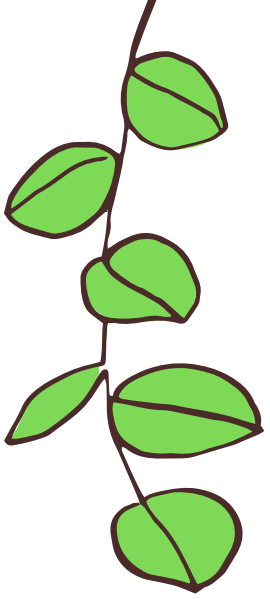
We selected 15 most well informed and competent students for this summit as speakers. Training, mentoring and guiding these students was more of an insightful journey for me.

It has been an absolute pleasure to be their event mentor teacher!!!!

**ATREYI SAHA**

Vice Principal & Event Mentor  
The Orchid School



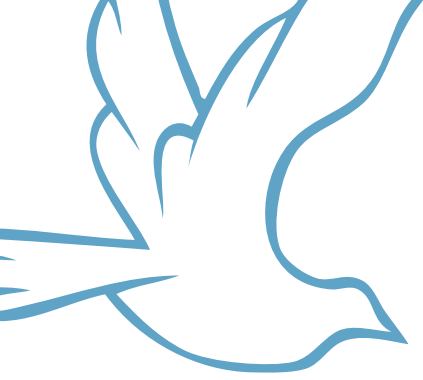


When a child is born into this world, they don't possess any good or bad qualities inherently. They aren't aware of the world that they're born into, the kind of people, the kind of destruction, nor the kind of happiness that it provides, they're taught that. They blossom into the youth of the world, the upholders, the people who are supposed to save the world from other's mistakes. This harbours resentment, anger but more often than not, there is another powerful thing that breeds in the youth. Hope. Hope, that drives them, pushes them to believe in their dreams for this world, in a brighter tomorrow. I strongly believe that it is this hope of the youth that will burn brighter than anger and save our world, but we must do it today. It is with this passion in my heart that I hope for this to be simply the beginning of a new tomorrow and not the beginning of an unfortunate end.

**KIARA WELDE**

Conference Chair,  
Student, Class X Plum





When we discuss about the youth, we think of their ideas, persistence, passion and their ability to see the flaws of the world they inherited, yet envision a brighter tomorrow. For young people, climate change is bigger than politics, protests, ulterior agendas, its a matter of life and death. When we planned and executed the youth summit, we were overwhelmed by the amount of issues we found. There is a rapid deterioration of the environment and yet, we behave as if the war against climate change is in the future and not right at this moment. On that day itself, I found myself, sad, proud, angry, hopeful, excited, a whole array of emotions that I doubt I would ever be fully able to express. We all realise now, that the earth doesn't truly require us, rather it would flourish without us. Yet, yet I urge you to fight. We have the tools we need for change, and it's high time that we fight for our own survival.

## ARUSHI SRIVASTAVA

Conference Co Chair,  
Student, Class X Periwinkle





**MONIKA GUPTA**

Mentor Teacher

The journey involved the trust, sharing of expertise and moral support. In this month long interaction we empowered each other to enact positive change in our surroundings and make valuable contributions towards the environment. Together we tackled climate change and equality, diversity and inclusion.

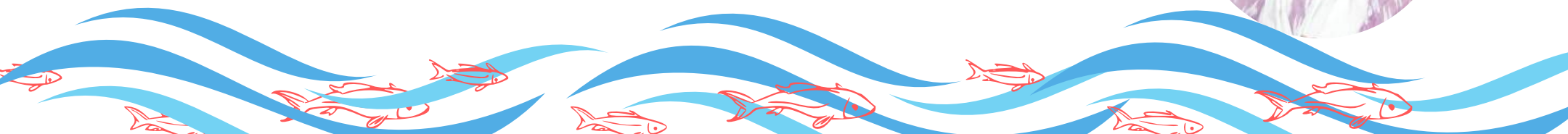


When I was told that a group of 4 students would need mentoring, I was perplexed. Do the kids really need it as they are such a smart bunch today? And my doubt proved right. They were so well planned with their write ups. Confident to boot. A bit here and there was all they needed. They were confident on stage and presented their thoughts beautifully.

I enjoyed the journey with this bunch of 4 .

**SUJATA GAWADE**

Mentor Teacher





**SANJUKTA SEN**  
Mentor Teacher

As a mentor, I felt a heavy influx of fresh ideas followed by researching, brainstorming and planning from my mentees. I enjoyed understanding diverse approaches and providing support in creating opportunities for impactful youth development for a greener, healthier future.



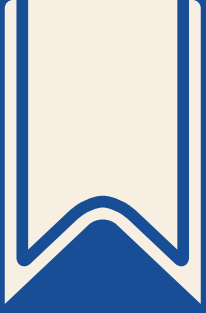
'Reduced Inequalities' nudged the speakers towards thinking of sustainable goals in a way that focused on existing patterns of discrimination and the need for equity. It was an extremely interesting and enriching experience to work with the speakers, taking into account the issue of reducing inequalities at micro and macro levels.

**RAHEE**

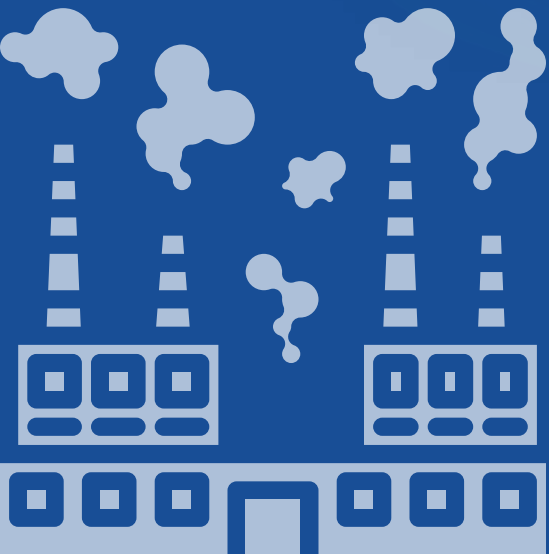
Mentor Teacher







# CLIMATE ACTION



# CLIMATE ACTION

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# SURABHI MARATHE

Student, Class IX Khaki

“You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.” These are the words of Jane Goodall.

Hello everyone. I’m Surabhi Marathe from XI Khaki. Thank you for coming here today to talk about, think and act towards a better tomorrow. Today we’re going to talk about a huge issue that concerns all that lives on this planet – Climate Change and Plastic.

Why would climate change concern us at all?

Well, it does, because it directly affects each living being on Earth. According to the UN, if global temperatures rise by 2 degrees, the damage done to our planet will be irreversible.

In the Glasgow Climate Pact in 2015, India has made five ambitious target goals, and our country is already taking steps towards them. We are trying to bring in more of renewable energy like wind and solar power, and to stop one time use plastic.

Our country is switching to electric buses and pushing for mass transportation in urban areas, and is on the journey towards sustainability. But what can we do at our levels to combat climate change?

An important cause of climate change is pollution due to plastic.

Today, plastic waste surrounds us. It's found almost everywhere, from the water we drink to some of the most extreme locations on Earth.

In the words of Claire Arkin, "Plastic pollution is not just an oceans issue, it's a climate issue and it's a human health issue."

Plastic is a huge contributor to global warming, which is often something that people don't realise. The production and burning of plastic pumps more than 350 million tonnes of greenhouse gases into the atmosphere every year.

The production of plastic is a carbon-intensive process. Plastic itself is made up of fossil fuels. Exposure to sunlight and heat causes plastic to release harmful greenhouse gases.

Microplastics that find their way into the oceans also threaten the plankton populations, which isolate about 30 to 50 percent of carbon dioxide emissions.

How does plastic garbage reach oceans in the first place? Well, all the garbage that we're not dumping at the right place, finds its way into a water body, and eventually the ocean. Ship loads of garbage are also dumped in the sea due to ever shortage of landfills.

Synthetic fabrics like polyester and nylon are made of plastic and when washed, shed huge amounts of microscopic plastic fibers that usually end up in water bodies. As our Environment Minister has said, "Plastic per se is not a problem, it is uncollected plastic waste that is."

Only about 12% of the total plastic waste in India is recycled. Of this 68% of the waste ends up in landfills and water bodies. The remaining 20% is gotten rid of by burning. Open burning is an issue which is prevalent in India and other developing countries.

This releases an extremely harmful pollutant, black carbon, whose potential to increase global warming is around 5000 times greater than that of carbon dioxide. Plastic by 2050 will be responsible for about 13% of our planet's carbon, which is equivalent to what 615 coal power stations emit. All of this means that it is crucial to immediately cut down on our plastic use.

So how can we do that?

Proper waste management of plastic can do wonders. Recycling has to be done in more amounts. The AIR principle – Avoid, Intercept, Redesign – if applied to various industries including plastic, can reduce their combined carbon emissions by 40%.

Community projects like Swacchha Bharat Abhiyaan can ensure that plastic around us is picked up and sent for recycling before it causes more damage. There is no doubt that plastic has to be cut down. But we have got so used to its convenience and its use, that without it, our lives would become hugely difficult, if not impossible. So facilities have to be set up so that people are encouraged to stop using plastic.

I love Nutella, so I'll give its example as well. For the last few years, the container would be made of plastic, but just recently, they've shifted to glass jars. There are many such examples of companies that have shifted to more sustainable options.

Many small scale industries are recycling plastic into innovative products that help us in our daily lives.

Now, many of us think, what difference can I alone make?

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It's important to understand that individualistic contributions DO help change the bigger picture. Even small changes we make in our lives can help make the world a more sustainable place. In the words of Greta Thunberg, “We already have all the facts and solutions. All we have to do is to wake up and change.”

So what are some doable things that we can incorporate in our lives?

The first and arguably one of the most important steps is spreading awareness. After all, action can only be taken once you become aware.

The second step? Cutting down on our plastic use. This includes swapping plastic bags for cloth bags, buying in bulk so that the amount of use and throw items and packaging will reduce, or even carrying your own bottle to avoid buying plastic ones.

One sanitary pad could take up to 800 years to decompose. So women who are comfortable could shift to menstrual cups or other sustainable options rather than sanitary napkins.





Another solution is shortening your food chain, which means buying food locally or even growing your own. It not only helps to decrease your carbon footprint but also reduces one time use plastic that would otherwise be used to package the food.

Plastic is extremely convenient and it really makes life easy. But is convenience more important than the damage it inflicts on our planet?

"People have relied too much on getting the thing they need in the most convenient and easy way," says Eleni Iacovidou. "I think we need to get a little bit uncomfortable."

What do you think? Climate change is EVERYONE'S issue, and since all of us have in some way contributed to it, it is OUR responsibility to turn it around as well.

Think about it. "If not me, who?.. If not now, when?.."

Thank you.





# REVA DURAPHE

Student, Class IX, Fawn

"The world has changed. I feel it in the water. I feel it in the earth. I smell it in the air. Much that once was is lost." Lady Galadriel starts narrating *The Lord of the Rings* with these words. Today, the reason for this drastic change is global warming. Hello everyone! I am Reva Duraphe and I will be talking about "Climate action".

I'm sure you've heard that the world was going to end in 2012. Many of the calendars made by people of ancient civilizations ended in this year. In the 1890s when global warming was discovered, it was believed the world was going to end soon. Some people predicted that we would be wiped out by natural disasters, like a giant wave, earthquakes or tremendous volcanic eruptions.

Yet, here I stand 10 years later! This makes me wonder, is climate change real or is it actually an elaborate hoax?

The news of heatwaves in Europe this year has spread worldwide. In Portugal, the average temperatures in the month of July used to be 30 degrees Celsius. In the heatwave this year, the temperature shot up by a staggering 17 degrees - to 47 degrees Celsius! Even in India, the heatwave this year has resulted in the hottest March since 1901! Due to this heatwave, a glacial lake released large amounts of water into a stream, as a result of which the Hassanabad Bridge in Pakistan collapsed. Statistics show the rise in the annual rise in temperatures in a few states in India over the last few decades.

These heat waves are followed by many deaths and severe water crisis. Unexpected changes in temperature, change in extreme weather events and changing rainfall patterns are leading to food scarcity. We have multiple food crises occurring in 2022. The cause - Global Warming.

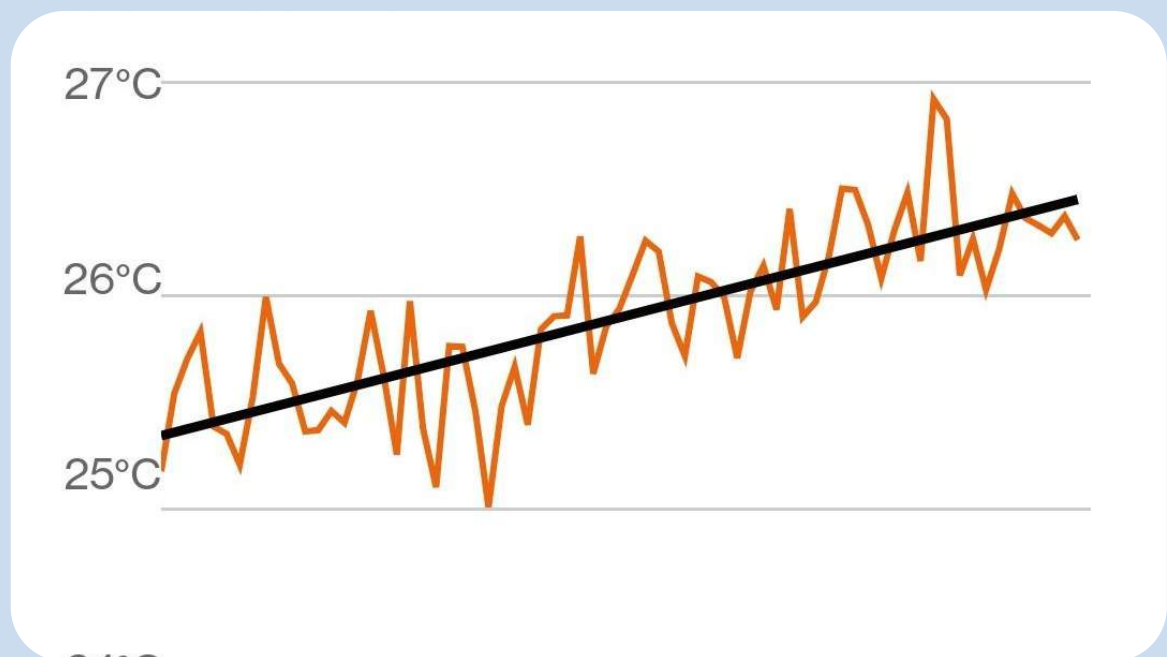
So, NO! Global warming isn't a hoax or a joke.

Food is a basic necessity of life, which is impacted by climate change. As temperatures are rising, the water requirements of crops in fields are also rising. The crop's immunity decreases due to water scarcity, and this hot, humid weather with high levels of carbon-dioxide is suitable for the growth of pests like insects, fungi and weeds. Hence, plants are now more vulnerable to attacks by pests.

The heatwave in India this year occurred in the final stage of the wheat growing season, and killed the crop right before harvest. In some parts of Punjab, nearly 30% of the crop was lost. Farmers shift to chemical pesticides, fertilizers, genetically modified crops and high yielding variety seeds for a greater yield and faster production.

These “modern farming methods” not only make the food harmful for consumption, but also decrease the soil fertility and cause pollution. It was noticed that for every 0.5 degree rise in temperature, milk production in cows falls by 2 litres per day.

So, in a heatwave like that of Europe this year, where temperatures rise by 17 degrees, just imagine how low the production will go! This decrease in yield is increasing food prices. Without food, life is impossible! Are we going to be robbed of this fundamental necessity of life?



Now let's turn the tables. Food also is a major contributor to climate change. As demand increases, forests are cut down to make way for monocultures.

These forests are major carbon-sinks, meaning that they absorb more carbon dioxide than they release. With these gone, global warming is certain to speed up. How do our individual actions add to this?

Imagine that you are eating a tasty piece of cheddar cheese, imported from England! Deforestation took place to plant pastures for cows to graze. The cows multiplied, releasing more methane in the air. They provided milk which was processed to make cheese. 1 kilo of cheese releases about 14 kilos of CO<sub>2</sub> in the air! 576 kilos of carbon dioxide are released while transporting the cheese from England to Mumbai.

The multiple layers of packaging also add to the cheese's carbon footprint. So, a total of about 600 kilos of carbon dioxide is released into the air, which is equivalent to a car travelling about 2000 kilometers. That means we can travel from Pune to Jammu and Kashmir! The packaging is disposed of in a dustbin, and it ends up in a landfill.

This isn't cheese being villainous! Every food that we eat influences our carbon footprint, and the carbon footprints of 8 billion people are the reason for climate change!

We are caught in this never-ending, vicious circle. While one feels that this problem is unsolvable, it is we as citizens who have the power to help, by being a part of the solution. As Gandalf says, "it is the everyday deeds of ordinary people that keep the darkness at bay." This is true for our problem too.

Small everyday changes in our lifestyle can keep climate change at bay! We all know about a few methods -using public transport and walking for distances within a kilometer, but the different realities in our country put obstacles in our path. Our home is where everything is in our control, thus making it the ideal place to start. I researched and found out simple changes I could make that wouldn't really be noticeable but would impact my carbon footprint.

Eating local helps offset transport emissions, a solution to the cheese problem! This also creates employment and livelihood opportunities. The dairy industry overall has a very high carbon footprint today, so I have reduced my meat consumption to help this cause further. The vegetables and fruits we get outside have been grown with harmful chemical pesticides.

Growing a small patch of organic vegetables in our terraces is carbon free! This is a part of our terrace garden at home. The produce that we get comes free of packaging and transport emissions, and the fruits of one's labors are certainly sweeter!



Composting fruit peels, wet waste and kitchen garbage creates an organic fertilizer, and egg shells provide plants with calcium. The flowering plants benefit from water used to wash lentils and rice, so we reuse that too.

Rob Greenfield, an American activist, is an excellent example of 'being the change'. He lived in a tiny 10 ft by 10 ft hut that he built with recycled materials in the urban environment of Florida. His aim - going carbon neutral.

For 365 days, he only ate foods that he grew or foraged. He spent one year without grocery stores or restaurants, nothing packaged or processed, nothing shipped over long distances. His outdoor kitchen used rainwater to wash hands and dishes, and his waste was used as fertilizer for trees.

At the end, he felt healthier and happier. He helped in building up a community that supported and practiced these ideas too.

It is up to us - whether we enjoy ourselves at the cost of our planet, or enjoy doing our bit to delay the climate crisis.

In the words of Sir David Attenborough, “We often talk about saving the planet, but the truth is we must do these things to save ourselves.

Thank you.







# AANYA ACHAREKAR

Student, Class X Periwinkle

Good Morning, I am Aanya Acharekar and I am here to tell you about an aspect of climate action that we don't give much thought to.

When we think about climate action, we think about wastage of water, climate change, or even separating dry waste from wet waste.

But have you ever thought that that trip you took to Goa a few years ago could contribute to climate change way more than you taking a few extra minutes in the shower every day could? Every second, 45 tourists arrive at their destination. That's huge!

The tourism industry is rapidly growing and uses resources in careless abundance. The average water consumption rates for hotels and resorts account for 84 -2,000 litres per tourist per day. But this affects rural tourism much more than it affects urban areas.

It leads to the depletion of local natural resources as well as to pollution and waste problems. Tourism often puts pressure on natural resources through over-consumption, often in these places, where resources are already scarce. In most parts of the country, the local community is rarely involved in the decision-making about the kind of tourism and tourists that visit their homes. Only a few people benefit, especially the urban tour operators. So can tourism be a solution?

Eco-tourism offers sustainable alternatives to our traditional environmentally damaging tourism methods. It provides a framework to implement commercially viable tourism without impacting the environment. It also contributes to the UN's 17 SDGs, such as education and climate action. Let me explain this through a few examples.

A few years back I visited a village in Goa called Netravalli. Here an NGO encourages the local community to practice eco-tourism and help grow their business sustainably while preserving the natural surroundings by providing them with adequate resources and information.



They also educate them in maintaining tourism as a secondary income to their main agricultural background, so they survive economically straining situations such as Covid-19 when the tourism industry took a steep fall.

This works the other way around as well. If the crops fail one year, the farmers can always rely on their tourism business as their income. This helps the locals become self-reliant and creates awareness within them to preserve their surroundings.

Another example is an organisation called 'Village Ways'. Situated across the country, this organisation works mainly towards empowering the locals. Village Ways contributes to this by helping them sell their handicrafts and encouraging them to share their local culture with tourists. The visitors stay at local home stays owned and run by the locals. 'Village ways' work hard with the village communities to determine the problems affecting the local biodiversity. They nurture the traditions and local knowledge that have long allowed the villages to live in balance with their surroundings, and to develop an understanding of the changes (positive and negative) that the modern world can bring.



Guides are trained to value and share their knowledge of local flora and fauna. Local craftsmen are encouraged to use traditional skills and materials to build or restore guesthouses and at the same time incorporate energy-saving technology such as solar panels for lighting and heating water. Another unique approach towards eco-tourism is implemented by an agency called 'Terra conscious'. They have initiated programmes on responsible livelihood development and raising awareness about wildlife and ecosystems. They provide tourists with comprehensive and immersive learning tours where they educate them on the different aspects that directly affect Goa's marine and coastal biodiversity and ecosystems.

These include improper sewage treatment, the disposal of non-biodegradable waste into the waters by tourists and locals alike and the pollution of the ocean by the various boats and ships that pepper Goa's coast. Their 'Impact Programs' are knowledge-based and are a source of education to the tourists that opt for them and help in creating awareness among the general populace.

This approach helps educate tourists to enjoy their travel responsibly. But what can we, as tourists, do to help decrease our negative impact on the environment?

Here are 5 tips to follow every time you travel:

### 1. Leave no trace

You don't have to be a die-hard activist to be a responsible traveller. From a responsible tourism perspective, it is important that your visit to the area is not a harmful one. So don't litter or cause any harm to the surroundings.

### 2. Bring along an open attitude. Support Local.

This makes everything easier and opens your mind to accept new things, new cultures, and new food. Support the local economy by staying in home stays, eating local cuisine and buying local products.

### 3. Share your own story

Sharing your own story and background with the local people you meet is another way to have a positive impact. Not everyone can travel, and your being there is an opportunity for the locals to learn about your background and for their own cultural discovery.



#### 4. Carry your own waste disposal system

In rural areas, there is an absence of proper waste disposal systems. So carry your own! Bring along a carry bag to dispose of non-biodegradable wastes.

#### 5. Respect the local culture

When travelling, always remember to respect the culture and traditions of the locals. Doing this, you will be able to have a great trip yourself and provide a great experience to the locals as well.

In the words of Parag Rangnekar, an eco-tourism expert “the very roots of eco-tourism lie in the locals of that place.”





# AAYUSH DHOBLE

Student, Class IX, Khaki

“We are the first generation to feel the effects of climate change, and the last which can do anything about it.” An extremely powerful quote by Barack Obama, from his speech during the Climate Change Summit in New York, in 2014. It has been quite some time since then, but these words hold true as ever.

So, let’s dive deeper and see what exactly is climate change and what can we do to mitigate its effects.

Climate change is not new. However, today, when talking about climate change, we are referring to the changes after 1880, when we started using thermometers and other meteorological instruments to measure temperature and CO2 levels.

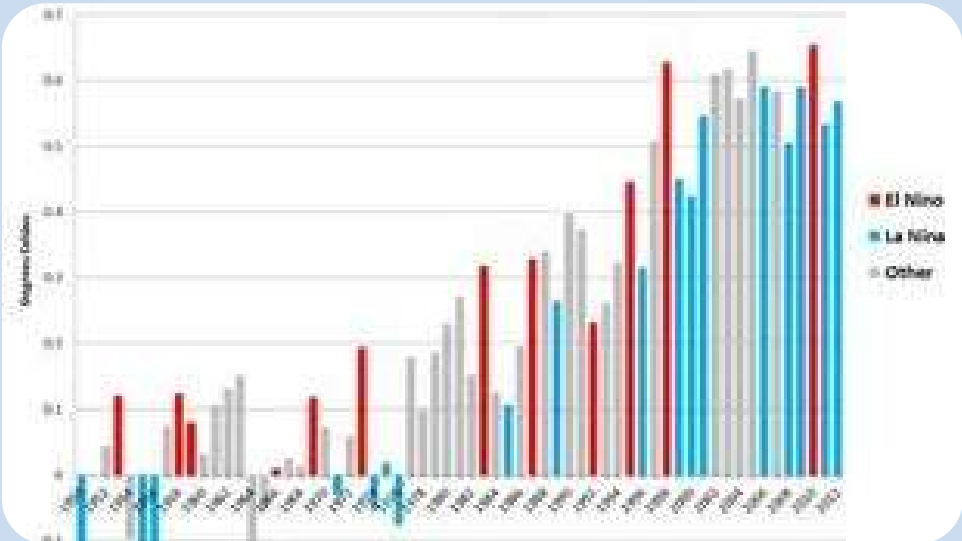
Climate change is the long-term change in temperature and weather patterns. Since 1880, meteorologists have been noticing, and recognizing climate change. Yet, why is it that no serious action was taken about it?

Well, although a small fraction of the population of people did know about it, for they were well educated and hence aware, the majority of the population did not, for they weren't very well educated and hence, not aware of it. Due to this, there was no pressure on politicians and governments to bring about a change.

Now, I will be talking a bit about how the rate of climate change increased.

Well, the reason was the Industrial Revolution.

The Industrial Revolution led to the introduction of many new machines and technologies, but most of these machines were powered by coal and petroleum, both of which are fossil fuels, and released tremendous amounts of greenhouse gases and carbon dioxide into the atmosphere, which lead to an increase in the rate of climate change.





Since 1880, when records began, the global temperature has increased by 1.1 degrees centigrade, according to NASA's Earth Observatory. The CO2 concentration in the atmosphere of Earth, during the pre-industrial times, was just over 280 parts per million, which has increased to 415 parts per million, an all-time high, according to Climate.gov.

The projected rise in temperature by the end of the century is about 2.4 degrees centigrade from pre-industrial levels, which is huge.

The implications of such a rise in temperature could be disastrous. We are already seeing some of them, in the form of the heatwaves, droughts and record temperatures in Europe, Asia and Africa this year. Floods have been occurring in many countries, like Pakistan, Iran and India in the last few years, and in cities like Mumbai and Pune, and the reason for this is the changing weather patterns and improper drainage systems.

Here, you can see an image of the 2019 Pune floods.



Glaciers are melting at an alarming rate, which is further expected to rise by the end of this century! For example, the Siachen Glacier, located in Ladakh, has retreated almost 1.5 km in the 2 decades after 1990! This will, as we can quite clearly see, lead to a tremendous rise in sea levels, thus endangering the existence of many small islands, and island countries like Maldives.

Climate change was first recognised as a serious problem in the 1960s, and as a result of this, the 1979 World Climate Conference was organised. The UN Framework Convention on Climate Change (UNFCCC), opened for signatures in 1992, and was the first convention by the UN for climate change, signed by 154 countries, all of whom agreed to stabilise greenhouse gas emissions so as to not interfere with the climate system.

The first real action was taken by the Conference of Parties (COP) in COP 3, which was held in Kyoto, Japan.



The Kyoto Protocol included emission goals, and had countries keep a check on their emissions. The most recent climate action plan was the Paris Agreement, which took place in COP 21, 2015, held in Paris.

In this Agreement, all 197 countries which are part of it agreed to limit rise in temperatures to below 2 degrees centigrade above pre-industrial levels by the end of 2030. The Paris Agreement also asked countries to reduce their greenhouse gas emissions by 2030, by significant levels. India has promised to cut down emission intensity to around 35% below 2005 levels by 2030 and has promised to generate 40% of its electricity from non-fossil fuel sources.

The Indian Government too introduced a climate action plan, in 2008, called the National Action Plan on Climate Change (NAPCC) whose aim was to mitigate and adapt to climate change.

The NAPCC planned to increase solar energy output, energy efficiency, improve water use efficiency and a lot more by the end of 2017, which was when this plan was terminated.

The Maharashtra State Government was the first state government to introduce a climate action plan, which was in the form of the Mumbai Climate Action Plan, which aims to remove carbon emissions from the city by 2050. However, this plan is only limited to Mumbai.

As we have seen, many climate action plans have been introduced at many different levels, globally, nationally and even at the state level. However, along with these, there have been many new inventions, and many new ideas have been thought up to help us in our struggle with climate change.

For example, The Line is a project that is still in the planning stages in Saudi Arabia, but the idea behind it is extremely innovative and one heard of never before. In it, there will be no roads, cars or emissions, and it will run on 100% renewable energy and 95% of land will be preserved for nature.

The Line will eventually accommodate 9 million people and will be built on a footprint of just 34 square kilometres, meaning a reduced infrastructure footprint, and an end-to-end railway network will eliminate the need for roads.

All this will greatly reduce carbon emissions, and the land preserved for nature will make it an oxygen filled city, with an amazing ecosystem and will help save many species from extinction.

There are many inventions, such as the ocean clean-up, a barrier designed to trap plastic waste floating through the ocean; plastic-eating super enzymes; biodegradable plastic, usually referred to as bioplastic which is made up of either plants or microorganisms.

All these inventions can play a huge role in saving our Earth. All these inventions must be encouraged, for it is already late, and we need to do something fast to save this planet.

More and more inventions will keep coming up, and climate action plans will keep on being made, but they can't help us and our planet if we don't join hands to save our planet. We must do whatever we can to limit climate change.

And we can do a lot. For starters, just doing small things like segregating your waste, bathing using one bucket of water instead of two and many more can help our planet a lot.

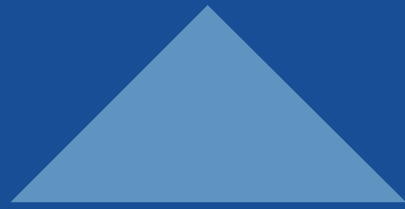
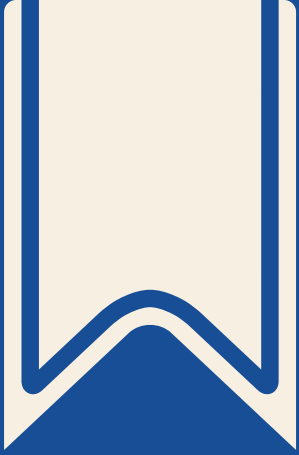
We can cycle for shorter distances, say no to plastic bags and use organic products packaged using biodegradable materials to help out. Taking eco-bags along with you when going out on a trip or a picnic to collect the garbage there, will help us clean our environment and do our bit. Even I do this when I go out for a trip. Planting trees and stopping deforestation will reduce carbon dioxide levels in the air and hold up the soil to prevent erosion.

As said by Gisele Bundchen, "One thing leads to the other. Deforestation leads to climate change, which leads to ecosystem losses, which negatively impacts our livelihoods – it's a vicious cycle." So come on, let's come together, join our hands to save this planet, for it is the only one we have, and we will go extinct without it.

Without the support of every single member of our species, it is not possible to save our planet, but together, can we save our planet?

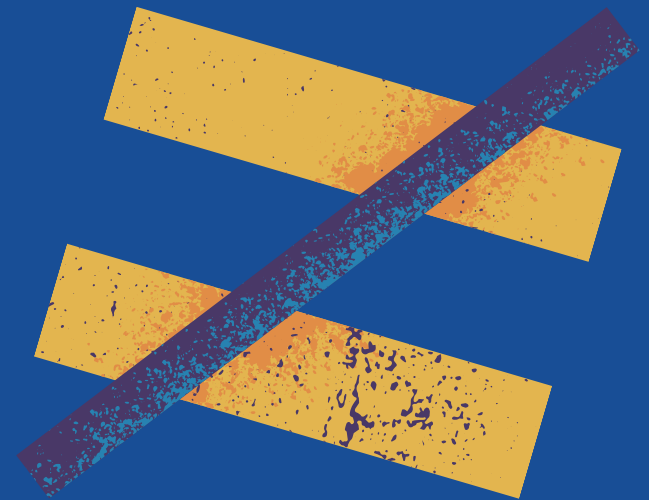
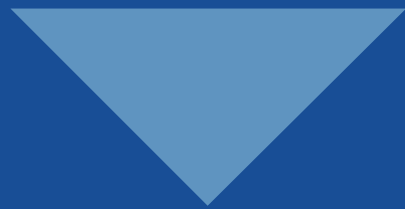
I will end with three words, which have been etched in our history books, to answer this question.

"Yes We Can!"



REDUCED

INEQUALITIES



# REDUCED INEQUALITIES

The 10th Sustainable Development Goal focuses on eradicating inequalities from all spheres of life. We have recognised that social problems generally tend to have a negative impact on other aspects of living as well, especially climate. Inequality is a spectrum which includes social, economic, and political inequality among people. This hampers the overall development of a country, thus harming the environment. This social imbalance obstructs the way to leading a sustainable lifestyle. Inequalities also lead to social disputes which affect people all around the world.

The speakers shared their perspective on the inequalities faced by people at different levels and connected it with the environmental threats they pose. They also suggested different ways to tackle the discrimination people face such that inequalities can be reduced.



# SHIKHA KURLIYE

Student, Class X Iris

Tomorrow we will be welcoming Lord Ganesha, the god of knowledge and wisdom, part human, part elephant - symbol of nature. What has become an extremely pressing concern for many during this joyous festival is the day of immersion, when we say goodbye to Ganesha. Rather than thinking of the symbolism behind this immersion, we are now having to think of ways to get rid of the debris which remains floating across our already stifled rivers, polluted because of immense amount of non-biodegradable, one time use plastic garlands, decoration, accessories, “jewelry” with which we adorn the idol.

Perhaps, in some tiny corner of a village still untouched by plastic mania, little girls and boys string up garlands of flowers from their backyard, use the same wooden décor that has descended from their great grandparents, use brightly colored sarees from their mother’s closet as the backdrop.

This might be a home of someone with limited economic resources and means, but it is certainly a sustainable one.



Today I am going to talk about reducing inequalities. Ironically enough, in many cases, the change that this brings about is unsustainable. Unfortunately, now the idea of development comes hand in hand with unsustainability. I want to emphasise the fact that while we think of reducing inequalities, we should be looking for ways in which that does not lead to the degradation of our environment, leading to climate change.

We have heard that inequality is the root of social evil. We see inequalities all around us, whether it's in the form of aunties telling us to put on more powder to make our skin lighter, or unequal distribution of income and opportunity between different groups in society. Inequality present in the social sector, dividing people economically has been a challenge India has faced for many years since independence.



We have all heard of the theory that the poor are getting poorer and the rich are getting richer. Why? This is because of the poverty trap, where it is nearly impossible to get out of the cycle of poverty that people are trapped in.

Many of the things that can help pull people out of poverty require the one thing poor people don't have: money. For example, without money, it's difficult to get a decent education and acquire new skills to boost job prospects and earnings potential. This reduces their chances of earning a high income, which in turn brings the inability to provide their children with a good education so that they can get good job prospects... and the cycle continues. The poverty trap creates a massive social gap which can only be closed if we all collectively work towards closing it. For many of us, bridging the social gap means bringing the rural poor up to the standards of the urban rich.

However, is the lifestyle of the urban rich really sustainable? Doesn't it affect the environment negatively? Our metropolitan cities have mountains of non-degradable waste lining the outskirts. Our cities flood every monsoon because the drains get clogged up by the amount of uncontrolled waste and construction cementing on every outlet.

If some rain water does manage to get out of the city, it ends up polluting the rivers and the seas. Plastic has become such an essential part of our lives! Isn't that ironic? That is what is slowly killing us!

Contrary to this, our rural countryside suffers from lack of basic necessities. People struggle to get clean water, unadulterated grain, and inexpensive vegetables!

Changing this situation cannot be done by a few people alone. We need to sit up and think of ways in which the urban rich might take a step back and emulate the naturally 'sustainable' lifestyle that the rural poor have been somewhat forced to adopt.

The consequences of reducing inequalities should not be increasing risk to our environment. If the lifestyle of the developed affects the climate in such a way that it can only lead to disaster, the idea of development is flawed. If by bridging the gap between the rich and the poor, we create a class that continues to over consume resources and pollute the earth, that equality has no meaning. The rural poor should have access to basic facilities and live life comfortably as the urban rich do. However while thinking of ways in which this can be achieved, the future political leaders, social workers and economic strategists sitting here should consider environmentally sustainable ways to do so.



# PAREESA JOSHI

Student, Class IX Khaki

Hello everyone, my name is Pareesa Joshi from Grade IX. I am going to talk about the crucial topic, gender inequality and its relation to climate change.

Gender and sex are those kinds of words that aren't synonyms, but it seems like they are. Sexes are biological differences whereas genders are the thoughts, opinions, and stereotypes we associate with the sexes.

I don't know if you have heard Emma Watsons' 'He For She' speech at the UN, in 2014, but I will include a snippet of its meaning. She says that 'feminism' is a word that is assumed to be interconnected to man-hating. That is not the truth. Feminism is just the sheer ambition for gender equality.

She continues by saying that gender inequality is as much a male issue as it is female. From my experiences, not many people talk about stereotypes men face every day. I've seen some of my male friends not expressing their feelings just because it would make them less of men. I've seen boys getting pushed away from their interests towards 'girly' stuff just because they wonder – "what will society think of me"?

She powerfully states that, and I quote, "if men don't have to be aggressive in order to be accepted, women won't feel compelled to be submissive. If men don't have to control, women won't have to be controlled. Both men and women should feel free to be sensitive. Both men and women should feel free to be strong. It is time that we all perceive gender as a spectrum, instead of two sets of opposing ideals."

Education is extremely important, for all of humanity, Emma Watson mentions the human rights for it, and how everyone deserves a decent education. Still, UNESCO states that an average of 130 million girls between the age of 6 and 17 are out of school and 15 million girls of primary-school age will never enter a classroom. Stereotypes do play a big role in these cases, but in rural areas, schools are far, far away. Many parents worry about the safety of their girls while travelling, and find it difficult to juggle their work and dropping off their girls to school.

Education helps in climate action drastically. It empowers young minds and increases awareness about depleting resources. Education helps children to think wisely and understand the consequences of their actions. When we learn about global warming, think about climate change, and separate biodegradable and non-biodegradable substances, it makes us pause and think again. Do I really need to take a cab? Should I go and buy a plant? Do I really need to throw this?

Amongst those privileged women who do manage to get an education, then an occupation, here are some startling statistics. Male to female doctor ratio is approximately 64% to 36%. The ratio of men to women in the tech industry is 5:1. Women in space science only represent 20-22% of the workforce. In the music industry, women outnumber men in the profession, but the highest positions are occupied by mostly men. The same occurs in the fashion industry and the beauty industry.

If all the population who wants to work could do so, the economy across the world would change for the better.

Undeveloped countries will increase their rate of development socially, then economically and then politically and have a better economy, society, occupation, and education. They will have more awareness about the SDGs and climate change. They will have better economies which can invest in earth-friendly products.

Let's assume that a woman does all the household chores and is one of many responsible for throwing away over 2 billion tons of household waste in a year, globally. This includes detergent and soaps, foods, plates, old toys, etc. The woman is expected to handle these responsibilities which she will not be able to manage without being made aware of the consequences.

So, ultimately it's a cycle. Women and men are perceived as unequal, which causes the women to not be allowed education. This makes her unaware about the earth she stands upon, how its resources are depleting, how its condition is deteriorating, and so on. Then because she is not educated, it becomes hard for her to build a career, and is handed over family responsibilities. This disturbing process gets passed onto future generations in the family, completing the vicious circle.

Instead, with one slight change of perspective in our minds, she can get educated, and lend a hand in climate action. She can have a profession if she wants to, which will bring the country closer to economic development, making it easier for the nation to invest in eco-friendly products. And even if she doesn't want to work, she will be an educator to the people around her. That way, the vicious circle will change to a virtuous one.

Inequalities cause the whole world to fall apart, they separate people, and break unity. If that continues, the earth will fall apart too. Climate action is like democracy, every vote counts, every initiative counts. If we live in harmony and help each other, climate action will come as a natural consequence.

I feel that inequality can be stopped with three words - peace, acceptance, humanity. And I genuinely think that it is high time, inequality has to stop. I have full faith in every one of us 7.97 billion people, that someday soon, it will.

We just have to keep trying.  
Thank You!







# SAMIKA MALI

Student, Class X Plum

“Is smoother skin worth more than having potable water or edible fish?”

For years, research has shown that beauty products made with tiny microbeads, gritty cleansers that scrub off dead skin cells, have been damaging water supplies, marine life and the ecological balance of the planet.

Beat the Microbead, an international campaign to ban the plastic beads, reports that marine species are unable to distinguish between food and microbeads. According to the campaign, "Over 663 different species were negatively impacted by marine debris with approximately 11% of reported cases specifically related to the ingestion of microplastics." This has been reported by Amy DuFault in The Guardian.

I am Samika from X grade Plum and today I will be talking about “Beauty and The Beads” – our perceptions of beauty and the need to reduce inequality in order to meet our sustainable development goals.

Most of the beauty products used today contain chemicals in them, some of which contribute directly to the deteriorating condition of our ecosystem, especially to marine life.

Many of these chemicals are nondegradable. Most of these products are disposed of in the oceans, they are consumed by the aquatic organisms, and if we then consume these animals we are also consuming these wastes. And it’s a vicious circle.

Listening to this makes you want to wipe that lipstick right off, huh?

Well, I’m saddened to inform you that even the make up removing wipes are one of the most harmful Beauty products out there.



These wipes are generally made out of polypropylene which is a thermoplastic polymer. While polypropylene itself can be recycled, its manufacturing requires about 78 kWh/kg of power, 630 gallons of water as well as petroleum and natural gas. I don't want to zap you with statistics, but considering how many people use wipes in this room alone, this product cannot be something that can be responsibly consumed. The only way out is to stop using it entirely. And this is only a by-product of cosmetics.

However not all products we use are related to hygiene, feeling clean and “exfoliated” or even the sense of luxury one gets when you hear that “you are worth it!”

The products people used to make themselves look beautiful were in the past made from the things they found around them, but now it seems to have taken a completely different turn. Instead of using items one found in the kitchen or garden, we have turned to chemical cosmetics.

Beauty brands often exploit society's need to be conventionally attractive. A fine example would be the infamous fairness creams that are consumed by the masses due to the rampant “colourism”. The word might sound a bit misplaced but it has to do with the need to be light skinned – in turn suggestive of a life of comfort where your skin isn't darkened and tanned.

The way these creams are advertised by celebrities is problematic in itself, I mean they go as far as saying that you can land a job, your ex and even a partner if you use their products, but the chemicals in most of them are even worse.

A study was carried out by the Indian NGO Centre for science and environment (CSE). They tested 73 fairness creams and 40% of them had a presence of mercury in them, other heavy metals found were nickel, lead and chromium, which are highly toxic. As mentioned earlier, these chemicals, again, are consumed by the aquatic animals and then us. The containers which these products come in are non-biodegradable and go into landfills, contaminating the earth.

Sunscreens, specifically the ones containing oxybenzone in them, are known for their coral bleaching. Coral reefs are extremely important for the ecosystem as they protect the coastal areas by slowing down waves and are home to thousands of species. Researchers have stated that oxybenzone damages the DNA of coral.

However, there are many ways to prevent all these chemicals and plastics from getting into the water at all. There are many beauty brands that will recycle empty bottles or containers if you return them. Some also provide the option of refillable packages.

If you have excess of any products that you are going to throw away, donate them or give them to your friends. If you are throwing these bottles in the recycling bin make sure that they are clean. However, considering the amount of water needed to clean, it is unsustainable. I suggest we use old cloth instead.

Another way would be by being observant. So many times we buy things without checking what is in them. Granted, most of the time I myself have no idea about what chemical does what, but simply knowing that these certain chemicals are harmful and keeping an eye out for them will do wonders.

But, one does wonder, how is it that people have become so obsessed with products that will help them attain their desired looks that they do not even check what goes in their products. How is it to such an extent that brands have exploited peoples' insecurities so much?

Throughout human history, as a society we have judged people based on their looks. Almost always, this has led to people inventing and buying products that “change” the way one looks based on the contemporary perception of beauty.



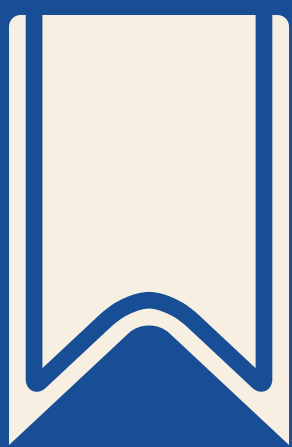
It is ingrained into our society that one's worth is decided on their looks. Anything other than what is deemed conventionally attractive is rejected by even the ones who have these looks. There is a solution to even this, however slow it may be.

This can be done by embracing all kinds of looks, allowing people to express themselves and ensuring representation of different looks and body types by the media.

We as a society must come to realize that our worth is not defined by something we cannot even choose, and as cliché as this may sound, celebrating our differences.

And, finally, we as individuals must work on being “indifferent”. One has to learn to be aware of diversity, accept these differences without prejudice and create an environment where everyone feels that they are equal and beautiful.





ALL you  
NEED is  
LESS

RESPONSIBLE CONSUMPTION  
AND PRODUCTION



# RESPONSIBLE CONSUMPTION AND PRODUCTION

The 12th Sustainable Development Goal targets sustainable consumption and production patterns. This topic relates to understanding how excessive market demand results in a vicious cycle of erratic consumption and production.

Unchecked consumption and production can pollute the environment, grossly exploit resources and as a result have adverse effects on the climate. As consumers, we have a lot of power to change the world by being mindful of our consumption.

This topic was chosen with the primary goal to make the youth aware of how their irresponsible consumption is leading to excess waste generation which is harming our environment directly or indirectly.

The speakers explored the different areas where the wastage of resources is done on a large scale and talked about its negative impacts on the environment. They also talked about what they are doing proactively to become responsible consumers.





# SHUBH TRIPATHY

Student, CClass X Plum

Economic and social progress over the last century has been accompanied by environmental degradation that is endangering the very systems on which our future development indeed, our very survival, depends.

Good afternoon everyone, I, Shubh Tripathy, today will be talking about the sustainable development goal 'Responsible Consumption and Production'. Let's divide this into a few points.

First, how does nature revive itself through responsible consumption and production? Second, what is one's role towards the cause? Third, what steps is the government taking towards sustainability? Fourth, and the question most people ask, what is in it for us?

So... how does nature revive itself through this method of attaining sustainability in the world?

Well, overconsumption leads to overproduction and a waste of resources. It's as simple as  $5 \times 8 = 40$  and  $5 \times 4 = 20$ , 5 in both cases being the production and 8 and 4 are the consumptions. In the first case, 5 units of a product made up of natural resources were produced, people liked the product and soon, it got sold out. Then there was a requirement for more, so another 5 units were produced, this cycle went on and on for some time and in total 40 units of the product were produced.

The difference in the second case is that the same people bought the products and after a point, started reusing them. This led to a rapid decrease in the demand for the product which resulted in half the production as compared to the first case.

Imagine this happening on a large scale and in all industries, think of how many resources we can save, so many more people now and in the future will be able to use these resources for various purposes. This is what sustainable development is all about, to get more and better with less.

Moving on, what can each one of us do to become a responsible consumer? I recommend one thing to all of us, and that is the 4Rs - reuse, recycle, reduce and the lesser-known sibling, refuse.

As consumers, I think all of us need to make a conscious effort to follow these principles. There are so many ways of reusing and recycling substances such as paper, aluminium, cardboard, sugarcane bagasse, etc. All of these materials can be considered as replacements for plastic.

Large-scale usage of these materials started during the COVID-19 pandemic. When travel had sort of come to a stop, people started using materials available to them locally for multiple purposes. An example of which is the making of mask out of cloth. Now, let's take the example of a nearing festival - Ganesh Chaturthi.

Many of us bring idols at home, many in their society. But every year, so many idols are submerged in water bodies, polluting the water and degrading its purity.

We need to start reusing and recycling before it gets too late. Punaravartan is a city-wide campaign to collect and redistribute the shaadu mati clay sludge after the visarjan of the Ganesh idols. Their main task is to ensure that the clay is kept clean and stored carefully so that it can be reused by the artisan.

Another option is to reuse the same PoP idol every year. This is a new and upcoming idea in which people dip the idol in water thrice, and then use it again the next year.

From the production point of view, there are many small initiatives and start-ups such as a company called ReCharkha, who upcycle plastic waste into beautiful bags, mats and many other things. Yes, all of us cannot open start-ups, but I feel like the least we can do is support such initiatives and give them a push.

Another thing that we can do, is be aware and spread awareness of what the government is trying to induce and promote. Which brings me to my next point, what is the government doing towards responsible consumption and production?

Well, I'm sure all of us have heard of the recent single use plastic ban throughout the country. Reports say that plastic waste every year leads to 400, 000 to a million deaths across the world because of diseases and accidents linked to poorly managed waste in developing countries. This is why the decision of banning single use plastic is such an important and powerful move to make India a plastic-free country.

You will notice a lot of positive changes in the food industry about which Anaya spoke earlier. Companies as big as Amazon themselves are using 100% recyclable materials in their packaging, and even the plastic that they use is more than 50 microns thick. Annual SDG progress of around 60 cities throughout India is monitored on a set of about 100 indicators by the government.

And now, for the last point of my talk today, what is in it for all of us? Yes with sustainable development, the future of our planet will be better, but is there anything that we get out of it right now?

Yes, very much. You will notice that the health of people living in a sustainable environment is usually a lot better than those of an environment where daily loads of non-recyclable waste is generated. A lot of these wastes end up in water, hence polluting it and make it unsafe for consumption.

Unfortunately though, that very impure water is consumed by lakhs of people leading to several diseases such as cholera, diarrhoea, dysentery, typhoid and polio. Some of the wastes end up in large landfills; these landfills can cause various respiratory diseases especially to the ones living closer to them.

Therefore, recycling and reusing wastes is a great way to make a greener environment, contributing in saving the planet from global warming and climate change.

That is it from me today, I'm sure that all of us have taken at least something out of this and are looking forward to applying it in our daily lives. There was a lot of hard work put into these speeches, so you better be responsible today onwards!

Thank you for listening. Signing off, Shubh Tripathy.



# ANAYA DEORE

Student, Class IX, Beige

We humans tend to spend money we don't have on things we don't need, to create impressions which don't last, which is why I, Anaya Deore from IX Class have chosen 'Responsible Consumption and Production' as the SDG I want to throw light upon.

Now, I love food and being a foodie, I chose my topic to be based on food wastage and responsible consumption.

Some of my favourite foods are panipuri, misal and pav bhaji. How are these delicacies made? It all starts when a farmer sows a seed. Agriculture is the lifeline of the Indian economy. "India lives in her seven hundred thousand villages".

Every one out of two people rely on agriculture as their source of income. Even though India is blessed with strong endowments in agriculture, it is not producing enough for the increasing population. Why is this so?

Due to the agricultural development and enhancement in technology farmers have started to use HYV seeds. These seeds require a lot of nutrients and water, which they get from the soil.

Lets say a farmer sows seeds of the wheat crop. All the nutrients present in the soil get used up by the HYV seeds. For sowing the same crop for the second time, the farmer needs to add additional fertilizers and pesticides which help in increasing the fertility.

But to sow the same crop for the third time they need to add larger amounts of fertilizers. Though these fertilizers provide the plant with sufficient nutrients, they kill the worms in the soil, the same worms which help in maintaining the fertility of soil.

So the farmers are trapped in a vicious cycle and feel the need to add more and more fertilizer every harvest season. This degrades the quality of soil to a great extent and also increases the production of artificial fertilizers.

Also what happens to the wastes after harvest? Let's take the same wheat crop. The wheat kernels are used to make flour and later a delicious burger bun. But what of the husk? Many times this so-called 'waste' is burned creating carbon emissions, rather than using it as a natural fertilizer for the soil!

But let us talk about an aspect you and I can easily relate to - Consumption of food.

It saddens me to know that one-third of all food produced for human consumption is never consumed. All those vada pavs gone to waste! But how can we change that? What can we do to be a responsible consumer? Well, as an expert on that very topic let me tell you:

1. Buy only and only what you need. Make a shopping list and stick to it, and avoid impulse buys. Not only will you waste less food, you'll also save money! Which is always good!
2. Pick ugly fruits and vegetables: Don't judge food by its appearance! Oddly shaped or bruised fruits and vegetables are often thrown away because they don't meet arbitrary cosmetic standards. Don't worry they taste the same!
3. Love your leftovers: this is something all Indian households already do, if you don't eat everything you make, freeze it for later or use the leftovers as an ingredient in another meal. How many of you like paratha? At my place whichever bhaji is leftover is added in a paratha and the end result I tell you is scrumptious!



4. Store food wisely: My mamma always does this. She moves the older products to the front of the fridge and new ones to the back. Try to use steel or glass containers for storing your food.

5. Sharing is caring: Donate food that would otherwise be wasted. For example, if you have some leftovers, you can give it to your house help or security guard.

Now let's talk about how industries affect food production. To think of it, even before food production begins, natural habitats and ecosystems are destroyed to clear land that will be used for agriculture.

Transportation of food is another factor that influences the unsustainability of our food production systems. After production, these crops are transported from the areas they're produced to wealthier, developed regions like Canada and the U.S. for the enjoyment of their citizens.



One more thing you should know about the food industry is that it is not quite the bargain it seems: Did you know that the food industry produces greenhouse gas emissions, pollutes air and water, and destroys wildlife which costs the environment the equivalent of about US \$3 trillion every year?

How can we make food production more sustainable? Here are a few ways:

1. **USE ECO-FRIENDLY PACKAGING:** Most of the restaurants have already implemented this. When it comes to metal food packaging, sustainably sourced aluminum is one of the most environmentally responsible choices.
2. **REDUCE FOOD WASTE :** I have already mentioned a few ways to do the same.
3. **IMPROVE ENERGY and WATER EFFICIENCY:** Reducing energy and water consumption can be particularly challenging in the food processing and manufacturing sector as the production demands and safety requirements must come first. However, significant improvements can nonetheless be made by finding opportunities for greater efficiency.

4. USE SUSTAINABLE INGREDIENTS: now what are sustainable ingredients? To understand that we need to understand what unsustainable ingredients are, The farming of “dirty” palm oil, cocoa and coffee, for instance, has been linked to deforestation, habitat destruction and child and forced labor, among other sustainability issues. Food processors and manufacturers can take a stand against these and other harmful agricultural practices by ensuring that they source “high-risk” ingredients responsibly.

The bottom of the pyramid which by the way has untapped potential for value creation must become an integral part of India’s sustainable growth story.

Recently I got an opportunity to participate in a program called Youth Forum Switzerland where I got to speak to an expert about smart cities and sustainable communities. That is where I learned that we don’t have to make our villages smart, we have to make the people in the villages smart.

I intend to spread awareness about being vocal for local. Remember, habits can be stronger than reasons.



# TURYA BHATKAR

Student, Class X Plum

My brain melted when I was thinking about a topic to talk about for this speech. Overconsumption? There are probably three galaxies' worth of information to process.

But then, I had my “eureka” moment if you will. Why did I even pick overconsumption in the first place? It was because, deep within my heart lay a passion for fashion done slowly, sustainably.

One of the places where we over consume our resources grossly is fashion. One million ton of textile are disposed of annually in India. India just so happens to have made it into the top 5 apparel manufacturing hubs. The apparel and textile industry causes greenhouse gas emissions greater than the air travel and shipping industry globally.

However, even with one of the main causes being population, there's another flamboyantly dressed skeleton in the closet we need to address – fast fashion.

Fast fashion combined with social media has caused us as a whole to be trend-chasers, consistently creating a personal style through which we can express our creativity.

But, you might be wondering what a trend cycle is exactly. A trend cycle essentially talks about the shelf life of a trend, and is categorized into five stages – introduction, rise, acceptance, decline, and obsolescence. Nowadays, things are ultra-connected with an emphasis on throwing out all that's old, all in pursuit of this art. And with the invention of social media, our access to the newest trends is a lot less controlled and a whole lot more rapid.

I chose to use the sudden popularity of “hauls”, also known as hyperconsumerism city, to shed light on this very real issue. If you're on social media, chances are you've seen some random influencer buy 10 or more pieces of clothing from various fast fashion brands. There has been a sudden increase in these hauls since the pandemic, which is for a much deeper reason.

The COVID-19 pandemic wasn't good for the majority of us. It lessened the consumption of human connection drastically and replaced it with the (over) consumption of media. Let's face it, we essentially used instagram to distract ourselves from a premature mid-life crisis.

And what did everyone overconsuming media lead to? Well, for one it made most of us a lot less happy, but it also led to us over consuming more tangible material things, in various forms, most notably cosmetics and fashion.

Zara, H&M and Urbanic, as our online therapists, pushed us to waste a lot of money, and have a careless, lavish mindset eating away at our precious earth.

We were essentially buying a lot of plastic by investing in synthetic material and throwing it away in a few months. I know I'm guilty of this. Are you? But, that doesn't mean we can't try to reduce the harm I've caused. Here are some of the steps I've taken toward a more sustainable lifestyle, while still cultivating my sense of personal style.

1. Upcycling - Wikipedia paraphrases upcycling as creative reuse, and I absolutely love that because it gives us the crux of what upcycling is all about. When we upcycle, we give a garment a new life, and you yourself evolve. An old pair of jeans turned into a symbol of my positive growth, while also enjoying its resurrection as a denim skirt.

2. Using what you already have - This one is quite simple and you'd think of it as a no brainer, but I've noticed that this tip is seldom put into practice.

Whenever you're in need of a piece of clothing, buying shouldn't be your only solution. There have been times I've needed a blazer or something and I didn't have one in my closet (because which 16 year old buys a blazer unless they absolutely needed it?), so instead, I took a deep dive in my grandpa's closet and used his blazer from the 80s instead!

3. Don't be a slow fashion police - don't go around having a superiority complex because you're into sustainable fashion. Understand other people's circumstances, and acknowledge your privilege in the fact that you can buy sustainably. It was difficult for me to confront how preachy I was about slow fashion, but it helped me develop and confront my ignorance of class differences.

4. Educating yourself - Educate yourself on the lives of your clothes — their origin, where they go when you throw them away, what they're made of and the brands they associate with. If you're questioning prices on a sustainable piece of clothing, teach yourself about the production process of said clothing — from the creation of the textiles to the conceptualization done by designers.

Creating a garment is a long process and shouldn't be rushed, nor should we devalue the process going into making clothes. Honestly, simply upcycling one t-shirt into a fitted cropped top took me hours, so I couldn't imagine how long making something from scratch would be.

5. Finally, I want to say that buying fast fashion isn't a bad thing if you're doing it consciously and judiciously, knowing the consequences of your actions. Fashion affects everything from inequalities in gender and in class to the quality of the water available on this earth.

Although this topic is nuanced and vast, I hope I have given all of you nuggets of information that encourage you to look deeper into everything you wear and buy. To be a responsible consumer and producer, even when the other option seems easier.

Thank you for listening.







# UJWAL THOTA

Student, Class IX Fawn

Hello! My name is Ujwal Thota, and I am from IX Class Fawn. Today, I am going to talk about 'Responsible Consumption and Production'. First, let me start by talking about sustainability.

Sustainability is the ability to develop while using only the available resources, without compromising on the resources required for future generations.

The aspects I will cover in this talk are:

1. What are fossil fuels and what are the problems we are facing because of them?
2. Irresponsible consumption of fuel.
3. Solutions to minimize unnecessary energy consumption.
4. And to end with, a Case Study.

I'd like to begin by telling you all about crude oil and coal, one of the most crucial natural resources being used by us. They are a mixture of hydrocarbons that are formed from the remains of animals and plants that lived millions of years ago.

Since they take more years than I can count to get replenished, they are non-renewable resources. I hope we all know that these are extremely harmful to the environment. Yet, we use them excessively and I bet we will continue to use them because all of our lives are so overly dependent on these resources.

Fridges, TVs, computers, lights, fans all run on electricity. All industries, offices, and homes use these appliances. Can you think of a day when you didn't use any electrical gadgets? Well, I can't. So I safely assume that electricity is the lifeline of the world.

Now, most of our electricity comes from burning coal. The magnitude at which we are dependent on coal is unimaginable. Did you know that India is the world's 3rd largest consumer of coal?

Now, you may ask, why is burning coal a problem? Well, let me explain. It produces emissions that are dangerous for us, such as sulfur dioxide, carbon dioxide and some nitrogen oxides that harm the Earth.

The same emissions are produced by the vehicles that run on petrol and diesel and have gotten you here, in this auditorium to listen to my speech.

How can we minimize these emissions?

Thanks to fast-evolving technologies, we now have many new solutions for the sustainable use of energy such as solar panels, hydroelectric power, wind power etc. But sadly, we are not implementing these technologies efficiently.

Let's take a look at Rajasthan, for example. In terms of solar power, Rajasthan has more potential than any other region in our country, but it still trails behind Karnataka and Telangana.

In terms of hydroelectric power, Arunachal Pradesh along with some other northeastern states have the greatest potential for hydroelectric power, but no schemes have been formulated to develop this potential resource.

Gujarat has the highest potential to generate wind power but is still lagging behind Tamil Nadu. We must develop these areas to the maximum and minimize the amount of fossil fuels we use.

Vehicles. Cars. Let's talk about them, shall we? Who doesn't love them? There are about 30 million cars in India, two of which are mine. Let's do some maths.

I use my car thrice a week, making it twelve times a month and 144 times a year. That is a lot of carbon emissions. Now, I would like to ask you. Is this responsible consumption of petrol?

By a show of hands, how many of you think this is not responsible consumption of resources? I agree.

Why is that so? Let's look at it this way. The primary environmental effect of petroleum, energy overuse is an increase in our carbon footprint. Overuse of cars leads to an increase in the extraction of fossil fuels, which increases the greenhouse gases in the atmosphere which in turn leads to environmental degradation. Now that we are aware of the problems, let us focus on the important aspect of it: How do we get ourselves out of this vicious cycle.



Firstly, we can do this by ensuring that we don't waste fuel. Fuel is a resource we can't afford to waste. Keeping your engine on idle when waiting for the signal to turn green also consumes more fuel than switching off the ignition and restarting it.

According to studies, on an average you waste 0.098 liters of fuel for every 10 minutes of idling. That may not sound much but it all adds up over time.

So as a rule of thumb, turn off the car if you will be idling over 10 seconds. Hence, I always make it a point to tell my parents to turn off the car at the traffic signals to avoid wastage of petrol.



Another way of consuming resources responsibly is to use electric cars. These are much less harmful to the environment, as opposed to diesel or petrol cars.

Planes are also a major cause of pollution. The jet fuel that is burnt is toxic to the environment. We must start implementing newer and more sustainable technologies to reduce the use of these hazardous fuels.

For example, we could start using battery-powered planes for shorter distances. Methods have also been discovered to use hydrogen, a zero-emission fuel in planes, which makes air travel much more sustainable.

But what change can we make on a daily basis? We have been learning about it since 3rd grade. But how many of us have actually been able to implement it?

We must minimize the usage of vehicles as much as possible. We should avoid using cars and scooters for short distances. I cycle short distances, or use public transport to cut down on the amount of fuel used.

I also ensure that I switch off all lights and fans before leaving any room. I would suggest that all of us take a pledge to do the same.

If all Indians implemented this in their daily lives, we would end up saving 72,036,000 kilowatts of power per hour. This shows that individually, we are a drop, but together, we are an ocean.

PMPML is the public transport bus service provider in Pune. I am sure most of us have seen their buses on the roads. What makes me talk about them is the switch they have made by opting electric buses over the normal ones. Electric buses are highly efficient and have lower operating costs than diesel buses. Fuel savings are significant and the buses also have fewer moving parts and maintenance needs. Not only are they reliable but they also have similar rates of downtime to other technologies. Summing up, a fleet of electric buses across most of India can benefit a lot more than just the ecosystem.

I would also like to share my personal experience with these buses. When I first saw these buses on the roads, I was really excited to travel in them. To actually check whether all the things mentioned earlier were right or not, I wanted to test them out myself. When I first sat into one, I could instantly feel the difference when compared to a normal bus which runs on diesel. And now, I can confidently say you can take my words, everything I mentioned about electric buses is true.

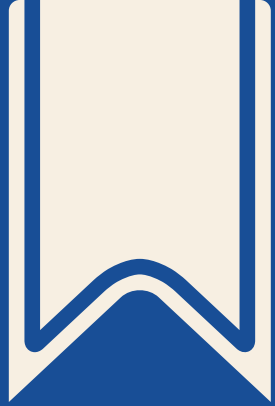
To conclude, I would like you all to remember that only when we become responsible consumers, we become accountable for our actions. We can't wait anymore.

All we have is now. Let's not waste time because now is the time to move to action.

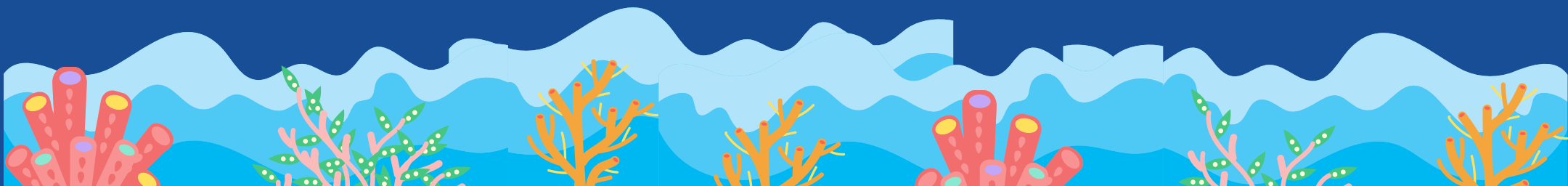
Thank You !!!







# CLEAN WATER AND SANITATION



# CLEAN WATER AND SANITATION

Sustainable Development Goal 6 on water and sanitation, adopted by United Nations Member States at the 2015 UN Summit as part of the 2030 Agenda for Sustainable Development, provides the blueprint for ensuring availability and sustainable management of water and sanitation for all. Water is essential because all life forms depend on it. However, in the face of extreme weather conditions and altered water cycles, we are witnessing a profound impact on our water systems.

These include untimely rains, floods, and droughts. Such natural calamities are responsible for the contamination of water bodies. Unclean water poses health risks, putting the lives of millions of people in danger.

About two billion people still lack access to safe drinking water. These life-threatening concerns make the provision of equal access to clean water for all extremely essential.

By researching and understanding the importance of clean water and sanitation, the speakers addressed the various issues faced by people all around the world due to unclean water.

They also explored the causes behind the deterioration of water quality that we, as consumers are responsible for, thus linking it back to responsible consumption and production, showing how climate and all its problems are truly interlinked.

They went to the grassroots level of the problems and came up with relevant solutions to solve the same.



# PRANJAL KULKARNI

Student, Class X Plum

Bali, Indonesia. It's a very picturesque, beautiful place isn't it? Brings an image to my mind of gorgeous vast rice fields, its famous volcanoes and of course who could forget, its clean, lovely beaches?

Turns out that it's not as clean and as beautiful as we all think. Unfortunately Bali has become a victim of pollution too just like most places.

The amount of plastic present near the beaches there is immense. Indonesia as a whole, has been recognized to be one of the world's worst contributors to marine plastic pollution.

Waste problems are noted to be particularly bad during the annual monsoon season, when debris is swept in by strong winds and currents and simply strewn across the sands.

Many swollen rivers have been seen to wash rubbish from riverbanks to the coastline too. This shows just how big a problem plastic waste is.

Good morning everyone, my name is Pranjal Kulkarni and today I'm going to be talking about the importance of clean water and sanitation.

Clean water and sanitation is most vital in today's day and age where our population keeps rising dramatically. This has only increased the pollution of the environment. As we know, water is the one of the most important natural resources needed for our survival and the pollution over time has unfortunately made clean water scarce.

It is estimated that around 70% of surface water in India is unfit for consumption. Every day, a huge amount of wastewater enters rivers and other water bodies with only a tiny fraction being adequately treated.

These are all numbers, all facts, all based on how dire and scary the situation is now. But I suppose we must ask, how did we reach here? For that, we must get to the root of the problem and try to understand the kinds of causes that have led to ocean degradation to become a problem of such an unprecedented scale.

There are many causes for pollution of water such as fuel spillages, oil pollution and plastic pollution.

But out of all these causes why is it that we focus on plastic? What makes plastic so harmful? Plastic is not just biodegradable material which, through its harmful chemicals, contaminates the soil and groundwater but it's also one of the biggest elements to harm the marine environment.

Plastic waste is undoubtedly a huge issue. More than 8 tons of plastic enters our oceans every year. A report from the Ellen MacArthur Foundation predicts that by 2050, plastic in the oceans will outweigh the number of fish. This report states that oceans will contain at least 937 million tons of plastic and with luck, 895 million tons of fish.

As plastic is getting accumulated in our oceans and seas, researchers are increasingly concerned about microplastics and their effects.

Microplastics, simply put, are particles that typically form when larger plastic objects such as shopping bags and food containers break down. They are widely seen, ranging from the deepest of seas to even surface waters.

We obviously see this kind of particles, these waste materials that are constantly out there. While discussing clean water and sanitation, it is easily understandable how these plastic particles are a concerning problem. But clean water and sanitation is not just about the surface level, it's a fairly deep rooted topic. Sanitation by definition is the promotion of hygiene and prevention of disease by the maintenance of a decent, sanitary condition. Our water may not have the plastic floating around in it anymore once we pick it out, but does that truly make it clean?

Whilst the harmful consequences of microplastic pollution on marine wildlife is well understood, there has been significantly less consideration for the interaction of microplastics with water treatment processes. Due to their small size, nano and microplastics can easily be ingested by living organisms and travel along water and wastewater treatment processes. A review, published recently in Water Research discovered that when wastewater contaminated with microplastics enters wastewater treatment plants, microplastics collide with each other which causes them to fragment into nanoplastics.



These microplastics and nanoplastics cause damage to the water treatment plants by blocking pores involved in the filtration processes and wearing down the treatment units. This reduces the efficiency of the process and involves risks such as treated water not meeting the required safety standards.

According to the study, we annually produce around 300 million tons of plastic around the world and up to 13 million tons of this ends up in our rivers and oceans. If we continue in this fashion, current projections suggest that this will amount to 250 million tons of plastic in waterways by 2025. Since plastic is not degraded naturally by weathering and ageing, plastic will continue to accumulate in our waterways.

This highlights the need for novel techniques to remove microplastics from waterways to lessen the impact of microplastic pollution on our ecosystem and human health.

Microplastics are also drastically affecting the wildlife. Thousands of seabirds and sea turtles, seals and other marine mammals are killed each year after ingesting plastic or getting entangled in it.

Plastic contributes heavily to water pollution, which is why it is important to reduce plastic waste and improve sustainability, both locally and globally. A safe water supply is the backbone of a healthy economy and society, yet is woefully under prioritized, globally.



So what do we do with the plastic we already have? Many countries and states are approaching this problem in a creative manner. Let us take the example of Chennai who generate about 3500 tonnes of plastic everyday out of which 35 to 40 tonnes are waste. This plastic waste was collected along with In Chennai, roads were made out of plastic waste to construct better, more durable and cost effective roads and such roads are being constructed since 2011.

Using Bitumen technology on waste plastic, the Pune Municipal Corporation too has constructed a 150 metre stretch of Bhagwat lane at Navi Peth.



Other trial areas in Pune include Katraj Dairy, Dattawadi Kaka Halwai Lane, Koregaon Park Lane 3 and more. Lucknow, Jamshedpur and Indore are other places that have explored such innovative recycling as well.

Other countries are also contributing in this war against the production and littering of plastic. For instance, the Clean Seas Campaign was created to fight against marine litter and plastic pollution. Over 60 countries - both coastal and landlocked - have signed up for this global movement with ambitious pledges and commitments.

Plastic is among the most valuable waste materials which we consider a major problem today. Another way of disposing or using it in forms of chemicals for industry or energy is a process called “cold plasma pyrolysis”.

Pyrolysis is a method of heating, which decomposes organic materials at temperatures between 400 degrees Celsius and 650 degrees Celsius, in an environment with limited oxygen.

But these are solutions at a larger scale. What can we do at home to support this cause? Our contribution could be as small as not buying plastic bottles or carrying reusable shopping bags but the most important of them all is recycling plastic so that the production of plastic decreases.

It is important that we take initiative for clean ups and do our part, but even as decent, civic citizens we are conscious of things as small as how we dispose of plastic.

Let's remember, every drop of water that will exist on our planet is already here, so our actions do have an impact

Thank you and have a good day!



# ARANYA NATH MISRA

Student, Class X Plum

As said by a speaker in the UN, “The water and sanitation crisis claims more lives through disease than any war claims through guns.”

A very warm afternoon to everyone present here, my name is Aranya Nath Misra and today I will be talking about this very topic in relation to the United Nations’ 6th Sustainable Development Goal.

Before I begin, I request you all to close your eyes.

Visualise. Visualise a world where there’s no water that can be used to drink. All of it is polluted to its highest capability. Plants, animals and humans on this earth are dying due to an uncountable number of diseases that have spread across like wildfire because of the lack of consumable freshwater and ingestion of dirty water.

Open your eyes. I am sure none of us want to live in such a world right? But, the hard truth is that all the water around us is getting contaminated gradually over time. It's time we do something to change this.

“Save water, safe life”. This very slogan has been around for decades now, but how far have we really come to implementing this? Have we actually preserved water and kept it clean? Obviously, our surroundings show otherwise.

Only 0.5% of the total water present on the earth is available as freshwater that is fit for consumption. Water pollution that we observe has increased at an alarming rate. Just recently, we had a Higher Education Fair at school.

After attending the event, I was walking outside the school, on my way to grab some food. While doing so, I had to make my way through puddles and puddles of dirty, muddy, and polluted rainwater which was clogged up on the road.

This made me think about how proper drainage facilities are so vital to ensure sanitation as well as clean water.

Did you know, each day, nearly 1000 children die due to preventable water and sanitation-related diarrheal diseases. Also, around 2.4 billion people lack access to basic sanitation services, such as toilets or latrines.

Not only does this affect human health, but it also affects the health of our planet. The ongoing climate change problem is further aggravating the situation, with increasing disasters such as floods and droughts. Almost 80% of wastewater in the world flows back into the ecosystem without being treated or reused, and 70% of the world's natural wetland extent has been lost, including a significant loss of freshwater species.

Our own city - Pune consists of many water bodies such as lakes and rivers. One such river is the Ramnadi, which is a tributary of the Mula river. It flows through areas, such as Bavdhan, Sus, Baner, Aundh and Pashan. I go past this river every day on my way to school. I myself have witnessed a truck dumping tons of mud, sewage and sludge in the water for no apparent reason. Plastic bags can also be seen lying around.

An Ex-Orchidian, currently in the 12th grade, surveyed the river to understand its exact problems. As of now, they are at a stage where they have the required infrastructure, however they will be implementing the plan only after the monsoon season. This plan consists of bringing in various companies under corporate social responsibility or CSR and launching a large-scale cleaning drive. Later they wish to collaborate with schools and colleges too.

The general public can also help by volunteering in future cleaning drives and awareness programs. Sagar-Mitra is another initiative that our school has partnered with, which aims to improve and recycle tons of plastic that is being fetched by school students from various water bodies. It addresses the numerous hazards of accumulating plastics in streams, lakes, rivers and oceans.



Now, talking about sanitation...

The lack of sanitation can be a barrier to individual prosperity and sustainable development.

When children, especially girls, cannot access private and decent sanitation facilities in their schools and learning environments, the right to education is threatened.

As adults, wage earners who miss work due to illness may find themselves in financial peril. And when health systems become overwhelmed and productivity levels fall, entire economies suffer.

Without basic sanitation services, people have no choice but to use inadequate communal latrines or to practice open defecation, posing a risk to health and livelihoods.

While some parts of the world have improved access to sanitation, millions of people in poor and rural areas have been left behind.

The 6th Sustainable Development Goal aims to achieve universal and equitable access to safe and affordable drinking water, sanitation and hygiene for all, by 2030.



It intends to pay special attention to the needs of women and girls and those in vulnerable situations.

It hopes to achieve various other objectives including reduction of pollution, increasing efficiency of water usage, protection and restoration of water resources in the rural areas as well as supporting countries in development related to this sector.

This SDG definitely will help in better water management but is also interconnected with many of the other SDGs, like in the case of overconsumption and wastage of water resources as well as sexual division of labour in the context of water collection for the household.

It is high time we take a step towards making this situation better. It is very easy to state problems, but actual development comes with solutions for them.

Change starts from us, and we, as the youth too can help with these matters. According to me, small changes create great impacts and thus, even the smallest of waste, for example, a chocolate wrapper thrown into the water ultimately leads to water pollution.

If such small actions can lead to such a large-scale problem, then, even the smallest of changes in our lifestyle can help create a cleaner and more sanitary world.

We, as the youth, can contribute by disposing of harmful materials properly. Using environment-friendly household cleaning items is another way to save our waters. Many such products are now easily available in the market.

Volunteering in programs to clean water bodies or maybe even becoming young entrepreneurs by starting such NGOs could also help towards fixing this problem. We could start fundraisers to collect money and donate the same towards installing washrooms in the rural areas.

The COVID-19 pandemic made us all cautious of our surroundings. Honestly, we all became a “Sheldon”. I know at least my dad did! All of us made sure that everything in our house was sanitised and water was purified. Why not help make sure that all our surroundings and water bodies remain clean too!

Clean water and sanitation is a right and we must fight to preserve it.





# SIYONA SHETTY

Student, Class IX Fawn

Good afternoon, everyone, my name is Siyona, and I shall be speaking on the topic 'Clean Water and Sanitation'. The UN General Assembly first recognized the right to safe drinking water as part of binding international law in 2010. The right to water entitles everyone to have access to sufficient, safe, acceptable, physically accessible and affordable water for both personal and domestic use.

A target goal under this SDG is achieving universal and equitable access to safe and affordable drinking water for all by 2030.

So, a quick run-through of some stats. About 892 million continue to practice open defecation. Almost 2.4 billion people lack access to basic sanitation facilities. Approximately 70% of lake water is used for irrigation. Didn't understand these stats? Me neither.

These numbers, as well as the idea of everyone getting clean water, and trust me, it is very sad saying this, seem like something so far away from me. So, I thought, instead of looking at the whole world, which I know very little about, why not look at something closer to me?

Today, I am going to look at the state of water right here in Pune, my main focus being non-equitable water distribution.

Sanitation in Pune is in a state of constant improvement. There have been schemes such as 'One Home, One Toilet' to create sustainable toilets for the urban poor.

More than 1600 toilets have been built in slums. There are projects especially for women's sanitation, such as converting buses into women-only hygienic toilets that sell products such as sanitary pads and tampons for a relatively cheaper cost.

Distribution of affordable water, on the other hand, is very uneven in Pune. Some places get up to 600 litres of water, while others barely get a 100. The first question that popped into my head when I heard this was - is this even legal? Didn't the UN claim that water to ALL is a human right?

The answer to that is... blurry. The Indian Constitution states that the responsibility of providing water is distributed from state governments to local governments, which for Pune, is the PMC. We can assure that this water is safe.

It comes straight from dams, and while there is obviously some unhygienic water in said dams, this water is not distributed to citizens and also, as they say, the devil you know is better than the one you don't. Because you see, while the responsibility of water rests with these local corporations, the finer details are pretty much fully in the corporation's hands.

This is why the PMC does not have the complete responsibility to give water to citizens any more. They have bought affidavits that put the responsibility of water supply on the shoulders of housing societies instead.

These societies then turn to water tanker mafias. Water tanker mafias steal water from sources that we shall talk about more in a bit and sell it for exorbitant prices, for at a minimum of 200 rupees more than PMC's affordable water.

Members of societies have complained about getting sick after drinking said water, stating that it is by no means suitable for children or senior citizens.

I want to ask two questions. A, why does this happen in the first place? And B, why does this continue? An explanation for A is that primary focus is on the construction of housing societies, and good water infrastructure cannot catch up to this.

Last year 178 building permits were granted in the short span of two months. Pune has also merged 34 villages into Pune's municipal area. This has led to even more building projects being opened.

As for B, societies do hypothetically have other options. But practically speaking, the water tanker mafia, if the name doesn't make it clear enough, does not play clean.

Purposely sabotaging pipelines, well-owners who are involved with this mafia intentionally depleting groundwater, assaulting and threatening anyone who tries to speak up, and perhaps even worse, using exploitation.

It isn't the societies that have alternate sources for water targeted. It's the societies who struggle for it every day, the societies who have no choice but these mafias.

Now, about where they get this water in the first place. The first option is illegally extracted groundwater. Frequent pumping of groundwater can lower it, making it impossible for wells to have the depth to get it. This groundwater is also mined from sources contaminated with chemicals and sewage, explaining the sickness.

The second option is the PMC's very own tanker filling stations!

A Hindustan Time articles alleges officials are involved in this, investigations showing that water meters showing the amount of water which civic staff maintain were found switched off, with CCTV cameras either damaged or pointing in the wrong direction.

The PMC admits that they are clueless when it comes to truly detecting theft because water meters are very easy to tamper with.

This further intimidates citizens, because what can an individual do when it's the system that owns them that is corrupted? But I don't think that line of thinking is accurate.

There are 11 organisations from Pune who filed a public interest litigation about water tanker mafias, and moved it to the Bombay High Court after futile meetings with local authorities.

They demand 135 litres of water to be supplied per day, policies on groundwater usage which do not exist at all so far, and details of water infrastructure to accompany construction.

And I think that's the beauty in all of this. You can help. It is only the restless letters to the Maharashtra government, the complaints filed against the PMC's irresponsibility and speaking up that has taken the case anywhere.

I think it is our duty as citizens to know. I lived in such a little bubble that before doing research for this speech I had no idea about an issue that directly affects so many people around me, as well as myself.

I always thought that awareness was a substitute for action. But now, I believe it is a precursor for it. Being conscious about these issues will create a world where it will be common for people to stand up to them, as well as provide a platform to fight for them along with like-minded people.

My last plea is to make yourself aware and stand against Pune's skewed water distribution system for both yourself and the people surrounding you.





# SAMEER DATAR

Student, Class X Iris

Hello, I'm Sameer Datar and today I'll be speaking to you about something that affects everyone, everywhere, every day - 'Clean water and Sanitation'.

Water. As the dictionary reads, a colourless, transparent, odourless liquid that forms the seas, lakes, rivers, and rain, and is the basis of the fluids of living organisms. But it is so much more than that.

An intangible part of our daily lives. From quenching our thirst, to keeping us clean, water plays a crucial role in every part of our lives. I'm not exaggerating when I say, water is something we absolutely cannot live without.

Yet, due to a variety of factors, a whopping 2.2 billion people around the world lack access to clean and safe drinking water.

It's estimated that by 2025, two-thirds of the world's population will be facing water shortages. In rural regions, the majority of the households get water daily, but at unpredictable timings, and others get water only at appointed hours daily.

In contrast, in urban areas, almost all households have improved water sources. In India, especially in rural areas, fetching water has been perceived as a woman's job for centuries. Women sometimes have to walk for miles on end just to reach the closest possible water source.

But, where did this problem arise and what is it caused by?

First let me recount an incident. Before COVID-19 hit, something I enjoyed was going to the Pashan Lake for a walk in my free time to listen to music and relax. However, nowadays I have started dreading this. Waste from many surrounding societies is dumped into the lake and there has been an increasing flow of sewage water inside the lake premises and the rising stench makes it impossible for visitors to stay for long.

Additionally, the solid waste suffocates and chokes aquatic life in the lake which causes a drastic reduction in the lake's fish population and also causes oxygen depletion.

Clean water distribution is directly influenced by water pollution, which is caused by a mix of natural and human factors and activities.

Let's look at water pollution as a tree.

Climate change is just one branch among many. Rising global temperatures are taking a toll on the water cycle, by influencing when, where and how much rain we get.

This has led to devastating droughts and floods that have set back water distribution. Global warming is also closely linked with another problem, ocean acidification. This phenomenon is also caused by increasing carbon dioxide levels in the atmosphere.

A portion of the carbon dioxide produced by humans doesn't stay in the air but instead dissolves in water. This has led to oceans becoming more acidic which in turn harms marine life as it causes shells and skeletons made out of calcium carbonate to dissolve.

Another branch of the tree is human activities.

Dumping of industrial wastes, which is full of toxic chemicals and pollutants, eventually flows into fresh water systems such as canals, rivers and later even into the seas, as the industries that produce them do not have proper waste management systems.



Mining, use of chemical fertilizers and pesticides, and even urban development as a whole, form leaves on these branches. The main thing we deduce from this is that, the major cause of water pollution and the very root of the tree, leads us back to the very beings this problem affects, humans.

Unsafe water has drastic and severe implications on human health. According to the UNESCO 2021 World Water Development Report, about 829,000 people die each year from diarrhoea caused by unsafe drinking water, sanitation and hand hygiene, out of which nearly 300,000 are children under the age of five.

This accounts for 5% of deaths in that age group. Another survey, conducted by the World Health Organization stated that 80% of the world's diseases and 50% of the world's child deaths are related to poor drinking water quality.

However, there must be ways in which we can battle this problem.

But first, let's rewind a bit. 1948. NASCAR, the National Association for Stock Auto Racing, was founded at Daytona Beach, California, Bob Falkenburg won at Wimbledon and communists seized power in Czechoslovakia as a part of the Cold War.

But there was something else that happened. Something that not many of us have even heard about. A bill was quietly passed by Congress in the United States that had certain instructions some factories were supposed to implement.

This bill was regarding the Federal Water Pollution Control Act

Unfortunately, the Act was not very well-designed and as a result, achieved little. A lot of you might think that this Act was merely another failed attempt at solving a problem that we haven't solved even after almost 75 years.

Well, you're not wrong, but let me tell you, this Act was something that set the pace for change, and paved the way for combating water pollution.

This issue we are presented with is indeed intimidating, as it sometimes should be. The fact that it's intimidating shows just how much it affects, not just you, me or even our communities for that matter, but the whole world and every single living being.



The first step in solving this problem, or any problem at all, is to acknowledge it. We must understand that our water resources are at great risk of extinction, and saving them is no longer a choice, but a responsibility.

The change required to solve this problem is indeed worldwide, but it starts right at home. Implementing the 5 Rs – Reduce, Reuse, Recycle, Refuse and Recover in our daily lives and honing this skill over time keeps us a step above water extinction.

Many everyday items are recyclable and manufacturing using recycled materials also combats pollution. We can also try and help by volunteering to clean beaches or rivers. Many NGOs often have such cleaning sessions.

A Pune-based NGO, Jeevitnadi, has been leading volunteers to clean up stretches of the Mutha river.

Another NGO, by the name of Jaldindi Pratishthan, organizes a unique event of travelling from Alandi to Pandharpur by boats through the Indrayani River. People travel by boats and walk alongside the river spreading awareness about water pollution.

An interesting fact is that, water shortage can cause inadequate sanitation – which is a problem for 2.4 billion people – which can lead to deadly diarrhoeal diseases, including cholera and typhoid fever, and other water-borne illnesses.

This brings us to sanitation. If COVID-19 has taught us anything, it's the need and importance of sanitation in our daily lives. Just like clean water, sanitation too is an integral part of our lives and something we cannot live healthily without.

But still, huge sections of the population seem to be unaware of this fact. According to the World Health Organization, over 1.7 billion people still do not have basic sanitation services, and out of these 494 million people still defecate in the open.

According to the World Bank, around 500 million women and girls globally lack adequate facilities for menstrual hygiene management.

Poor sanitation can be caused by a variety of factors, like contaminated water and even lack of education. Children from a young age must be taught the basics of sanitation, irrespective of their background.

Not only should this education include things which affect them every day, such as frequent washing of hands, but also things such as proper disposal of waste. At homes, we must set examples for our children and siblings, by following and practising proper sanitation.

Educational settings often lacked adequate physical environments and social support for managing menstrual sanitation, especially in low- and middle-income countries.

However, progress has been made in recent years to bring attention to these challenges faced by school-going girls.

In conclusion, we're all familiar with the phrase, "with great power, comes great responsibility". It's a power and privilege for us to be living in this day and age, where we are surrounded by resources we can exploit. But there is another side to this coin.

The privilege of being alive, means that we are responsible for what happens to this world, and thus, need to work together to save it.

Thank you.



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