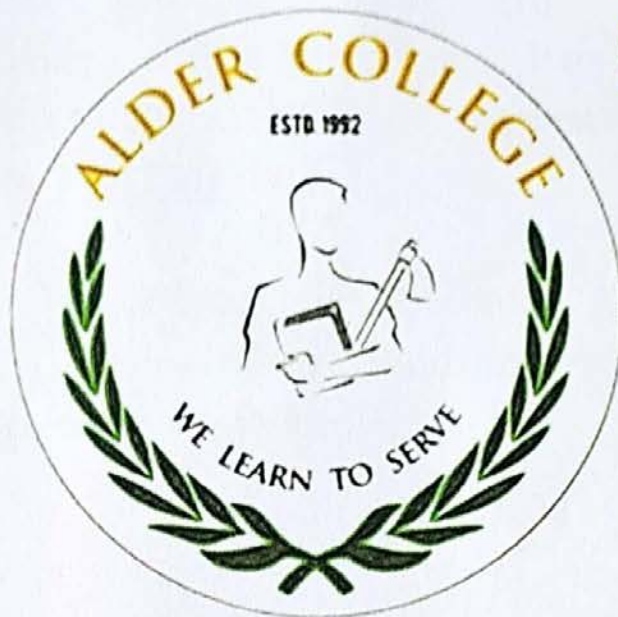
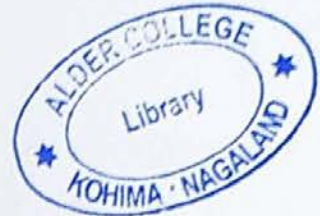


ALDER COLLEGE

KOHIMA : NAGALAND



E.V.S PROJECT

TOPIC : 'BEAT PLASTIC POLLUTION'

Submitted to: -

Ms. Kevingunuo *Angami.*
Department of
Environmental Science
Alder College Kohima.

Submitted by:-

Name : Lanumeren Jamir
BA 5th Semester
Roll No : 100
Section : 'A'
NU Roll No: AG15240049

CERTIFICATE

This is to certify that this Project has been made by LANUMEREN JAMIR of B. A 5th Semester on the topic BEAT PLASTIC POLLUTION.

Under the guidance of Madam KEVINGUNUO ANGAMI Asst. Professor of Environmental Department and have completed it successfully.

[Handwritten Signature]
31/7/18

Principal Signature

PRINCIPAL
Alder College

Alder College.
Kohima, Nagaland

Kohima Nagaland

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Lastly, I would also like to thank my parents who helped me in financializing on this project.

Yours. name

Aims

- * Study of plastic pollution
- * Causes of plastic pollution
- * Effects of plastic pollution
- * Preventions on plastic pollution

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INTRODUCTION.

Plastic pollution is the introduction of plastic into the environment which then upsets the existing ecosystems in different ways. These pollutants cause environmental degradation and also affect different living organisms and their habitats negatively.

When plastic products accumulate in the environment, they begin to cause problems for wildlife, humans and other living organisms. They create conditions that are not favorable for healthy living and proper growth. This is what is essentially referred to as plastic pollution.

Plastic pollution is similar to any other type of environmental degradation, the only major difference here being that the major pollutants are made from plastic.

It can be prevented and the effects minimized when the right measures are put in place. To know just how much this type of pollution is dangerous, we can first of all look at how plastic pollution occurs

Plastic pollution occurs when pollutants build up in water sources and make it difficult for marine life to move around freely in their habitat. They can also reduce the (flow) flow of air within water bodies, a factor that endangers the lives of organisms that reside in these habitats. Some marine organisms ~~make~~ ingest microorganisms made of plastic and suffer from poisoning because of the chemical components. On the other hand plastics can be eyesore when they are strewn all over the place. They can also trap water and act as breeding places for diseases causing organisms like mosquitoes. Plastics that degrade in water sources can cause pollution by making the water obtained from such places unfit for human consumption. The burning of materials made of plastic also causes pollution. These are some of the ways in which plastic pollution occurs in the environment and the biodiversity.



Fig. Effects of plastic on environment

Causes of Plastic Pollution.

While solving the problems of plastic pollution may seem as easy as just implementing recycling or cleaning up empty bottles, the truth is that the plastic causing the pollution can range in size from big to microscopic. The major contributions to this problem today include:

1. Plain Old Trash:-

Plastic is everywhere, even on those items you may not expect it to be. Milk cartons are lined with plastic, water bottles are handed out everywhere and some products may even contain tiny plastic beads. Every time one of these items gets thrown away or washed down a sink, the toxic pollutants have more of a chance to enter the environment and do harm.

Trash dumps and landfills are unfortunate major problems, as they allow pollutants to enter the ground and affect wildlife and ground water for years to come.

2. It is overused:-

As plastic is less expensive, it is one of the most widely available and overused items in the world today. When disposed, it does not decompose easily and pollutes the land or air nearby when burned in open areas.



Fig. Trash on landforms

3. Plastic as Transportation :

There are many human factors in climate change, and one of the side effects of climate change is the spread of invasive species to areas previously uninhabitable to them. One way that these species reach these spaces is through 'plastic islands' throughout the ocean.

Plastic creation is a big part of fossil fuel use worldwide. The harm to the environment is two-fold. Not only does the production of plastics contribute to global warming by using fossil fuels, but the discarded plastics trapped by varying ocean currents help alien species to spread.

Even areas that are difficult for humans to access have plastics floating in the water. During an expedition to Antarctica, one of the most remote places in the world, scientists found plastics. Ten different species of invertebrates were found attached.

One way to change our dependence on plastics is to view these materials as ongoing tools rather than disposables.

Plastic's adverse effect on our environment.

1. Plastic in Landfills:-

A landfill stores our waste, but plastic was created to be durable. As it sits in the landfill, the pressure and exposure cause the plastic to leak chemicals from its structures into the surrounding groundwater.

Groundwater doesn't stay in place. We access our groundwater sometimes miles from the landfill location, and places such as California are already experiencing toxins from plastics in the groundwater supply. It costs the world millions of dollars each year to remove these toxins from the environment, and the process itself causes further pollution.

2. Plastic in Ocean:-

You may have heard about the floating island caught in the middle of ocean currents. You may have seen pictures of turtles with shell indentations caused by plastic rings from soda bottles, and birds with plastic in their stomachs.

What you may not know is that wildlife never has to come directly into contact with the plastic itself to be affected by its toxins. Plankton, microorganisms floating in masses and a source of food for many of the ocean's inhabitants come into contact with plastics and absorb the toxins into their organs causing health issues.



Fig. Pollution on the environment

3. Fishing Nets &

Commercial fishing is an economic necessity for many parts of the world, and tons of people eat fish for their daily survival. However, this industry has helped contribute to the problem of plastic pollution in the oceans in several ways. The nets used for certain large-scale trawling operations are usually made of plastic. First, these spend long times submerged in water, leaking tons (of) oil will, but they also often get broken up or lost, left to remain whenever they fall. This not only kills and harms local wild life, but also ensures that pollutants enter the water and fish of the area.

4. Disposing of Plastic and Garbage :

This may sound a bit confusing, but because plastic is meant to be lasting, it is nearly impossible to break down. Burning plastic is incredibly toxic, and can lead to harmful atmospheric conditions and deadly illness. Therefore, if it is a landfill, it will never stop releasing toxins in that area.

Even recycling doesn't cut down on plastic, as it essentially uses the existing plastic, albeit in a new form. The process of recycling can also lead to plastic variants being released in a number of ways.

Plastic Effects On Human Life :

Plastics can be made of a selection of many different chemicals to improve its properties, to prevent degradation in the environment when exposed to light, humidity, temperature or microorganisms, to make it more or less flexible, to lessen flammability or to color it.

Plastics comes in many forms but there is general consensus that while a useful material, there are serious concerns about its effects on human health.

The three most commonly cited plastic additives that have been linked to such diseases are :

1. BPA or Bisphenol A, often used in food and beverages containers, such as water bottles. The EU has taken steps to ban the use of BPA in baby clothes and some EU member states have taken restrictions further.
2. Plasticisers or Phthalates, primarily used in PVC to make it flexible, these additives can be used in children toys, flooring, clothes and myriad of other everyday items.
3. Flame retardants, used in electric and electronic equipment, upholstery and other items to provide fire safety benefits. Some of these substances have been banned

by the UN due to the detrimental effects they had to the environment and human health.

(Additi) Additionally, very few of these chemicals known to easily migrate from plastic have been tested for their toxicity to humans. One of the reasons for this is the difficulty in coming up with a testing model as there does not appear to be a population baseline for a control group that has not been exposed to plastic.

Effects of plastic on human health are:

1. Metabolism.
2. Heart rate.
3. Digestion.
4. Temperature.
5. General mood.
6. Ability to sleep well.
7. Sexual function.
8. Fertility

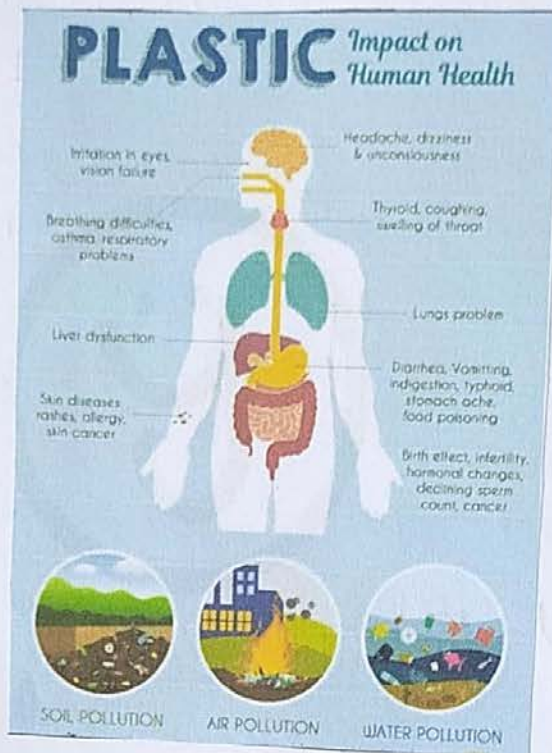


Fig. Effects of plastic pollution on human health.

Effects Of Plastic On Animals.

The real impact of plastic bags litter is felt on wildlife both in the marine environment and on land or in rural areas.

Tens or thousands of whales, birds, seals and turtles are killed every year from plastic bag litter in marine environment as they often mistake plastic bags for such as jellyfish.

Plastic bags once ingested cannot be digested or passed by an animal so it stays in the gut. Plastic in an animal's gut can prevent food digestion and can lead to a very slow and painful death.

As plastic bags can take up to 1,000 years to break down, once an animal dies and decays after indigesting plastic, the plastic is then freed into the marine environment to carry on killing other wildlife.

As for land animals, when plastic is indigested or passed in their digestion system it can get lodged in the windpipe, obstructing airflow when swallowed or when birds try to regurgitate it to feed their chicks eventually causing suffocation. Once in the digestive tract, plastic debris can either block the tract or accumulate in the stomach,



Fig. Effects of plastic pollution leading to death of land animals.

producing a false sense of fullness, causing the animal to stop eating, resulting in malnutrition as it slowly starves to death.

Marine animals aren't the only ones affected by plastic trash. Land birds like the reintroduced California Condor have been found with plastic in their stomachs. ~~Stay~~ animals that are forced to rifle through garbage piles to find food, and animals that normally feed in waste dumps or landfills, have suffered suffocation or intestinal blockage and eventual starvation, for discarded plastic waste.

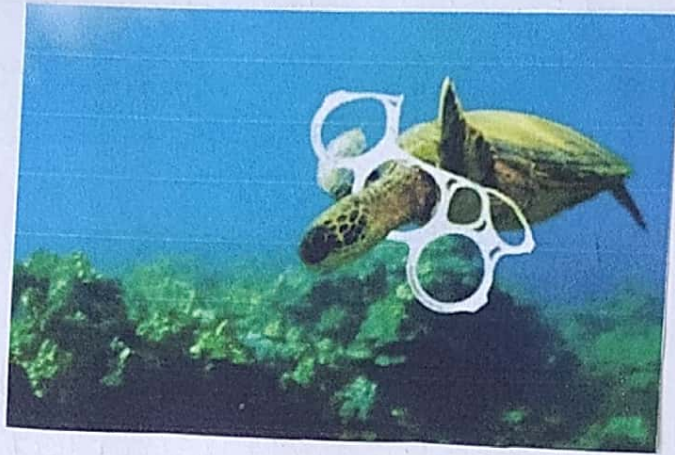


Fig. Effects of plastic pollution on marine animals.



Fig - Pollution on water bodies

Solutions Of Plastic Pollutions

Plastic pollution can be prevented by following the steps given below.

1. Say NO to plastic straws.
2. Using a recycable shopping bag.
3. Getting rid of plastic water bottles.
4. Packing lunch in glass/metal containers instead of plastic containers.
5. Avoiding snacks/food with excess packaging.
6. Stop using plastic cutlery.
7. Use cardboard over plastic when you can.
8. Avoid cosmetic products that contain microbeads.
9. Choosing metal over plastic razors.
10. Getting rid of plastic hampers.

Plastic pollution Solutions can also be practiced through :-

1. Awareness :-

Holding an event such as a film screening, trivia night or activity in a local school will not only raise awareness in your town, but also helps people to learn how others are making a difference and starts a conversation about how they can also bring about change. This will not only help people know about the problems and effects of plastic but also help prevent it.



#BeatPlasticPollution

REFUSE	Single use plastics
REUSE	Choose reusable items
REDUCE	Plastic pollution

Fig. Preventions of plastic pollution.

2. Education :

Engaged learning brings empowerment. We educate to engage via interactive presentations, film screenings, mini cleanups with citizens, trivia nights and games. Educating people about the plastic effects on the human, environmental and wildlife will bring a sense of being cautious about the effects that plastic brings about.

3. Action :

Awareness and education can bring about a big difference when put into action. We can help our school or community learn how to refuse, reduce, reuse and recycle in fun and innovative ways. The first step is the first success and by participating in a plastic pollution solution events or any other events that brings about change.

CONCLUSION

Plastic pollution has so many negative effects. They are not confined to one segment of the ecosystems. Different components of the environment are affected and this causes loss of biodiversity. The planet is much better when it's clean and pollution is kept at a minimum or completely eradicated. People have to be ready to do what is necessary to make that happen.

Lastly, individuals must also do what is right to protect the environment and themselves. They must strive to have a clean planet by recycling waste products, using green alternatives and disposing of wastes appropriately. When we do all what is necessary, we reduce plastic pollution and conserve the environment. It's obvious that nearly all of the causes of pollution are as result of human actions. Changing our ways of life would help reduce it.



Fig. Environmental protection.

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