A PROJECT ON

"PLASTIC POLLUTION IN INDIA"

Submitted to

Rashtrasant Tukadoji Maharaj Nagpur University, NAGPUR In the Partial Fulfillment of

B.Com. (Computer Application) Final Year

Submitted by Tanvi Bageshwar Shubhangi Durge

Under the Guidance of Pravin J. Yadao



G. S. College of Commerce & Economic Nagpur 2019-2020

G. S. COLLEGE OF COMMERCE & ECONOMICS NAGPUR

CERTIFICATE

(2019 - 2020)

This is to certify that Mr. /Miss: Tanvi Bageshwar & Shubhangi Durge has completed their project on the topic of Ayurveda prescribed by the Rashtrasant Tukadoji Maharaj Nagpur University for B.Com. (Computer Application) - III course in G. S. College of Commerce & Economics, Nagpur.

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Place: Nagpur

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Internal Examiner

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Date: Tanvi Bageshwar

Place: Nagpur Shubhangi Durge

DECLARATION

We (**Tanvi Bageshwar & Shubhangi Durge**) hereby honestly declare that the work entitled "**Plastic Pollution In India**" submitted by us at G.S. College of Commerce & Economics, Nagpur in partial fulfillment of requirement for the award of B.Com. (Computer Application) degree by Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur has not been submitted elsewhere for the award of any degree, during the academic session 2019-2020.

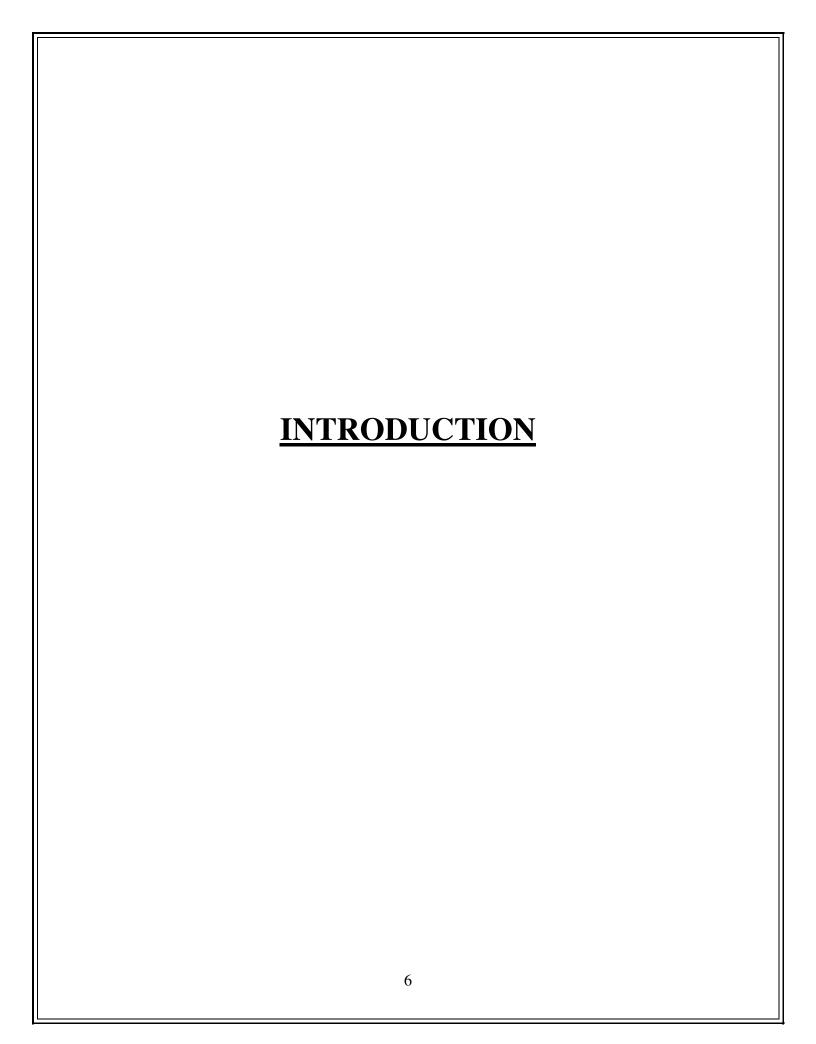
The project has been developed and completed by us independently under the supervision of the subject teacher and project guide.

Date: Tanvi Bageshwar

Place: Nagpur Shubhangi Durge

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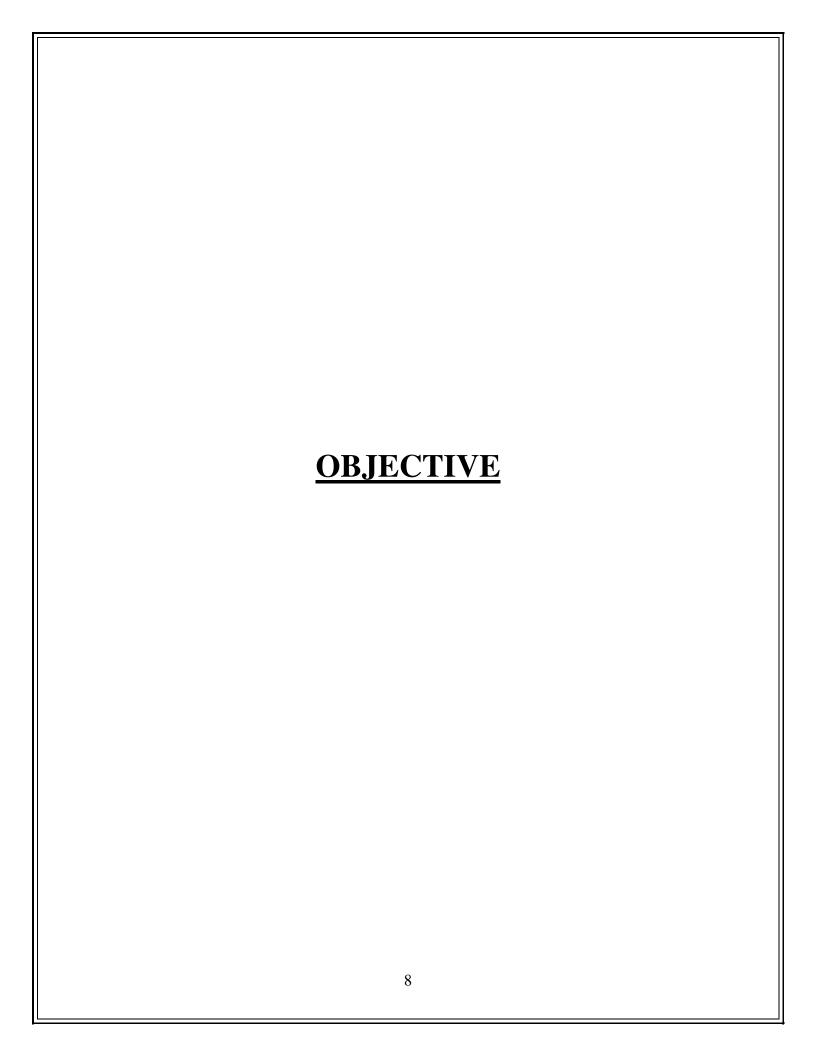


INTRODUCTION

India generates nearly 26,000 tonnes of plastic waste every day, making it the 15th biggest plastic polluter globally. Discarded plastic waste litter the country's roads, rivers and also form huge mounds in garbage dumps across the country. "The rubbish dump I frequent is filled mostly with plastic," Ram Kumar, a ragpicker in Noida, near New Delhi, told Quartz. "Bottles, containers, and polythene bags are some of the items I routinely gather from here (to sell to recyclers). "During the monsoon, plastic bottles at the dump accumulate water and are a breeding ground for mosquitoes. Besides the stench, the site poses a major health hazard for the area's residents, exposing them to the mosquito-borne diseases. Many a times, the solid waste has been put on fire by the municipal agency, polluting the air. It can also be fatal for the stray animals, mainly cows and dogs that end up mistaking plastic for food.

A biophysical environment is a biotic and abiotic surrounding of an organism or population, and consequently includes the factors that have an influence in their survival, development, and evolution. A biophysical environment can vary in scale from microscopic to global in extent. It can also be subdivided according to its attributes. Examples include the marine environment, the atmospheric environment and the terrestrial environment. The number of biophysical environments is countless, given that each living organism has its own environment.

Plastic pollution is the accumulation of plastic objects and particles in the Earth's environment that adversely affects wildlife, wildlife habitat, and humans. Plastics that act as pollutants are categorized into micro, meso-, or macro debris, based on size. Plastics are inexpensive and durable, and as a result levels of plastic production by humans are high. However, the chemical structure of most plastics renders them resistant to many natural processes of degradation and as a result they are slow to degrade. Together, these two factors have led to a high prominence of plastic pollution in the environment. Plastic pollution can afflict land, waterways and oceans.



AIM AND OBJECTIVE

- **1.** To represent and promote the recycling industry for the benefit of all Members of the Association.
- **2.** To promote the individual and collective services of Members.
- **3.** To represent the interests of Members at local, national and European Government level with direct contact and through Government agents.
- **4.** To be a principal voice for the recycling industry.
- **5.** To develop best practice in the recycling industry by promoting:

Health & Safety standards

Legal and Regulatory compliance

Operational standards

6. To provide a source of information for Members on matters relating to the waste and recycling industry, including:

Health & Safety

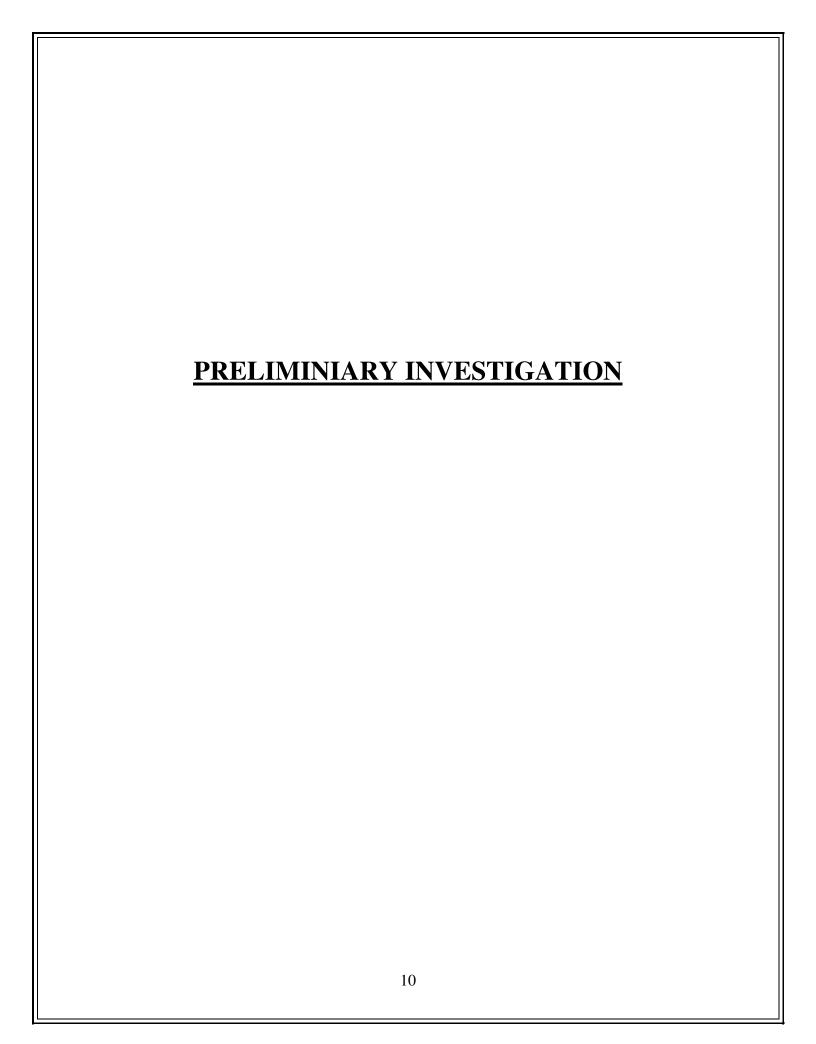
Current legislation and regulation

Industry benchmarking

Technical developments

Training & education

- **7.** To explore group purchasing schemes for the benefit of Members.
- **8.** To organise networking and social fellowship events in order to improve communication between Members.
- **9.** To promote and communicate the best interests of the Association and its Members (and these Aims & Objectives) to the trade and general media and public.



PRELIMINIARY INVESTIGATION

The first step in the system development life cycle is the identification of need. this is a user's request to change ,improve or enhance an existing system .the initial investigation is one way of handling this. The objective is to determine where the request is valid and feasible before a recommendation is reached to nothing ,improve or modify the existing ,or build a new one.

We see various website to find that lack of countries river information also see some website have not give all the countries hydropower plant .this lack of information have mention in the website .also we see many website have not give location of and some popular river in the world ,all this information have mention in the Plastic Pollution In India website.

INDENTIFICATION OF NEED

The success of a system depends largely on how accurate a problem is defined and properly carried out through the choice of solution .in to days modern world ,when everything is becoming more and more titan word watches are one may feel that the task of keeping the records of the data should also be done automatically using computer programs.

If any reference of particular customers past records has to be seen them ,it needs piles of registers to search it .it is all manual work .the system also doesn'n have any backup plan ,if the data is lost by any cause then there is no option to recover it.

FEASIBILITY STUDY

1. Technical Feasibility:-

Technical feasibility means to solve problem as related the software and hardware. Technical feasibility means refers to the technical resource needed to analyst must find out whether current technologies are sufficient to proposed system which includes. We can strongly say that it is technically feasibility.

Since there is no difficulty in getting the required resources for the development of the project. All the resources needs for the development of the software as well as maintenance of the same is available in the organization from where we utilizing the resources. The system project is considered as technically feasible if the internal technical capability sufficient to system.

2. Economical feasibility:-

Economical feasibility is a way of determining the cost of resources determination compare to project benefits of the proposed system. Economic analysis could also be referred to as cost/benefits analysis. It is the most frequently used method. For evaluating the effectiveness of the new system.

NEED OF NEW SYSTEM

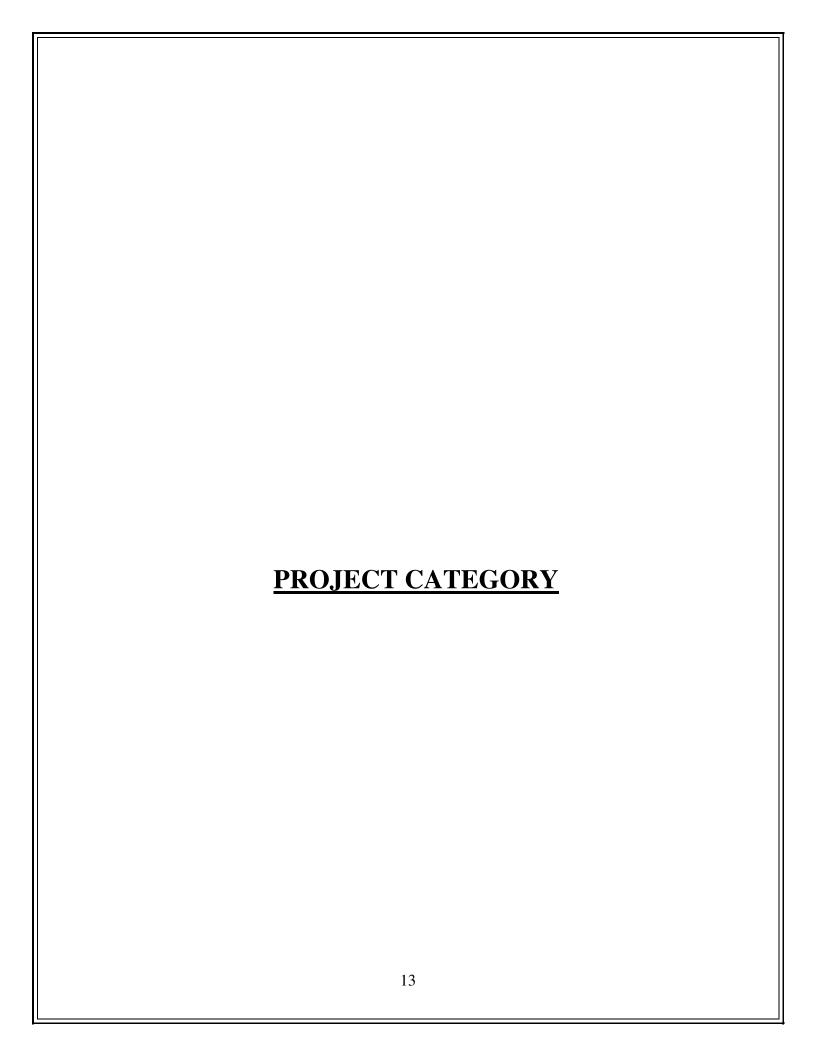
System is the organized working of all its unites and sub-unites. In order to derive the objectives of the project, the system is selected in such a way50 that it would satisfy all the requirements all project. It also help to get the desired output. In to days world of computers where in every aspect of the life is computerized so that the system used should be efficient and accurate.

As per the old system like books or journals or any other media, it is very difficult to view a to of featured contents as we see using modern techniques such as reading EBook or getting information directly from the information website. If we use the old techniques, we can access only alimitesd amount of data and if we are in a search of a particular topic then it because very difficult to search that contents.

The need of the new system is arise form the webpage that exists in the present manual system. The new system is required to save resource such as time and manpower, which are valuable in the present scenario of system. The new system help to handle large database in a smooth and also makes the updating if data very easy.

This project will be a user friendly material.

- 1. This project provides Quick performing application.
- 2. Accuracy and efficiency of this project is better than any other project.
- 3. Modification will provides some extra ordinary function to the project



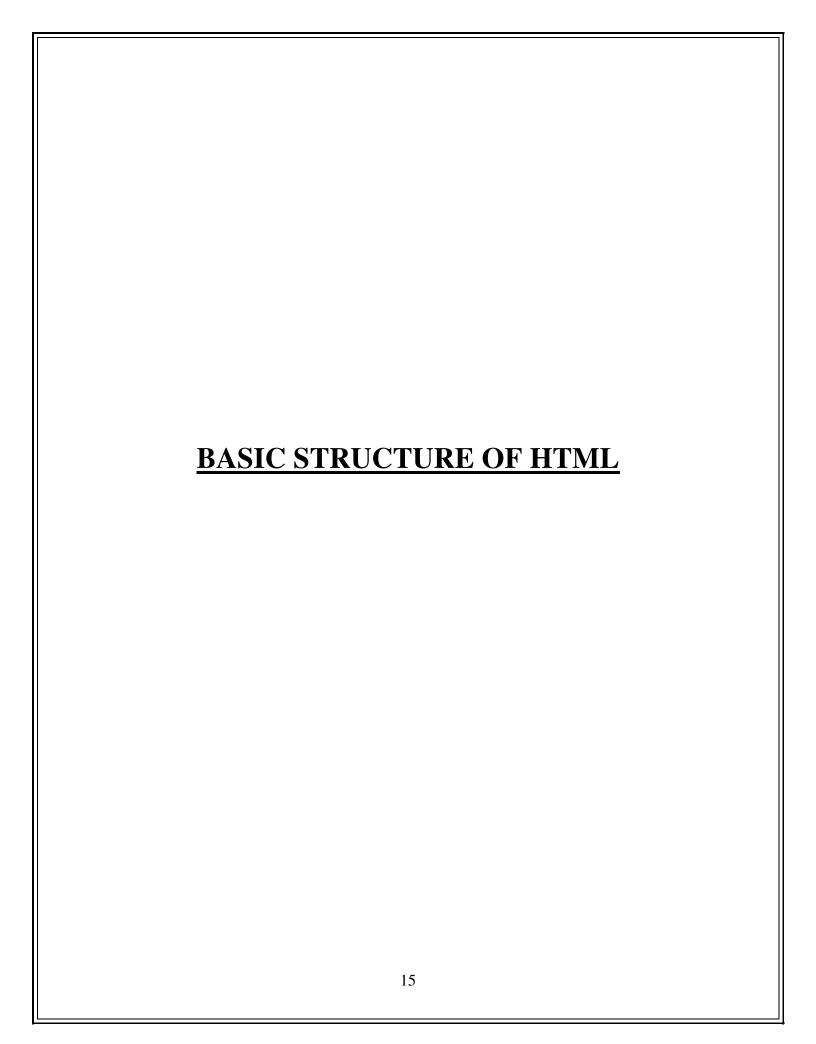
PROJECT CATEGORY

HTML→

HTML is language interpreted by browser web pages care called HTM L documents.HTML is a set of special code that can be embodied in text to odd formatting and linking information called tags HTML is collection of platform-independent style used to create a document for the world wide web(www)HTML is language that is used to describe & format the structure of a web page. The code written in HTML is interpreted by browser the structure of all web page similar. A web page has some common attributes such as heading , paragraph, text, bulleted lists, image and footers. However each web page can have a different combination of attribute the appearance of a web page is important and HTML provides style to make the document look attractive we can use graphics various fonts sizes and colors to enhance the presentation of a documents use can also create hypertext links we can use HTML to publish any type of information through web pages.

Syntax:-

```
<HTML>
<HEAD>
<TITLE></TITLE>
</HEAD>
<BODY>
HELLO WORLD
</BODY>
</HTML>
```



BASIC STRUCTURE OF HTML:-

<HTML>:-This tag indicate to the browser that the file is an HTML file. A basic HTML document consist of opening <HTML>and closing<HTML>tags. All the contents of the web page is contained within these tags.

E.g<HTML>
HTML tags and contents
</HTML>

<HEAD>:-A HTML documentation a pair of opening<HEAD>and closing</HEAD>tag. Any information types here will not appear in the viewingarea of the web browser. The <HEAD>tag contains the optional<TITLE>tag.

E.g<HTML>

<HEAD>

<TITLE>

Demo of HTML

</TITLE>

</HEAD>

</HTML>

<TITLE>:-The contains of this tag is display in the title bar of any web browser window. It should be unique and descriptive because it is used by search engines as a search crier icon for any information in the absence of this tag, web browser display the entire path of HTML file.

E.g. <HTML>

<HEAD>

<TITLE>demo of html</TITLE>

</HEAD>

</HTML>



HARDWARE AND SOFTWARE REQUIREMTS SPECIFICATION

HARDWARE:

Hardware is being defined as under it conatins how much processor speed and how much RAM will be used for the better perfomace of the website

Processor pentioun 4 or newer wersion

Processor speed: 2.00 gigahertz [GHz]

RAM: 2GB

HARDWARE: 250GB

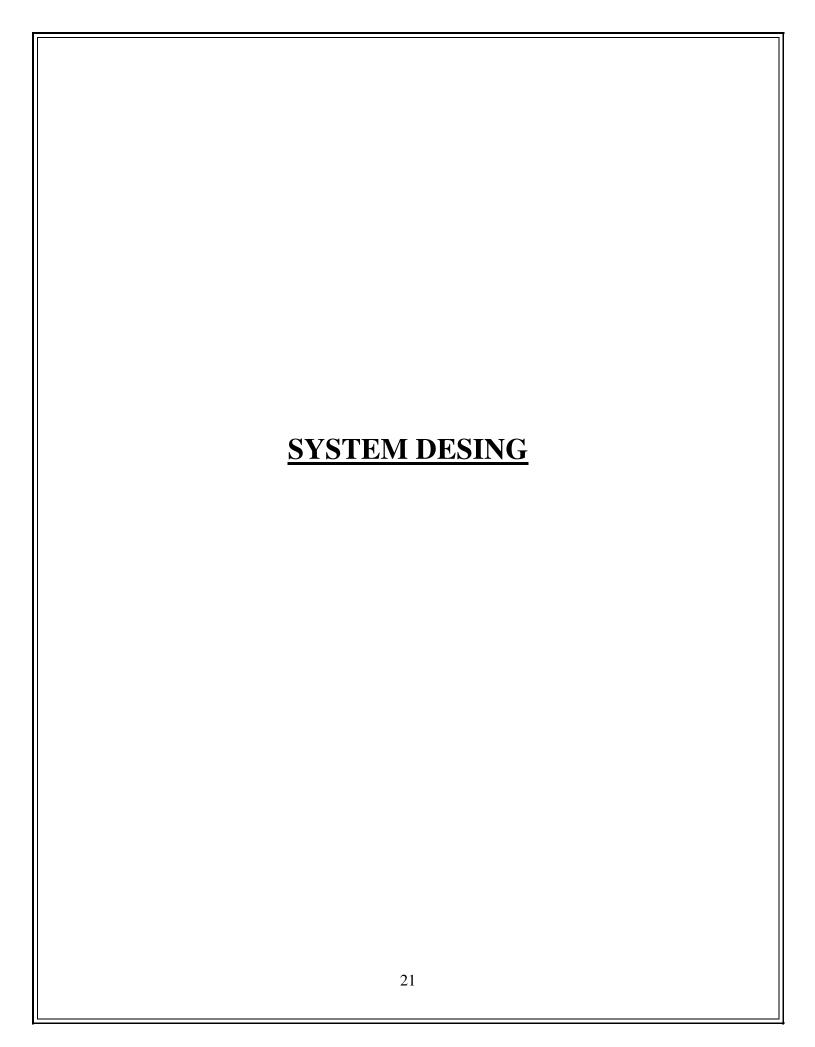
SOFTWARE:

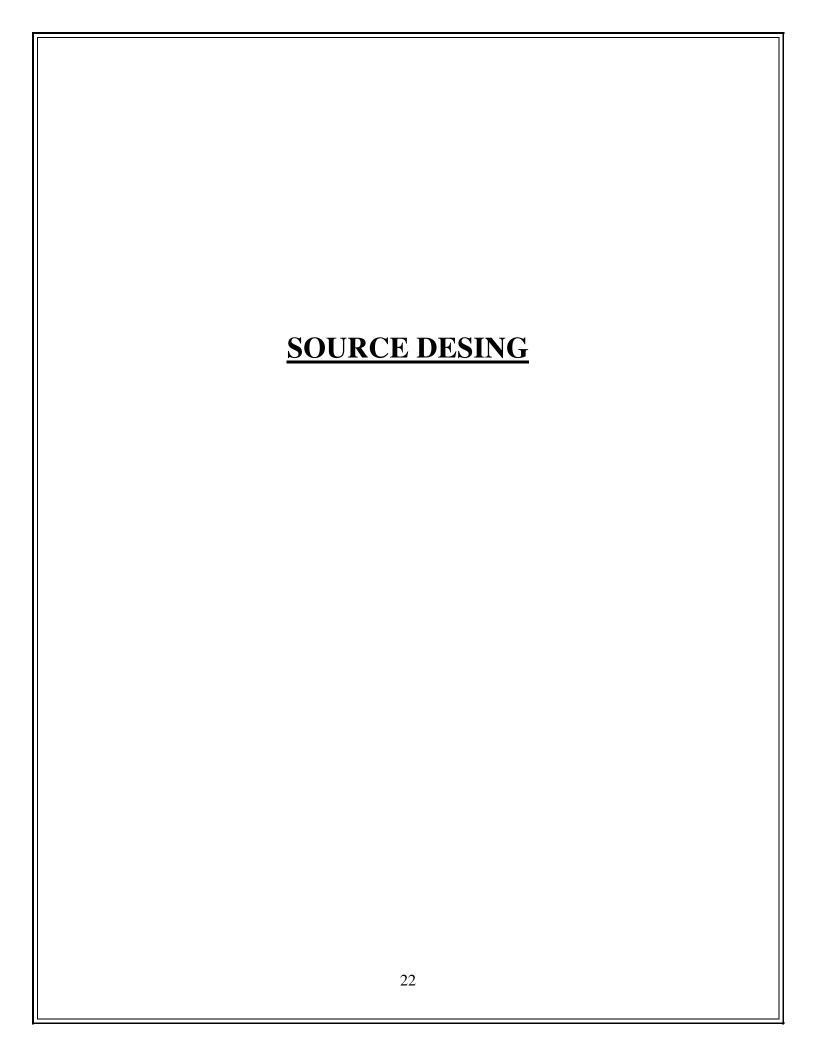
Software is being defined as under it conatin in which opertaing system and on which web browser has supported for the performance of the website.

- A. Hardware is being defined as under it contain.
- B. Internet explore 6.0
- C. NOTEPAD++
- D. Goggle chrome

DETAILS SYSTEM ANALYSIS	
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DATA FLOW DIAGRAM START WEBSITE **COMPANY RECYCLE FEEDBACK GALLERY EFFECTS HOME** PLASTIC BAGS **ENVRONMENT EFFECTS HUMAN EFFECTS PLASTIC** WAPPER ANIMALS EFFECT PLASTIC **BOTTELS BIRDS EFFECTS** 20





ADVANTAGE	S AND DISADVANTA	GES
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What are the advantages and disadvantages of using plastics?

It depends on what type of plastics we're dealing with. Let's take plastic bags for instance:

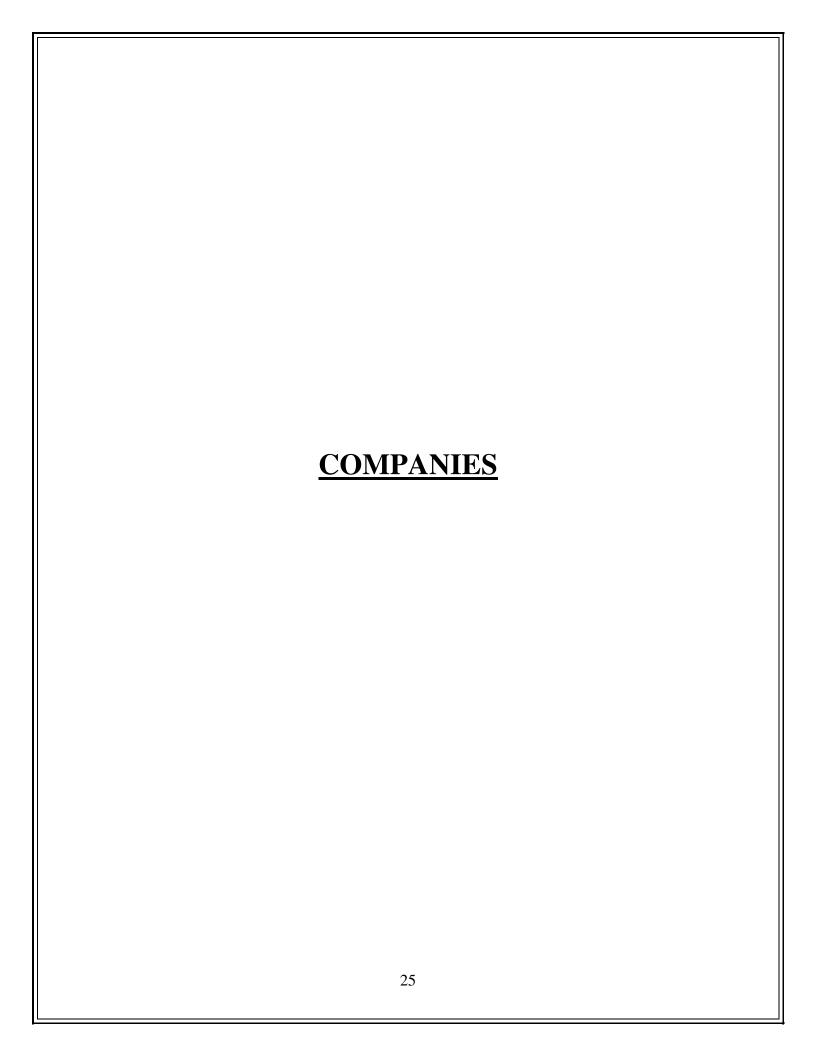
*The advantages of plastics:-

It is durable, low cost, water resistant, lesser energy and heavy chemicals requirements in manufacture and are light weight. Many studies comparing plastic versus paper for shopping bags show that plastic bags have less net environmental effect than paper bags, requiring less energy to produce, transport and recycle; however these studies also note that recycling rates for plastic are significantly lower than for paper. Plastic carrier bags can be reused as trash bags or bin bags. Also, plastic bags are complimentary in many locations but are charged or "taxed" in others.

It depends on what type of plastics we're dealing with. Let's take plastic bags for instance:

*The disadvantages of plastics:-

Plastics bags are make of a non-renewable resource, which gives us more reasons to use recyclable shopping bags. Plastic bags are also flimsy and do not sit as well as either paper or cloth. They are a hazard to wildlife animals, if they are not disposed properly. Lastly, plastic bags clogs roadside drains, which could cause the flooding of the street at heavy rainfalls.



WHICH COMPANIES ARE RESPOSIABLE FOR PLASTIC POLLUTION

Plastics help us to do more with less in many ways. When it comes to packaging, plastics often enable manufacturers to ship more product with less packaging material. This process of light-weighting can play an important role in boosting the environmental and economic efficiency of consumer product packagingAre you sick and tired of the constant beach clean-ups with no end to plastic pollution in sight? So are we. In time for World Environment Day, hosted in India this year, GAIA members across India, the Philippines and Indonesia are releasing the results from a new kind of clean-up called a brand audit, where we expose exactly which multi-national companies are responsible for the majority of plastic waste that ends up on our lands and beaches. By identifying who's behind the waste that's polluting our country and demanding change, we hope cleanups will be a thing of the past. Companies can't keep making billions off of single-use packaging, and leave us to clean up their mess. It's time for them to #breakfreefromplastic! So which brands are the biggest litterbugs in South Asia? See below to find out!

TOP POLLUTERS INTERNATIONAL AND LOCAL

"The numbers are staggering. There is simply too much plastic in the environment. This has to change," said Pratibha Sharma, National Coordinator of GAIA India. "Corporations cannot continue polluting the environment, make money out of the problem they are creating but contribute nothing to cleaning up the pollution they cause. The government must ensure that the corporations cannot continue doing business as usual, by enacting acomprehensive extended producer responsibility policy," she added. From May 16 to 26, ten GAIA member organizations and partners conducted clean-up and waste and brand audits in 18 states in India. Of the total waste collected, 46,100 pieces of plastic waste were branded, of which 47.5% were multilayer plastic packaging which can neither be recycled nor composted. Results showed that both local and international brands are responsible for the plastic waste pollution in the country. PepsiCo India topped the

multinational polluters list, followed by Perfetti van Melle and Hindustan Unilever, an Indian subsidiary of Unilever, as second and third, respectively. Other multinational brands in the top 10 list of polluters are Coca-Cola, Mondelez, Nestle, Procter & Gamble, McDonald's, and Ferrero SpA. Meanwhile, Amul, Britannia, ITC, Parle emerged as the top corporate polluters amongst the national brands.

*INTERNATIONAL COMPANIES PRODUCE THE PLASTIC PACKGING PRODUCTS IN INDIA

Nestlé and Unilever are responsible for a quarter of the branded throwaway plastic driving the plastic pollution crisis in the Philippines, according to a report published today by the Global Alliance for Incinerator Alternatives (GAIA). The companies were named the top polluters based on a series of brand and waste audits conducted in six cities and one province in the country. The report, conducted in collaboration with the University of Santo Tomas' Research Center for Social Sciences and Education (RCSSEd), provides new evidence exposing Nestlé and Unilever's overproduction of single-use sachets (small packets containing single-use quantities of any material) that are marketed in the Global South, but not other parts of the world. In response to the GAIA report's findings, Greenpeace Southeast Asia (Philippines) Campaigner Abigail Aguilar said: "Once again, this report suggests that although countries in Southeast Asia are being blamed for the plastic pollution crisis, the responsibility lies with multinational corporations like Nestlé and Unilever that continue to expand their production of unnecessary throwaway plastic at the expense of our communities, waterways, and health." "Nestlé and Unilever need to stop deflecting the blame for plastic pollution onto individuals. These companies are responsible for this crisis and the only solution is for them to significantly reduce the production of throwaway plastics and move toward refill and reuse systems for their customers throughout the world.

UNILEVERE:- Plastic has its place and that place is not in the environment. We want to keep this valuable material where it should be in the circular economy, where it can be reused, recycled or composted. Plastic is a valuable material that has a vital place in the economy and in our business. It is crucial for the safe and efficient distribution of our products and it has a lower carbon footprint than many alternative materials. But it has no place in our oceans, rivers, streets and countryside. At the heart of the plastic waste problem is the linear 'take-makedispose' model of consumption, which means products get manufactured, bought, used briefly, and then thrown away. As a consumer goods company, we're acutely aware of the causes and consequences of this linear model. It is unsustainable in a world in which, just 14% of the plastic packaging used globally makes its way to recycling plants, and only 9% is actually recycled – while a third is left in fragile ecosystems, and 40% ends up in landfill. And discarding plastic makes no sense economically, either. According to the World Economic Forum, plastic packaging waste represents an \$80-\$120 billion loss to the global economy every year.

NESTLE:-

Plastic waste, and in particular plastic-based marine pollution, is one of the biggest environmental issues the world is facing today. Packaging can be a major contributor to such waste. At the same time, it remains important for purposes such as protecting foods and beverages during transportation, extending the shelf life of food and preventing food waste. This makes it essential not just to reduce the amount of packaging used, but to make packaging recyclable or reusable. Nestlé carefully considers the environmental impact of packaging as an integral part of its product design. Since the early 1990's, we have been focusing on reducing the amount of packaging we use through our global source reduction programme — eliminating unnecessary packaging and reducing weight while ensuring product quality. Nestlé's diverse product range

means we draw on a range of materials – including paper, wood, metal, glass and plastic – for our packaging.

MONDELEZ:-

Mondelez International, is accelerating its plastic waste reduction efforts by joining two major sustainability initiatives. In becoming a signatory of both the Ellen MacArthur Foundation's New Plastics Economy Global Commitment, and a participant in the New Plastics Economy Initiative, and a member of WRAP's UK Plastics Pact, the company is doubling down on its zero-net waste packaging ambition. As part of the New Plastics Economy Global Commitment, Mondelēz International will work towards the following eliminating problematic or unnecessary plastic packaging by 2025; making 100% of its plastic packaging reusable or recyclable; use 5% recycled content across all packaging used, and move away from single-use towards reuse models where relevant. As a member of the UK Plastics Pact, which is the first in a global network of Pacts which are aligned with, and support the New Plastics Economy initiative, Mondelez International commits to working towards delivering the UK Plastics Pact 2025 targets. These include eliminating unnecessary and problematic packaging and plastic products; ensuring all plastic packaging is recyclable in practice, and sing recycled plastic in our packaging wherever possible. As part of a longterm commitment to reduce environmental impact, the company set 2025 packaging innovation targets to ensure 100% of packaging is designed to be recycled, contains onpack recycling information and contributes to the company's commitment to reduce CO2 emissions. Today, 93% of the company's total packaging, including both plastic and nonplastic, is designed to be recycled. Moreover, the company is calling for and participating in sector-wide collaboration to identify and scale up innovation, harmonise packaging formats to make recycling easier and improve waste management infrastructure.

PEPSICO

Packaging plays an essential role in safely delivering our products to customers and consumers. As a business, we design our packaging materials around several critical criteria, including compliance with food safety regulations, freshness and quality of the product, environmental sustainability, affordability, and consumer preferences, including convenience. At the beginning of every packaging design effort, we balance these criteria to arrive at a final packaging design. We recognize that packaging is often disposed of improperly after a product has been consumed, and we share the concern that plastics and other wastes are accumulating in the marine environment and on land. These materials have value, and we are working on a broad set of solutions to ensure that they do not end up as litter or in a landfill. The following goals make up our 2025 packaging sustainability agenda: Strive to design 100 percent of our packaging to be recyclable, compostable or biodegradable, Strive to use 25 percent recycled content in our plastic packaging by collaborating with our suppliers, helping to increase consumer education, fostering cross-industry and publicprivate partnerships, and advocating for improved recycling infrastructure and regulatory reform, all of which are required to realize our ambition, By 2025, PepsiCo will reduce virgin plastic use across our beverage portfolio by 35%, equating to the elimination of 2.5 million metric tons of cumulative virgin plastic when taking into account business growth. On an absolute basis, this includes a 20% virgin plastic reduction vs a 2018 baseline. In partnership with the PepsiCo Foundation, work to increase recycling rates. The problem of waste and litter is a challenging issue that involves a complex system of actors, including many companies along the packaging value chain, retail and sales outlets, waste management and recycling industries, governments and consumers.

*LOCAL COMPANIES PRODUCE THE PLASTIC PACKGING PRODUCTS IN INDIA

AMUL

With the government all set to ban single-use plastics on the occasion of the 150th birth anniversary of Mahatma Gandhi on October 2, plastic manufacturers are looking to produce alternative materials at an affordable price. Since glass or any other material may work out to be costly, the industry is looking to produce packaging materials made of polymer with high viscosity to make them recyclable. For milk packaging, the industry is mulling to manufacture pouches and bags made from polyester filament yarn (PFY) which could be used 45-50 times and are also recyclable. Consumers would be able to send these pouches back to milk suppliers, resulting in savings in the cost of packaging. "Switching to alternative packaging materials, such as glass and tetra pack, would add to the cost of packaging, handling, and transportation (as glass is heavier than plastic). Neither is it user-friendly nor cost-effective. Thus, until the industry comes out with an alternative solution of packaging, the ban should be pushed by at least three months. Also, the ban should be implemented in a phased manner," said a senior industry official

PARLE

At the end of last year, my then 4th standard Garbology students wrote to Parle G to request they rethink their packaging for their biscuits and candies. You can see a sampling of the letters here. They never received a reply, so at the end of the summer holiday I wrote to ParleG on its

Facebook page to see if I could get a response that way. While there was a brief reply, it seemed to make light of the children's ideas. Today they finally wrote a reply. This time I typed it up and pasted it on the Facebook page again hoping they would consider what we wrote. (In class the brainstorming session was much more creative that what they ultimately put below. I heard such wonderfully out-of-the box ideas from putting biscuits in cement to using mango pits to papier mâché!) As part of expanding its plastic packaging business, food and beverage player Parle Agro, is planning to expand its Polyethylene Terephthalate (PET) business by increasing its production capacity by another 21 per cent in the next fiscal. The company has increased its annual preform production by 17 per cent in FY 2009-10. Known for brands like Frooti and Appy Classic, Parle Agro diversified into production of PET preforms (semi-finished bottles) in 1996. PET (Polyethylene Terephthalate) is a strong, lightweight packaging material that keeps bottled content fresh for up to six months. Parle Agro's PET division supplies preforms to customers in the bottled water, ready-to-drink beverages, carbonated drinks, edible oil, confectionery and pharmaceutical segments. Its product range in terms of neck type are 30/25 mm (water application); PCO neck (carbonated & juice application) and short neck (water application).

BRITANNIA

We know that plastic is extremely bad for the environment, especially single-use plastic. A United Nations Environment Program report states that the most common plastics emit traces of two powerful greenhouse gases that lead to further global warming. But when I read a report by the National Institute of Environment Health Sciences, USA, which says that plastic interferes with our hormonal system leading to infertility and possible cancer, I realized, to my horror, that I and the billions of others on this planet are slowly poisoning

ourselves to death. That is why the UN has declared the theme for 2018 as #BeatPlasticPollution and on World Environment Day, India's Union Environment Minister Harsh Vardhan vowed to eliminate all single-use plastics by 2022, the 75th year of India's independence.

EFFECTS

ENVIRONMENT EFFECT:-

Importing plastic waste despite oversupply in India There are two main reasons why India generates so much plastic waste--the vast network of unlicensed units manufacturing low-grade plastic bags and other material such as styrofoam, and the indifference of municipal authorities to waste management. Currently, the country is able to recycle only about 4 million tonnes. Before the re-imposition of the plastic waste import ban in March 2019, Indian recycling firms were importing plastic waste from China, Italy, Japan and Malawi. This is because imported plastic waste is cheaper and available in segregated forms. "The recycling industry should be able to use this surplus plastic waste but there is shortage of segregated plastic waste," said OP Ratra, a consultant to the plastic industry. Plastic waste imports had increased four-fold from 12,000 tonnes in 2016-17 to 48,000 tonnes in 2017-18, despite a 2015 ban on plastic waste import. This was made possible by a loophole which allowed import of plastic waste through Special Economic Zones. On March 6, 2019, the government put a ban on this as well. By the time the last ban was imposed, within the first quarter of the current financial year, 25,000 tonnes of plastic waste had already been imported. Why India is unlikely to phase out single-use plastic by 2022 As we mentioned earlier, at the UNEA held in Nairobi, Kenya, between March 11 and 15, 2019, India piloted a resolution on phasing out single-use plastic by 2022, a deadline later updated to 2025. A majority of member countries opted to go in for a less ambitious "reduction by 2030". The UNEA is the world's highest-level environmental forum with 170 member states. In 2018, as the global host to UN World Environment Day, India had promised to phase out single-use plastic by 2022 with the theme 'Beat Plastic Pollution'.

EFFECTS ON HUMAN

A new report reveals that plastic is a human health crisis hiding in plain sight. Plastic & Health: The Hidden Costs of a Plastic Planet, authored by the Center for International Environmental Law (CIEL), Earthworks, Global Alliance for Incinerator Alternatives (GAIA), Healthy Babies Bright Futures (HBBF), IPEN, Texas Environmental Justice Advocacy Services (t.e.j.a.s.), University of Exeter, and UPSTREAM, brings together research that exposes the distinct toxic risks plastic poses to human health at every stage of the plastic lifecycle, from extraction of fossil fuels, to consumer use, to disposal and beyond.

To date, research into the human health impacts of plastic have focused narrowly on specific moments in the plastic lifecycle, often on single products, processes, or exposure pathways. This approach fails to recognize that significant, complex, and intersecting human health impacts occur at every stage of the plastic lifecycle: from wellhead to refinery, from store shelves to human bodies, and from waste management to ongoing impacts of microplastics in the air, water, and soil. Plastic & Health presents the full panorama of human health impacts of plastic and counsels that any solution to the plastic crisis must address the full lifecycle.

*PLASTICS IN THE OCEAN AFFECTING HUMAN HEALTH

Over a few decades, humans have managed to dump tons upon tons of garbage into the ocean. Of the most devastating elements of this pollution is that plastics takes thousands of years to decay. As a result, fish and wildlife are becoming intoxicated. Consequently the toxins from the plastics have entered the food chain, threatening human health. In the most polluted places in the ocean, the mass of plastic exceeds the amount of plankton six times over. This is a large piece of evidence that leaves the problem of polluted oceans undeniable. It is upsetting that more of

clean up effort is not taking place. Ocean acidification is caused when CO₂ dissolves into the ocean bonding with sea water creating carbonic acid. The acid reduces the pH levels in the water, essentially changing the Ocean acidity by 30% in the last 200 years according to analysis - a level that the ocean has not been at in over 20 million years. The acidity depletes the calcium concentrations, making it difficult for crustaceans to build their shell, leaving them vulnerable without their armor. Between the global temperature rise of one degree and the ocean acidification, scientists say a quarter of all coral reefs are considered damaged beyond repair, with two-thirds under serious threat. Coral reefs are home to 25% of aquatic life, many of which are responsible for the natural filtration of the ocean and production of necessary nutrients that are vital for life under the sea. However, acidification is not the only watery threat as there are other human activities causing severe changes.

*PLASTICS GETTING TO HUMANS IMPACTING HEALTH

Different plastics spread throughout the ocean. As Styrofoam breaks into smaller parts, polystyrene components in it sink lower in the ocean, so that the pollutant spreads throughout the sea column. In fact, not only do the toxins in plastic affect the ocean, but acting like sponges, they soak up other toxins from outside sources before entering the ocean. As these chemicals are ingested by animals in the ocean, this is not good for humans. We as humans ingest contaminated fish and mammals. Human activity can be directly attributed to the cause of hundreds

of extinctions in the last two centuries, versus the millions of years that extinctions naturally occur. As we progress through the 21st century, humans have changed the world in unprecedented ways. Overpopulation has grown into an epidemic since mortality rates have decreased, medicine has improved, and methods of industrial farming were introduced, thus keeping humans alive for much longer and increasing the total population. There are different types of ways that plastic is dangerous for humans. Direct toxicity from plastics comes from lead, cadmium, and mercury. These toxins have also been found in many fish in the ocean, which is very dangerous for humans. Diethylhexyl phthalate (DEHP) contained in some plastics, is a toxic carcinogen. Other toxins in plastics are directly linked to cancers, birth defects, immune system problems, and childhood developmental issues.

EFFECTS ON ANIMALS:-

A charity in India made a startling discovery. After taking in 36 stray cows, one died and they discovered the cause – the cow ate too much plastic. In an effort to save the rest of the cattle, the charity surgically removed plastic from each cow's stomach. Now, the charity, Karuna Society for Animals and Nature, is using the evidence to encourage everyone from local officials to the Supreme Court to ban plastic garbage. How cows ingest plastic In rural parts of India, cows roam the streets looking for food. The country's waste management system is extremely lacking, which means many streets and alleys are littered with garbage. Farmers can't afford to feed their cows so they're often let loose to find the nutrients they need on the streets. As cows pick through piles of garbage, hunting for leftovers, they also consume plastic. Unsurprisingly, the biggest plastic pollutant digested by cows is plastic bags. The bits of plastic

consumed build up in their internal organs, which make it difficult for cows to eat. As a result, milk production drops as does milk quality. Over time, the plastic consumption "sentences cattle to a slow and cruel death," according to animal activists. There are treatments to prevent death, but once milk production drops, farmers usually abandon cows rather than spend money on treatment. The Supreme Court calls for action The Supreme Court says the death of cattle from plastic consumption is "alarming" and has called on all local governments to take action. To curb plastic bag pollution, the court suggests fining residents and businesses that don't dispose of waste properly. Plastic bag bans aren't uncommon. Several states in the U.S. have banned plastic bags or charge shoppers a tax to use one. In India, the plastic bag ban sounds like a step in the right direction, but several cities already have a plastic bag ban in place but don't have the resources to enforce it. Without enforcement, garbage continues to cover the streets and becomes a main source of food – and cause of death – for roaming cattle. A zero waste solution While India's pollution problems are unique, it's not the only country struggling to mange waste. Even the U.S. faces problems. The country only recycles about 34% of its waste, sending the rest to landfills. To curb plastic pollution, a zero waste strategy is the best solution. How can you as a consumer commit to zero waste? By using refill technology consumers can eliminate massive amounts of single-use plastic from their daily life. Plastic pollution has the potential to poison animals, which can then adversely affect human food supplies. Plastic pollution has been described as being highly detrimental to large marine mammals, described in the book Introduction to Marine Biology as posing the "single greatest threat" to them. Some marine species, such as sea turtles, have been found to contain large proportions of plastics in their stomach. When this occurs, the animal typically starves, because the plastic blocks the animal's digestive tract. Sometimes Marine mammals are entangled in plastic products such as nets, which can harm or kill them. Plastic pollution causes great harm to the organisms big and small that encounter it. From tiny corals to majestic whales, more than 700 marine species are known to be killed either by the ingestion of plastic or entanglement - resulting in more than 100 million animal deaths a year, that we know of.

Plastic Impacts Land Animals Too. We know by now that plastic pollution is turning our oceans into a toxic "plastic soup," in which fish, mammals, sea birds and even zooplankton are literally choking to death.

Entanglement, choking, ingestion that leads to poisoning and starvation—these plague land animals too. And while the statistics are incomplete, some conservationists estimate that at least 100,000 mammals and birds die from them each year, felled by the estimated 500 billion and more

plastic bags that are produced and consumed around the world; the numbers of fish killed by them are unknown, but they are sure to number. The real impact of plastic bag litter is felt on wildlife both in the marine environment and in rural areas. Tens of thousands of whales, birds, seals and turtles are killed every year from plastic bag litter in the marine environment as they often mistake plastic bags for food 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 ingesting plastic, the plastic is then freed back into the marine environment to carry on killing other wildlife.

*IMPACTS ON MARINE ANIMALS

Plastic waste is littering our oceans and threatening the lives of millions of marine animals. Plastic contains toxic chemicals, which can increase the chance of disease and affect reproduction. After ingesting microplastics, seals, and other animals can suffer for months or even years before they die. So too are whales. Large amounts of plastics have been found in the stomachs of beached whales. Plastic debris started appearing in the stomach of the sperm whale since the 1970s, and has been noted to be the cause of death of several whales. In June 2018, more than 80 plastic bags were found inside a dying pilot whale that washed up on the shores of Thailand. In March 2019, a dead Cuvier's beaked whale washed up in the Philippines with 88 lbs of plastic in its stomach. In April 2019, following the discovery of a dead sperm whale off of Sardinia with 48 pounds of plastic in its stomach, the World Wildlife Foundation warned that plastic pollution is one of the most dangerous threats to sea life, noting that five whales have been killed by plastic over a two-year period. Most marine debris (80%) comes from trash and

debris in urban runoff, i.e. land-based sources. Key components of land-based sources include litter, trash and debris from construction, ports and marinas, commercial and industrial facilities, and trash blown out of garbage containers, trucks, and landfills. 1 Ocean-based sources, such as, overboard discharges from ships and discarded fishing gear, account for the other 20%. Food containers and packaging are the largest component of the municipal solid waste stream (80 million tons or 31.7 %).2 These items, together with plastic bags, also represent the largest component of marine debris (that is, barring items less than 5mm such as pre-production plastic pellets, fragments, and polystyrene pieces).3 Packaging and single use disposable products are not only ubiquitous in marine debris, they represent an unsustainable use of precious resources (oil, trees, energy sources, water). The quantity of marine debris is increasing in oceans world-wide. Researchers at the Algalita Marine Research Foundation documented an increase in plastic debris in the Central Pacific Gyre fivefold between 1997 and 2007, where the baseline in 1997 showed plastic pieces outnumbered plankton on the ocean surface 6:1.4 Off Japan's coast, the quantity of pelagic plastic particles floating increased 10 fold in 10 years between the 1970s and 1980s, and then 10 fold every 2-3 years in the 1990s.5 In the Southern Ocean, plastic debris increased 100 times during the early 1990s.6 These increases in plastic debris occurred at the same time that worldwide production of plastic fibers quadrupled. In the ocean, plastic debris injures and kills fish, seabirds and marine mammals. Marine plastic pollution has impacted at least 267 species worldwide, including 86% of all sea turtle species, 44% of all seabird species and 43% of all marine

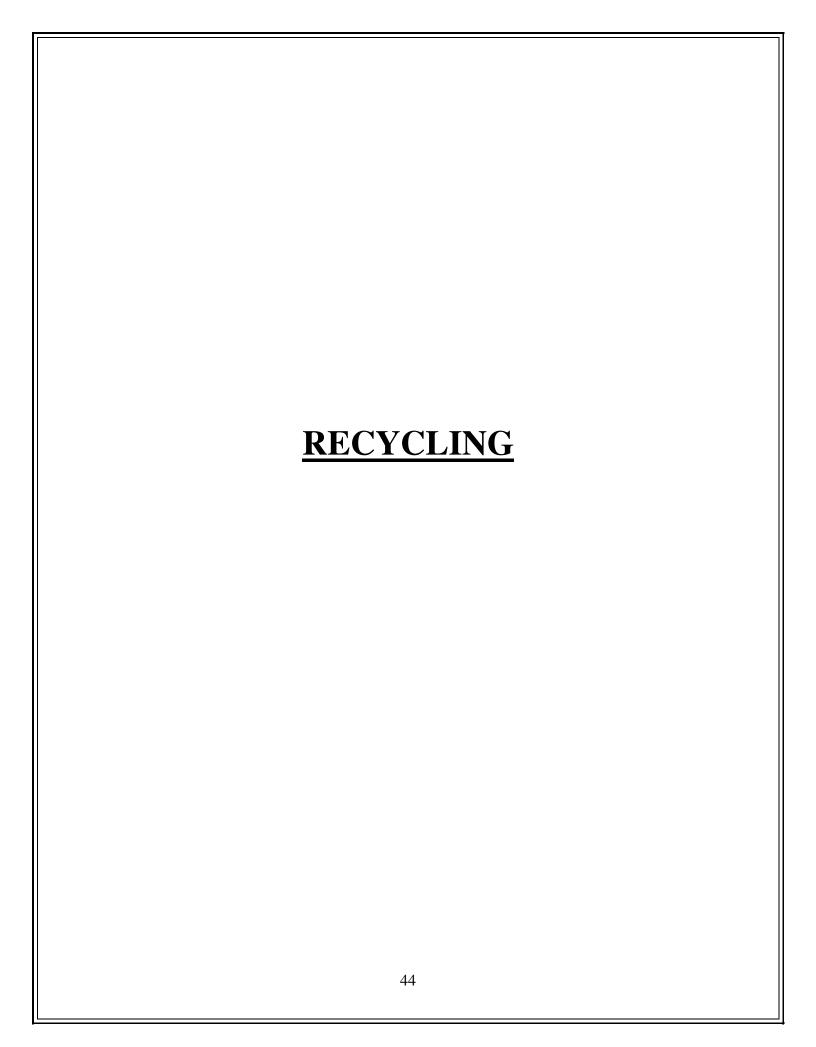
mammal species. The impacts include fatalities as a result of ingestion, starvation, suffocation, infection, drowning, and entanglement.7 In 2010, a California grey whale washed up dead on the shores of the Puget Sound. Autopsies indicated that its stomach contained a pair of pants and a golf ball, more than 20 plastic bags, small towels, duct tape and surgical gloves. Seabirds that feed on the ocean surface are especially prone to ingesting plastic debris that floats.

EFFECTS ON BIRDS:-

Bits of plastic debris litter the shore: bottle caps, toys, cigarette lighters, fishing line and other garbage. Scientists are now documenting how this surge of plastic trash leaves a wake of death and disease that directly affects seabirds. In many areas of the globe, birds inadvertently feed on plastic floating on the water, mistaking it for food, and many times this ingestion leads to death and even the death of their young. A report by scientists studying the stomach content of Laysan Albatross chicks on Midway Atoll in the Pacific Ocean revealed disturbing results: Forty percent of Laysan Albatross chicks die before fledging. Necropsies of the chick's stomachs found them filled with plastic trash. Large plastic detritus such as bottles and packaging has well-known effects on sea life, strangling birds and fish and transporting alien species to new waters. Millimeter-sized plastic pellets-the building blocks of larger products-clog U.S. harbors and soak up toxic chemicals from seawater, poisoning the creatures that swallow them. Because plastic pellets are magnets for toxic chemicals like DDT and PCBs, they effectively become poison pills. Japanese researchers found that concentrations of these chemicals were as much as a million times higher than in the water. Plastics themselves can leach endocrine-disrupting chemicals like biphenyl.

Plastic pollution does not only affect animals that live solely in oceans. Seabirds are also greatly affected. In 2004, it was estimated that gulls in the North Sea had an average of thirty pieces of plastic in their stomachs. Seabirds often mistake trash floating on the ocean's surface as prey. Their food sources often has already ingested plastic debris, thus transferring the plastic from prev to predator. Ingested trash can obstruct and physically damage a bird's digestive system, reducing its digestive ability and can lead to malnutrition, starvation, and death. Toxic chemicals called polychlorinated biphenyls (PCBs) also become concentrated on the surface of plastics at sea and are released after seabirds eat them. These chemicals can accumulate in body tissues and have serious lethal effects on a bird's reproductive ability, immune system, and hormone balance. Floating plastic debris can produce ulcers, infections and lead to death. Marine plastic pollution can even reach birds that have never been at the sea. Parents may accidentally feed their nestlings plastic, mistaking it for food. Seabird chicks are the most vulnerable to plastic ingestion since they can't vomit up their food like the adult seabirds. After the initial observation that many of the beaches in New Zealand had high concentrations of plastic pellets, further studies found that different species of prion ingest the plastic debris. Hungry prions mistook these pellets for food, and these particles were found intact within the birds' gizzards and proventriculi.

Pecking marks similar to those made by northern fulmars in cuttlebones have been found in plastic debris, such as styrofoam, on the beaches on the Dutch coast, showing that this species of bird also mistake plastic debris for food. An estimate of 1.5 million Laysan albatrosses, which inhabit Midway Atoll, all have plastics in their digestive system. Midway Atoll is halfway between Asia and North America, and north of the Hawaiian archipelago. In this remote location, the plastic blockage has proven deadly to these birds. These seabirds choose red, pink, brown, and blue plastic pieces because of similarities to their natural food sources. As a result of plastic ingestion, the digestive tract can be blocked resulting in starvation. The windpipe can also be blocked, which results in suffocation.[5] The debris can also accumulate in the animal's gut, and give them a false sense of fullness which would also result in starvation. On the shore, thousands of birds corpses can be seen with plastic remaining where the stomach once was. The durability of the plastics is visible among the remains. In some instances, the plastic piles are still present while the bird's corpse has decayed. Similar to humans, animals exposed to plasticizers can experience developmental defects. Specifically, sheep have been found to have lower birth weights when prenatally exposed to bisphenol A. Exposure to BPA can shorten the distance between the eves of a tadpole. It can also stall development in frogs and can result in a decrease in body length. In different species of fish, exposure can stall egg hatching and result in a decrease in body weight, tail length, and body length.



RECYCLE:-

INFORMATION

The use of plastic is growing at a rapid rate in India. However, this rate does not match with the rate at which plastic waste is managed, which means all the plastic waste is not properly collected or disposed of. What India needs is an integrated plastic waste management system and thankfully, two cities of India are setting a good example in managing the plastic waste. Bhopal and Indore, cities in the central Indian state of Madhya Pradesh are using plastic waste in building roads. Only 24% of plastic waste is recycled in India and the rest is dumped into landfills. But in the city of Indore, which houses almost 2 million people and generates 130 MT of plastic waste daily, considers waste management as one of its top priorities. This has offered a more sustainable environment by means of reduced usage, reuse, reduced production and hence less disposal of plastic. With the help of local NGO, the government has set up an integrated program for waste management that has been replicated even in the neighboring states across India. Indore and Bhopal has been recycling and reusing plastic for the construction of roads benefiting more than 2 million people. The plastic waste collected by the rag-pickers, are scanned and segregated by their usage value. The single use plastic waste (which consists of almost half of the plastic waste) is shredded and baled. These bales are further co-processed at cement kilns or used in building roads. This model has not only helped employed the rag-pickers but also build a livelihood for many impoverished men and women working in construction of roads. Single use plastic which would have landed in landfills are now being used to fuel cement furnaces and build strong roads. Roads made with mixed plastic are durable as it has high resistance to water. Today, India recycles 60% of total plastic waste, 70% of which is recycled at registered facilities, 20% by unorganized sector and 10% at home. India recycles 38% more plastic than the global average of 20%. An alternate petrol-based plastic carry bags has been introduced in the market, which is 100% biodegradable. In order to manage plastic waste, under the Swachh

Bharat Mission, the government of India encourages the use of compostable carry-bags and the need for the manufacturer to obtain a certificate from the pollution board before selling these. India uses the policy of reducing the amount of waste produced, reusing the material repeatedly, recycling the material to make new products and recovering energy from plastic waste. Through mix of motivation, technology and knowledge India is finding a sustainable solution to of the most pressing challenge of plastic waste management. Visit exhibition 2020 and explore new business opportunities if you are from the plastic recycling industry, produce plastic recycle dana or products.

*Five things to know about plastic waste and recycling in India

India's Prime Minister Narendra Modi is pursuing an ambitious project to phase out single-use plastics by 2022 in the vast South Asian nation, which has a population of 1.3 billion.

1)Consumption per person

India's per capita consumption is 11 kilogrammes (24 pounds) compared to the United States, where it is the world's highest at 109 kilogrammes, according to figures released by the Federation of Indian Chambers of Commerce and Industry (FICCI) in 2017. The world average is about 28 kilogrammes, the data said. Consumption is projected by the government to increase to 20 kilogrammes by 2022. India, the world's second-most populous country, generates around 5.6 million tonnes of plastic waste annually, according to government figures.

2) Single-use plastics

Modi wants to limit the use of single-use plastic such as bags, cutlery and straws. Almost half of plastics in India are used for packaging, with much of it single-use, according to the industry. Several states in India have already banned plastic carry bags. But enforcement has been lax. Amid a push by Modi for businesses to join his campaign, national carrier Air India and online ecommerce giants Amazon India and Walmart-backed Flipkart say they will ditch single-use plastic for packaging in coming years.

3) WASTE

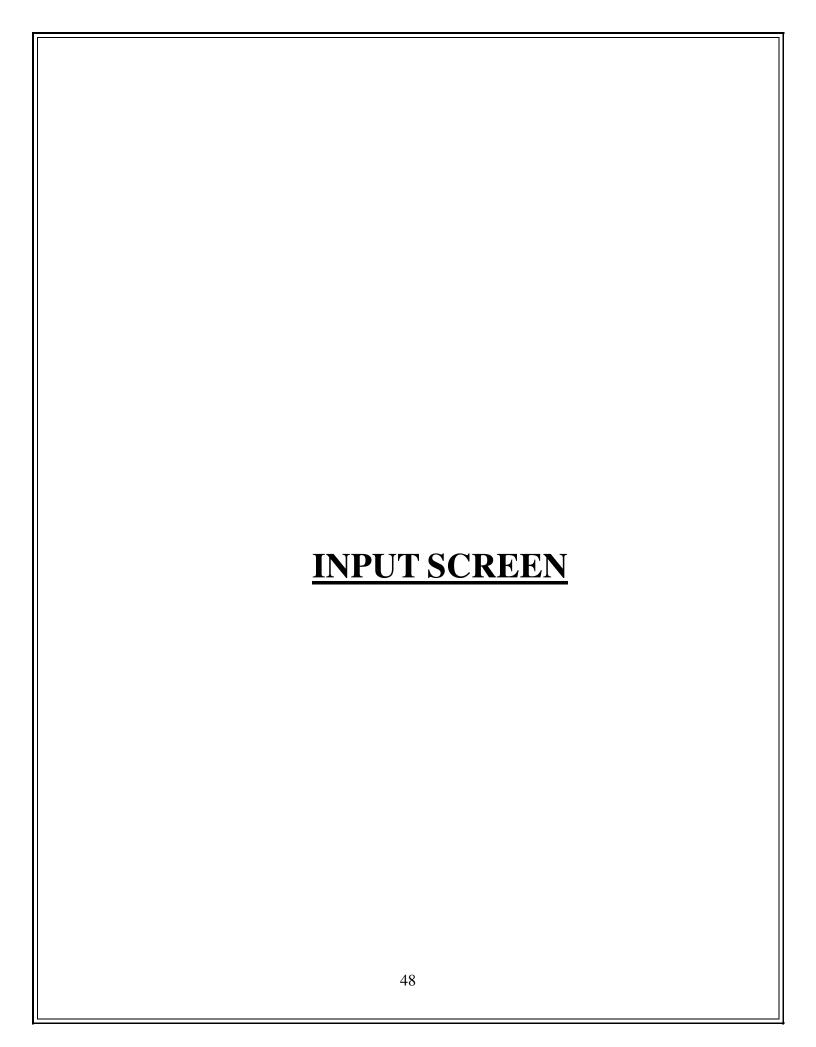
Plastic makes up about eight percent of total solid waste in India, according to the government.

4) Visible impact

The impact of plastic waste is visible in two major river systems flowing through India. The Indus (164,332 tons) and Meghna-Brahmaputra-Ganges (72,845 tons) carry some of the world's highest amounts of plastic debris to the oceans, according to the United Nations.

5)Recycling

Waste is not segregated in India when it is collected, and vast amounts of plastic litter clog public spaces as well as water bodies. India's segregation and recycling system operates through an informal chain of workers—from ragpickers who sort through waste to dealers who sell the plastic to plants. About 60 percent of plastic waste in India is recycled, according to various estimates. Just nine percent of all plastic waste ever produced globally has been recycled, according to the United Nations.



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India generates nearly 26,000 tonnes of plastic waste every day, making it the 15th biggest plastic polluter globally.

Discarded plastic waste litter the country's roads, rivers and also form huge mounds in garbage dumps across the country.

Besides the stench, the site poses a major health hazard for the area's residents, exposing them to the mosquito-borne diseases. Many a times,

the solid waste has been put on fire by the municipal agency, polluting the air.

It can also be fatal for the stray animals, mainly cows and dogs that end up mistaking plastic for food.

A biophysical environment is a biotic and abiotic surrounding of an organism or population,

and consequently includes the factors that have an influence in their survival, development, and evolution.

A biophysical environment can vary in scale from microscopic to global in extent. It can also be subdivided according to its attributes.

Examples include the marine environment, the atmospheric environment and the terrestrial environment.

The number of biophysical environments is countless, given that each living organism has its own environment.

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The annual plastic waste management reports of the <U>Central Pollution Control Board (CPCB)</U> states that the estimated plastic waste for Maharashtra

increased from 1,045.24 tonnes per annum in 2011-12 to 4,69,098 tonnes per annum in 2015-16. It has one of the highest plastic consumption across Indian states.

<H2>IN GUJARAT</H2>

Gujarat presently generates more than 8,300 metric tonnes of solid waste daily. Under the new policy, all major urban civic bodies have been asked to ensure 100 per cent waste segregation to ensure less generation of solid waste.

Gujarat has 7,751 units that hazardous waste generating units that generate more than a quarter of India' – the highest in the country.

**
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<H2>IN UTTARPRADESH</H2>

UP's decision to use plastic waste comes in the wake of the state generating over 1.3 lakh tonnes of plastic waste annually,

as per the Central Pollution Control Board. Uttar Pradesh Chief Minister Yogi Adityanath announced that from July 15, plastic bags,

cups and glasses will be banned in the state.

<H2>IN KARNATAKA</H2>

Central Pollution Control Board, states that "the total plastic waste generated in Karnataka during 2015-16 is approximately 1,29,600 tons/annum.

On January 20, 2015, the Karnataka Government announced a move to impose a state-wide ban on single-use plastic. Soon after citizens groups

petitioned the Chief Minister to set a date for the ban in support of the move. It was only on October 28, 2015, that the Karnataka Government

issued a draft plastic ban for public comments.

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<H2>IN ANDHRA PRADESH</H2>
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Except for Andhra Pradesh, Sikkim, West Bengal and Puducherry, all the other states.
Worse, a little over 10,000 tonnes a day of plastic waste remains uncollected.
packaging options, though the company did not reveal how many restaurants were using
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THE OVERALL OBJECTIVE OF THE PROJECT IS TO REDUCE PLASTIC IN WASTE STREAMS
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PRODUCTION FROM WASTE.
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MORE SPECIFICALLY, THE PROJECT AIMS AT:
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<P>1. IDENTIFYING THE MAIN CHALLENGES AND BARRIERS FOR REDUCING PLASTIC WASTE
IN MIXED WASTE AND RESIDUAL WASTE STREAMS,
HEREBY STIMULATING PREVENTION AND RECYCLING OF PLASTIC WASTE</P>
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<P>3. DIVERTING WASTE PLASTIC FROM THE RESIDUAL WASTE GOING TO INCINERATION
(CREATING A CARBON NEUTRAL ENERGY SOURCE) AND LANDFILL</P><BR>
<P>4. AN IMPORTANT FEATURE OF THE PLASTIC ZERO PROJECT IS TO SET UP COOPERATIVE
FORUMS INVOLVING PUBLIC AND PRIVATE STAKEHOLDERS,
BY BRINGING STAKEHOLDERS TOGETHER WITH SHARED RESPONSIBILITY. THE FORUMS AND
NETWORKS WILL IDENTIFY AND ANALYSE RELEVANT INTERFACES BETWEEN
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THE PARTNERS IN THE VALUE CHAIN, AND PROVIDE THE NECESSARY PRODUCTION

WASTE SERVICES, AND TECHNOLOGIES FOR REPROCESSING. BY INVOLVING ALL

TO RETHINK PRODUCT DESIGN THROUGH CRADLE-TO-CRADLE METHODS.</P>

TECHNOLOGY, INFRASTRUCTURE, PHYSICAL PLANNING, INFORMATION,

STAKEHOLDERS IN THE VALUE CHAIN THERE WILL BE AN OPPORTUNITY

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*THE ADVANTAGES OF PLASTICS:
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IT IS DURABLE, LOW COST, WATER RESISTANT, LESSER ENERGY AND HEAVY CHEMICALS
REQUIREMENTS IN MANUFACTURE AND ARE LIGHT WEIGHT.
MANY STUDIES COMPARING PLASTIC VERSUS PAPER FOR SHOPPING BAGS SHOW THAT
PLASTIC BAGS HAVE LESS NET ENVIRONMENTAL EFFECT THAN PAPER BAGS,
REQUIRING LESS ENERGY TO PRODUCE, TRANSPORT AND RECYCLE; HOWEVER THESE
STUDIES ALSO NOTE THAT RECYCLING RATES FOR PLASTIC ARE SIGNIFICANTLY LOWER
THAN FOR PAPER.
PLASTIC CARRIER BAGS CAN BE REUSED AS TRASH BAGS OR BIN BAGS. ALSO, PLASTIC BAGS
ARE COMPLIMENTARY IN MANY LOCATIONS BUT ARE CHARGED OR "TAXED" IN OTHERS.
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PLASTICS BAGS ARE MAKE OF A NON-RENEWABLE RESOURCE, WHICH GIVES US MORE REASONS TO USE RECYCLABLE SHOPPING BAGS.

PLASTIC BAGS ARE ALSO FLIMSY AND DO NOT SIT AS WELL AS EITHER PAPER OR CLOTH. THEY ARE A HAZARD TO WILDLIFE ANIMALS, IF THEY ARE NOT DISPOSED PROPERLY. LASTLY, PLASTIC BAGS CLOGS ROADSIDE DRAINS, WHICH COULD CAUSE THE FLOODING OF THE STREET AT HEAVY RAINFALLS.

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Plastics help us to do more with less in many ways. When it comes to packaging, plastics
often enable manufacturers to ship more product with
less packaging material. This process of light-weighting can play an important role in
boosting the environmental and economic efficiency of consumer
product packaging Are you sick and tired of the constant beach clean-ups with no end to
plastic pollution in sight?
So are we. In time for World Environment Day, hosted in India this year, GAIA
members across India,
the Philippines and Indonesia are releasing the results from a new kind of clean-up called
a brand audit,
where we expose exactly which multi-national companies are responsible for the
majority of plastic waste that ends up on our lands and beaches.
By identifying who's behind the waste that's polluting our country and demanding
change, we hope clean-ups will be a thing of the past.
Companies can't keep making billions off of single-use packaging, and leave us to clean
up their mess.
It's time for them to #breakfreefromplastic! So which brands are the biggest litterbugs in
South Asia? See below to find out!
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"The numbers are staggering. There is simply too much plastic in the environment.

This has to change," said Pratibha Sharma, National Coordinator of GAIA India.

"Corporations cannot continue polluting the environment, make money out of the problem they are creating but contribute nothing to cleaning up the

pollution they cause. The government must ensure that the corporations cannot continue doing business as usual,

by enacting acomprehensive extended producer responsibility policy," she added. From May 16 to 26, ten GAIA member organizations and partners conducted clean-up

and waste and brand audits in 18 states in India.

Of the total waste collected, 46,100 pieces of plastic waste were branded, of which 47.5% were multilayer plastic packaging which can neither be recycled nor composted.

Results showed that both local and international brands are responsible for the plastic waste pollution in the country.

PepsiCo India topped the multinational polluters list, followed by Perfetti van Melle and Hindustan Unilever, an Indian subsidiary of Unilever,

as second and third, respectively. Other multinational brands in the top 10 list of polluters are Coca-Cola, Mondelez, Nestle, Procter & Gamble, McDonald's, and Ferrero SpA. Meanwhile, Amul, Britannia, ITC,

Parle emerged as the top corporate polluters amongst the national brands.

"The FMCG segment which consumes more than 50% of plastics produced are leaking the same into our environment unattended.

This is leaking public money into drains. The primary function of packaging materials has changed from protection to advertising brand names.

This has to be challenged; the plastic industry in general, and brands, in particular, should be held liable for the plastic pollution,"

said Shibu Nair, Executive Director of Thanal, the anchor organization of the waste and brand audits conducted in Thiruvanthapuram, Kerala

The audits were conducted as a lead-up activity to this year's World Environment Day celebration with the theme, "Beat Plastic Pollution."

Environmental groups across different cities and regions of India—Bengaluru, Chennai, Darjeeling, Dehradun, Delhi, Goa, Himachal Pradesh, Kolkata, Leh, Mumbai, Nagaland, Pune, Sikkim, and Trivandrum—took part in this exercise.

They covered urban metros and mini metros along with ecological fragile zones such as beaches and rivers and hard-to-reach mountainous regions to account for diverse demographics and lifestyle standards.

The waste collected was audited under various categories:

unbranded plastics, branded plastics, polystyrene, rubber, glass, metal, textile, and paper.

The branded plastics were further audited to record the brand and identify the manufacturer and also the types of packaging such as single layer,

multilayer, polystyrene, expanded polystyrene, hard plastics, PET, foil, and others.

They were also classified according to product category such as food packaging, household packaging, or personal care.

"Through the brand audit activity, we found that there is a huge amount of waste in the form of single-use and multilayer plastic packaging that get generated at a very high rate every single day. Such plastic waste is not only detrimental to the environment in terms of plastic pollution but is also causing frequent floods and drainage problems in Mumbai and other cities.

Nestlé and Unilever are responsible for a quarter of the branded throwaway plastic driving the plastic pollution crisis in the Philippines,

according to a report published today by the Global Alliance for Incinerator Alternatives (GAIA).

The companies were named the top polluters based on a series of brand and waste audits conducted in six cities and one province in the country. The report, conducted in collaboration with the University of Santo Tomas' Research Center for Social Sciences and Education (RCSSEd), provides new evidence exposing Nestlé and Unilever's overproduction of single-use sachets (small packets containing single-use quantities of any material) that are marketed in the Global South, but not other parts of the world. In response to the GAIA report's findings, Greenpeace Southeast Asia (Philippines) Campaigner Abigail Aguilar said:

"Once again, this report suggests that although countries in Southeast Asia are being blamed for the plastic pollution crisis, the responsibility lies with multinational corporations like Nestlé and Unilever that continue to expand their production of unnecessary throwaway plastic at the expense of our communities, waterways, and health."

"Nestlé and Unilever need to stop deflecting the blame for plastic pollution onto individuals. These companies are responsible for this crisis and the only solution is for them to significantly reduce the production of throwaway plastics and move toward refill and reuse systems for their customers throughout the world. It's time to reject overconsumption and the corporations that continue to sell it to us."

Plastic has its place and that place is not in the environment. We want to keep this valuable material where it should be

in the circular economy, where it can be reused, recycled or composted. Plastic is a valuable material that has a vital place in the economy and in our business.

It is crucial for the safe and efficient distribution of our products and it has a lower carbon footprint than many alternative materials. But it has no place in our oceans, rivers, streets and countryside.

At the heart of the plastic waste problem is the linear 'take-make-dispose' model of consumption, which means products get manufactured, bought, used briefly, and then thrown away.

As a consumer goods company, we're acutely aware of the causes and consequences of this linear model.

It is unsustainable in a world in which, just 14% of the plastic packaging used globally makes its way to

recycling plants, and only 9% is actually recycled – while a third is left in fragile ecosystems, and 40% ends up in landfill.

And discarding plastic makes no sense economically, either. According to the World Economic Forum, plastic packaging waste represents

an \$80-\$120 billion loss to the global economy every year.

Moving towards a circular economy – where we not only use less packaging but design the packaging we use so it can be reused, recycled or composted

will mean less plastic in our shared environment. It will also contribute towards the UN Sustainable Development Goal on Sustainable Consumption and Production (SDG 12), specifically target 12.5 on substantially reducing waste generation through prevention, reduction, recycling and reuse. It also contributes to achieving SDG 14, Life on Water, through target 14.1 on preventing and reducing marine pollution of all kinds.

Each minute the equivalent of one rubbish truck of plastic leaks into streams and rivers, ultimately ending up in oceans. An estimated 100 million marine animals die each year due to discarded plastic.

Plastic waste, and in particular plastic-based marine pollution, is one of the biggest environmental issues the world is facing today. Packaging can be a major contributor to

such waste. At the same time, it remains important for purposes such as protecting foods and beverages during transportation, extending the shelf life of food and preventing food waste. This makes it essential not just to reduce the amount of packaging used, but to make packaging recyclable or reusable.

Nestlé carefully considers the environmental impact of packaging as an integral part of its product design. Since the early 1990's, we have been focusing on reducing the amount of packaging we use through our global source reduction programme – eliminating unnecessary packaging and reducing weight while ensuring product quality.

Nestlé's diverse product range means we draw on a range of materials – including paper, wood, metal, glass and plastic – for our packaging. Through our Packaging Policy we are focused on reducing the environmental impact of our packaging, whilst not compromising on safety, quality and consumer acceptance.

In addition to the work of the Institute, we are working with value chain partners, industry associations and the civil society to explore different packaging concepts to shape a waste-free future. Such system-wide change takes time, but we are committed to creating a world without waste, and delivering on the commitments we have made to achieve this. Our company will also continue to play an active role in the development of well-functioning collection, sorting and recycling schemes across the countries where we operate.

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<h1>MONDELEZ</h1>

Mondelēz International, is accelerating its plastic waste reduction efforts by joining two major sustainability initiatives.

In becoming a signatory of both the Ellen MacArthur Foundation's New Plastics Economy Global Commitment, and a participant in the New Plastics Economy Initiative, and a member of WRAP's UK Plastics Pact, the company is doubling down on its zeronet waste packaging ambition.

As part of the New Plastics Economy Global Commitment, Mondelēz International will work towards the following eliminating problematic or unnecessary plastic packaging by 2025; making 100% of its plastic packaging reusable or recyclable; use 5% recycled content across all packaging used, and move away from single-use towards reuse models where relevant.

As a member of the UK Plastics Pact, which is the first in a global network of Pacts which are aligned with, and support the New Plastics Economy initiative, Mondelēz International commits to working towards delivering the UK Plastics Pact 2025 targets.

These include eliminating unnecessary and problematic packaging and plastic products; ensuring all plastic packaging is recyclable in practice, and sing recycled plastic in our packaging wherever possible.

As part of a long-term commitment to reduce environmental impact, the company set 2025 packaging innovation targets to ensure 100% of packaging is designed to be recycled, contains on-pack recycling information and contributes to the company's commitment to reduce CO2 emissions.

Today, 93% of the company's total packaging, including both plastic and non-plastic, is designed to be recycled.

Moreover, the company is calling for and participating in sector-wide collaboration to identify and scale up innovation, harmonise packaging formats to make recycling easier and improve waste management infrastructure.

Packaging plays an essential role in safely delivering our products to customers and consumers. As a business, we design our packaging materials around several critical criteria, including compliance with food safety regulations, freshness and quality of the product, environmental sustainability, affordability, and consumer preferences, including convenience. At the beginning of every packaging design effort, we balance these criteria to arrive at a final packaging design.

We recognize that packaging is often disposed of improperly after a product has been consumed, and we share the concern that plastics and other wastes are accumulating in the marine environment and on land. These materials have value, and we are working on a broad set of solutions to ensure that they do not end up as litter or in a landfill. The following goals make up our 2025 packaging sustainability agenda:

Strive to design 100 percent of our packaging to be recyclable, compostable or biodegradable,

Strive to use 25 percent recycled content in our plastic packaging by collaborating with our suppliers, helping to increase consumer education, fostering cross-industry and public-private partnerships, and advocating for improved recycling infrastructure and regulatory reform, all of which are required to realize our ambition,

By 2025, PepsiCo will reduce virgin plastic use across our beverage portfolio by 35%, equating to the elimination of 2.5 million metric tons of cumulative virgin plastic when

taking into account business growth. On an absolute basis, this includes a 20% virgin plastic reduction vs a 2018 baseline.

In partnership with the PepsiCo Foundation, work to increase recycling rates. The problem of waste and litter is a challenging issue that involves a complex system of actors, including many companies along the packaging value chain, retail and sales outlets, waste management and recycling industries, governments and consumers. As a result, PepsiCo engages in a variety of programs and initiatives that bring stakeholders together to create broad solutions in order to shift the whole system in a more sustainable direction.

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With the government all set to ban single-use plastics on the occasion of the 150th birth anniversary of Mahatma Gandhi on October 2, plastic manufacturers are looking to produce alternative materials at an affordable price.

Since glass or any other material may work out to be costly, the industry is looking to produce packaging materials made of polymer with high viscosity to make them recyclable. For milk packaging, the industry is mulling to manufacture pouches and bags made from polyester filament yarn (PFY) which could be used 45-50 times and are also recyclable. Consumers would be able to send these pouches back to milk suppliers, resulting in savings in the cost of packaging.

"Switching to alternative packaging materials, such as glass and tetra pack, would add to the cost of packaging, handling, and transportation (as glass is heavier than plastic). Neither is it user-friendly nor cost-effective. Thus, until the industry comes out with an alternative solution of packaging, the ban should be pushed by at least three months. Also, the ban should be implemented in a phased manner," said a senior industry official.

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Also, the ban should be implemented in a phased manner," said a senior <BR> <BR> <IMG SRC="I:\21.5.2020\new1\24.PNG" WIDTH=800 HEIGHT=400 ALIGN=CENTER> <BR> <BR> <H1>PARLE</H1> <BR> <BR> <BR> <
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At the end of last year, my then 4th standard Garbology students wrote to Parle G to request they rethink their packaging for their biscuits and candies. You can see a sampling of the letters here. They never received a reply, so at the end of the summer holiday I wrote to ParleG on its Facebook page to see if I could get a response that way. While there was a brief reply, it seemed to make light of the children's ideas. Today they finally wrote a reply. This time I typed it up and pasted it on the Facebook page again hoping they would consider what we wrote. (In class the brainstorming session was much more creative that what they ultimately put below. I heard such wonderfully out-of-the box ideas from putting biscuits in cement to using mango pits to papier mâché!) As part of expanding its plastic packaging business, food and beverage player Parle Agro, is planning to expand its Polyethylene Terephthalate (PET) business by increasing its production capacity by another 21 per cent in the next fiscal. The company has increased its annual preform production by 17 per cent in FY 2009-10.

Known for brands like Frooti and Appy Classic, Parle Agro diversified into production of PET preforms (semi-finished bottles) in 1996. PET (Polyethylene Terephthalate) is a strong, lightweight packaging material that keeps bottled content fresh for up to six months. Parle Agro's PET division supplies preforms to customers in the bottled water, ready-to-drink beverages, carbonated drinks, edible oil, confectionery and pharmaceutical segments. Its product range in terms of neck type are 30/25 mm (water application); PCO neck (carbonated & juice application) and short neck (water application).

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<H1>BRITANNIA</H1>

We know that plastic is extremely bad for the environment, especially single-use plastic. A United Nations Environment Program report states that the most common plastics emit traces of two powerful greenhouse gases that lead to further global warming.

But when I read a report by the National Institute of Environment Health Sciences, USA, which says that plastic interferes with our hormonal system leading to infertility and possible cancer, I realized, to my horror, that I and the billions of others on this planet are slowly poisoning ourselves to death.

That is why the UN has declared the theme for 2018 as #BeatPlasticPollution and on World Environment Day, India's Union Environment Minister Harsh Vardhan vowed to eliminate all single-use plastics by 2022, the 75th year of India's independence.

Britannia is one of the most loved food and beverage companies in India and it is celebrating its 100th year of doing business.

As per Varun Berry, MD Britannia, "The entire portfolio of Britannia products is going to change because we are changing the logo of Britannia and hence some of the packaging designs are changing and the formulations are changing".

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<U>Importing plastic waste despite oversupply in India</U>
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There are two main reasons why India generates so much plastic waste--the vast network of unlicensed units manufacturing low-grade plastic bags and other material such as styrofoam, and the indifference of municipal authorities to waste management.

Currently, the country is able to recycle only about 4 million tonnes.

Before the re-imposition of the plastic waste import ban in March 2019, Indian recycling firms were importing plastic waste from China, Italy, Japan and Malawi. This is because imported plastic waste is cheaper and available in segregated forms.

"The recycling industry should be able to use this surplus plastic waste but there is shortage of segregated plastic waste," said OP Ratra, a consultant to the plastic industry.

Plastic waste imports had increased four-fold from 12,000 tonnes in 2016-17 to 48,000 tonnes in 2017-18, despite a 2015 ban on plastic waste import. This was made possible by a loophole which allowed import of plastic waste through Special Economic Zones. On March 6, 2019, the government put a ban on this as well. By the time the last ban was imposed, within the first quarter of the current financial year, 25,000 tonnes of plastic waste had already been imported.

Why India is unlikely to phase out single-use plastic by 2022

As we mentioned earlier, at the UNEA held in Nairobi, Kenya, between March 11 and 15, 2019, India piloted a resolution on phasing out single-use plastic by 2022, a deadline later updated to 2025. A majority of member countries opted to go in for a less ambitious "reduction by 2030". The UNEA is the world's highest-level environmental forum with 170 member states.

In 2018, as the global host to UN World Environment Day, India had promised to phase out single-use plastic by 2022 with the theme 'Beat Plastic Pollution'. "Only a small proportion of the plastics produced

globally are recycled, with most of it damaging the environment and aquatic biodiversity," a government press release had stated. "Both these are global challenges and the resolutions piloted by India at the UNEA are vital first steps towards addressing these issues and attracting the focus of the global community."

India's plastic consumption set to cross 20 million metric tonnes by 2020

However, a 2022 phase-out seems unlikely--India's annual plastic consumption is expected to cross 20 million tonnes in 2020.

Between 2010 and 2015, the plastics processing industry grew at a compound annual growth rate (CAGR) of 10% in volume--from 8.3 million metric tonne per annum (MMTP) to 13.4 MMTPA, as per a 2017 study by Federation of Indian Chambers of Commerce & Industry, an industry lobby. By 2020, it is expected to grow at a CAGR of around 10.5% to reach 22 MMTPA.

In plastic, the packaging sector is growing the fastest, registering a CAGR of 15% between 2010 and 2015, the study said. An increase in the consumption of plastics will almost certainly result in a rise in plastic waste.

"Plastic accounts for 8% of the total solid waste generated in the country annually, with Delhi producing the biggest quantity, followed by Kolkata and Ahmedabad," said a 2018 report (pdf) by the Delhi-based The Energy and Resources Institute (TERI), citing data from India's central pollution control board (CPCB). Of the 25,940 tonnes of plastic waste produced in India everyday according to CPCB, 94% is thermoplastic, or recyclable materials such as PET (polyethylene terephthalate), and PVC (polyvinyl chloride). Yet, these materials can be recycled utmost 7-9 times, after which they have to be disposed off.

That brings us to a key missing aspect: waste management system.

"The plastic waste we generate daily is not recycled or reused and neither is there a foolproof system of disposal," says Kavita Ashok, president and founder of a Delhi-based NGO Tree for life.

The CPCB, in 2014, estimated that India recycles as much as 80.28% of plastic waste, thanks to an army of rag pickers, who collect and segregate the waste. However, out of the non-recyclable waste, merely 28.4% could be treated before being disposed off, leaving the rest to pollute landfills or rivers, and seas, according to TERI

Time and again, the centre, and various state governments have enacted laws, with little success, to curb the

 Inadequate laws

"The various laws enacted failed due to a lack of people's will. Until citizens are themselves aware and take a pledge to avoid plastic use, no law can be effective," says Anand Arya, a Delhi-based environmentalist. The 2016 plastic waste management rules were an attempt by the central government to hold everyone responsible for setting up a proper channel for plastic disposal. However, succumbing to pressure from businesses, the government last year relaxed the stringent and result-oriented rules. For instance, the clause related to charging merchants who use plastic carry bags was omitted. Initially, it was mandatory for such vendors to register with their respective local authorities and pay a minimum monthly fee of Rs4,000 (\$55.7). There were other amendments, too, that have diluted the original law. Will Modi's latest appeal, therefore, have any different effect?

Onus on companies

The prime minister's call has cheered activists. Given his popularity, it has the potential to create a sense of general awareness, opines Arya. "Not just the prime minister, Bollywood celebrities can also ask their fans from their social media accounts which will definitely help the cause," he said.

However, experts believe putting pressure on businesses will be key. "Consumers alone should not be asked to ditch plastic, businesses should also be asked to innovate," suggests Tree for life's Ashok. "Firms can use banana, palm, or bamboo leaves as an alternative. They can learn from the Philippines, which has pioneered the process. Besides, steel can also be a good replacement," says Ashok. Most of the plastic produced is used by the packaging industry. Finding a replacement is necessary as the plastic packaging industry is estimated to grow to 22 million tonnes a year by 2020 from 13.4 million

tonnes in 2015. Nearly half of this is single-use plastic, according to a study by Federation of Indian Chambers of Commerce and Industry.

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A new report reveals that plastic is a human health crisis hiding in plain sight. Plastic & Health: The Hidden Costs of a Plastic Planet, authored by the Center for International Environmental Law (CIEL), Earthworks, Global Alliance for Incinerator Alternatives (GAIA), Healthy Babies Bright Futures (HBBF), IPEN, Texas Environmental Justice Advocacy Services (t.e.j.a.s.), University of Exeter, and UPSTREAM, brings together research that exposes the distinct toxic risks plastic poses to human health at every stage of the plastic lifecycle,

from extraction of fossil fuels, to consumer use, to disposal and beyond.

To date, research into the human health impacts of plastic have focused narrowly on specific moments in the plastic lifecycle, often on single products, processes, or exposure pathways. This approach fails to recognize that significant, complex, and intersecting human health impacts occur at every stage of the plastic lifecycle: from wellhead to refinery, from store shelves to human bodies, and from waste management to ongoing impacts of microplastics in the air, water, and soil.

Plastic & Health presents the full panorama of human health impacts of plastic and counsels that any solution to the plastic crisis must address

the full lifecycle.

Because of the chemical additives used during plastic production, plastics have potentially harmful effects on human health.

Indeed, exposure to toxic chemicals coming out of plastic can cause cancers, birth defects, impaired immunity and other health problems.

Plastic may cause pollution when poorly managed but it has lots of advantages too,

such as being resistant. Many plastic items can therefore be reused or used for different purposes.

Before throwing plastic items, it is important to consider how they can be reused.

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<H2><U>*PLASTICS IN THE OCEAN AFFECTING HUMAN HEALTH</U></H2>

<P>Over a few decades, humans have managed to dump tons upon tons of garbage into the ocean.

Of the most devastating elements of this pollution is that plastics takes thousands of years to decay.

As a result, fish and wildlife are becoming intoxicated. Consequently the toxins from the plastics have entered the food chain.

threatening human health. In the most polluted places in the ocean, the mass of plastic exceeds the amount of plankton six times over.

This is a large piece of evidence that leaves the problem of polluted oceans undeniable. It is upsetting that more of clean up effort is not taking place.

Ocean acidification is caused when CO₂ dissolves into the ocean bonding with sea water creating carbonic acid. The acid reduces the pH levels in the water,

essentially changing the Ocean acidity by 30% in the last 200 years according to analysis - a level that the ocean has not been at in over 20 million years.

The acidity depletes the calcium concentrations, making it difficult for crustaceans to build their shell, leaving them vulnerable without their armor. Between the global temperature rise of one degree and the ocean acidification,

scientists say a quarter of all coral reefs are considered damaged beyond repair, with two-thirds under serious threat.

Coral reefs are home to 25% of aquatic life, many of which are responsible for the natural filtration of the ocean and

production of necessary nutrients that are vital for life under the sea. However, acidification is not the only watery threat

as there are other human activities causing severe changes.

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<H2><U>*PLASTICS GETTING TO HUMANS IMPACTING HEALTH</U></H2>

<P>Different plastics spread throughout the ocean.

As Styrofoam breaks into smaller parts, polystyrene components in it sink lower in the ocean, so that the pollutant spreads throughout the sea column.

In fact, not only do the toxins in plastic affect the ocean, but acting like sponges,

they soak up other toxins from outside sources before entering the ocean.

As these chemicals are ingested by animals in the ocean, this is not good for humans. We as humans ingest contaminated fish and mammals. Human activity can be directly attributed to the cause of hundreds of extinctions in the last two centuries, versus the millions of years that extinctions naturally occur. As we progress through the 21st century, humans have changed the world in unprecedented ways.

Overpopulation has grown into an epidemic since mortality rates have decreased,

medicine has improved, and methods of industrial farming were introduced,

thus keeping humans alive for much longer and increasing the total population.

There are different types of ways that plastic is dangerous for humans. Direct toxicity from plastics comes from lead, cadmium, and mercury. These toxins have also been found in many fish in the ocean, which is very dangerous for humans. Diethylhexyl phthalate (DEHP) contained in some plastics, is a toxic carcinogen. Other toxins in plastics are directly linked to cancers, birth defects, immune system problems, and childhood developmental issues. To learn more on effects of plastics on humans visit the Ecology CenterOther types of toxic plastics are BPA or health-bisphenol-A, along with phthalates (mentioned above). Both of these are of great concern to human health. BPA is used in many things including plastic bottles and food packaging materials. Over time the polymer chains of BPA break down, and can enter the

human body in many ways from drinking contaminated water to eating a fish that is exposed to the broken down toxins. Specifically, BPA is a known chemical that interferes with human hormonal function. Rolf Halden, associate professor in the School of Sustainable Engineering and Arizona State University has studied plastics adverse effects on humans and has thus far concluded that and exact outline of health effects of plastics on humans is almost impossible to determine. This is due to the fact that the problem of plastic contamination in humans is globally spread; there are almost no unexposed subjects. That being said, it is evident that the chemicals are not healthy for humans. To learn more about Halden's studies on plastic at Arizona State University see Impacts of plastics on human health and ecosystems

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A CHARITY IN INDIA MADE A STARTLING DISCOVERY. AFTER TAKING IN 36 STRAY COWS, ONE DIED AND THEY DISCOVERED THE CAUSE – THE COW ATE TOO MUCH PLASTIC.

IN AN EFFORT TO SAVE THE REST OF THE CATTLE, THE CHARITY SURGICALLY REMOVED PLASTIC FROM EACH COW'S STOMACH. NOW, THE CHARITY, KARUNA SOCIETY FOR ANIMALS AND NATURE, IS USING THE EVIDENCE TO ENCOURAGE EVERYONE FROM LOCAL OFFICIALS TO THE SUPREME COURT TO BAN PLASTIC GARBAGE.

HOW COWS INGEST PLASTIC

IN RURAL PARTS OF INDIA, COWS ROAM THE STREETS LOOKING FOR FOOD. THE COUNTRY'S WASTE MANAGEMENT SYSTEM IS EXTREMELY LACKING, WHICH MEANS MANY STREETS AND ALLEYS ARE LITTERED WITH GARBAGE.

FARMERS CAN'T AFFORD TO FEED THEIR COWS SO THEY'RE OFTEN LET LOOSE TO FIND THE NUTRIENTS THEY NEED ON THE STREETS. AS COWS PICK THROUGH PILES OF GARBAGE, HUNTING FOR LEFTOVERS, THEY ALSO CONSUME PLASTIC. UNSURPRISINGLY, THE BIGGEST PLASTIC POLLUTANT DIGESTED BY COWS IS PLASTIC BAGS.

THE BITS OF PLASTIC CONSUMED BUILD UP IN THEIR INTERNAL ORGANS, WHICH MAKE IT DIFFICULT FOR COWS TO EAT. AS A RESULT, MILK PRODUCTION DROPS AS DOES MILK QUALITY. OVER TIME, THE PLASTIC CONSUMPTION "SENTENCES CATTLE TO A SLOW AND CRUEL DEATH." ACCORDING TO ANIMAL ACTIVISTS.

THERE ARE TREATMENTS TO PREVENT DEATH, BUT ONCE MILK PRODUCTION DROPS, FARMERS USUALLY ABANDON COWS RATHER THAN SPEND MONEY ON TREATMENT.

THE SUPREME COURT CALLS FOR ACTION

THE SUPREME COURT SAYS THE DEATH OF CATTLE FROM PLASTIC CONSUMPTION IS "ALARMING" AND HAS CALLED ON ALL LOCAL GOVERNMENTS TO TAKE ACTION. TO CURB PLASTIC BAG POLLUTION, THE COURT SUGGESTS FINING RESIDENTS AND BUSINESSES THAT DON'T DISPOSE OF WASTE PROPERLY.

PLASTIC BAG BANS AREN'T UNCOMMON. SEVERAL STATES IN THE U.S. HAVE BANNED PLASTIC BAGS OR CHARGE SHOPPERS A TAX TO USE ONE.

IN INDIA, THE PLASTIC BAG BAN SOUNDS LIKE A STEP IN THE RIGHT DIRECTION, BUT SEVERAL CITIES ALREADY HAVE A PLASTIC BAG BAN IN PLACE BUT DON'T HAVE THE RESOURCES TO ENFORCE IT.

WITHOUT ENFORCEMENT, GARBAGE CONTINUES TO COVER THE STREETS AND BECOMES A MAIN SOURCE OF FOOD – AND CAUSE OF DEATH – FOR ROAMING CATTLE.

A ZERO WASTE SOLUTION

WHILE INDIA'S POLLUTION PROBLEMS ARE UNIQUE, IT'S NOT THE ONLY COUNTRY STRUGGLING TO MANGE WASTE.

EVEN THE U.S. FACES PROBLEMS. THE COUNTRY ONLY RECYCLES ABOUT 34% OF ITS WASTE, SENDING THE REST TO LANDFILLS.

TO CURB PLASTIC POLLUTION, A ZERO WASTE STRATEGY IS THE BEST SOLUTION. HOW CAN YOU AS A CONSUMER COMMIT TO ZERO WASTE? BY USING REFILL TECHNOLOGY CONSUMERS CAN ELIMINATE MASSIVE AMOUNTS OF SINGLE-USE PLASTIC FROM THEIR DAILY LIFE.

PLASTIC POLLUTION HAS THE POTENTIAL TO POISON ANIMALS, WHICH CAN THEN ADVERSELY AFFECT HUMAN FOOD SUPPLIES.

PLASTIC POLLUTION HAS BEEN DESCRIBED AS BEING HIGHLY DETRIMENTAL TO LARGE MARINE MAMMALS, DESCRIBED IN THE BOOK INTRODUCTION TO MARINE BIOLOGY AS POSING THE "SINGLE GREATEST THREAT" TO THEM

SOME MARINE SPECIES, SUCH AS SEA TURTLES, HAVE BEEN FOUND TO CONTAIN LARGE PROPORTIONS OF PLASTICS IN THEIR STOMACH.

WHEN THIS OCCURS, THE ANIMAL TYPICALLY STARVES, BECAUSE THE PLASTIC BLOCKS THE ANIMAL'S DIGESTIVE TRACT.

SOMETIMES MARINE MAMMALS ARE ENTANGLED IN PLASTIC PRODUCTS SUCH AS NETS, WHICH CAN HARM OR KILL THEM.

Plastic pollution causes great harm to the organisms big and small that encounter it. From tiny corals to majestic whales, more than 700 marine species are known to be killed either by the ingestion of plastic or entanglement - resulting in more than 100 million animal deaths a year, that we know of.

PLASTIC IMPACTS LAND ANIMALS TOO. WE KNOW BY NOW THAT PLASTIC POLLUTION IS TURNING OUR OCEANS INTO A TOXIC "PLASTIC SOUP,"

IN WHICH FISH, MAMMALS, SEA BIRDS AND EVEN ZOOPLANKTON ARE LITERALLY CHOKING TO DEATH. ENTANGLEMENT, CHOKING, INGESTION THAT LEADS TO POISONING AND STARVATION—THESE PLAGUE LAND ANIMALS TOO.

AND WHILE THE STATISTICS ARE INCOMPLETE, SOME CONSERVATIONISTS ESTIMATE THAT AT LEAST 100,000 Mammals and birds die from them each year,

FELLED BY THE ESTIMATED 500 BILLION AND MORE PLASTIC BAGS THAT ARE PRODUCED AND CONSUMED AROUND THE WORLD:

THE NUMBERS OF FISH KILLED BY THEM ARE UNKNOWN, BUT THEY ARE SURE TO NUMBER.

THE REAL IMPACT OF PLASTIC BAG LITTER IS FELT ON WILDLIFE BOTH IN THE MARINE ENVIRONMENT AND IN RURAL AREAS.

TENS OF THOUSANDS OF WHALES, BIRDS, SEALS AND TURTLES ARE KILLED EVERY YEAR FROM PLASTIC BAG LITTER IN THE MARINE ENVIRONMENT AS THEY OFTEN MISTAKE PLASTIC BAGS FOR FOOD 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 INGESTING PLASTIC, THE PLASTIC IS THEN FREED BACK INTO THE MARINE ENVIRONMENT TO CARRY ON KILLING OTHER WILDLIFE.

IMAGES:-

<H2><u>*IMPACTS ON MARINE ANIMALS</u></H2>

<P>PLASTIC WASTE IS LITTERING OUR OCEANS AND THREATENING THE LIVES OF MILLIONS OF MARINE ANIMALS.

PLASTIC CONTAINS TOXIC CHEMICALS, WHICH CAN INCREASE THE CHANCE OF DISEASE AND AFFECT REPRODUCTION.

AFTER INGESTING MICROPLASTICS, SEALS, AND OTHER ANIMALS CAN SUFFER FOR MONTHS OR EVEN YEARS BEFORE THEY DIE .

SO TOO ARE WHALES. LARGE AMOUNTS OF PLASTICS HAVE BEEN FOUND IN THE STOMACHS OF BEACHED WHALES.

PLASTIC DEBRIS STARTED APPEARING IN THE STOMACH OF THE SPERM WHALE SINCE THE 1970S, AND HAS BEEN NOTED TO BE THE CAUSE OF DEATH OF SEVERAL WHALES.

IN JUNE 2018, MORE THAN 80 PLASTIC BAGS WERE FOUND INSIDE A DYING PILOT WHALE THAT WASHED UP ON THE SHORES OF THAILAND.

IN MARCH 2019, A DEAD CUVIER'S BEAKED WHALE WASHED UP IN THE PHILIPPINES WITH 88 LBS OF PLASTIC IN ITS STOMACH.

IN APRIL 2019, FOLLOWING THE DISCOVERY OF A DEAD SPERM WHALE OFF OF SARDINIA WITH 48 POUNDS OF PLASTIC IN ITS STOMACH.

THE WORLD WILDLIFE FOUNDATION WARNED THAT PLASTIC POLLUTION IS ONE OF THE MOST DANGEROUS THREATS TO SEA LIFE,

NOTING THAT FIVE WHALES HAVE BEEN KILLED BY PLASTIC OVER A TWO-YEAR PERIOD.

MOST MARINE DEBRIS (80%) COMES FROM TRASH AND DEBRIS IN URBAN RUNOFF, I.E. LAND-BASED SOURCES. KEY COMPONENTS OF LAND-BASED SOURCES INCLUDE LITTER, TRASH AND DEBRIS FROM CONSTRUCTION, PORTS AND MARINAS, COMMERCIAL AND INDUSTRIAL FACILITIES, AND TRASH BLOWN OUT

OF GARBAGE CONTAINERS, TRUCKS, AND LANDFILLS. 1 Ocean-based sources, such as, overboard discharges from ships and discarded fishing gear, account for the other 20%.

FOOD CONTAINERS AND PACKAGING ARE THE LARGEST COMPONENT OF THE MUNICIPAL SOLID WASTE STREAM (80 MILLION TONS OR 31.7 %).2 THESE ITEMS, TOGETHER WITH PLASTIC BAGS, ALSO REPRESENT THE LARGEST COMPONENT OF MARINE DEBRIS (THAT IS, BARRING ITEMS LESS THAN 5MM SUCH AS PRE-PRODUCTION PLASTIC PELLETS, FRAGMENTS, AND POLYSTYRENE PIECES).3 PACKAGING AND SINGLE USE DISPOSABLE PRODUCTS ARE NOT ONLY UBIQUITOUS IN MARINE DEBRIS, THEY REPRESENT AN UNSUSTAINABLE USE OF PRECIOUS RESOURCES (OIL, TREES, ENERGY SOURCES, WATER).

THE QUANTITY OF MARINE DEBRIS IS INCREASING IN OCEANS WORLD-WIDE. RESEARCHERS AT THE ALGALITA MARINE RESEARCH FOUNDATION DOCUMENTED AN INCREASE IN PLASTIC DEBRIS IN THE CENTRAL PACIFIC GYRE FIVE-FOLD BETWEEN 1997 AND 2007, WHERE THE BASELINE IN 1997 SHOWED PLASTIC PIECES OUTNUMBERED PLANKTON ON THE OCEAN SURFACE 6:1.4

OFF JAPAN'S COAST, THE QUANTITY OF PELAGIC PLASTIC PARTICLES FLOATING INCREASED 10 FOLD IN 10 YEARS BETWEEN THE 1970S AND 1980S, AND THEN 10 FOLD EVERY 2-3 YEARS IN THE 1990S.5 IN THE SOUTHERN OCEAN, PLASTIC DEBRIS INCREASED 100 TIMES DURING THE EARLY 1990S.6 THESE INCREASES IN PLASTIC DEBRIS OCCURRED AT THE SAME TIME THAT WORLDWIDE PRODUCTION OF PLASTIC FIBERS OUADRUPLED.

In the ocean, plastic debris injures and kills fish, seabirds and marine mammals. Marine plastic pollution has impacted at least 267 species worldwide, including 86% of all sea turtle species, 44% of all seabird species and 43% of all marine mammal species. The impacts include fatalities as a result of ingestion, starvation, suffocation, infection, drowning, and entanglement.7

IN 2010, A CALIFORNIA GREY WHALE WASHED UP DEAD ON THE SHORES OF THE PUGET SOUND. AUTOPSIES INDICATED THAT ITS STOMACH CONTAINED A PAIR OF PANTS AND A GOLF BALL, MORE THAN 20 PLASTIC BAGS, SMALL TOWELS, DUCT TAPE AND SURGICAL GLOVES.

SEABIRDS THAT FEED ON THE OCEAN SURFACE ARE ESPECIALLY PRONE TO INGESTING PLASTIC DEBRIS THAT FLOATS. ADULTS FEED THESE ITEMS TO THEIR CHICKS RESULTING IN DETRIMENTAL EFFECTS ON CHICK GROWTH AND SURVIVAL.8 ONE STUDY FOUND THAT APPROXIMATELY 98% OF CHICKS SAMPLED CONTAINED PLASTIC AND THE QUANTITY OF PLASTIC BEING INGESTED WAS INCREASING OVER TIME.9

BECAUSE PERSISTENT ORGANIC POLLUTANTS IN THE MARINE ENVIRONMENT ATTACH TO THE SURFACE OF PLASTIC DEBRIS, FLOATING PLASTICS IN THE OCEANS HAVE BEEN FOUND TO ACCUMULATE POLLUTANTS AND TRANSPORT THEM THROUGH OCEAN CURRENTS. 10 FLOATING AND MIGRATING PLASTIC DEBRIS HAS ALSO BEEN FOUND TO TRANSPORT INVASIVE MARINE SPECIES. 11 INCREASINGLY, RESEARCH SHOWS THAT MARINE LIFE THAT INGESTS PLASTICS COATED WITH POLLUTANTS CAN ABSORB THESE POLLUTANTS THEIR BODIES.

PLASTIC DEBRIS IS POLLUTING THE HUMAN FOOD CHAIN. IN A 2008 PACIFIC GYRE VOYAGE, ALGALITA RESEARCHERS BEGAN FINDING THAT FISH ARE INGESTING PLASTIC FRAGMENTS AND DEBRIS. OF THE 672 FISH CAUGHT DURING THAT VOYAGE, 35% HAD INGESTED PLASTIC PIECES.

THE PLASTICS INDUSTRY, THROUGH THE LEADERSHIP OF THE AMERICAN CHEMICAL COUNCIL (ACC), SPENDS MILLIONS OF DOLLARS EACH YEAR TO CONVINCE POLICY MAKERS AND CALIFORNIANS THAT SOLUTIONS TO PLASTIC POLLUTION LIE IN ANTI-LITTER CAMPAIGNS THAT ATTRIBUTE THE RESPONSIBILITY FOR MARINE DEBRIS ON INDIVIDUAL BEHAVIOR. YET THEY HAVE DEVOTED LITTLE FUNDING TO PUBLIC EDUCATION AND MUCH MORE ON PROMOTING POLICIES THAT SUPPORT INCREASED USE OF PLASTICS.

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<P>Bits of plastic debris litter the shore: bottle caps, toys, cigarette lighters, fishing line and other garbage. Scientists are now documenting how this surge of plastic trash leaves a wake of death and disease that directly affects seabirds.

In many areas of the globe, birds inadvertently feed on plastic floating on the water,

mistaking it for food, and many times this ingestion leads to death and even the death of their young.

A report by scientists studying the stomach content of Laysan Albatross chicks on Midway Atoll in the Pacific Ocean revealed disturbing results:

Forty percent of Laysan Albatross chicks die before fledging. Necropsies of the chick's stomachs found them filled with plastic trash.

Large plastic detritus such as bottles and packaging has well-known effects on sea life,

strangling birds and fish and transporting alien species to new waters.

Millimeter-sized plastic pellets-the building blocks of larger products-clog U.S. harbors and soak up toxic chemicals from seawater.

poisoning the creatures that swallow them.

Because plastic pellets are magnets for toxic chemicals like DDT and PCBs,

they effectively become poison pills.

Japanese researchers found that concentrations of these chemicals were as much as a million times higher than in the water.

Plastics themselves can leach endocrine-disrupting chemicals like biphenyl.

<RR>

Plastic pollution does not only affect animals that live solely in oceans. Seabirds are also greatly affected. In 2004.

it was estimated that gulls in the North Sea had an average of thirty pieces of plastic in their stomachs.

Seabirds often mistake trash floating on the ocean's surface as prey. Their food sources often has already ingested plastic debris,

thus transferring the plastic from prey to predator. Ingested trash can obstruct and physically damage a bird's digestive system,

reducing its digestive ability and can lead to malnutrition, starvation, and death. Toxic chemicals called polychlorinated biphenyls

(PCBs) also become concentrated on the surface of plastics at sea and are released after seabirds eat them. These chemicals can accumulate

in body tissues and have serious lethal effects on a bird's reproductive ability, immune system, and hormone balance. Floating plastic

debris can produce ulcers, infections and lead to death. Marine plastic pollution can even reach birds that have never been at the sea.

Parents may accidentally feed their nestlings plastic, mistaking it for food.

Seabird chicks are the most vulnerable to plastic ingestion since they can't vomit up their food like the adult seabirds.

After the initial observation that many of the beaches in New Zealand had high concentrations of plastic pellets,

further studies found that different species of prion ingest the plastic debris. Hungry prions mistook these pellets for food,

and these particles were found intact within the birds' gizzards and proventriculi. Pecking marks similar to those made by northern fulmars

in cuttlebones have been found in plastic debris, such as styrofoam, on the beaches on the Dutch coast, showing that this species of bird also mistake plastic debris for food.

An estimate of 1.5 million Laysan albatrosses, which inhabit Midway Atoll, all have plastics in their digestive system. Midway Atoll

is halfway between Asia and North America, and north of the Hawaiian archipelago. In this remote location, the plastic blockage has proven

deadly to these birds. These seabirds choose red, pink, brown, and blue plastic pieces because of similarities to their natural food sources.

As a result of plastic ingestion, the digestive tract can be blocked resulting in starvation. The windpipe can also be blocked, which results

in suffocation.[5] The debris can also accumulate in the animal's gut, and give them a false sense of fullness which would also result in starvation.

On the shore, thousands of birds corpses can be seen with plastic remaining where the stomach once was. The durability of the plastics is visible among the remains. In some instances, the plastic piles are still present while the bird's corpse has decayed.

Similar to humans, animals exposed to plasticizers can experience developmental defects. Specifically, sheep have been found to have lower birth weights when prenatally exposed to bisphenol A.

Exposure to BPA can shorten the distance between the eyes of a tadpole. It can also stall development in frogs and can result in a decrease in body length.

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length, and body length.
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In different species of fish, exposure can stall egg hatching and result in a decrease in body weight, tail

RECYCLE:-

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<BR>
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The use of plastic is growing at a rapid rate in India. However, this rate does not match with the rate at which plastic waste is managed, which means all the plastic waste is not properly collected or disposed of. What India needs is an integrated plastic waste management system and thankfully, two cities of India are setting a good example in managing the plastic waste. Bhopal and Indore, cities inthe central Indian state of Madhya Pradesh are using plastic waste in building roads. Only 24% of plastic waste is recycled in India and the rest is dumped into landfills. But in the city of Indore, which houses almost 2 million people and generates 130 MT of plastic waste daily, considers waste management as one of its top priorities. This has offered a more sustainable environment by means of reduced usage, reuse, reduced production and hence less disposal of plastic.

With the help of local NGO, the government has set up an integrated program for waste management that has been replicated even in the neighboring states across India. Indore and Bhopal has been recycling and reusing plastic for the construction of roads benefiting more than 2 million people. The plastic waste collected by the rag-pickers, are scanned and segregated by their usage value. The single use plastic waste

(which consists of almost half of the plastic waste) is shredded and baled. These bales are further coprocessed at cement kilns or used in building roads. This model has not only helped employed the ragpickers but also build a livelihood for many impoverished men and women working in construction of roads. Single use plastic which would have landed in landfills are now being used to fuel cement furnaces and build strong roads. Roads made with mixed plastic are durable as it has high resistance to water. Today, India recycles 60% of total plastic waste, 70% of which is recycled at registered facilities, 20% by unorganized sector and 10% at home. India recycles 38% more plastic than the global average of 20%. An alternate petrol-based plastic carry bags has been introduced in the market, which is 100% biodegradable. In order to manage plastic waste, under the Swachh Bharat Mission, the government of India encourages the use of compostable carry-bags and the need for the manufacturer to obtain a certificate from the pollution board before selling these.

India uses the policy of reducing the amount of waste produced, reusing the material repeatedly, recycling the material to make new products and recovering energy from plastic waste. Through mix of motivation, technology and knowledge India is finding a sustainable solution to of the most pressing challenge of plastic waste management.

Visit exhibition 2020 and explore new business opportunities if you are from the plastic recycling industry, produce plastic recycle dana or products.

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industry,produce plastic recycle dana or products.
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<BR>
<H1><U>*Five things to know about plastic waste and recycling in India</U></H1>
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<H3><U>India's Prime Minister Narendra Modi is pursuing an ambitious project to phase out single-use plastics by 2022 in the vast South Asian nation, which has a population of 1.3 billion.

</U></H3>

<U><H2>1)Consumption per person</U></H2>

India's per capita consumption is 11 kilogrammes (24 pounds) compared to the United States, where it is the world's highest at 109 kilogrammes, according to figures released by the Federation of Indian Chambers of Commerce and Industry (FICCI) in 2017.

The world average is about 28 kilogrammes, the data said. Consumption is projected by the government to increase to 20 kilogrammes by 2022.

India, the world's second-most populous country, generates around 5.6 million tonnes of plastic waste annually, according to government figures.

<U><H2>2) Single-use plastics</U></H2>

Modi wants to limit the use of single-use plastic such as bags, cutlery and straws. Almost half of plastics in India are used for packaging, with much of it single-use, according to the industry.

Several states in India have already banned plastic carry bags. But enforcement has been lax. Amid a push by Modi for businesses to join his campaign, national carrier Air India and online e-commerce giants Amazon India and Walmart-backed Flipkart say they will ditch single-use plastic for packaging in coming years.

<U><H2>3) WASTE</U></H2>

Plastic makes up about eight percent of total solid waste in India, according to the government.

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<B><U><H2>4) Visible impact</B></U></H2>
<BR>
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The impact of plastic waste is visible in two major river systems flowing through India. The Indus (164,332 tons) and Meghna-Brahmaputra-Ganges (72,845 tons) carry some of the world's highest amounts of plastic debris to the oceans, according to the United Nations.

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<BR>
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<BR>
<B><U><H2>5)Recycling</B></U></H2>
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Waste is not segregated in India when it is collected, and vast amounts of plastic litter clog public spaces as well as water bodies.

India's segregation and recycling system operates through an informal chain of workers—from ragpickers who sort through waste to dealers who sell the plastic to plants.

About 60 percent of plastic waste in India is recycled, according to various estimates. Just nine percent of all plastic waste ever produced globally has been recycled, according to the United Nations. </BODY>

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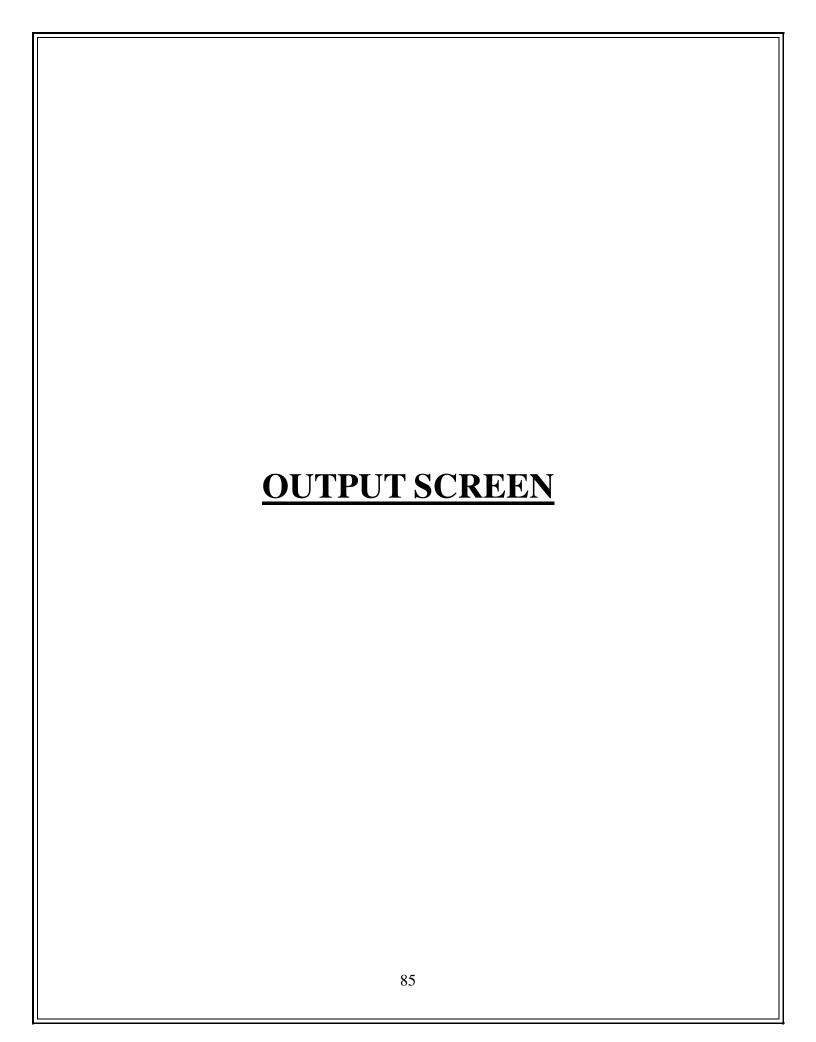
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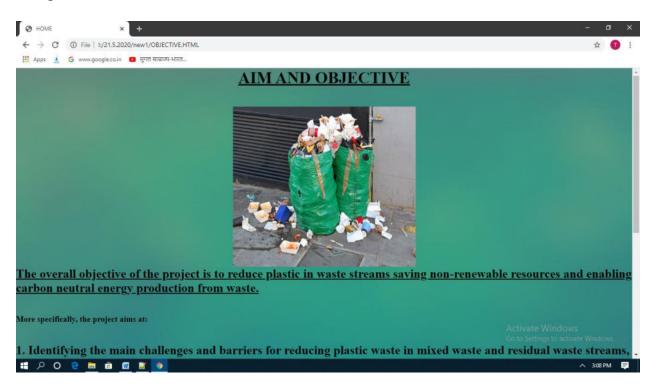
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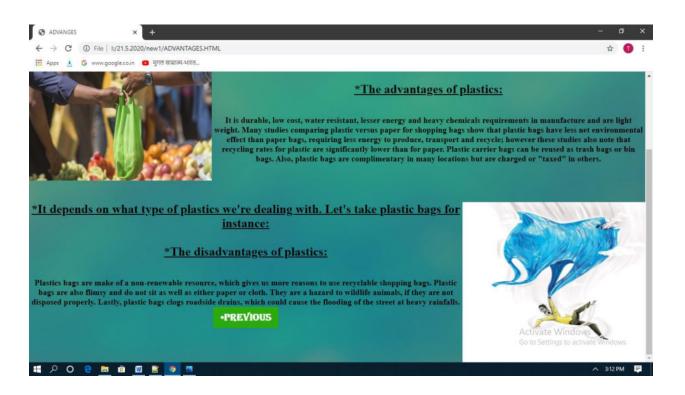


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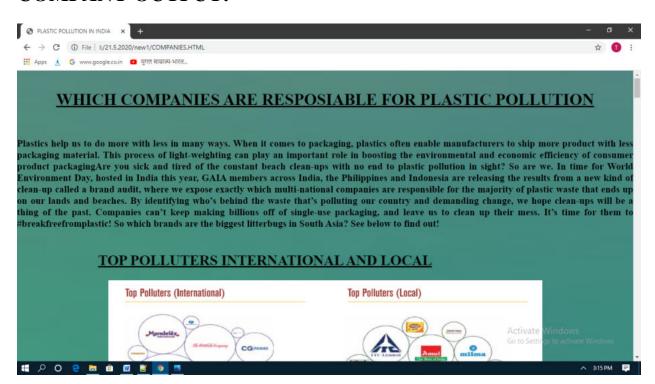


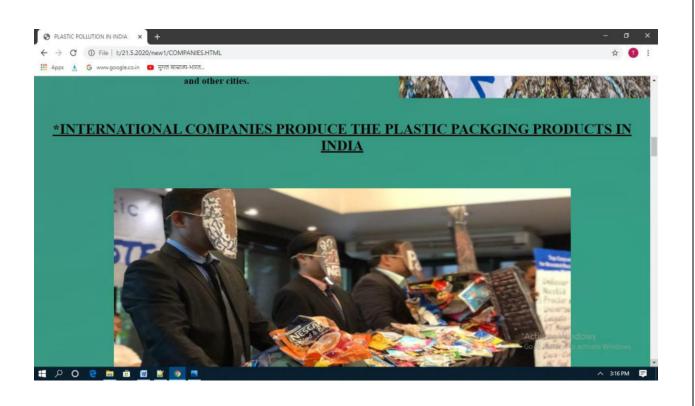
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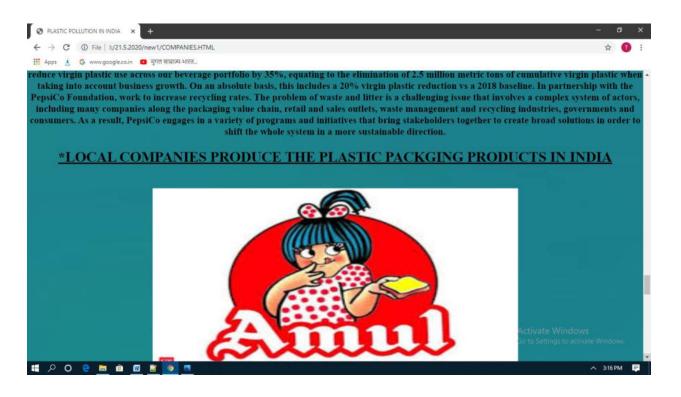




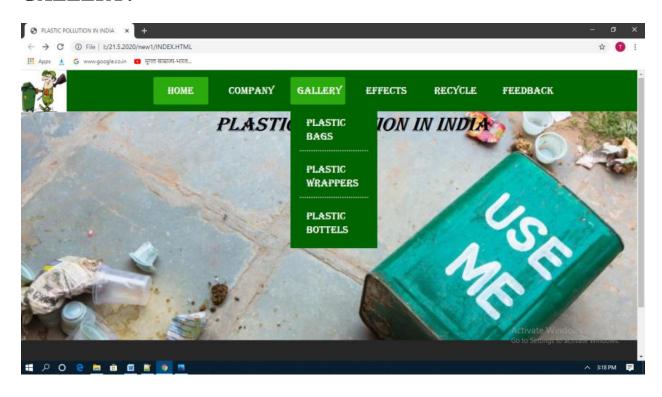
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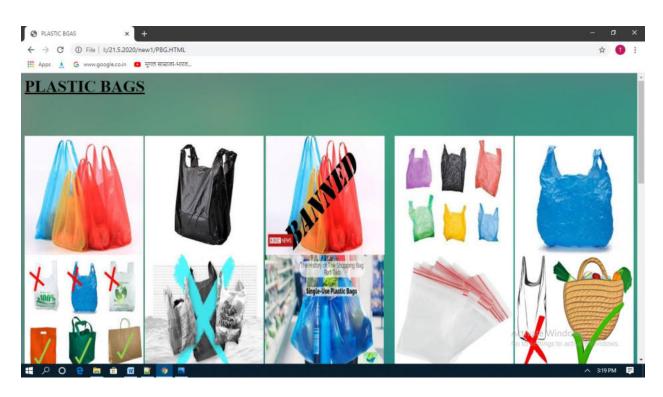


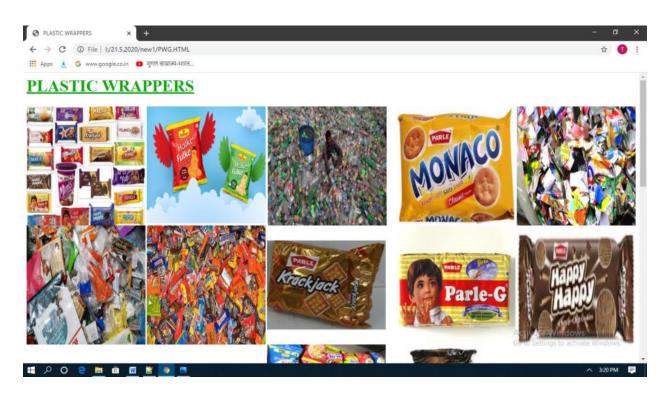


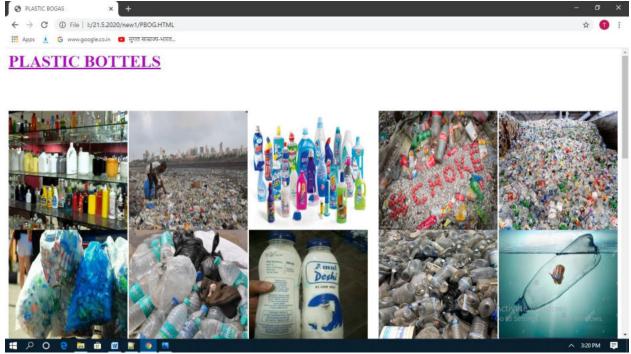


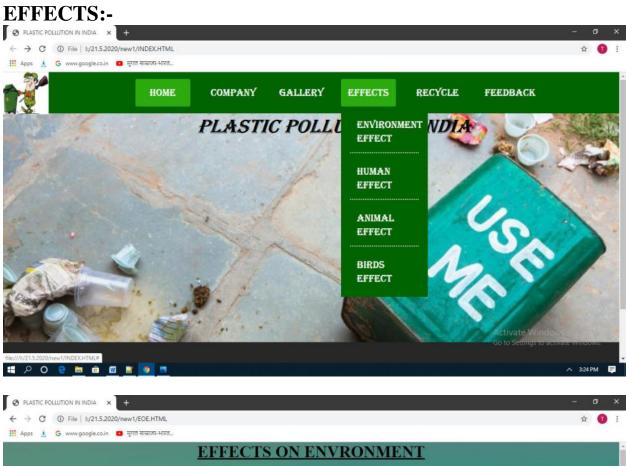
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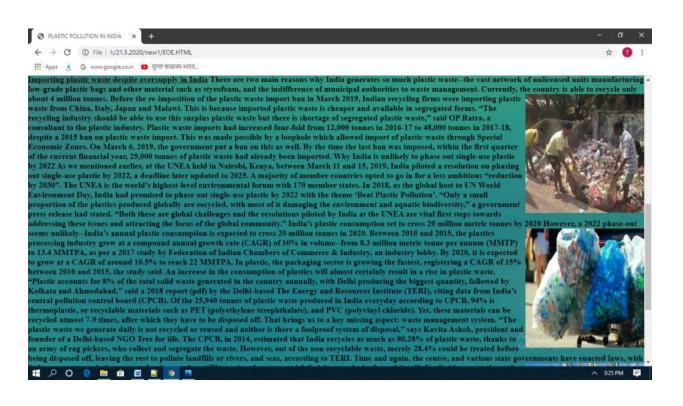


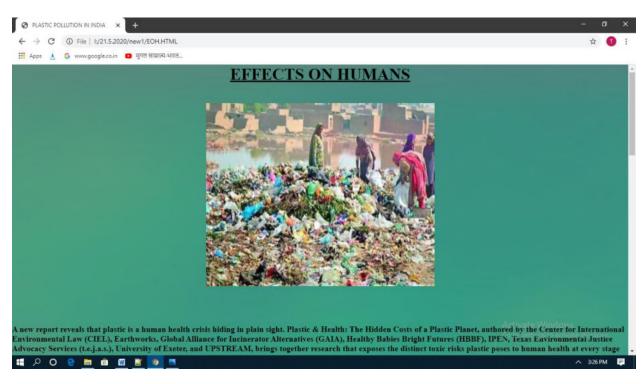


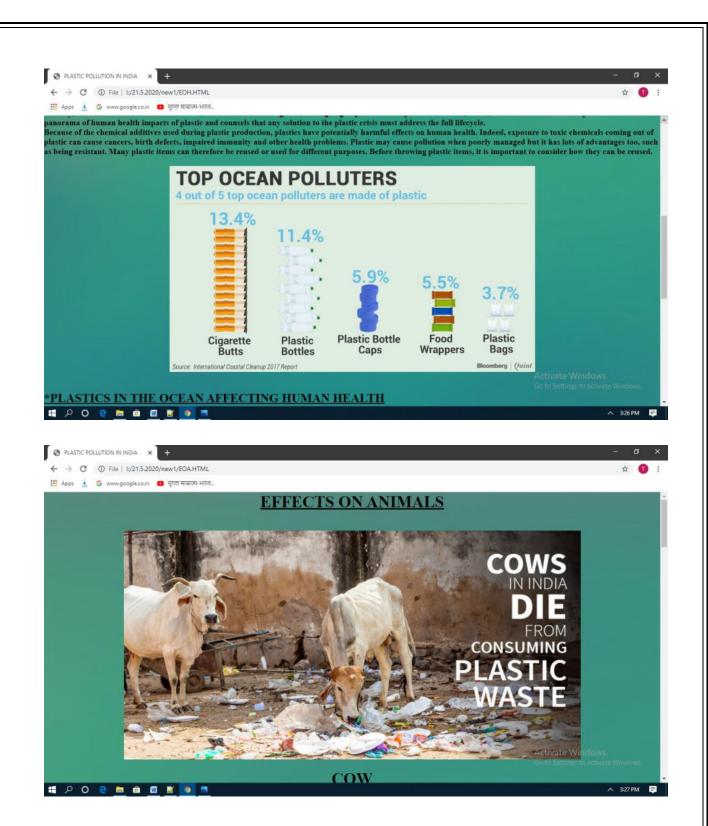


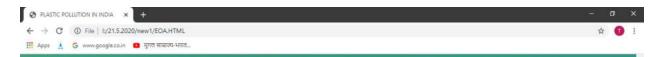












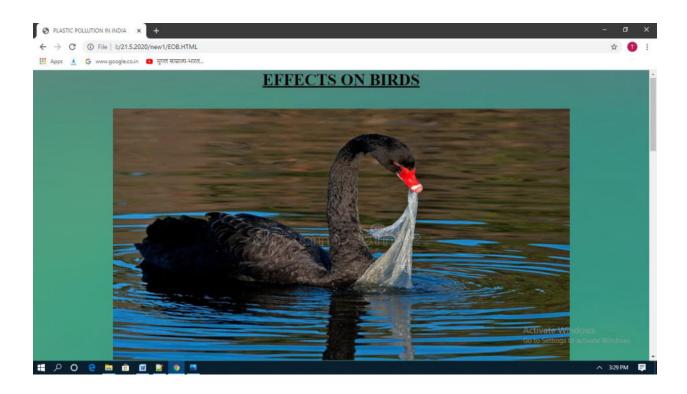
A charity in India made a startling discovery. After taking in 36 stray cows, one died and they discovered the cause – the cow ate too much plastic. In

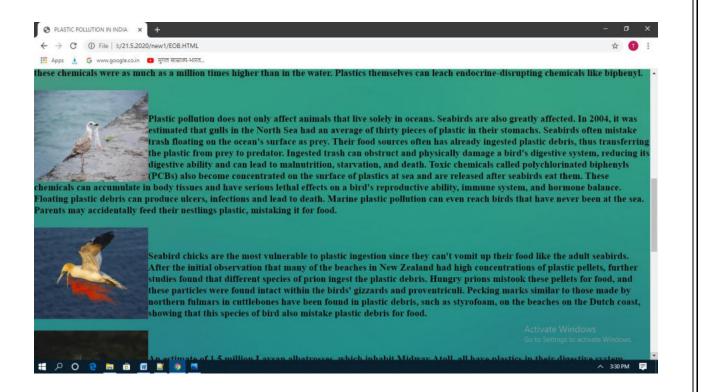
an effort to save the rest of the cattle, the charity surgically removed plastic from each cow's stomach. Now, the charity, Karuna Society for Animals and Nature, is using the evidence to encourage everyone from local officials to the Supreme Court to ban plastic garbage. How cows ingest plastic In rural parts of India, cows roam the streets looking for food. The country's waste management system is extremely lacking, which means many streets and alleys are littered with garbage. Farmers can't afford to feed their cows so they're often let loose to find the nutrients they need on the streets. As cows pick through piles of garbage, hunting for leftovers, they also consume plastic. Unsurprisingly, the biggest plastic pollutant digested by cows is plastic bags. The bits of plastic consumed build up in their internal organs, which make it difficult for cows to eat. As a result, milk production drops as does milk quality. Over time, the plastic consumption "sentences cattle to a slow and cruel death," according to animal activists.

There are treatments to prevent death, but once milk production drops, farmers usually abandon cows rather than spend

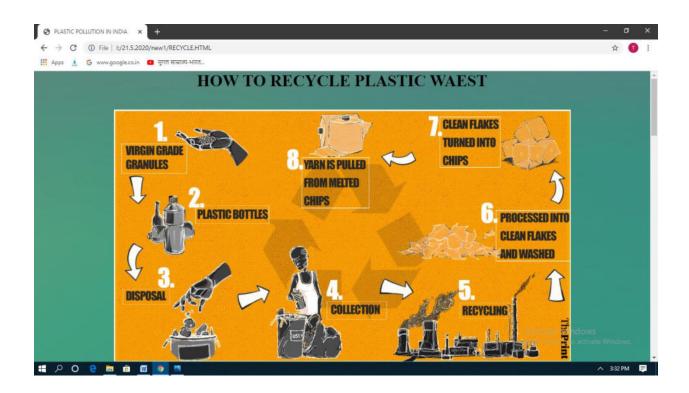
There are treatments to prevent death,

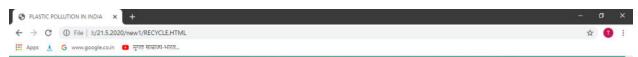
money on treatment. The Supreme Court calls for action The Supreme Court says the death of cattle from plastic consumption is "alarming" and has called on all local governments to take action. To curb plastic bag pollution, the court suggests fining residents and businesses that don't dispose of waste properly. Plastic bag bans aren't uncommon. Several states in the U.S. have banned plastic bags or charge shoppers a tax to use one. In India, the plastic bag ban sounds like a step in the right direction, but several cities already have a plastic bag ban in place but don't have the resources to enforce it. Without enforcement, garbage continues to cover the streets and becomes a main source of food – and cause of death – for roaming cattle. A zero waste solution While India's pollution problems are unique, it's not the only country struggling to mange waste. Even the U.S. faces problems. The country only recycles about 34% of its waste, sending the rest to landfills. To curb plastic pollution, a zero waste strategy is the best solution. How can you as a consumer commit to zero waste? By using refill technology consumers can eliminate massive amounts of single-use plastic from their daily life. Plastic pollution has the potential to poison animals, which can then





RECYCLING:-





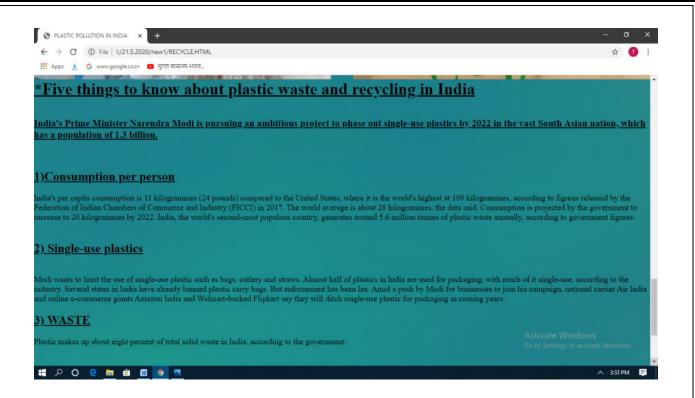
INFORMATION

The use of plastic is growing at a rapid rate in India. However, this rate does not match with the rate at which plastic waste is managed, which means all the plastic waste is not properly collected or disposed of. What India needs is an integrated plastic waste management system and thankfully, two cities of India are setting a good example in managing the plastic waste. Bhopal and Indore, cities in the central Indian state of Madhya Pradesh are using plastic waste in building roads. Only 24% of plastic waste is recycled in India and the rest is dumped into landfills. But in the city of Indore, which houses almost 2 million people and generates 130 MT of plastic waste daily, considers waste management as one of its top priorities. This has offered a more sustainable environment by means of reduced usage,

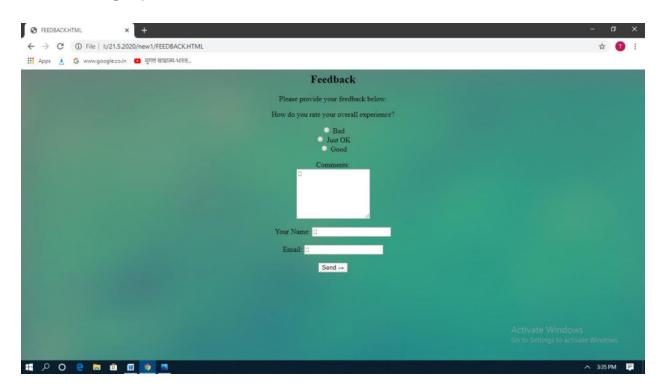


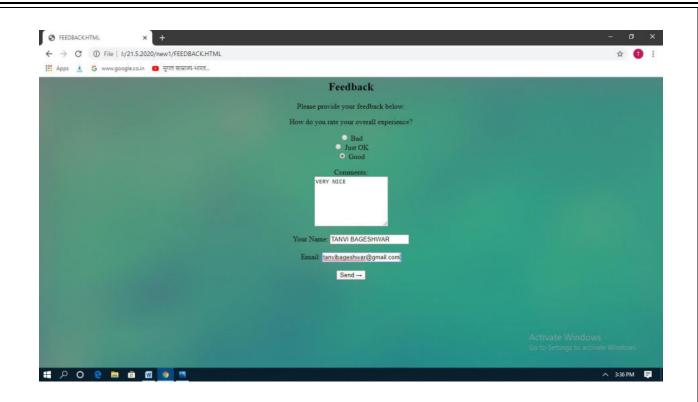
reuse, reduced production and hence less disposal of plastic. With the help of local NGO, the government has set up an integrated program for waste management that has been replicated even in the neighboring states across India. Indore and Bhopal has been recycling and reusing plastic for the construction of roads benefiting more than 2 million people. The plastic waste collected by the rag-pickers, are scanned and segregated by their usage value. The single use plastic waste (which consists of almost half of the plastic waste) is shredded and baled. These bales are further co-processed at cement kilns or used in building roads. This model has not only helped employed the ragpickers but also build a livelihood for many impoverished men and women working in construction of roads. Single use plastic which would have landed



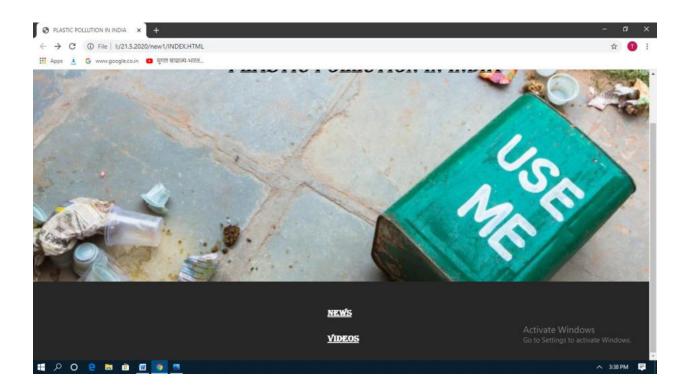


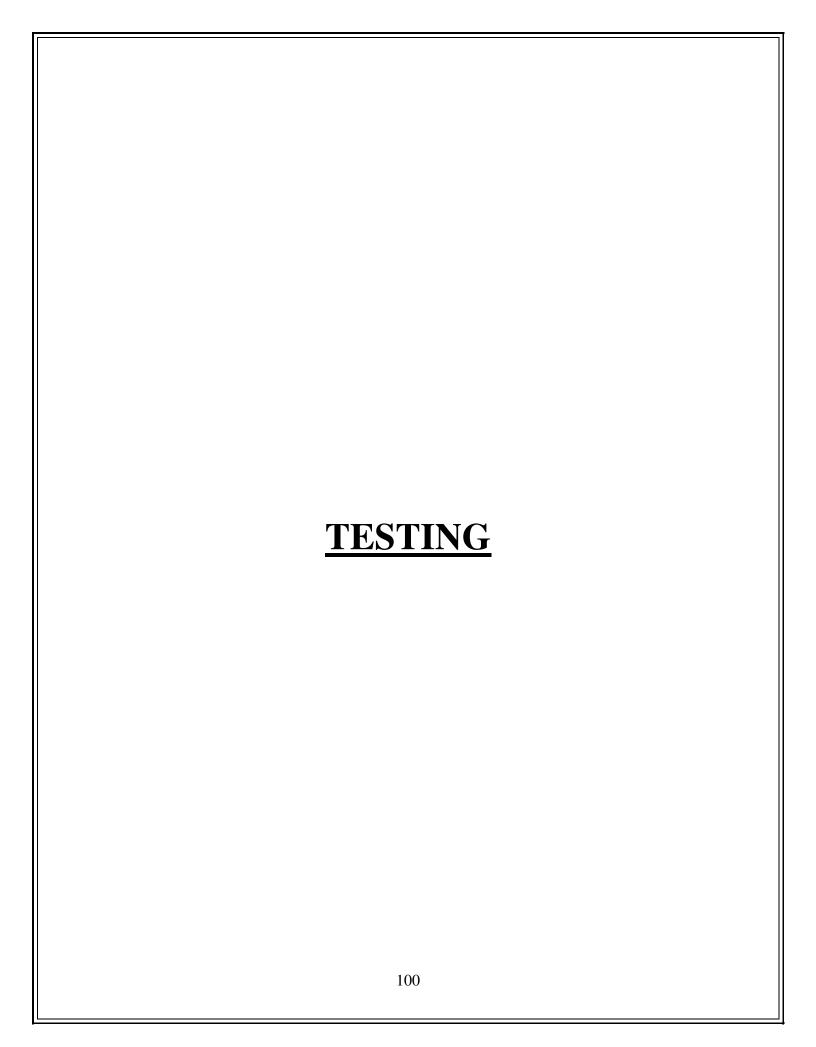
FEEDBACK:-





FOOTER:-





TESTING

Testing plays a very important role to assure the quality of any system testing give chance upgrade or to improve if any drawbacks are there.testing is generally done at two levels, testing of individual modules and testing the entire system .during system testing, the system is used experimentally to ensure during system testing ,the system is used experimentally to ensure that the software does not fall.that it will run according to its specification and in the way users expect .testing is done through out system development at various stages not just at the end.it is always a good practice to test the system at many different levels at various intervals that is subsystem, program modules as work progresses and finally the system as a whole.

Program Testing:

Under this testing, we have to concentrate on the software part.system software should be free from errors. whether it is syntax error or logical error. I have done software testing the output of this test is satisfactory. It fulfils all the conditions, which was required for the program testing.

Security Testing:

The security test deals with deals with the data control and various security measurs of the system.it tries to find out what security measures should be adopted in case of damages cost due to power failure or other problem.I have done security test and seen that result is satisfactory.

Documentation Testing:

Documentation testing is necessary for the project. It tries to find out whatever document supplied are satisfactory or any further document should be supplied.

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	ROJEC
	CT:

FUTURE SCOPE OF THE PROJECT:

There are good things about plastics including benefits for the environment, but is it possible to make use of the good aspects and avoid the bad?

As plastic continues to grow in distribution, so will the hormonal and chemical effects onto our bodies, water systems, and air. By 2050, researches believe that there will be more plastic than fish in the ocean as the rate of plastic production and plastic pollution continues to compound with each coming year.

T	MPEMNATATION, EVALUATION AND
	WII EMINATATION, EVALUATION AND
	MAINTANCE
	104

MAINTENACE:

Maintenance covers a wide range of activities, including correcting coding and

design errors, updating user support. the project needs maintenance in future if any

enhancements are made, maintenance of hardware and software is also required.

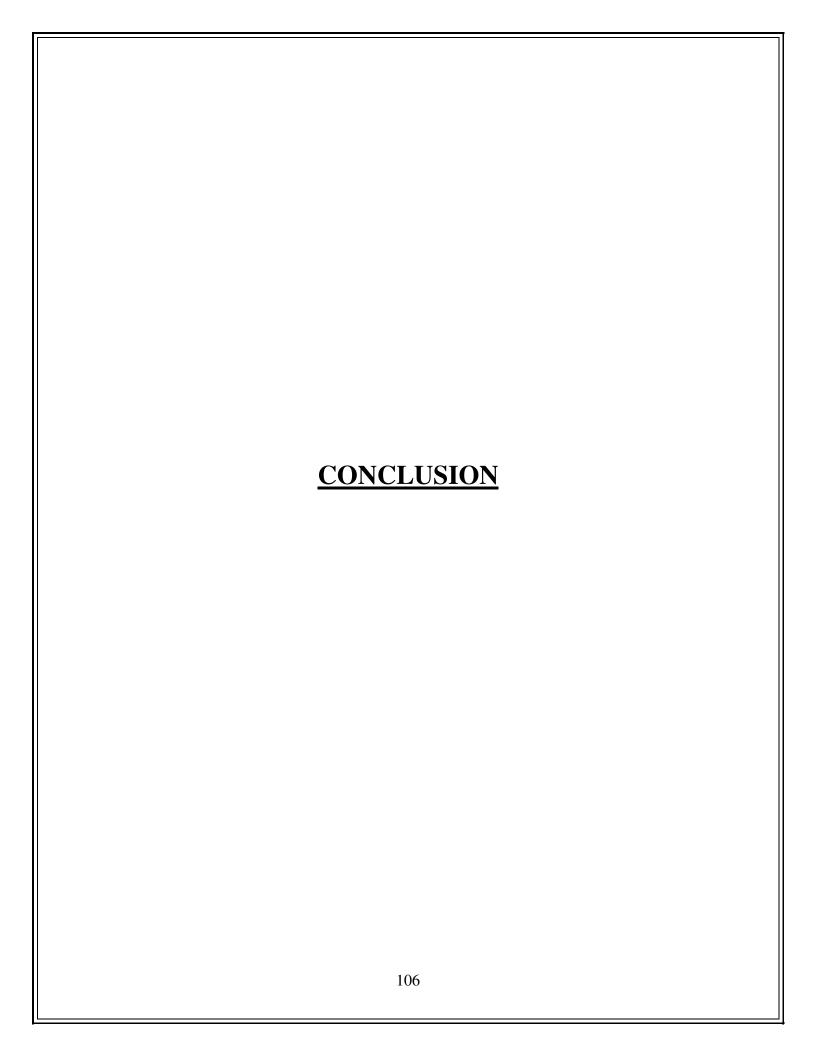
IMPLEMENTATION:

The system implementation involves the conversion of design into the actual working system .The system implementation stands for conversion are of three types:

- 1. Conversion of manual system into computerized system.
- 2. Conversion of existing computerized system into modified version of hardware.
- 3.Keeping the hardware it and implementing the new technique. In this project the type of implemention used is conversion of manual system into computerised system. this project is going to implent the manual system into computerised system. which is very easy to handle and saves time, which is very valuable in the today's world.

EVALUATION:

The evaluation process includes the study of the existing system there drawbacks and the various option to improve the system.the conventration should be on the satisfying the primary requirments of the users.the system is evaluated on the basis of: In this project evaluation is made on the existing and their drawbacks, what improvements can be provides facility to users.collecting the data required for improvements it in real use.

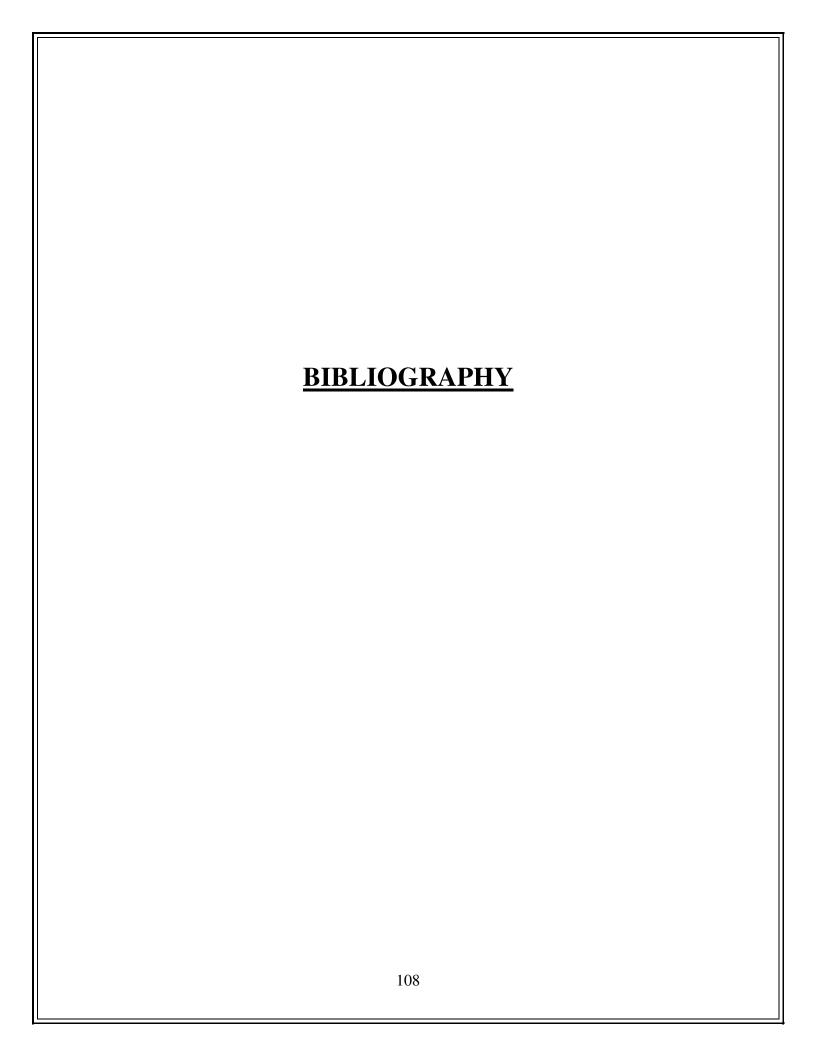


CONCLUSION:-

Plastic bags affect many people, not only the consumers but plastic bags also affects the environment and animals. We are affected by plastic bags because we all dispose of them incorrectly and because we are unaware of the consequence of using plastic bags. Research show that "It takes 500-1,000 years for the plastic to degrade" this means the plastic we use isn't really going away anytime soon.

The amount of plastic bags we use is important because once we throw the plastic bags away they will just pile up and create pollution, which is harmful to the environment because how we dispose of the plastic bags isn't really going to help due to the amount of time it takes for them to decompose. Something important to know is that "50 percent of the plastic we use , we use just once and throw away" this should be taken into consideration because the plastic bags are just being used once then throw away, this contributes to the pollution being created. This is how we are affected by the use of plastic bags.

The environment effects of plastic bags are important because they not only affect the environment, but also affects humans. The environment effects due to plastic bags are pollution, litter, loss of resource, and pacific trash vortex. Plastic bags are extremely harmful to the environment because we use world wide and are mostly used once then are thrown out and because of this we are just harming ourselves by continuing to use plastic bags.



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A PROJECT SYNOPSIS ON

"PLASTIC POLLUTION IN INDIA"

Submitted to

Rashtrasant Tukadoji Maharaj Nagpur University,
NAGPUR
In the Partial Fulfillment of

B.Com. (Computer Application) Final Year

Synopsis Submitted by

Tanvi Bageshwar Shubhangi Durge

Under the Guidance of Pravin J. Yadao



G. S. College of Commerce & Economics Nagpur 2019-2020

1. Introduction: (Write 4 to 5 lines)

India generates nearly 26,000 tonnes of plastic waste every day, making it the 15th biggest plastic polluter globally. Discarded plastic waste litter the country's roads, rivers and also form huge mounds in garbage dumps across the country. "The rubbish dump I frequent is filled mostly with plastic," Ram Kumar, a ragpicker in Noida, near New Delhi, told Quartz. "Bottles, containers, and polythene bags are some of the items I routinely gather from here (to sell to recyclers)."During the monsoon, plastic bottles at the dump accumulate water and are a breeding ground for mosquitoes. Besides the stench, the site poses a major health hazard for the area's residents, exposing them to the mosquito-borne diseases. Many a times, the solid waste has been put on fire by the municipal agency, polluting the air. It can also be fatal for the stray animals, mainly cows and dogs that end up mistaking plastic for food.

2. Objectives of the project: (Write only 5 points)

The followings are the some important Aims and Objectives:-

- Identifying the main challenges and barriers for reducing plastic waste in mixed waste and residual waste streams, hereby stimulating prevention and recycling of plastic waste
- Promoting recycling of plastic polymers as a substitute for virgin plastic
- Diverting waste plastic from the residual waste going to incineration (creating a carbon neutral energy source) and landfill
- Read more on Brainly.in https://brainly.in/question/7053110#readmore.

3. Project Category: Website

4. Tools/ Platform/ Languages to be used: CSS, PHP, HTML

5. Scope of future application: (Write 4 to 5 points)

The following are the some important Scope:-

- The Indian plastic and petrochemical sector has a huge potential for growth and there is a need for free trade agreement (FTA).
- Duty inversion to make cost of manufacture in the country cheaper, according to Minister of State for Chemicals and Fertilizers Hansraj Gangaram Ahir.
- The plastic sector has a huge potential for development and there is a great scope for consumption in sector of housing, public infrastructure and agriculture.
- Taxation on goods and services is a matter of discussion as on date through GST and is to be decided in near future.

Submitted by,	Approved by,
Shubhangi Durge Tanvi Bageshwar	Prof. PravinYadao Project Guide
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