



PLASTIC WASTE



4ème Section Internationale 2021-2022
ANNA DE NOAILLES Bucarest

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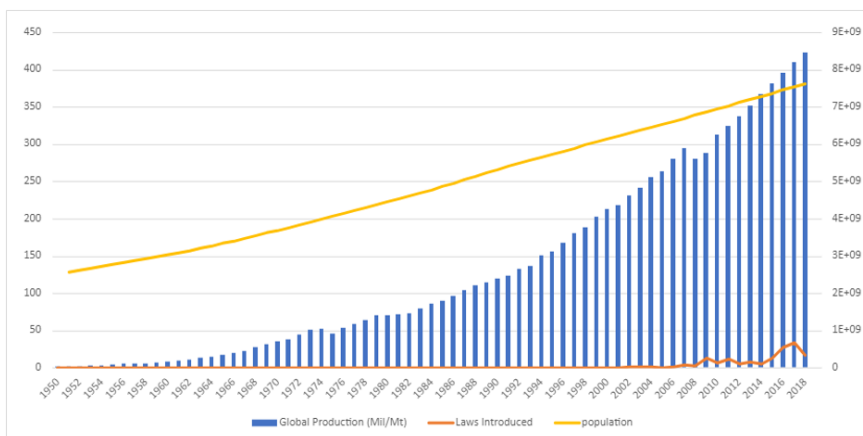
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From fantastic plastic to drastic plastic

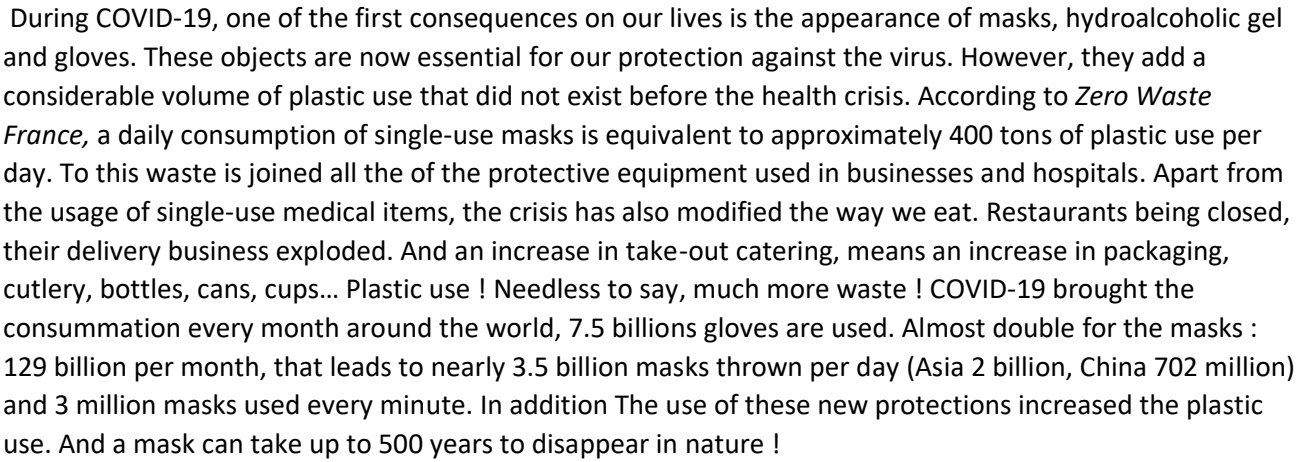
Eugenie and Karen

Plastic use has greatly increased from the 1950s to nowadays. After World War 2, companies were out of business, so the SPI (Society of the Plastic Industry) decided to help by giving them plastic used for weapons during World War 2. This triggered the use of plastic of everyday life. After examining the evolution of plastic, it is clear that plastic use has increased, it is shown by the mass-production of it, why plastic is so important in our lives and the effects of plastic today.

The first polymer was invented in 1869 by John Wesley Hyatt. Later, Leo Baekeland invented Bakelite in 1907 (the first fully synthetic plastic that was used in electrical insulators, radio and telephone casings, kitchenware, jewelry, pipe stems, children's toys, and firearms.) The use of plastic has skyrocketed since the second World War and has become a problem. To put it into perspective, these surprising statistics show just how much plastic has been produced throughout the years. First, the 2 million tons of plastic made in the 1950s soon became 380 million tons in 2015. According to the Central Pollution Control Board, roughly 9200 tons of plastic were generated each day in India. By the 2000s, 300 million tons of plastic waste was created each year. For reference, that's about the weight of the entire human population. Finally, a whopping 8.3 billion tons of plastic has been produced since the early 1950s. That's enough to cover the land area of Argentina. Experts estimate that the plastic production will likely double within 20 years and quadruple by 2050.



Plastic has become such an important part of our everyday life as we have become heavily dependent on it. If we look at what has caused the extreme plastic waste, there are of course things like straws, shopping bags, bottles of water, pens, packaging but also industrial machinery, transportation, electronics, building materials etc... Although it is looked down upon, plastic has saved countless lives. It can be found in medical equipment, prosthetic limbs, medications etc...



Plastic use alarmingly expanded since its commercialization in the 1950s. Plastic is now essential for the world we live in and today we rely on it to a great extent. After World War 2, plastic production became unstoppable and powerful for businesses. For the last two years, we have been dealing with a health crisis ; COVID-19, which, so far, just worsened the over use of plastic. Finally, it is proved that plastic use dangerously increased.

GEO PLASTICS

Maria and Stephanie and Renee

INTRODUCTION



In this essay, we will find out which countries have the most prominent plastic production and consumption and their roles in limiting plastic waste and pollution. Every paragraph will have a specific theme introduced by a question in bold caps at the beginning of each paragraph.

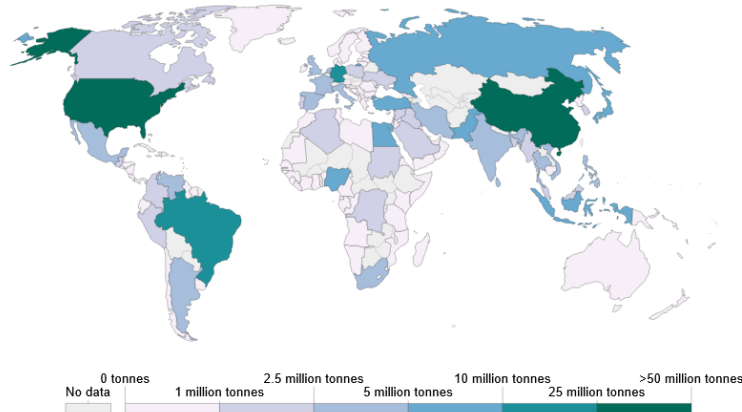
Which regions (continents) produce the bigger amount of plastic?

In 2019, China had a total share of 31% of the production of plastic materials, producing an average of 6 to 8 million metric tons, which makes it the world's largest plastic producer and consumer. North America was the second largest plastic producer region after China, with a total share percentage of 19%. Those numbers are remarkably high considering the total worldwide plastic production in 2019, 368 million metric tons. Pandemic food delivery and packaging, created, and still does, vast amounts of plastic waste in China and the rest of the world. From plastic bottles to food packaging, single-use plastics are the most common type of plastic produced during this time. More than 130 million tons of plastic were thrown away in 2019, due to Covid safety rules and what they require from us. Nowadays, the three characteristics plastic must have to limit the production and consumption of plastic, are: durable, lightweight, and recyclable. Plastic products have been mass-produced for decades, but most are thrown away after just one use, that makes plastic pollution one of the world's most pressing environmental issues. Single-use plastic straws are vanishing in China as the first phase of the country's most stringent plastic ban takes effect. In the document below (statistics of the production of plastic products in China) we can notice the significant rise of plastic products production from the year 2000 to 2019. In only 19 years, it

went from 10 million tons to exceed the 80 tons mark. There are already huge consequences that we are made to face because of this problem, so if we continue this way, those consequences will not only get bigger but also add up to one another.

Plastic waste generation, 2010

Total plastic waste generation by country, measured in tonnes per year. This measures total plastic waste generation prior to management and therefore does not represent the quantity of plastic at risk of polluting waterways, rivers and the ocean environment. High-income countries typically have well-managed waste streams and therefore low levels of plastic pollution to external environments.



Source: OWD based on Jambeck et al. (2015) & World Bank

CC BY



The map below shows the plastic production of different regions such as North America, Latin America, Europe, Middle East Africa, Asia, CIS countries, and Oceania. We can notice that Asia uses the most plastic, in contrast to Oceania that barely produces 1% of the worldwide plastic production. Therefore, we can conclude that it is the most plastic-free continent.

Which regions are most affected by plastic pollution?

Plastic pollution affects the environment and humans by killing up to a million persons per year because of the enormous impact of throwing away plastic after just one use. This happens mainly in India, East Asia, where people do not have enough money to get the necessary education to understand the massive impact plastic can have on all of us. Additionally, the Pacific Ocean, the most affected ocean on the planet, is drowning in more than 8 million tons of plastic that "lives" in our oceans and menaces multiple animal species that are going extinct. This phenomenon kills 100 000 marine mammals each year. In Asia, China, Indonesia, and the Philippines, countries have inferior waste management, infrastructure, and a lack of instruction around the harms of single-use plastics, which explains why the Pacific Ocean is the most polluted and damaged in the World... Another reason for that is the different continents the ocean touches: it is in contact with even more of this dreadful material called plastic that enters our oceans and seas every time it has the opportunity. Garbage, empty bottles, trash bags, straws, packaging, and many more, are floating along its surface. The pacific islands ecosystems are being humbled by pollution and face a lot of climate impacts, changing temperature, and rainfall issues.



Which countries recycle the most and are more implied in reusing plastic?

The World is consuming much plastic, so some countries have decided to take action to limit the consumption of this dangerous material. Germany is one of the highest-rated countries that have helped; since 2016, by recycling 51,6% of all the plastic, they have consumed. In the first place is Austria, Austrians recycle 63% of the plastic that they consume. They are the leaders of the plastic recycling campaign in the World! In second place comes the famous Republic of South Korea. Southern Korea recycles up to 60%. The fun fact is that it now recycles 95% of its food waste. After the top 3 countries that we just stated, Wales, Switzerland, and Sweden follow next. The World should take an example from them! Let us all learn from these countries and pay more attention to how we use plastic. Is it necessary or not?

CONCLUSION

To sum everything that has been said, we can conclude that China is one of the many countries that produce and consume vast amounts of plastic. This affects not only humans but also animals, especially in the Pacific Ocean. This ocean is in contact with multiple continents, exposing it to even more plastic that menaces its marine animals. These problems are worse due to the apparition of COVID 19; now, everything has to be packaged for safety, so plastic is even more used. Solving these problems is not an easy task considering we are using plastic in everyday life (masks, trash bags, plastic bottles, straws... and much more!) Even though eliminating plastic is very challenging, some regions such as Austria, Germany, and the Republic of South Korea manage to be more careful with their plastic waste.

AquaPlastica

Victor and Ilinca

1. How does plastic impact on water and Animals touched
2. The effects
3. How to reduce it ?

1. Impact of plastic on the oceans and animals touched

We entirely agree that plastic is essential to our society. Still, how is it that even if we get rid of plastic, it found itself abandoned in the wilderness and then carried on by the winds or currents to the sea?

Here is where we begin to learn about the journey of plastic in the ocean.

Along the way to the sea, plastic accumulates shreds of PCBs and pesticides nowadays used for farming purposes, later found in the sea or on seashores.

Despite this, the significant impact of plastic is on marine wildlife who every year suffer more than 1000 injuries, deaths, and rehabilitation.

Besides, the most visible and disturbing effects of marine plastics are the ingestion, suffocation, and entanglement of hundreds of marine species.

Sea birds, whales, dolphins, fishes, and turtles mistake plastic waste for prey and die of starvation as plastic debris fills their stomachs.

They suffer additionally from infections, internal injuries, and the reduced ability to swim.

All of these animals are suffering from plastic waste but turtles are mostly affected by having a unique type of stomach.

Several examples show us that plastic bags are mostly found in their stomachs than other's animals causing their instant death.

Once again, plastic not only affects wildlife as its starting to affect humans.

Numerous cases of human intoxications shown by scientists over the past few years are proving that plastic is a deadly weapon for our bodies.

Under the influence of solar UV radiation, winds, currents, plastic fragments are modified into small particles, named microplastics (smaller than 5 mm) or nanoplastics (smaller than 100 nm).

Invisible plastic debris has been identified in salt, water, beer and found in all samples collected all over the oceans in the world including the Arctic.

In conclusion, make sure your plastic doesn't end up in the wilderness!

2. The effect

Over 300 million tons of plastic are produced every year, which the half is use for single-use issues like shopping bags, cups and straws.

Among it, 8 million tons plastic end up in the oceans every year. Floating plastic debris are currently the most killing items for marine wildlife.

Plastic waste is more abundant on the coasts of all the continents, with a lot of debris found near densely populated areas and popular tourist destinations.

Plastic pollution is the most important problem affecting the marine life. It also threatens ocean and human health, food safety, tourism, and contributes to climate change. Why?

Impacts on...

...Marine environment

One of the most impactful things of marine plastic pollution are the uptake, suffocation and strangulation of thousands of marine species. Marine wildlife confuses plastic waste with prey, and most die because of these plastic debris. They are also disappearing due to pollution and destruction of the seabed (corals). Floating plastics also contribute to the spread of marine organisms and bacteria, which kill the ecosystems.

...Food and health

Invisible plastic called microplastics, are present on seafood that we eat. Several chemical and toxic products used in the production of plastic are known to be carcinogenic and cause developmental, reproductive and neurological problems.

...Climate change

Plastic, which is a product from petrol, also contributes to water warming and also global warming. For example, the ocean's temperature has increased by 1.5°C for the past century and reached the highest temperature ever recorded.

...On tourism

Plastic waste degrades the aesthetics of tourist areas, which attracts less visitors so that causes an economic decline. It also needs more cleaning and maintenance which costs more.

3. How to reduce it?

Getting rid of plastic in our lives is difficult but if we don't try, oceans will be soon overwhelmed killing many marine species.

To encourage you to get involved do these actions:

You can try to limit the use of plastic bottles because every minute 1 million plastic bottles are purchased. So, to reduce your usage of plastic bottles refuse them when you are offered and seek reusable alternatives.

An average of 500 billion to 1 trillion plastic bags are used annually in the world, that's nearly two million plastic bags every minute. So, use reusable shopping bags.

Every day, more than 500 million plastic straws are used in the United States only so if you need to use a straw, purchase a reusable one and when you order a drink, always ask for 'no straw please'

Around 500 billion disposable coffee cups are produced each year. Paper coffee cups have a slim plastic lining to keep liquids leaking, making them hard to recycle. So, use a reusable cup or ceramic cup.

Plastic packaging are produced more than other materials being cheaper but is often designed for short-term or single use. Avoid buying food or other items that are wrapped in plastic. When you need to buy fresh vegetables do not use a pre-cut version that's been plastic wrapped,

Take these measures to protect the oceans!

FACTS:

1. Some 18 billion pounds of plastic waste flows into the oceans every year from coastal regions.
2. 8 tons of plastic/year on the water
3. 26000 tons of plastic has been dumped in the ocean during the coronavirus pandemic

SOURCES:

<https://www.nationalgeographic.com/science/article/plastics-facts-infographics-ocean-pollution>

<https://www.take3.org/the-plastic-facts/>

RECYCLING TIPS :

[https://www.greatswamp.org/blog/recycling-](https://www.greatswamp.org/blog/recycling-tips/)



[tips/](#)





Plastic is the New Predator

Mate

Introduction

Plastic waste has become a huge problem nowadays. An approximative amount of 8.3 billion of plastic is currently present on our Earth, and the really shocking fact about this is that only 9% is recycled, 12% is burnt and 79% is thrown in the environment, causing thus the extinction of numerous animals or even species. This article will present the slaughter of these innocent animals and plants living in various places around the Earth, the ways plastic suffocates them and the impact of their death on the ecosystem.

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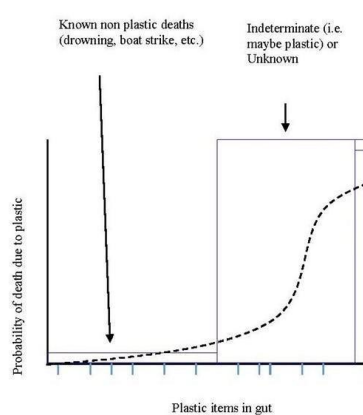
Plastic presentation

Or how this material impacts animals and plants and how their death impacts the ecosystem

Bird dead from microplastics that he ate







Graphic representing the average number of death of animals by plastic

The impact of plastic on the environment

The impact of plastic on sea animals

Most of the marine animals can die by plastic in two ways:

- the first is when a plastic bag (most of the time) is getting wrapped around the neck of an animal, and as this, suffocates them. 44% of animals killed by plastic died this way;
- the second way is when a marine animal eats a plastic bag, confusing them with a squid, the natural nutrition of several sea animals. By doing this, if they have luck, they will just spit it out, but if they are behind the eight ball, they will have their respiratory system blocked by plastic, and will be asphyxiated.

The impact of plastic on corals

Corals (sea plants) are heavily impacted by plastic. There are two major ways how plastic tortures them:

- the first is when plastic blocks the sun from reaching the corals, and as this, kills them;
- the second way is when a piece of plastic clings to a coral, and slowly sickens or even kills them.

Microplastic

Several animals die by microplastics. But what are these exactly? Microplastics are pieces of plastics that come from a larger, degraded one. Small sea animals may eat them. After consuming the first microplastic, there isn't any danger. Though, if they eat more, their stomach will be full of plastic, and won't be able to eat, which causes starving and soon death.

Did you know?: currently 11 billion of plastic items are stuck on corals

The impact of plastic on non-sea-animals

Plastic impacts majorly sea animals and birds. With birds, the case is basically the same; they either eat microplastics or they get wrapped around their neck a plastic bag, and suffer to death.

Conclusion

Plastic impacts not only sea animals, but also, land animals and corals. Plastic can kill in 2 ways: animals either eat it, and thus suffocates them, or a piece of plastic gets wrapped around their neck and as this asphyxiates them.

How the death of these animals impacts the ecosystem

The death of animals not only impacts the ecosystem, by the decrease of the normal body size of animals, but it can also deprive humans from food and clean water.

References

- worldwildlife.org
- nationalgeographic.com
- theguardian.com
- npr.org
- weforum.org

Did you know?: 11 billion plastic items are currently stuck on corals.

Europe: eco-cities?

Radu and Yannick

PLASTIC IN URBAN AREAS AND RECYCLING IN BUCHAREST AND OTHER EUROPEAN CITIES

Trash has become a real problem. It was not an issue at the beginning of humanity, but now it is a considerable one. It started from the bones of a dead animal that had been cooked, equipment for hunting to a massive plastic island in the Pacific and ruined landscapes. Trash is a waste material, that means that it has been thrown away. We live in cities, so today I will explain how cities fight waste, but not all of them do something significant. Cities like Bucharest are not spared from the trash. The rapid urbanization of the world has driven the usage of plastic in the everyday products including:

- Clothes*
- Packaging*
- Cars*
- Money*
- IT&C and telecommunication*

Plastic has a long lifespan and its cheaper to get than other materials. Plastic, when it's just trashed, it's a very biodegradable material.



-Balta Pipera

There are regions where trash is not in vast numbers like others. One factor is poverty.

“They should keep the streets clean and store garbage in these containers we installed near the blocks, but unfortunately they don’t do it. They simply throw garbage out the window, on the sidewalk,” said Magdalena Iuga, deputy director with the Public Utilities Director of the Bucharest City Hall, quoted by Digi24.ro.

Ferentari is not the only outskirts of the Capital city Bucharest that is polluted. Voluntari hosted a landfill until 2012 that has now been covered with dirt but in the process, tons of trash were soaring towards the Pipera neighbourhood. Voluntari is rapidly growing comparing with other outskirts of Bucharest, but the landfill made it look awfully bad. Also, the garbage collector Romprest is not coming to take the trash even if they are obliged to.



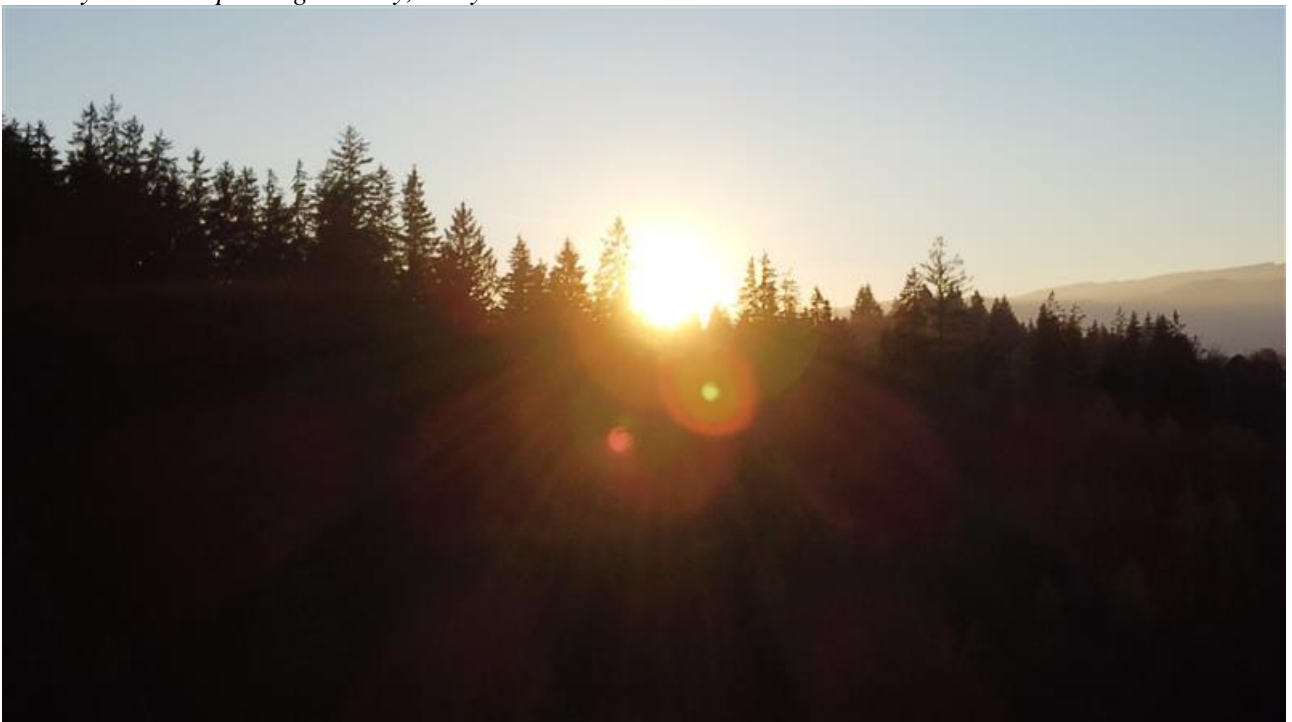
-Sunset over Bucharest (It was taken in Voluntari)

Voluntari is so close to Bucharest that it can be considered a suburb of Bucharest. Voluntari in Romanian means "volunteers". It was founded by the Heroes of the Great War who were given land to build homes near the capital. The land is cheap so big companies can build lots and lots of houses and buildings very easily. Between 2001 and 2005 its economy grew with 25%.

After talking so much about trash in urban spaces, we also must clean it up right? Well, Bucharest is not a professional at this, but the city is improving. Every Monday (In sector 1), the trash collectors come to take the regular trash and every Tuesday they come to take the recycling materials, while every 2 weeks, they are gathering the glass. Bucharest has a remarkably simple system, the regular trash is deposited in black trash bins, recyclable materials are in the green bin and finally in the yellow bin, we deposit the glass. Then the dump trucks bring the trash in the special recycling sites. Unfortunately, it's cheaper to deposit the trash in illegal landfills.



Romania is criticized for being a squalid country, but every country that was in the Eastern Block is very dirty (except Germany). Romania is progressing a lot. It started implementing taxes on littering and on big and aged vehicles that are polluting a lot. Dacia is selling electric cars which are substantial value for the money. The City Hall is implementing cleaning programs with volunteers and professional workers. The mayor bought more dumb trucks and electric busses for public transports. The City Hall is improving our city, can you?



Over the last few years, there has been an important increase in the number of the companies and organizations that handle waste disposal and recycling in Bucharest. We have found out somewhere around 15 such companies. For example, one each has its own means of operation and each handles recycling of different products. Some of them recycle all types of materials such as plastic, glass, aluminum, while others target more specific waste, such as electronic devices and furniture. This can be a bit confusing, due to the fact that there is no integrated system and you have to employ different companies for different types of trash. However, we have found an organization called “The recycling map”, which is a national platform that provides information regarding recycling in Romania. On their website, you can find places that collect waste, how to reduce waste and dispose of it efficiently. They also have many recycling campaigns for school children and the general population. As far as we saw on the internet, this is the most useful website regarding the recycling process in Romania. The biggest company that handles waste in Bucharest is Romprest and they have established all over Bucharest most of the selective trash cans.

Regarding waste disposal in Berlin and Zurich, both of these cities have a well-established recycling policy. Moreover, in these cities, recycling is mandatory, and failing to select your waste leads to fines.

In Germany and in Switzerland, a major part of the success of this process, is the proper sorting of garbage and that starts in each household. In Berlin for example, recycling is learned in school. Children learn about the benefits of selecting your trash and disposing of it properly from a school age. They learn how to do it, they learn about each type of waste. They are even taught how to properly dispose of each material and how to reduce waste in your own household. Maybe, that is why people actually recycle in Germany. Of course, the fact that you are receiving a significant fine if you don't select your waste makes a strong case for recycling.

In Switzerland, the law is even more harsh when it comes to recycling. Each waste collection point is supervised by the local police and security cameras and if you are caught inadequently throwing away trash, then you will receive a fine. Switzerland ranks first in having the highest recycling rates and that was capable because every person was encouraged, through various campaigns, to recycle as much as possible. At this moment, Switzerland no longer buries waste in landfill sites. Most of the waste goes through a recycling process where it is repurposed for environment conservation or renewable energy. We talked about the recycling map in Romania. Switzerland also has this service. In this country, recycling can be done either through a door-to-door collection or via public facilities, such as collection spots. These collection spots can be found via the recycling map.

So, we can understand that recycling in the world is becoming more and more important.

Plastic Politics

Amza and Cem



Plastic is a worldwide material that has taken an important role in our lives, such as in medicine, industry or in daily life. We are sometimes overusing plastic, which is at the origin of plastic waste, a problem that has become international, and a problem that plenty of political organizations are trying to find a solution to this. These organizations are trying to reduce plastic waste by informing people about the overuse of plastic, and by taking governmental decisions like laws, which make countries do many things about this problem, such as recycling.

Japan is known worldwide for having a plastics recycling rate of 85%. Each year, around 9.4 million tons of plastic waste are generated in Japan. Around two-thirds of Japan's plastic waste is incinerated, however, the EIA (U.S. Energy Information Administration) says that this releases harmful toxins. Thankfully, this means that only 8% of plastic waste ends up in landfills. Another important generator of plastic waste is...

Germany is hailed worldwide as a recycling champion, but they are still the largest exporter of plastic waste in the continent too as they export around 1 million tons of plastic waste (which is worth 254 million euros). However, around 63% of the country's plastic waste, which is 3 million tons, is recycled. One country which is not known for its actions on plastic waste is...

The United States of America is a very divided nation, which means that there are few laws about plastic waste that go through in congress. Most action on plastic waste is taking by state governments,

interestingly, most of these states are democrat states. However, like Germany, the U.S. ships a lot of plastic to poorer countries, such as Indonesia or Malaysia, because nobody seems to be paying attention to the international law about this. The U.S.A.'s biggest rival in the world, which is...



China is the country which, based on information from 2010, produced the most quantity of plastic in the world. However, despite this, daily plastic waste per person is one of the lowest in the world at 0.12 kilograms. China also banned single-use plastic straws and bags in many places. Halfway across the world, we find the country of ...

Brazil, which is the fourth-largest producer of plastic waste in the world, is said to only recycle 1.28% of the 11.4 million tons of plastic produced each year. This means that 7.7 million tons of plastic waste ends up in landfills. Because of this, the Brazilian government is trying to fix things. For example, Rio de Janeiro has banned the use of plastic drinking straws and Sao Paulo has prohibited the use of petroleum-based bags. However, the battle against plastic waste is still going on, and individual nations are not the only ones fighting.

Many international organizations joined the battle of reducing plastic waste, but only a few of them are politically powerful enough to take crucial decisions or implement laws against plastic waste. A global organization that is fighting against plastic waste is the U.N. (United Nations). The U.N. is organizing plenty events to inform people about plastic waste such as the "Play it Out" festival, that took place on 1 June 2019 at the Sir Vivian Richards National Stadium in Antigua, and it was live streamed globally. Another important event organized by the United Nations is a photo exhibit called "Planet or Plastic," an event that put into action the esthetic of Arts to raise awareness about plastic waste. Another political organization that is fighting against plastic waste is COP. COP26 is a conference that took place in Glasgow, Scotland, gathering as many as 130 countries across the globe. Even though at this conference the international leaders talked more about climate change, the plastic waste problem was also discussed, but no decisions were taken about this.



Many countries and political organizations are doing things against plastic waste, and others are doing very little or nothing about it. Some countries such as Japan are recycling a lot, while others such as Brazil, are not. Some countries, such as Germany, pay other countries to take care of their trash. Political organizations like the U.N. are trying to raise awareness, while other organizations, like COP 26 have bigger items on their agenda. At the end of the day, everyone says that they care about plastic waste, or they ignore it, but what is important is what they are actually doing about it, and they can definitely do more about it. Maybe the way to solve this problem is not by looking at governments for answers, but for corporations and other organizations. Here are a few places where you can donate to help reduce plastic waste:

<https://theoceancleanup.com/>

<http://www.greenantz.com/>

<https://www.theplaf.com/>

<https://mybasurero.com.ph/>

<https://www.plasticsforchange.org/>

<https://wasteaid.org/>

<https://www.5gyres.org/>

<https://www.plasticpollutioncoalition.org/>

Greenwashing: a legal scam?

Thomas and Vlad

Pollution and plastic waste have been concerning problems for the past decades. People have started to be more aware of this problem and willing to solve it. Unfortunately, some companies have capitalized on this fact and have started a process called greenwashing. The action is a type of deception that implies conveying inaccurate information about an organization's actions to be eco-friendly. Although doing the dreadful process doesn't cause any financial penalties, it ubiquitously causes an imbalance of trust. Companies greenwash for increased sales and popularity.



Plastic clothes have been a problem since the start of the XXI century, mainly because most clothes end up in landfills. Solutions to this

problem would positively change the world. This problem has only created a new way for companies to lie to us, saying that their "sustainable" fabric is revolutionary. H&M, for example, has made this claim, sustaining their eco-friendliness. After some molecular research, scientists found that the youthful fabric is worse for the environment than the previously-used material!



Some companies are hypocrites; they criticize others while polluting, this is a type of greenwashing. A big greenwasher is none other than the enormous soda supplier and distributor Coca-Cola. The brand is no stranger to pollution, in India alone, coca-cola runs 58 bottling factories, each producing Over 860000 bottles a DAY. Yes, you heard me right, that is 49880000 bottles every day made by Coca-Cola in India independently. And they have 100s more factories outside of India, making them sell 1.9 billion bottles every day. That puts in perspective just how much they pollute. But the peculiar fact is that they still find ways to say they're 'Eco-Friendly.' A controversial comment was Coca-Cola's new hashtag. 'World Without Waste.'. After explaining just how much they pollute, you might think of them as hypocrites. And fear not, you're not the only one; millions of people online have criticized their new comment, saying that they don't have the right to profit from this comment and that they don't deserve the privilege of being eco-friendly. Because people devote their whole lives to this movement, and they come out of nowhere, the number one plastic polluter, talking about how they want to help the world remove waste while not changing their production of plastic that

ends up in the ocean.



For the last couple of years, companies have removed part of their complementary products, saying that it helps the environment. Many popular phone companies such as Apple Samsung have removed their complimentary chargers when buying a new phone 'in the hopes of using less plastic.'. Of course, this movement seems to help the environment because you wouldn't want a charger you're using to end up in a landfill every time you get a new phone. But this is unfortunately a greenwashing scheme because chargers will always get old even when you don't receive one with your phone, and you will need to buy a new one to be able to reach your phone's maximum charging speed. This will,

of course, lead to them making you pay for chargers and profiting in the long term, and the most outrageous thing about it is that they are using a real-world problem to benefit more on their trillion-dollar empires wrongfully. Since Apple was the first to do it, we will use them as an example. On October 13th, 2020, the gigantic Silicon Valley company, apple announced its incredible plan to eradicate complimentary chargers from new phones, claiming it's for the greater good and that they would be wrong not to help the world with their success. That, of course, is a lie because the real reason is that they want to profit more from chargers. This has gotten apple a lot of backlashes. Mainly because their customers didn't want to pay for their overpriced chargers when they used to get them for free, but also because they were using a critical problem and benefiting from it while still claiming they're different than other business tycoons. But they aren't the only ones to abuse world endangerment problems for their benefit.



Greenwashing is ubiquitous, corporate bodies lie and use people's ambition to help the environment for increased sales and popularity. It can be spotted when labels seem to give out irreal information on the producer's green actions or when companies that are not known for their green actions want to help the environment, this is probably a way to make people like them more.

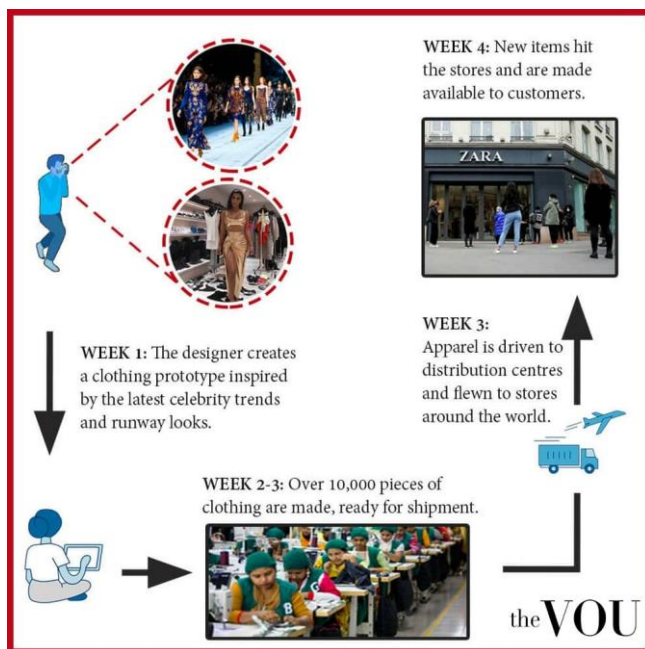
Fast Trash-ion

Maia and Eva

Fast fashion can be defined as profitable business model based on replicating catwalk pieces, trendy clothing and high-end designers' mass-using low-quality synthetic materials and producing them at low cost.

Unfortunately, the entire business model has a serious negative impact on the environment, workers, and local communities.

The financial success of fast fashion started around the 1980's but its popularity exploded in the 2000's.



A fast fashion business model example, the V

Micro-trends are **cheap, stylish fashion items that** are designed to last until the end of the current season and are often born on social media. A "trend" is defined as a general direction in which something is developing or changing, and when we apply that to the fashion industry, this describes the popularity of a specific type of style or piece of clothing. So, a *micro-trend* is one that quickly rises in popularity and falls even faster.

In exchange macro-trends are the styles we tend to associate with the different decades, for instance, shoulder pads of the eighties, drop-waist dresses in the twenties, and flare jeans in the seventies.

Trends last less every year, especially with new fashion influences appearing every season. This last few years on social media, influencers are putting pressure on their young audience to stay "on trend". People are more concerned now with "keeping up" and less by developing a personal style.

And because of these rapidly changing trends, these items are making their way from wardrobes to the landfills and a greater amount of waste is produced.

The volume of clothing Americans throw away each year has doubled from 7 million to 14 million tons in under 20 years.

Polyester Pollution

Polyester is a synthetic fabric which is made using polyester yarns or fibers.

This textile is the most common manufactured fiber worldwide and known for its durability and inexpensive production cost.

Popular uses of polyester :

Fashion (Clothing and Bags)

Sportswear

Bedding such as sheets, duvet covers

and sleeping bags

Footwear

Soft furnishings

- Polyester is a synthetic fabric which is made using polyester yarns or fibers. This textile is the most common manufactured fiber worldwide and known for its durability and inexpensive production cost.

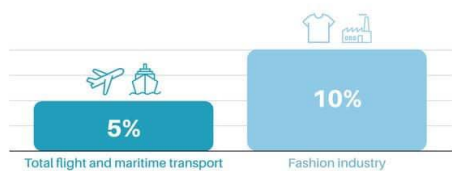
Despite its benefits it is one of the most, if not, the most harmful fabric for the environment. This plastic material is not biodegradable and can take from 20 to 200 years to decompose. A study by Plymouth University discovered that one wash could release 4,000 microfibrils per gram of fabric, but also up to 400 microfibrils are shed simply by wearing polyester clothing. These contribute to 31% of plastic pollution in the ocean and cause substantial harm to marine life. Not only does the clothes that we throw away end up in the oceans but also the strong dyes end up in our water supplies degrading the

waterways and affecting humans and animals. If you can believe it, the terrifying effects of the production of this material do not stop here. It also pollutes our air that we breathe in the fabrication process, 1.2 billion tonnes of carbon emissions are released by the fashion industry every year.

As a whole, the industry is responsible for 92 million tons of waste dumped in landfills every year. A 2017 report found 35 per cent of microplastic pollution comes from washing synthetic textiles, almost all of it is produced by fast fashion **brands**.



CO2 consumption in comparison



EARTH.ORG

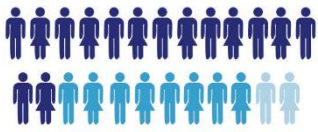
Sweatshops

A factory employing workers at low wages, for long hours and under poor conditions. These factories are usually located in developing countries like Bangladesh, India, China and South America. The sweatshop's usual salary is 3 cents/hour, that barely covers fundamental needs. The main employees of these type of factories are women and kids. 260 million children between 5 and 14 are forced to work in sweatshops according to the International Labour Organization.

Children as young as 6 can be found working up to 16/h per day. So, is this new shirt that's trending made by children and out of harmful materials worth it?

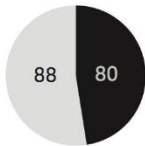
The True Cost

Sweatshops impact children globally.



1 icon = 10 million children between the ages of five and 14

Asia Africa Latin America



Children work an average of 80 hours per week.

The three largest products made in sweatshops:

1. Shoes
2. Clothing
3. Rugs

Source: Vegan Pease
Kendra Harvey | THE BROADVIEW



The fashion revolution, conclusion and solutions

Brands becoming more sustainable.

- Brands have noticed that this is a very serious problem, and it needs to be taken care of immediately. Some examples of initiatives brands are implementing are the use of recycled plastics and materials, sustainably grown cotton, reducing packaging. Some behaviors that we can implement in our lives are to buy less, give a chance to second hand, choose natural materials and do research prior to buying (on the apps like "Good on you")

But be aware that some brands can seem to have "green initiatives" but actually they just greenwashing the public.

Popular parts of sustainable fashion include:

Ethical Fashion: Production, working conditions, fair-trade

Circular Fashion: Recycling, Upcycling, Thrifting

Slow Fashion: Sharing, Renting,

Conscious Fashion: Eco-friendly, green fashion

- “Gen Z is driving a renaissance of thrift stores” For the good news, second hand and small business has been popularized by Gen-Z in this time period. Gen Z is making secondhand clothing “cool” thanks to its penchant for online resale.

Teens are making their own money by selling their own clothes on apps like Depop and buying other clothing items from others making this a sustainable fashion habit

- **Protests-** Even with covid, protests about this topic did not end. Before London Fashion Week, the activists: Extinction Rebellion (XR) came to the streets to rebel against fast fashion.

LINKS

<https://goodonyou.eco/> : check if your favorite brands are ethical!

<https://www.sustainable-fashion.com/>

<https://www.traid.org.uk/>

<https://extinctionrebellion.uk/> or <https://rebellion.global/>



Buy less,
Choose well,
Make it last.

Vivienne Westwood



Bye plastic vs Buy plastic

Matei and Federico

Ways of replacing plastic

We all know that today plastic is everywhere in our lives, but have you ever thought about how we can replace it. This question is a very important one because if we don't do anything about it, in not many years plastic will bring us at our end. The important aspects of this project are where is plastic and how to replace it in each case, and to convince and raise your awareness to use more often eco-sustainable products, and to let you also know that you use plastic for example in packaging, clothes, cosmetics, or even health products, and in many others that I'm sure you didn't even know about.

For a more precise look over the ways to replace plastic in the world, here are some ways of replacing it in our everyday life. For example, you can put metal or wooden cutlery in your lunch box or even have a metal lunch box, and it even preserves the temperature inside and you can use it for many years. We can replace plastic bags of trash or even when you go to the supermarket with paper bags or wood boxes, so they are eco-sustainable. All that to say that there are many ways to replace plastic and if everyone does every day a little action like these for ecology, the world can only go in a better way.

The scientific benefits of metal and what advantages they usually provide over plastic fabrication:

- Heat resistance: Metals typically have a higher melting-point and are less likely to degrade under elevated temperatures.
- Improved strength: Metal grades tend to be stronger, harder, and more durable than their plastic counterparts.
-

This list shows some of the advantages of using metals instead of plastic

The list below shows the advantages of wood that plastic for example doesn't have:

- Renewable, Recyclable, Natural. Timber is one of the few natural, renewable building materials.
- Carbon Positive.
- Low Energy Production.
- Health and Wellbeing.
- Fire Performance.
- Natural Insulation.



But the use of wood does not have to be excessive and in limited quantities.

And finally, how to replace plastic in clothes because as you may know plastic is even in what we wear every single day! So, the better way of replacing in clothes today is by using eco sustainable cotton, that isn't modified with a chemical process. Many famous brands today like Nike are beginning to use eco sustainable cotton. This cotton is not only good for the environment, but also beneficial for our skins, at the opposite of the cotton modified with chemical processes or where we used plastic.



Let's also talk about biodegradable and eco-sustainable plastics, because as you might not know there are different types of plastics, and some are better for the environment than others. If a plastic is biodegradable, it is written with a symbol with 3 arrows, it is very recommended for the environment to use these types of plastics.

and

In conclusion, plastic is a very important product in our everyday lives, but it isn't essential, and we just prove that there are many ways of replacing it that are eco sustainable and even more practical. Sometimes it isn't very practical and it would be very difficult to convince people to change their usual habits, change the clothes they wear and the material of the objects they use every day, but there isn't another solution to preserve the nature and the world.

Sources:

- National Geographic
- Wikipedia
- eartheasy