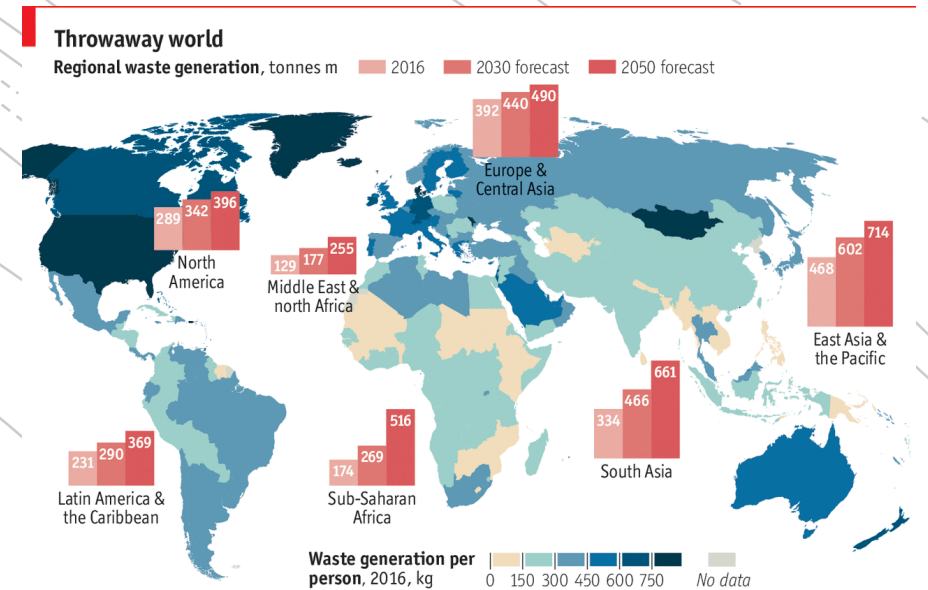


# WASTE MANAGEMENT

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Source: World Bank  
The Economist



The background of the slide features several thin, curved lines in shades of gray, some solid and some dashed, creating a sense of motion or a globe-like pattern.

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- Causes
- Impacts
- How different countries deal with the issue
- Possible solutions in the future
- Earth day

## (CAUSE 1)

### HOUSEHOLD WASTE



- Household waste is defined as post-consumer waste that includes consumer products. With the expansion of the world population, the amount of household waste increases significantly.
- At first glance, consumer waste does not seem as dangerous as industrial waste, especially when it comes to potential negative effects for our environment. However, household waste can be quite harmful as many products of everyday life contain chemicals that can cause a negative ecological impact if not disposed of properly.
- Indeed, some of these products have many of the same hazardous characteristics as regulated hazardous waste due to their flammability, reactivity, corrosivity, persistence and toxicity

## (CAUSE 2)

### INDUSTRIAL WASTE



- Industrial waste can be defined as the waste produced by industrial activities.
- It may appear in liquid, gaseous or solid form. Industrial waste can be radioactive, toxic, corrosive, ignitable or radioactive. It can lead to the pollution of soil, air and water

## (CAUSE 3) FOOD WASTE



- Large quantities of food are produced every day. However, a large part of this food is disposed of before it even reaches grocery stores. This could be due to minor problems.
- Even if food reaches the grocery stores and people buy it, a significant portion of our food ends up in the trash because we don't consume it.
- In addition, many people are afraid of consuming food if the expiration date is reached, even if the food is still in good shape and not dangerous to human health.



## POLLUTION & WASTE MANAGEMENT



First and foremost, there is the problem of improper waste management leading to pollution.

An example of this could be countries like china which incinerate all of their rubbish and cause numerous environmental issues such as air pollution, soil contamination and so on. Then again, this in not that big of a problem in countries that don't incinerate their waste however it still shouldn't be overlooked.

In fact, nowadays most countries incinerate their trash since building tens or perhaps hundreds of dumps all over the country, would not only be costly but would also deturpate the landscape of said country

## THE NEGATIVE IMPACTS OF DUMPS



- As said in the prior slide, dumps greatly disfigure the land. They also lead to bad air in the dumping area since most of the things thrown into the pile eventually start smelling foul.
- Now to address the elephant in the room, dumps don't really solve the problem of waste management as it is just simply thrown in the dump and left there. Never actually getting rid of waste leads to the construction of more dumps, moreover, the rate at which dumps need to be built is going to rise, due to the constantly increasing human population.
- Obviously dumps are only a temporary solution to the problem, which if anything will only make said problem worse as time passes.

## NEGATIVE IMPACTS OF INCINERATORS



- The only real way to permanently get rid of rubbish is by incinerating it. This method is much more diffused than any other and for good reason, in fact, it allows to completely get rid of huge quantities of trash in a very small time and for a relatively low cost.
- The problem with this however, is that the process of combustion generates CO<sub>2</sub>, a chemical that, as I am sure we all know by now, is extremely harmful to the environment and leads to very serious environmental issues such as global warming and pollution.
- Other than this, incinerators produce ash, which, if mishandled and dumped anywhere near inhabited places can lead to choking and respiratory diseases as well as cancer.



## IMPACTS OF RECYCLING



- Recycling is the most environment-friendly way of disposing of waste products. As far as we know, for the time being, there is no permanent way to get rid of hazardous material that doesn't have any serious side effects. So our best bet for now is to reuse all the things that would otherwise be thrown away.
- The only real danger of recycling comes not from the process itself but from people being careless. Both the people who consciously decide to not recycle their waste and those who own the recycling companies and don't adhere to government guidelines.
- A very fitting example of this would be a Romanian factory which was under investigation in 2014 for reports of not following government guidelines. It was later found out that the factory was dumping its waste into the ocean as to not spend any money to treat it.

# NETHERLANDS



Dutch Waste Management Association  
Partner in the circular economy

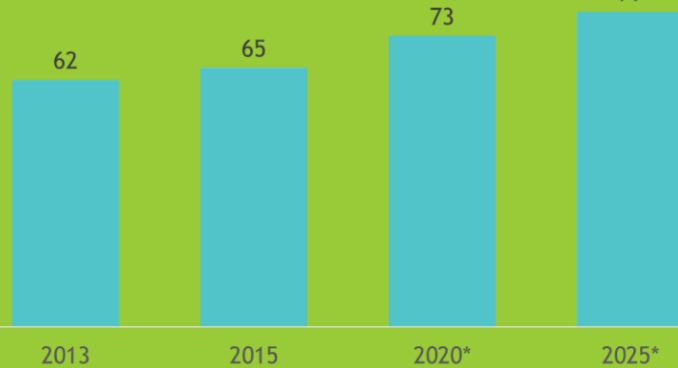


(the association that manage the waste in Netherlands)

- ❖ The Dutch system is considered one of the best in the world when it comes to waste management and recycling. Dutch people follow a precise procedure called “Lansink’s Ladder”, which, was incorporated in Dutch legislation in 1994. This procedure consists in:
  - creating as little waste as possible,
  - recuperating the valuable raw materials from the waste,
  - recycling more than 64% of Dutch waste,
  - incinerating the majority of the remainder part to generate energy,
  - Disposing of the small part that remains in a environmentally friendly way.
- ❖ According to a survey carried out by TNT Post:
  - 90% of Dutch people separate their household waste,
  - 80% of the interviewed citizens turn off the tap while their brushing their teeth,
  - 75% of the interviewed citizens turn the thermostat down a “a degree or two”,
  - the less popular taken measure is installing carbon filters on cars and purchasing biological products.

## CHINA

Actual and targeted rate of solid industrial waste reuse in China according to the "Made in China 2025" strategic plan from 2013 to 2025  
(in 1,000 metric tons)



Source: Mordor Intelligence



- China is the most populated country in the world, in 2020 almost 1,4 billion people reside there and therefore produce waste. In 2017 the country's statistical yearbook counted 215 million tones of urban household waste. It is the second largest producer of waste in the World.
- China manages its waste thanks to the speed and efficiency of its recycling collectors. In fact the country focuses on reusing and recycling the valuable waste, especially plastic, metal and electronics.
- China is becoming an important exporter of available scrap metal. the most advanced metal scrap recycling areas are located in the eastern coastal region all the way from Guangzhou in the south, right up to Beijing and Tianjin
- From 2009 to 2018 the annual sales of passenger vehicles have increased from 10 million to 25 million, they are then recycled rather than dumped.
- In 2015 a percentage of about 65% reusage of industrial waste in China was registered, but the Chinese desire "Made in China 2025" is to reach a percentage of 79%by 2025.

## INDIA



- India is one of the most densely populated countries with an average of population density of 464 inhabitants per km<sup>2</sup>.
- This country is in big troubles in terms of waste, in fact every year only 43 million metric tones of waste out of 62 million are collected. Only 12 million of those 43 million are then recycled, the remaining part is dumped in landfills.
- The Indian streets and waterways are full of waste.
- a 13\$ billion industry that can earn a potential from waste is expected by 2025
- In April 2016 the Ministry of Environment has made the rules stricter for the program for Indian waste management called "Swachh Bharat" which incriminates all the people who burn waste or leave it out in the open.

## FRANCE



(example of a "no waste" grocery store)

- France has a big lead in terms of waste management. This country has been the first one which has forbidden the waste of food in supermarkets.
- According to Arash Derambarsh (a municipal councilor in the Paris suburb of Courbevoie) "The situation is very simple: on one hand, we have supermarkets that throw away kilos of unsold food every day; on the other hand, we have millions of poor and homeless people", the idea was to give all the unsold food in supermarkets to homeless people to avoid wasting it.
- Following this train of thought lots of stores became "no waste" grocery stores, where customers can only buy the amount of needed food putting it into containers taken from home. The food in this kind of stores is stored in bulk.
- Countries like Denmark, Germany, Britain and the US instantly took part to this movement, spreading it all the World.



# INTRUDUCTION



- Quite clearly, at the moment a waste disposal method which does not have any side effects is not feasible and it most likely won't be for the foreseeable future, in spite of this, in a distant future such a thing could be possible.
- When it comes to waste management, there are 2 possible categories which we can improve on and make into solutions; these two are: reduction in waste production, and improvement in waste disposal.
- We are going to be thinking about environment friendly ways to make both of these solutions possible.

## REDUCING WASTE PRODUCTION



- Most of the waste that goes to incinerators and dumps comes from factories and energy implants, what we could do about factories is to use solar power instead of fossil fuels to reduce the amount of greenhouse gasses generated by them, of course various scrap and rubbish would still need to be disposed of, however these would not need to be incinerated and could simply be recycled into other products.
- The downside of this is that a humongous amount of alternative energy implant would need to be built and that would take a ridiculously large amount of money, which the country would never make back since the factories would work at the exact same Rate as before.
- As for energy implants, they wouldn't necessarily have to be alternative, instead we could redirect the co2 emitted by them and use it to produce oxygen through plant in a contained environment such as a lab.

## IMPROVEMENT IN WASTE DISPOSAL



- Waste disposal is somewhat of a complex subject and the reasons for that are quite obvious.
- We cannot dump all of our rubbish in dumping areas since they take up a lot of space and are extremely unsanitary. Besides the fact that if we did that in a few hundreds of years all of the planet would be covered in trash.
- On the other side of the argument, if we incinerate all the waste we create serious health hazards such as pollution. In spite of all that has been said before improving in this department would be quite simple, that is if a technology to cleanse  $\text{CO}_2$  and other pollutants were to be invented, with that we would just need to redirect all of the waste products of factories and such to nearby cleansing implant, where the gasses would be purified and transformed into oxygen or air; while dealing with solid waste by recycling it

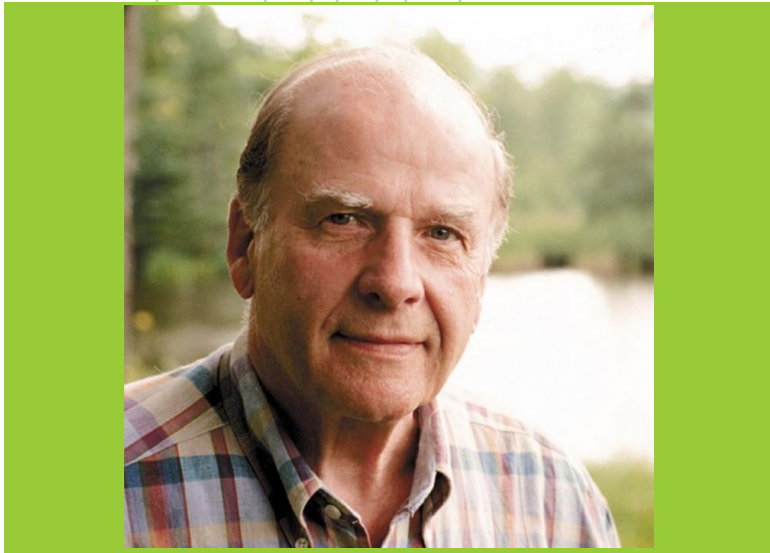
## (EARTH DAY PT.1) INTRODUCTION



- It is celebrated on 22 April all over the world to raise public awareness on the central issue that unites all humanity: protecting our home.
- World Earth Day was born from the need to protect the environment and natural resources.

## (EARTH DAY PT.2)

### THE CREATOR



- The idea of creating Earth Day came from Wisconsin Democratic Senator Gaylord Nelson who drew inspiration from demonstrations against the war in Vietnam to create a major national environmental protest.
- The son of a nurse and a doctor, a lawyer and then a soldier during the Second World War, Gaylord Nelson was a man who could convince people, a man who could even push President John Fitzgerald Kennedy to give a series of speeches linked to the environment for the States United and the conservation of the natural heritage.
- But in addition to being an environmental defender, he was also a strong advocate of civil rights and freedoms and one of the first public opponents of the Vietnam war. During the speech he gave during Earth Day 1970 he accused the government of spending billions of dollars in a senseless war instead of looking after and worrying about American citizens, calling them "inhuman traps for thousands of people".



## (EARTH DAY PT.3)

50



- 50 years later, in the midst of the climate and health crisis, Earth day acquires even more meaning.
- A planet with finite resources, with increasingly endangered ecosystems and with natural cycles that are changing so rapidly, that they are unable to know what the consequences will be in the medium and long term.
- We have all the scientific knowledge we need, we know with certainty that human activities have deleterious effects on the "Earth system", but we also know how to solve these crises, even if it means rethinking the development model, redistributing wealth, to guarantee equal opportunities and rights for the whole population. We are facing an unprecedented challenge.

A close-up photograph of a pair of hands with light skin and manicured nails, gently cupping a small, translucent green globe. The globe features a white line map of the world's continents and latitude/longitude lines. The hands are positioned with fingers slightly curled around the globe, palms facing upwards. The background is a soft, out-of-focus light gray surface. Overlaid on the center of the globe is the text "The end" in a white, elegant, cursive script font.

*The end*