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INFOGRAPHICS

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INFOGRAPHIC

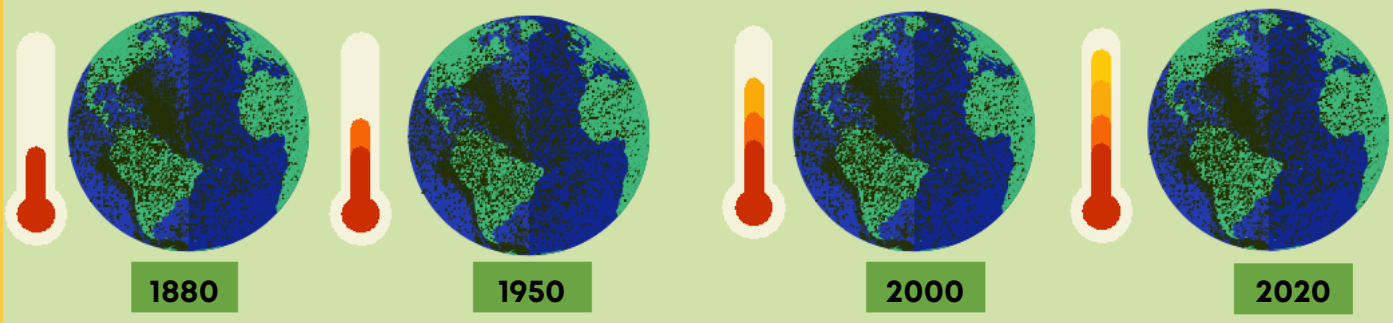
THE FIGHT AGAINST CLIMATE CHANGE

This infographic provides a comprehensive overview of strategies and actions to combat climate change, including definitions, proposed solutions, and actionable steps to address this global challenge effectively.

Summary of the subject | Definitions and concepts | keys figures and datas | Consequences and solutions | Actions

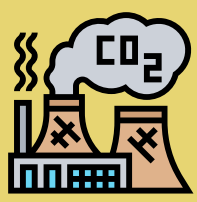
Climate change is a global phenomenon characterized by significant alterations in temperature patterns, weather events, and environmental conditions. It is primarily driven by human activities that release greenhouse gases into the atmosphere, trapping heat and leading to widespread impacts on ecosystems, economies, and societies worldwide. Addressing climate change requires urgent and coordinated action across all sectors of society to mitigate emissions, adapt to changing conditions, and transition to a sustainable future.

The increase of climate change with time.



Climate change has caused a **30%** reduction in Arctic sea ice extent since **1979**

Caring for climate change is essential to protect our planet and future generations. It mitigates extreme weather risks, preserves biodiversity, and ensures cleaner air and water. By acting now, we promote sustainable growth, innovation, and social equity. Urgent action is needed to address climate change's threats to ecosystems, weather patterns, and global food security. Proactive measures, such as reducing greenhouse gas emissions and transitioning to renewable energy, are crucial to safeguarding our environment and building a resilient future for all.



419 parts per million

2010s warmest decade

In 2019, the average global temperatures surpassed the 20th-century average by 1.8°F (0.98°C), as reported by NASA. This signifies the conclusion of the hottest decade ever documented.

As of May 2020, the atmospheric concentration of carbon dioxide stands at its peak, marking the highest level ever recorded in human history.

11%

emissions

Deforestation contributed to approximately 11% of total global greenhouse gas emissions.

Climate change has plenty effects such as:

- Weather Patterns
- Sea Levels
- Ecosystems and Biodiversity
- Water Resources
- Agriculture and Food Security
- Public Health
- Economic Systems
- Ocean Health

Studies indicate that 3.6 billion individuals currently reside in regions highly vulnerable to the impacts of climate change. Projections suggest that between 2030 and 2050, climate change could result in roughly 250,000 extra fatalities annually, attributable solely to undernutrition, malaria, diarrhea, and heat stress.

DEFINITIONS & CONCEPTS

GREENHOUSE EFFECT:

The greenhouse effect refers to the process where certain gases in Earth's atmosphere trap heat, warming the planet. Human activities, such as burning fossil fuels, release greenhouse gases like carbon dioxide (CO_2) and methane (CH_4), intensifying this effect.

As a result, the concentration of CO_2 in the atmosphere has surged from around 280 parts per million (ppm) before industrialization to over 410 ppm today.

GLOBAL WARMING:

Global warming is the long-term increase in Earth's average surface temperature due to human-induced emissions of greenhouse gases. Since the late 19th century, the Earth's average surface temperature has risen by approximately 1.18 degrees Celsius (2.12 degrees Fahrenheit), primarily driven by these emissions.

This rise in temperature marks a significant departure from historical norms and has widespread implications for ecosystems and human societies.

MITIGATION:

Mitigation involves efforts to reduce or prevent the emission of greenhouse gases to minimize the extent of climate change.Despite mitigation efforts, global CO_2 emissions reached a record high of 36.8 billion metric tons in 2019, underscoring the ongoing need for action.

CLIMATE RESILIENCE:

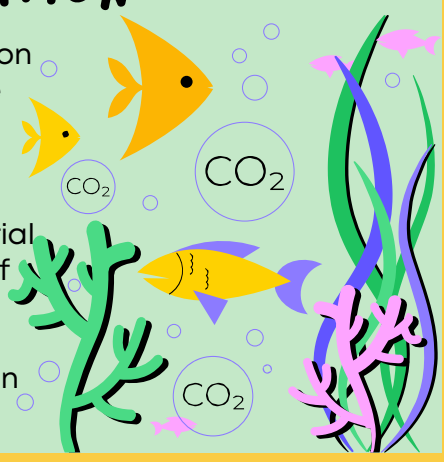
Climate resilience refers to the ability of systems and communities to withstand, recover from, and adapt to the impacts of climate change.Investing $1.8 trillion globally in climate resilience measures from 2020 to 2030 could yield $7.1 trillion in benefits, according to the Global Commission on Adaptation.

CARBON FOOTPRINT:

A carbon footprint represents the total amount of greenhouse gases emitted directly or indirectly by an individual, organization, event, or product. The concept of a carbon footprint is essential for understanding and addressing climate change, as it provides a tangible way to measure and manage human-induced greenhouse gas emissions. By reducing our carbon footprint through lifestyle changes, energy efficiency improvements, and adoption of renewable energy sources, we can contribute to efforts to mitigate climate change and build a more sustainable future.

OCEAN ACIDIFICATION:

Ocean acidification occurs when the absorption of carbon dioxide from the atmosphere decreases the pH of ocean surface waters, posing significant threats to marine ecosystems.Since the industrial era began, the average pH of ocean surface waters has decreased by about 0.1, representing a 26% increase in acidity.



TIPPING POINT:

A tipping point is a critical threshold where a system undergoes a sudden and irreversible change, potentially triggering cascading impacts.Arctic sea ice has declined at a rate of about 13.1 percent per decade since 1979, nearing a tipping point where summer ice could vanish entirely.

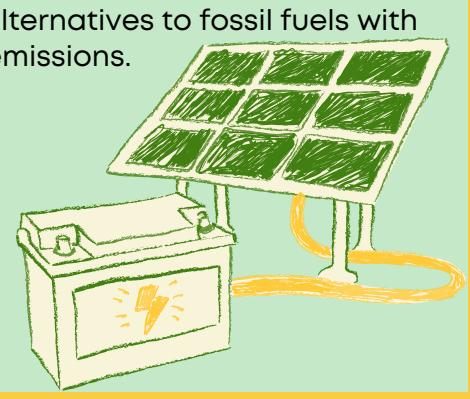
CLIMATE JUSTICE:

Climate justice highlights the disproportionate impacts of climate change on marginalized and vulnerable communities, emphasizing the need for equitable solutions.Between 70 and 80 percent of people displaced by climate change are women, according to the United Nations.

RENEWABLE ENERGY:

Renewable energy sources, such as solar, wind, and geothermal power, offer alternatives to fossil fuels with minimal greenhouse gas emissions.

In 2020, renewable energy accounted for over 26% of global electricity generation, a figure expected to rise as technology advances.

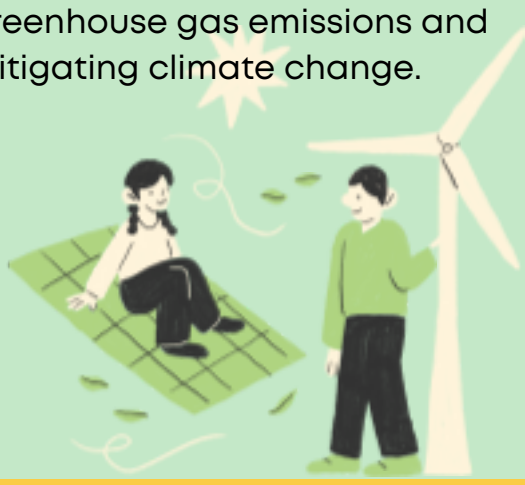


ADAPTATION:

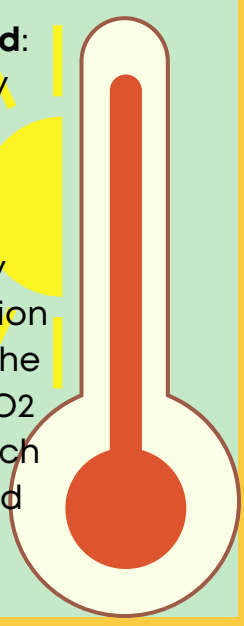
Adaptation entails making adjustments to minimize the negative impacts of climate change on human societies, economies, and ecosystems. The World Bank estimates that by 2030, global adaptation costs for developing countries could range from $140 billion to $300 billion per year.

FIGURES & DATA

Renewable Energy Capacity Growth:
Global renewable energy capacity increased by 330 GW in 2020.The expansion of renewable energy capacity helps to reduce reliance on fossil fuels, decreasing greenhouse gas emissions and mitigating climate change.



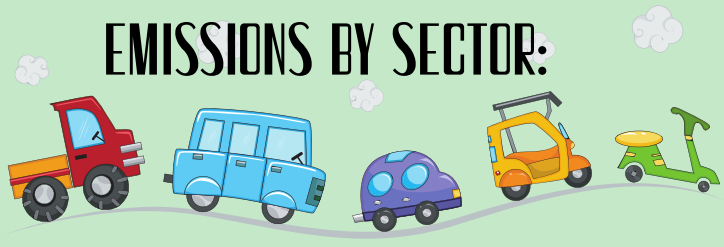
Temperature Rise Trend: Global average temperature has risen by 1.2°C (2.2°F) since the late 19th century. The steady increase in global temperatures is primarily driven by the accumulation of greenhouse gases in the atmosphere, primarily CO2 from human activities such as burning fossil fuels and deforestation.



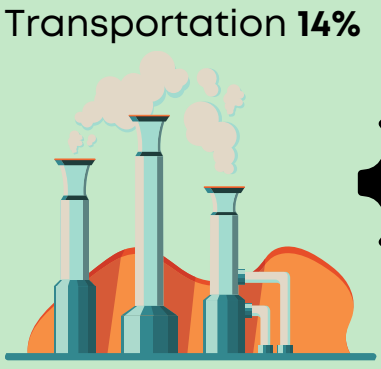
Global Warming

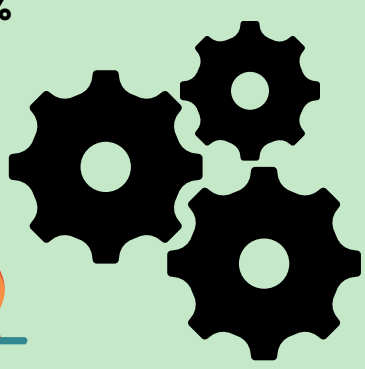
An IPCC special report delves into the consequences of a 1.5°C increase in global temperatures from pre-industrial levels, examining associated greenhouse gas emission trajectories. It emphasizes bolstering worldwide actions against climate change while promoting sustainable development and poverty alleviation.

GLOBAL CARBON DIOXIDE EMISSIONS BY SECTOR:



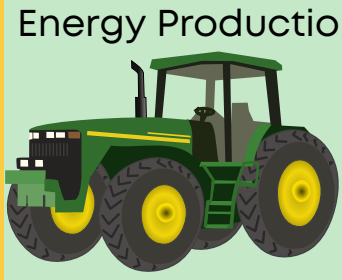
Transportation **14%**





Energy Production: **25%**

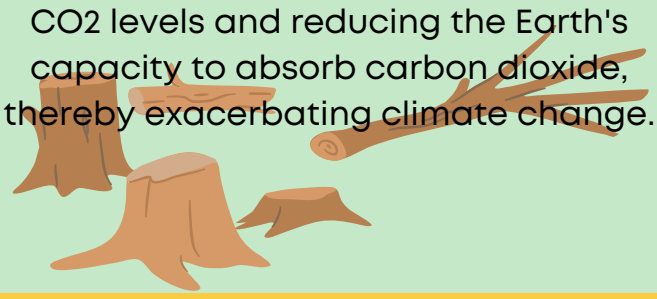
Industry: **21%**



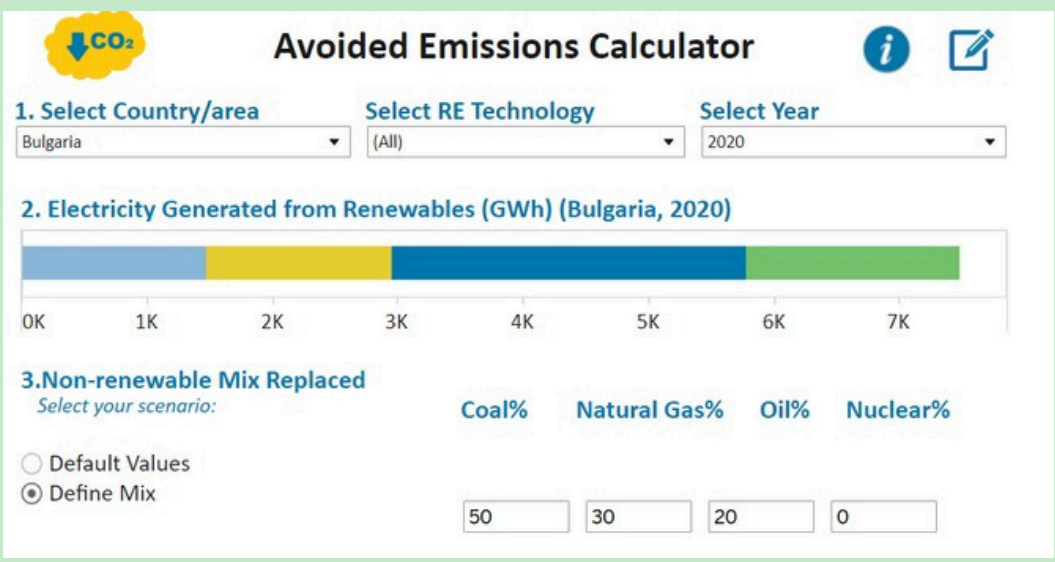
Agriculture: 24%

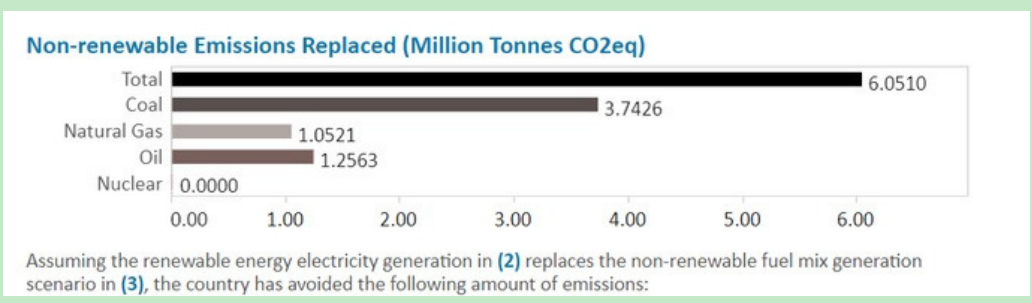
Others:**16%**

Deforestation Rate:
An average of 10 million hectares of forest are lost annually. Deforestation releases stored carbon into the atmosphere, contributing to increased CO2 levels and reducing the Earth's capacity to absorb carbon dioxide, thereby exacerbating climate change.



Avoided Emissions
5.923 Million Tonnes CO2eq



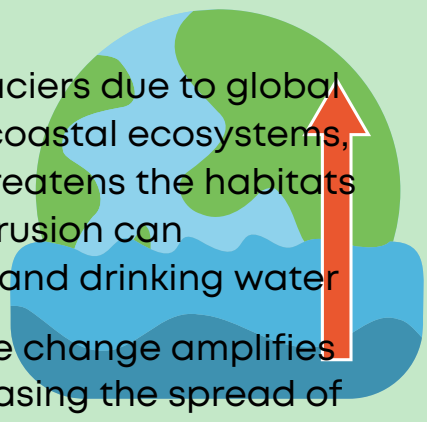


The significant contrast in Bulgaria's avoided emissions between 2002 and 2020 underscores a notable stride in the nation's efforts to mitigate climate change. In 2002, Bulgaria's avoided emissions stood at 1.704 million tonnes of CO2eq, reflecting initial steps towards environmental stewardship. However, fast forward to 2020, and the nation has made remarkable progress, with avoided emissions skyrocketing to 5.923 million tonnes of CO2eq. This staggering increase signals a substantial shift towards cleaner energy sources, improved energy efficiency, and enhanced environmental policies over the past two decades.

CONSEQUENCES AND SOLUTIONS

Consequences of Climate change

1



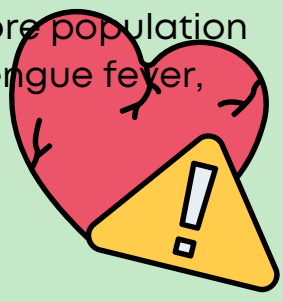
- **Rising Sea Levels:** The melting of polar ice caps and glaciers due to global warming leads to rising sea levels. This effect disrupts coastal ecosystems, erodes shorelines, submerges low-lying islands, and threatens the habitats of marine species. Additionally, increased saltwater intrusion can contaminate freshwater sources, affecting agriculture and drinking water supplies.

2

- **Disruption of Ecosystems:** Changes in temperature and precipitation patterns disrupt ecosystems globally, impacting biodiversity and ecosystem services. This disruption alters habitats, threatens the survival of species, and disrupts ecological balance. The loss of keystone species and ecosystem functions can have cascading effects, jeopardizing the stability and resilience of ecosystems vital for human well-being.

3

- **Health Risks:** Climate change amplifies health risks by increasing the spread of vector-borne diseases and heat-related illnesses. Rising temperatures expand the geographic range of disease vectors such as mosquitoes, exposing more populations to diseases like malaria, dengue fever, and Zika virus. Heatwaves and air pollution exacerbate respiratory and cardiovascular diseases, particularly in vulnerable populations, impacting public health systems and infrastructure.



4

- **Food Insecurity:** Climate change affects agricultural productivity, leading to food insecurity for millions of people worldwide. Altered growing conditions, increased pest pressures, and water scarcity reduce crop yields and livestock productivity. This effect threatens food supplies, particularly in regions already facing food insecurity, exacerbating poverty and social instability.

5

- **Extreme Weather Events:** Climate change intensifies weather patterns, resulting in more frequent and severe extreme weather events. This phenomenon leads to widespread destruction of infrastructure, loss of lives, and displacement of communities. The increased frequency of hurricanes, cyclones, droughts, and heatwaves challenges emergency response efforts and strains resources, exacerbating societal vulnerabilities.

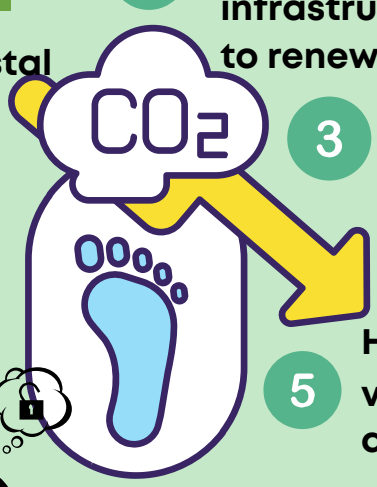
6

- **Economic Losses:** Damage to infrastructure, agricultural losses, increased healthcare costs, and displacement of populations contribute to economic instability. These losses hinder economic development, exacerbate poverty, and strain resources needed for adaptation and mitigation efforts, undermining long-term sustainability goals.

Solutions

1 **Rising Sea Levels: Build coastal defenses and reduce greenhouse gas emissions.**

2 **Extreme Weather Events: Improve infrastructure resilience and transition to renewable energy.**



3 **Disruption of Ecosystems: Protect habitats, promote sustainable land use, and combat deforestation.**

4 **Food Insecurity: Invest in climate-resilient agriculture and improve food distribution.**

5 **Health Risks: Control disease vectors, improve healthcare access, and reduce air pollution.**

6 **Economic Losses: Invest in adaptation measures, incentivize emission reductions, and transition to a low-carbon economy.**

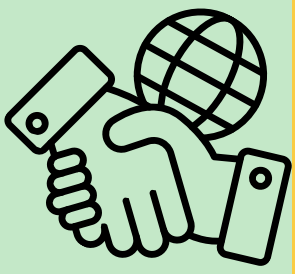
7 **Loss of Biodiversity: Establish and expand protected areas, regulate wildlife trade, and promote sustainable development practices.**

8 **Water Scarcity: Implement water conservation measures, invest in water-efficient technologies, and manage water resources sustainably through watershed management and governance reforms.**

ACTIONS

International Cooperation:

Foster global collaboration through diplomatic efforts, agreements, and alliances to implement coordinated actions on climate change mitigation and adaptation.

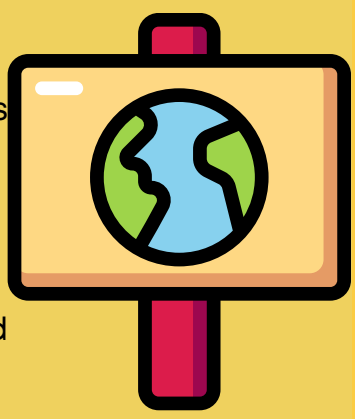


Research and Development:

Invest in research and development initiatives to innovate new technologies, strategies, and solutions for mitigating greenhouse gas emissions, enhancing resilience, and promoting sustainable development.

Education and Awareness

Promote public awareness and education campaigns to increase understanding of climate change impacts, foster behavior change, and empower individuals and communities to take meaningful action.



Policy Reform

Advocate for policy reforms at local, national, and international levels to integrate climate considerations into decision-making processes, incentivize sustainable practices, and enforce regulations that reduce greenhouse gas emissions and protect vulnerable populations.

Community Engagement

Empower local communities to participate in climate action initiatives, develop resilience strategies, and implement grassroots solutions tailored to their specific needs and circumstances.

Financial Support

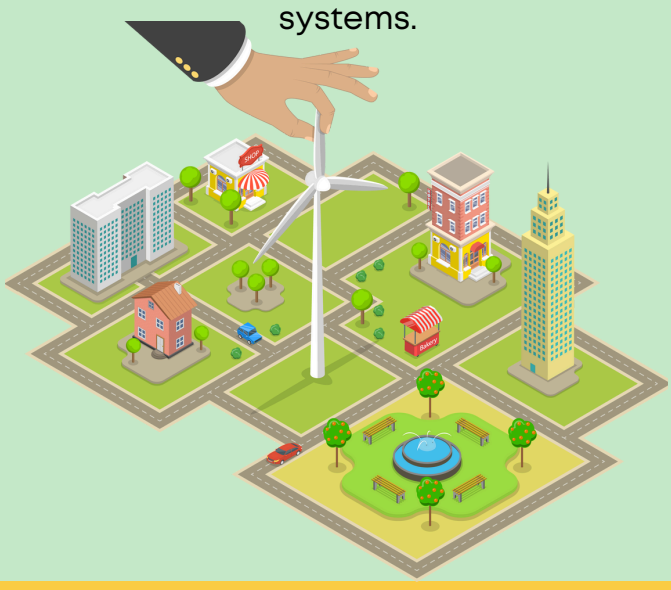
Mobilize financial resources from governments, businesses, and international institutions to support climate change mitigation and adaptation efforts, particularly in developing countries and marginalized communities disproportionately affected by climate impacts.

Corporate Responsibility

Hold corporations accountable for their environmental impact by encouraging transparency, promoting sustainable business practices, and implementing carbon pricing mechanisms to internalize the costs of emissions.

Investment in Infrastructure

Upgrade and invest in resilient infrastructure that can withstand climate-related hazards, such as floods, storms, and heatwaves, while also supporting sustainable transportation, energy, and water systems.



Capacity Building

Strengthen institutional and human capacities at all levels, including governments, communities, and organizations, to effectively plan, implement, and monitor climate change actions. This involves providing training, technical assistance, and knowledge-sharing platforms to support sustainable development practices and climate resilience building efforts.

SOURCES

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- https://www.irena.org/Data/View-data-by-topic/Climate-Change/Avoided-Emissions-Calculator
- https://www.un.org/en/climatechange/science/climate-issues/water
- https://climate.ec.europa.eu/climate-change/consequences-climate-change_en
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- https://www.wired.co.uk/article/climate-change-facts
- https://www.un.org/sustainabledevelopment/climate-facts-and-figures/
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- https://www.activesustainability.com/climate-change/6-actions-to-fight-climate-change/
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INFOGRAPHIC

FOOD WASTE

Summary of the subject

Definitions and concepts

keys figures and datas

Consequences and solutions

Actions

SUMMARY

Food waste, with exacerbating **environmental problems**, growing global **population** and the pressing need for **sustainable food** systems, has become a **critical challenge** to achieving **global** sustainability and **food security**.

WHY?

One might think that, as long as they do the things right, food waste is not a thing to ponder upon. Is it correct though?

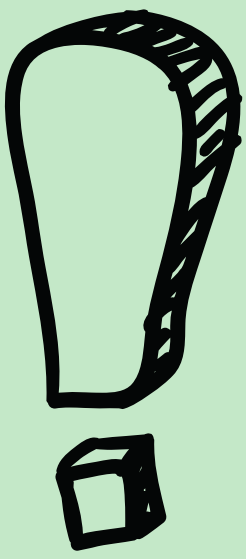
Well, food waste not only affects our individual lives, such as wasted resources, but it negatively impacts our environment, further exacerbating the loss of biodiversity and global food security.

HOW?

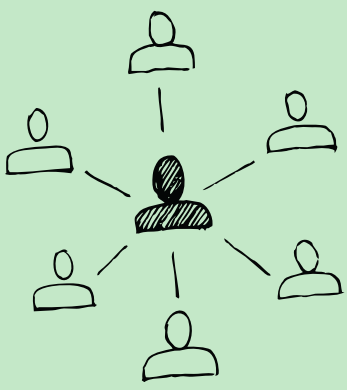
So, imagine every time you toss out a piece of food, it's like throwing away a tiny piece of the planet. When food gets tossed, all the water, energy, and effort that went into growing it gets wasted too. Plus, it ends up in landfills where it rots and releases methane, a super-strong gas that's bad news for our climate.

DEFINITIONS & CONCEPTS

Okay, now that we covered the basics, let's delve deeper on the topic and see what lies behind!



Food waste is defined by the United Nations Environment Programme (UNEP) as "the discard of edible foods at the retail and consumer levels." It encompasses food that was fit for human consumption but was not consumed because it was discarded either before or after it spoiled.



So, when we look at the definition, we see that the issue as not just an environmental concern but also a socioeconomic problem, emphasizing the loss of resources and the missed opportunity to feed the hungry, which directly impacts global food security and sustainability efforts.

What other concepts are linked to food waste?

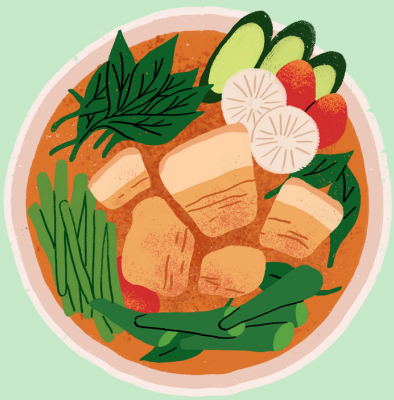
well, unfortunately, food security and sustainability are not the only concepts impacted by food waste. Here are some others:

Biodiversity loss refers to the
reduction extinction of species, the decline in populations of organisms, and the degradation of ecosystems. Food waste exacerbates biodiversity loss by necessitating more land to be used for food production than is needed.

The decomposition of wasted food in landfills contributes to the production of methane, a potent greenhouse gas. This links food waste directly to climate change by exacerbating greenhouse gas emissions.

KEYS FIGURES AND DATAS

Now that we have seen what food waste is, and how it affects us and our environment, let's see what happens around the World with food waste!



According to the UN 17 percent of total global food production is wasted in households, in the food service and in retail all together.

Globally, around 13 percent of food produced is lost between harvest and retail.

In the EU, 10% of food made available to EU consumers (at retail, food services and households) may be wasted. according to Eurostat.

Also, according Eurostat, over to 37 million people cannot afford a quality meal every second day in the EU

In the EU, the food waste per person, in a year, is estimated to be around 131 KG, with 58 million tonnes of food waste in general generated every year.

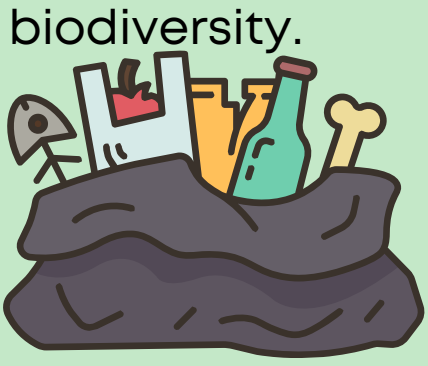
Every year, according to FAO, the cost of food waste amounts to approximately 1 trillion Euro, also heavily impacting the World economy.

CONSEQUENCES AND SOLUTIONS

Having seen the impact of the food waste across Europe and the World, you might wonder, what are the consequences that us, people and our environment suffer from Food waste. Here are some of the consequences:

Climate Change

to Food waste contributes significantly environmental degradation. It uses valuable resources such as water, land, and energy unnecessarily and generates a considerable amount of greenhouse gas emissions, particularly methane, when organic waste decomposes in landfills. This exacerbates climate change and can lead to the loss of biodiversity.



Waste management

Food waste contributes to the growing problem of waste management. As food decomposes in landfills, it not only takes up space but also releases methane, a potent greenhouse gas. Managing this waste requires resources and infrastructure, which can be particularly challenging in densely populated areas.

Food Security

Food waste has implications for food security. By wasting food, we are not utilizing our food supply efficiently, which could otherwise help feed the growing global population.

ACTIONS

OK, then what? What to do to reduce food waste, and the impact of food waste on climate change, food security and waste issues? Let's see the possible solutions.

Food waste and Climate Change

1.**Reduce at the Source:** Implementing measures to prevent food waste at the source is key. This includes better forecasting of food demand, improving agricultural practices to reduce pre- harvest losses,

2. **Support Local Food Systems**: Local food systems reduce the need for long-distance food transport, which not only cuts down on emissions but also reduces the likelihood of food spoilage and waste during transportation.

Food waste and waste management

1.**Composting and Recycling:** Implementing composting and enhanced recycling programs, can effectively divert food waste from landfills, reducing methane emissions and turning waste into valuable resources like renewable energy and soil fertilizer.

Food waste and food security

1.**Food Preservation Technologies**: Investing in and adopting advanced food preservation technologies and practices will help extend the shelf life of food products, thus reducing waste and improving food security.

SOURCES

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2.NASA Global Climate Change - https://climate.nasa.gov/faq/19/what-is-the-greenhouse-effect/

3.United Nations - https://www.un.org/en/observances/end-food-waste-day

4.Center for Science Education - https://scied.ucar.edu/learning-zone/how-climate-works/greenhouse-effect

5.Eurostat - https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Food_waste_and_food_waste_prevention_-_estimates

6.FAO - https://www.fao.org/3/i2697e/i2697e.pdf

7.UNEP - https://www.unep.org/resources/report/unep-food-waste-index-report-2021

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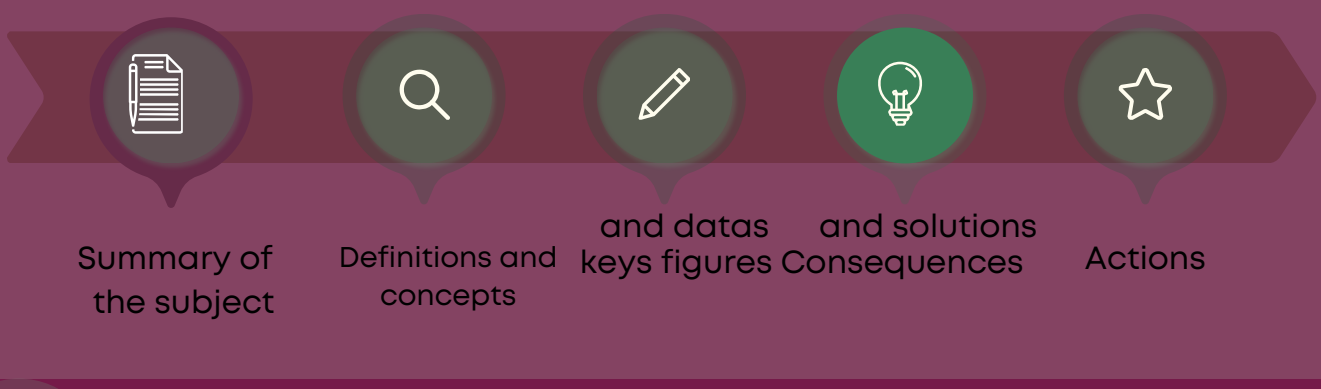
INFOGRAPHIC

POLLUTION & ITS EFFECT ON HEALTH

This infographic aims to shed light on the problem of pollution, explore its devastating consequences on health, highlight key figures and statistics, propose solutions to mitigate its impacts, and suggest actionable steps for individuals and communities to take. Join us as we delve into the complex issue of pollution and discover how we can work together to create a healthier and more sustainable world for all.



SUMMARY

From the hazy haze of urban smog to the polluted waters of industrial run-off, pollution permeates our environment, posing a serious threat to our collective enlightening infographic, we delve into the intricate web of connections between pollution and its health impacts.

By unraveling the complexities of pollution-induced health risks and advocating for proactive interventions, this infographic serves as a rallying cry for individuals and communities alike to rise up and champion a cleaner, healthier future for our planet and its inhabitants.

DEFINITIONS & CONCEPTS

What is Pollution?

Pollution refers to the introduction of harmful substances or pollutants into the environment, resulting in adverse effects on ecosystems, human health, and the quality of air, water, and soil.

Common Pollutants

The World Health Organization (WHO) identifies six major air pollutants, known as criteria pollutants, which are particularly harmful to human health. These pollutants include:

- Particle pollution (PM10 and PM2.5)
- Ground-level ozone (O3)
- Carbon monoxide (CO)
- Sulfur oxides (SOx)
- Nitrogen oxides (NOx)
- Lead (Pb)

Types of Pollutants:

Pollutants can exist in various forms, including solids, liquids, and gases. Common types of pollutants include:

1. **Solid pollutants**

E.g. trash, plastics, and industrial waste.

2. Gaseous pollutants:

E.g. carbon monoxide, sulfur dioxide, and nitrogen oxides emitted from vehicles and industrial processes.

3. Liquid pollutants:

E.g. sewage, oil spills, and chemical runoff.

Sources of Pollution:

Industrial emissions

Vehicle emissions

Residential activities

Agricultural runoff

Key Concepts:

Point Source Pollution vs. Non-Point Source Pollution:

- Point source pollution: This refers to pollution that originates from a single, identifiable source, such as a factory, power plant, or sewage treatment plant. Point source pollution can be easier to regulate and control because the source is localized.

- Non-point source pollution: Unlike point source pollution, non-point source pollution comes from multiple, diffuse sources and is more challenging to trace back to specific origins. Examples include agricultural runoff, urban runoff, and atmospheric deposition. Non-point source pollution often results from activities such as agriculture, construction, and urban development.

Bioaccumulation and Biomagnification:

- Bioaccumulation: This process occurs when pollutants accumulate in the tissues of organisms faster than they can be excreted or metabolized. As a result, the concentration of pollutants increases over time within the organism's body. Bioaccumulation commonly affects aquatic organisms exposed to persistent pollutants like heavy metals and certain organic chemicals.

- Biomagnification: Biomagnification refers to the process by which the concentration of pollutants increases at higher levels of the food chain. As organisms consume contaminated prey or food sources, the pollutants accumulate in their tissues. Consequently, predators at the top of the food chain, such as apex predators or humans, may experience higher levels of pollutant exposure due to biomagnification.

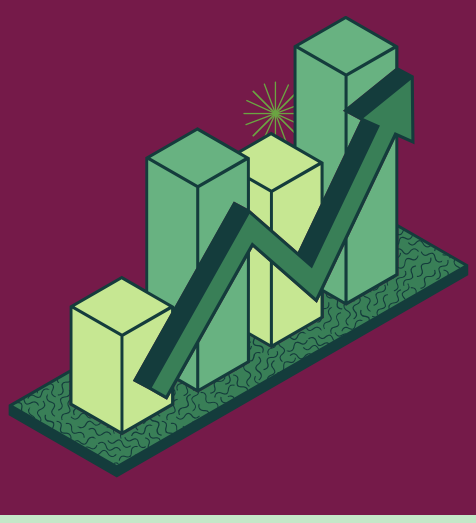
Eutrophication:

Eutrophication is the excessive enrichment of water bodies with nutrients, primarily nitrogen and phosphorus. These nutrients originate from sources such as agricultural runoff, sewage discharge, and fertilizer use. In eutrophic waters, algae and aquatic plants proliferate, leading to algal blooms and oxygen depletion. This process can disrupt aquatic ecosystems, harm fish and other aquatic organisms, and degrade water quality, leading to ecological and economic impacts.

Greenhouse Gases and Global Warming:

Greenhouse gases (GHGs) are gases in the Earth's atmosphere that trap heat and contribute to the greenhouse effect, leading to global warming and climate change. Major greenhouse gases include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Human activities, such as burning fossil fuels, deforestation, and industrial processes, have significantly increased GHG concentrations in the atmosphere, causing global temperatures to rise and resulting in various climate-related impacts.

KEYS FIGURES AND DATAS



Data 1

Most Europeans live in highly polluted urban areas.

Data 2

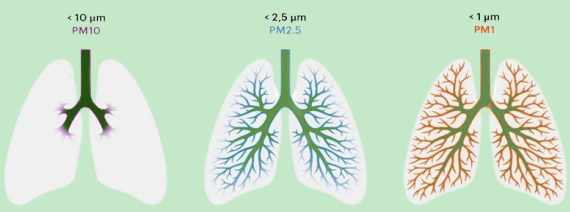
97%

of the EU's urban population are exposed to concentrations of PM2.5

238,000

premature deaths in the EU in 2020 due to PM2.5.

Data 3



Fine PM2.5 particles pose the greatest health risks. The smaller the particles the deeper they go in the lungs.

Data 4

WHO identifies six major air pollutants with disastrous effects.

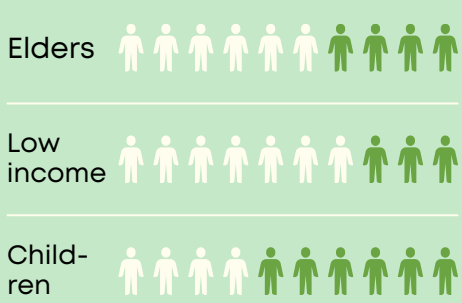
- Particle pollution
- Ground-level ozone
- Carbon monoxide
- Sulfur oxides
- Nitrogen oxides
- Lead

Data 5

- Urban areas face heightened risks due to road emissions and industrial activities.

- Industrial accidents can release toxic fogs with fatal consequences.

Data 6



Children, elderly, and low-income individuals are more susceptible to various health issues including COPD, asthma, cardiovascular diseases, and diabetes.

PM10 & PM2.5 emitted by sources like diesel vehicles and power plants, accumulate in the respiratory system.

PM2.5 poses the most significant health risks due to its size and penetration depth.

CONSEQUENCES

Respiratory Illnesses

Pollution irritates the respiratory system, causing asthma, bronchitis, and aggravated COPD.

Long-term exposure worsens symptoms and can lead to chronic conditions.

Cardiovascular Diseases

Pollutants trigger systemic inflammation and impair blood vessel function, promoting plaque formation and clot formation, increasing the risk of heart attacks and strokes.

Long-term exposure increases cardiovascular morbidity and mortality.

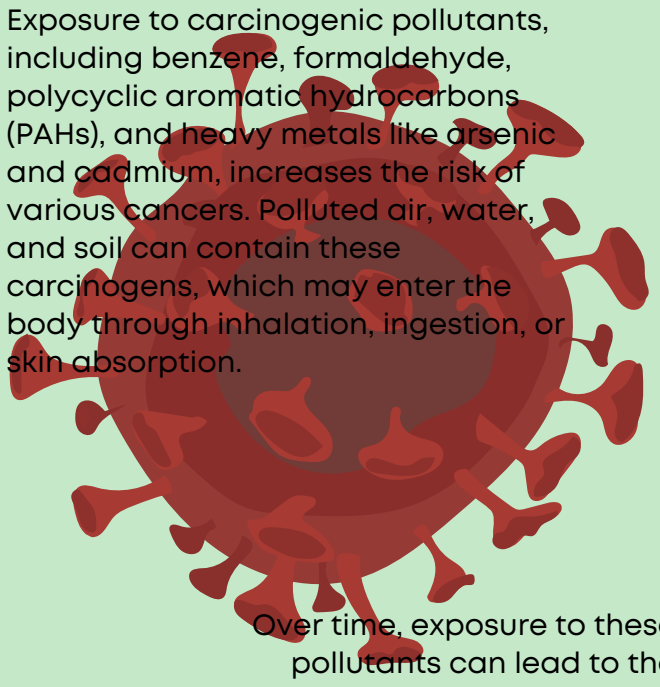
Neurological Disorders

Certain pollutants, such as heavy metals, pesticides, and volatile organic compounds (VOCs), have neurotoxic properties that can adversely affect the nervous system.

Chronic exposure to these pollutants is linked to neurodevelopmental disorders in children, cognitive decline in adults, and an increased risk of neurological conditions such as Alzheimer's disease, Parkinson's disease, and multiple sclerosis.

Cancer Risk

Exposure to carcinogenic pollutants, including benzene, formaldehyde, polycyclic aromatic hydrocarbons (PAHs), and heavy metals like arsenic and cadmium, increases the risk of various cancers. Polluted air, water, and soil can contain these carcinogens, which may enter the body through inhalation, ingestion, or skin absorption.



Over time, exposure to these pollutants can lead to the development of lung cancer, bladder cancer, leukemia, and other malignancies.

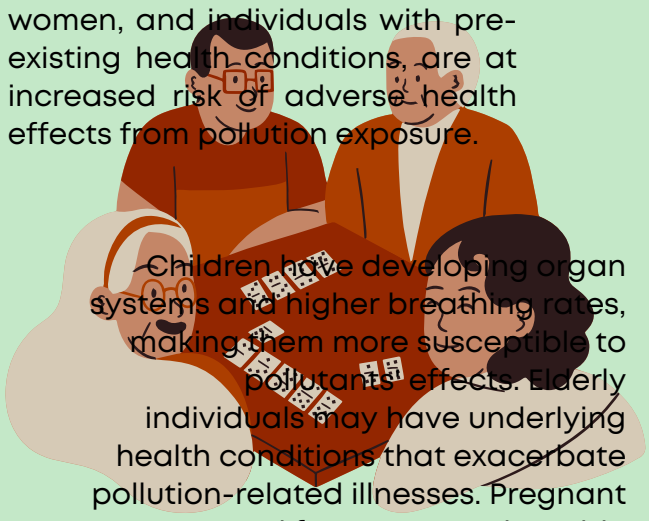
Immune System Compromises

Pollutants can disrupt immune system function, leading to dysregulation of immune responses and increased susceptibility to infections, autoimmune diseases, and chronic inflammation. Particulate matter and pollutants like ozone and sulfur dioxide can induce airway inflammation, impairing the immune system's ability to defend against respiratory infections.

Prolonged exposure to pollution may also exacerbate existing autoimmune conditions and inflammatory disorders.

Vulnerable Populations

Vulnerable populations, including children, the elderly, pregnant women, and individuals with pre-existing health conditions, are at increased risk of adverse health effects from pollution exposure.



Children have developing organ systems and higher breathing rates, making them more susceptible to pollutants' effects. Elderly individuals may have underlying health conditions that exacerbate pollution-related illnesses. Pregnant women and fetuses are vulnerable to pollutants' teratogenic effects and developmental toxicity.

Pollution-related illnesses impose a significant burden on public health systems, resulting in increased healthcare costs, hospital admissions, and premature mortality.

Treating pollution-related conditions places strain on healthcare resources, reducing capacity to address other health needs.

Additionally, pollution-related morbidity and mortality contribute to productivity losses, absenteeism, and socioeconomic disparities in health outcomes, exacerbating healthcare inequities.

SOLUTIONS

Reduce Emissions from Transportation

Promote public transportation, cycling, and walking to reduce vehicle emissions. Invest in electric vehicles and improve fuel efficiency standards for cars and trucks.

Regulate Industrial Emissions

Enforce strict emission standards for industries to reduce air and water pollution. Require industries to implement pollution control technologies and improve waste management practices.

Clean Energy Transition

Shift from fossil fuels to renewable energy sources like solar, wind, and hydropower. Support policies that incentivize clean energy adoption and phase out coal-fired power plants.

Improve Waste Management

Implement waste reduction, recycling, and composting programs to minimize landfill waste. Properly dispose of hazardous waste and prevent contamination of soil and water sources.

Enhance Air Quality Monitoring

Expand air quality monitoring networks to track pollutant levels in urban and industrial areas. Provide real-time air quality information to the public and vulnerable populations.

Protect Green Spaces and Natural Habitats

Preserve forests, wetlands, and other natural habitats. Plant trees and vegetation to improve air quality and mitigate the effects of pollution.

ACTIONS

Reduce Personal Vehicle Use

Opt for walking, cycling, carpooling, or using public transportation whenever possible to reduce emissions from personal vehicles. Combine errands and plan routes efficiently to minimize driving distance and fuel consumption.

Conserve Energy at Home

Use energy-efficient appliances, LED lighting, and programmable thermostats to reduce energy consumption and air pollution from power generation. Turn off lights, appliances, and electronics when not in use to conserve energy and reduce emissions.

Practice Sustainable Consumption

Choose products with minimal packaging and opt for reusable items instead of single-use plastics. Support eco-friendly and sustainable brands that prioritize environmental protection and reduce pollution in their production processes.

Reduce, Reuse, Recycle

Minimize waste generation by avoiding unnecessary purchases and opting for products with minimal packaging. Reuse items whenever possible and repair or repurpose old belongings instead of discarding them. Recycle paper, glass, plastic, and metal materials according to local recycling guidelines to conserve resources and reduce pollution.

Raise Awareness and Advocate for Change

Educate yourself and others about the health effects of pollution and the importance of taking action to protect the environment. Participate in community clean-up events, tree planting initiatives, and environmental awareness campaigns to promote pollution prevention and environmental stewardship.

SOURCES

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INFOGRAPHIC

ZERO WASTE

This infographic covers “Zero Waste” with some outstanding aspects.

Summary of the subject

Definitions and concepts

Key figures and data

Importance and benefits

Actions

SUMMARY

Definition

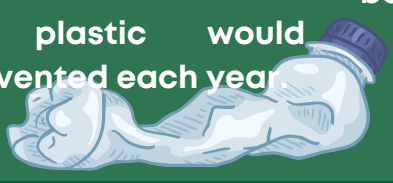
“Zero waste is not an end goal but set of guiding principles”.

Striking Data

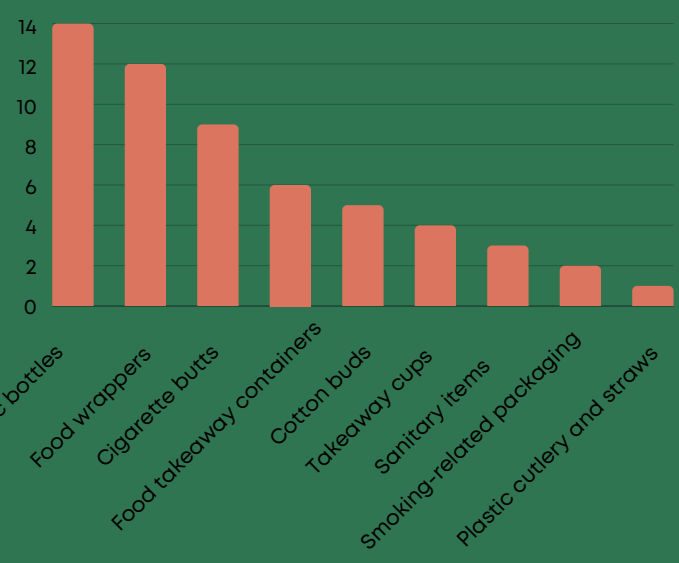
If Europeans swapped to reusable water bottles

6,741 tons

be of plastic would prevented each year



Figures and Numbers



Some data about Zero Waste.

Importance & Benefits

Discover the importance and benefits of zero waste lifestyle.

Actions

What are the possible action you can take to reduce waste and change to zero waste lifestyle.

DEFINITIONS & CONCEPTS

Definition:

According to the **Zero Waste International Alliance**, zero waste is:

"A goal that is **ethical, economical, efficient and visionary**, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all **discarded materials are designed to become resources** for others to use. Zero Waste means designing and managing products and processes to systematically avoid and **eliminate the volume and toxicity of waste** and materials, conserve and recover all resources, and **not burn or bury them**. Implementing Zero Waste will eliminate all discharges to land, water or air that are **a threat to planetary, human, animal or plant health"**.

The 5 Principles of Zero Waste

The first step to a zero-waste lifestyle is to prevent waste from entering your home in the first place.

REFUSE

REDUCE

REUSE

RECYCLE

ROT

As we try to reduce what is in our space, we can also be mindful of how we can repurpose items in our homes.

We can significantly reduce our environmental impact by being mindful of what we buy and use

Recycling should be considered your last resort. Recyclable items often end up downcycled into reusable items or not properly disposed of, which can, in turn, have the opposite of the intended effect.

In other words, composting. This applies to organic waste from food scraps that we could be repurposing instead of throwing away.

"Zero waste is not merely an end goal, but a set of guiding principles that strive towards eliminating waste at any and all stages of the chain."

KEYS FIGURES AND DATAS

Global e-waste reached

53,6 million

metric tons from 2010 to 2019.

~~Over half~~ of the world plastic is thrown out is from packaging

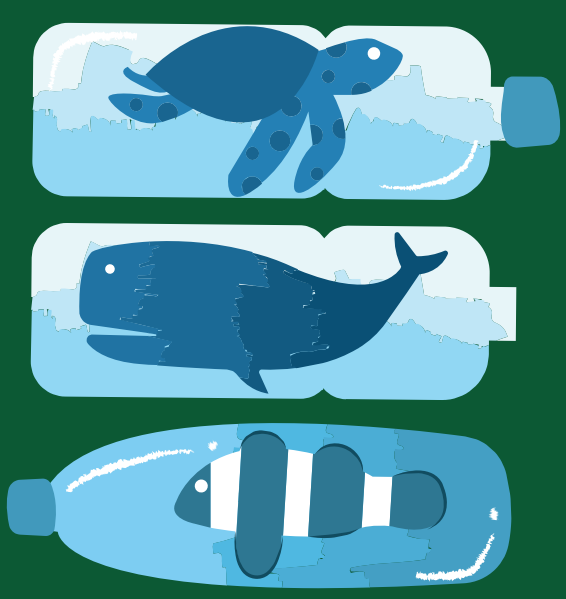
146 million

metric tons each year.

Of all the plastic waste on earth only

9%

is recycled.



By the year 2050, our oceans will have

more plastic than fish

Amount of food wasted each year is

931 million tonnes

SOLUTIONS

Saving money

Zero waste encourages a more deliberate approach to consumption, focusing on needs rather than wants.

Local economic development

While zero waste practices are often focused on things like trash reduction, there is also the encouragement of supporting local markets and businesses.

Creates more jobs

On average, zero waste strategies create the most jobs of any waste management, through reducing, reusing, and recycling.

Reduced landfill waste

Landfills can have quite detrimental effects on the environment. They can release harmful greenhouse gases like methane, which is over 25 times more potent than carbon dioxide in trapping heat.

Reduced pollution

Less waste means less trash in landfills, but this also results in a reduced need for logging in the forests, mining, and drilling for oil, all of which require loads of energy.

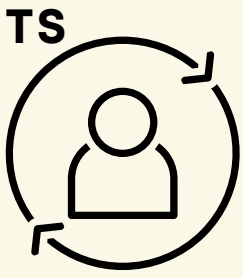
Positive systemic change

The zero waste movement promotes a circular economy. It is all about doing your part in conserving nature and its precious resources. It encourages a shift from our linear consumption habits into more circular, sustainable ones for the sake of Earth's preservation.

ACTIONS

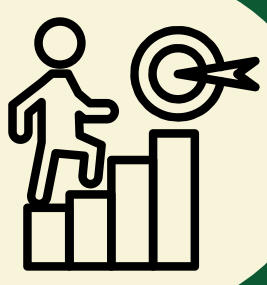
1.ASSESS YOUR WASTE HABITS

Take stock of the amount of waste you produce and identify areas where you can improve. This could include reducing single-use plastics, minimizing food waste, or finding alternatives to disposable products.



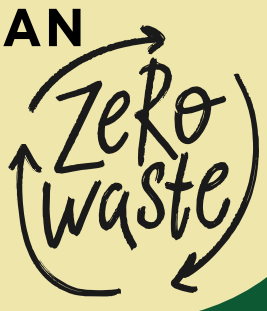
2. SET ACHIEVABLE GOALS

Once you clearly understand your waste habits, set achievable goals to reduce waste in specific areas. Start small and gradually increase your efforts as you become more comfortable with the changes.



3. ZERO WASTE ACTION PLAN

Identify the changes you want to make and outline your steps to achieve them. This could include purchasing reusable items, starting a composting system, or finding local recycling options for hard-to-recycle items.

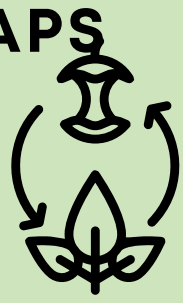


4. REDUCE FOOD WASTE

Plan your meals and shop with a grocery list to reduce food waste in your kitchen to avoid overbuying. Utilize leftovers creatively, freeze excess food, and compost any food scraps that cannot be consumed.

5. COMPOST FOOD SCRAPS

Composting is a valuable practice that helps divert organic waste from landfills and produces nutrient-rich soil for your garden.



6. FOOD STORAGE

Proper food storage is essential for minimizing waste. Store perishable items in airtight containers or beeswax wraps to extend their shelf life.

7. REUSE COMMON HOUSEHOLD ITEMS

Reusing common household items is a great way to reduce waste. Find alternative uses for items like glass jars, plastic containers, or old clothing.

8. IDEAS FOR CLOTHING

Instead of discarding old clothing or furniture, consider repurposing them to give them a new life. You can turn old t-shirts into cleaning rags or transform an old dresser into a unique statement piece.

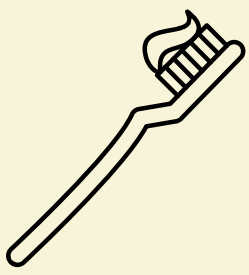
ACTIONS

9. ZERO WASTE PRODUCTS

Creating your zero-waste products can be a fun and rewarding endeavor. Make your natural cleaning solutions, personal care items, or even fashion accessories.

10. REDUCE WASTE IN BATHROOM

Switch to eco-friendly alternatives such as bamboo toothbrushes, refillable soap dispensers, and menstrual cups.



11. REDUCE WASTE IN GROCERY SHOPPING

Bring your own reusable bags, buy in bulk to avoid excess packaging, and choose products with eco-friendly packaging.

12. SWITCH TO ECO-FRIENDLY OPTIONS

Cleaning products often come in single-use plastic containers and contain harmful chemicals. Switch to eco-friendly alternatives such as homemade cleaners or refillable options.

13. AVOID SINGLE-USE PLASTICS

Traveling can often lead to increased waste generation. Pack a reusable water bottle, utensils, and a cloth bag to carry your essentials.

14. CONSCIOUS EFFORT WHEN EATING OUT

Bring your containers for leftovers, or opt for restaurants that use compostable or reusable packaging.

15. SUSTAINABLE TRANSPORTATION

Reusing common household items is a great way to reduce waste. Find alternative uses for items like glass jars, plastic containers, or old clothing.

SOURCES

- What is Zero Waste? Embrace the 5Rs: Zero Waste Living
- The 5 Principles of Zero Waste
- Zero Waste Hierarchy
- Must Know Zero Waste Statistics
- Zero Waste Facts & Statistics
- Zero Waste 101
- 10 Eye-opening Zero Waste Facts
- 21 Ideas for Zero Waste Living
- What is Zero Waste? (Ecocycle)
- 15 Easy Ways to Start Living a Zero Waste Lifestyle
- How to Go Zero Waste
- The Importance and Benefits of Practicing Zero-Waste Living
- Zero Waste Advantages
- Top 15 Benefits of Zero Waste
- Zero Waste is a Climate Change Solution
- What Does Zero Waste Mean?

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INFOGRAPHIC

GREEN DEAL FOR EUROPE

The role of European Union (EU) in combating climate change and the specific actions it aims to implement to achieve its goal of climate neutrality by 2050.

What is the Green Deal for Europe?

Areas of action and key objectives

Key figures and data

~~Consequences and solutions~~

Actions on European level

SUMMARY

WHAT IS ITS MAIN GOAL?

Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal **will transform the EU into a modern, resource-efficient and competitive economy,**

The EU's strategy is to become the first continent in the world to achieve climate neutrality.

Even though the EU has acted in favour of environment in the past, the launch of the Green Deal in 2019 marks an important turning point that sets a clear and ambitious target of climate neutrality by 2050.

WHAT IS THE GREEN DEAL FOR EUROPE?

On 11th December 2019, the President of the European Commission Ursula von der Leyen presented the Green Deal for Europe, **a framework for all legislation both new and old,** proposed by the Commission **with the aim of making the European Union (EU) climate neutral by 2050.**

The Green Deal is a vision for Europe's future that involves and impacts not only the 27 member states, but the whole world. In fact, the EU has the ambition to align its member states with **the ecological and energy transition** while spearheading the fight against climate change on an international scale.

KEY DATES FOR AN AMBITIOUS STRATEGY

2019	The European Commission presents the Green Deal for Europe, the EU's roadmap and strategy to make Europe the first continent to achieve climate neutrality by 2050.
2021	In July 2021, the European Commission unveils a climate package with the aim of turning the ambition of climate neutrality into concrete political action. The package is called "Fit for 55" and refers to the EU's target to reduce its carbon emissions by 55% by 2030
2024	On 6th February 2024, the Commission presents a recommendation for a 2040 emissions reduction target to set the path to climate neutrality in 2050.
2030	In order to achieve climate neutrality in 2050, the target of reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 must be met.
2050	The European Union will have become truly carbon neutral.

DEFINITIONS & CONCEPTS

THE GREEN DEAL: EU'S NEW GROWTH STRATEGY

The Green Deal's guidelines, strategies and legislative proposals concern various sectors and areas that are different from each other, but interlinked.

The transition to a climate-neutral Europe requires huge efforts from citizens, businesses, entire sectors, politicians. It will not only mean changes in our lifestyles, consumption, production, mobility. It will also mean that many workers will have to give up their jobs in traditional fossil fuel-based sectors and move to environmentally friendly sectors and 'green jobs'.

For example, in the construction sector, the Green Deal for Europe is expected to create 487,000 new jobs in the EU by 2030.

KEY OBJECTIVES

The European Green Deal will ensure:

- **no net emissions of greenhouse gases by 2050**
- **economic growth decoupled from resource use**
- **no person and no place left behind**

AREAS OF ACTION

CLIMATE
Becoming the first climate neutral continent by 2050

ENERGY
Supplying clean, affordable and secure energy

ENVIRONMENT & OCEANS
Preserve and restore ecosystems and biodiversity

AGRICULTURE
From farm to fork: designing a fair, healthy and environmentally friendly food system

TRANSPORT
Accelerating the transition to sustainable and intelligent mobility.

INDUSTRY
Low-emission technologies, sustainable products and services. Achieving a climate neutral and circular economy.

RESEARCH & INNOVATION
Deploying and demonstrating solutions. Engaging citizens in social innovation.

FINANCE & REGIONAL DEVELOPMENT
Sustainable investments to deliver the European Green Deal

NEW EUROPEAN BAUHAUS
A creative and interdisciplinary initiative that connects the European Green Deal to our living spaces and experiences

KEYS FIGURES AND DATAS

'FIT FOR 55' PACKAGE OF LEGISLATION

NOW FULLY ADAPTED

Under the European Climate Law, the EU committed to reduce its net greenhouse gas emissions by at least 55% by 2030. **The 'Fit for 55' package of legislation makes all sectors of the EU's economy fit to meet this target.** It sets the EU on a path to reach its climate targets in a fair, cost-effective and competitive way.

LEADING THE GREEN INDUSTRIAL REVOLUTION

With the Green Deal Industrial Plan, presented in February 2023, EU aims to enhance the competitiveness of Europe's net-zero industry, and accelerate the transition to climate neutrality.

More than 400 GW of wind and solar renewable energy production capacity in the EU in 2022, **an increase of over 25% compared to 2020**

4.5 million green jobs in the European economy in 2019 up from 3.2 million in 2000

RENOVATING BUILDINGS FOR GREENER LIFESTYLES

The Commission aims to at least **double renovation rates in the next ten years** and make sure renovations lead to higher energy and resource efficiency.

The newly created **Social Climate Fund** will support EU citizens most affected or at risk of energy or mobility poverty. It will provide over **€86 billion in total to support the most vulnerable citizens and small businesses** with the green transition.

The first climate-neutral continent
by 2050

At least 55% less
net greenhouse gas emissions by 2030, compared to 1990 levels

3 billion
additional trees to be planted in the EU by 2030

MAKING TRANSPORT SUSTAINABLE FOR ALL

55% reduction of emissions from cars by 2030

50% reduction of emissions from vans by 2030

0 emissions from new cars by 2035

CLEANING OUR ENERGY SYSTEM

Reducing greenhouse gas emissions by at least 55% by 2030 requires higher shares of renewable energy and greater energy efficiency.

42.5%
new renewable energy target for 2030 (with the ambition to reach 45%)

11.7%
improvement in energy efficiency by 2030

SOLUTIONS IN EUROPEEN LEVEL

CO_2 EMISSION PERFORMANCE STANDARDS FOR CARS AND VANS

Passenger cars and vans ('light commercial vehicles') are respectively responsible for around 12% and 2.5% of total EU emissions of carbon dioxide (CO2), which is the main greenhouse gas.

Stricter CO2 emission targets have been in force since 2020. **The average CO2 emissions from all new passenger cars** registered in Europe **already fell by 12% between 2019 and 2020, and further by 12.5% between 2020 and 2021.** The main driver of the decrease in emissions is a surge in zero- emission passenger car registrations, which reached 10% of the EU fleet in 2021.

RENEWABLE ENERGY DIRECTIVE

The Renewable Energy Directive is **the legal framework for the development of clean energy across all sectors of the EU economy**, supporting cooperation between EU countries towards this goal.

Since its introduction, the share of renewable energy sources in EU energy consumption has increased from 12.5% in 2010 to 23% in 2022. **Sweden had the highest share of renewables in its consumption (66%), ahead of Finland (47.9%) and Latvia (43.3%),**

Global leader

EU leads technology development in renewables

23%

share of renewables in EU energy consumption 2022

at least 42.5%

the new binding renewable energy target for 2030

ENERGY PERFORMANCE OF BUILDINGS DIRECTIVE

around 40%

of energy consumed in the EU is used in buildings

+/- 80%

of the energy used in EU households is for heating, cooling and hot water

A**iming to achieve a fully decarbonised building stock by 2050,** the Energy Performance of Buildings Directive contributes directly to the EU's energy and climate goals.

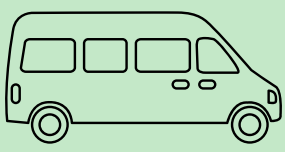
Buildings are the single largest energy consumer in Europe. 85% of EU buildings were built before 2000 and amongst those, 75% have a poor energy performance. **Acting on the energy efficiency of buildings is therefore key to saving energy and achieving a zero-emission** and fully decarbonised building stock by 2050.

SOLUTIONS: GREEN LIFE

54%

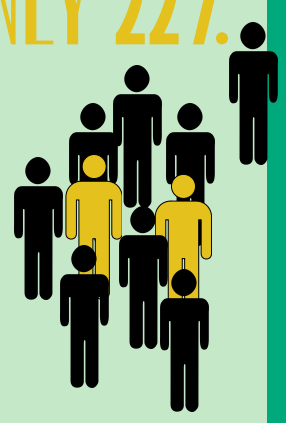
of greenhouse gases emitted by transport come from **private cars**

in **2035** all new cars and vans registered in the European Union must be **0 emission vehicles**



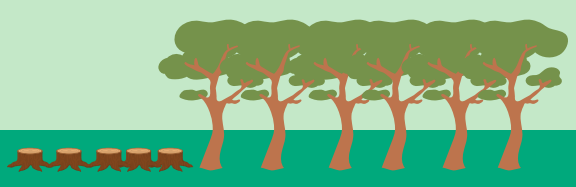
ONLY 22%

of young people prefer soft modes of transport such as walking or cycling



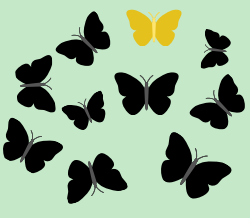
2/3

of the world's forest area is lost to palm oil and soy cultivation



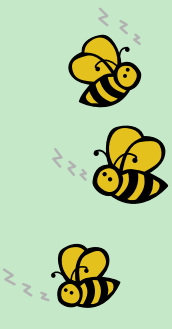
3 BILLION

more trees to be planted by **2030**

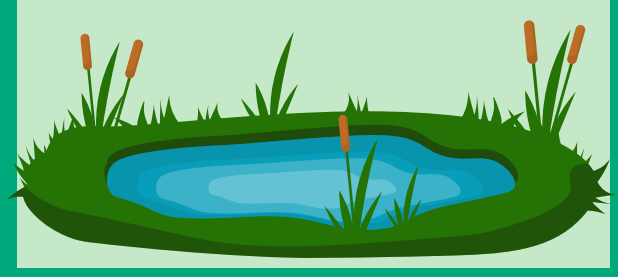


1/10

species of bees and butterflies are threatened with **extinction** in Europe.



at least **20%** of land areas and **20%** of sea areas restored by 2030

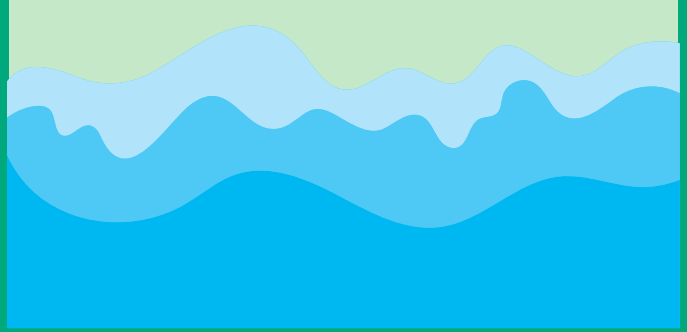


SOLUTIONS: GREEN LIFE

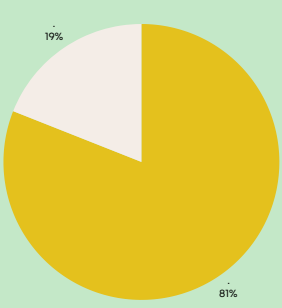
reconnecting Europe's

25000 KM

of rivers

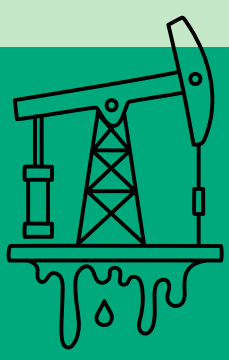


19 **million tonnes** of pollutants were discharged into European waters, according to company declarations in 2021



81% of marine habitats are in poor condition

70% of the energy available in the European Union comes from **fossil fuels**



guarantee a **secure and affordable** energy supply for the EU

gradual restoration of peatlands

30% by 2030

50% by 2050

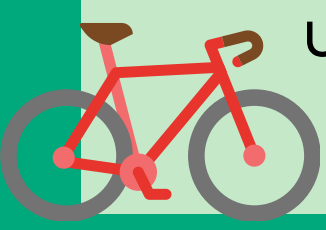
40%

of renewable energies in final energy consumption in Europe by 2030

ACTIONS: TRANSPORT

less than **3 KM,**

use your bike



1 TONNE

of CO2 saved per years by carpooling **2 days a week**

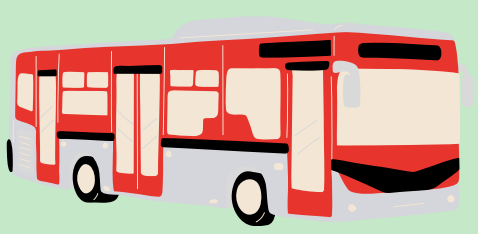
replacing **1/5**

car journeys by **one**

public transport

journey reduces CO2

emissions by **20%**



a **train journey** emits an average of **1.2KG**

of CO2 per passenger per 100 km,

compared with **16.6KG** for air travel

Eco-driving can reduce fuel

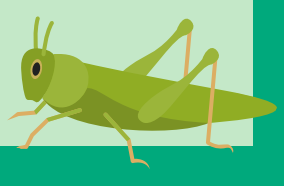
consumption and CO2

emissions by **10-15%**

ACTIONS: BIODIVERSITY

STOP PESTICIDE

Intensive pesticide use has led to **a 40% decline** in insect populations in Europe over **the last 30 years.**



reserve **20%** of your garden as a **natural flower meadow**

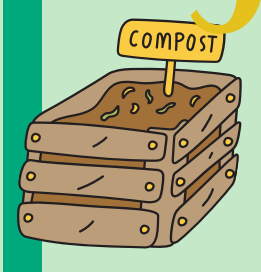
for every **100M²** of garden, install 1 to 3 **insect hotels**

CREATE

a **small pond** for wildlife

Eat fruits and vegetables in **SEASON**

Adopt **composting** to reduce household waste by **30%**



ACTIONS: WATER

CHECK REGULARLY FOR WATER LEAKS

repairing a leak that loses 1 litre/hour avoids wasting 8,760 litres/year

operate the washing machine or dishwasher only when it is

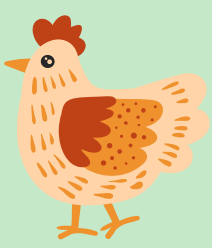
FULL

40%

of water used for gardening can be saved with **a water reclaimer**

150 LITERS

of water saved with a **5-minute shower** instead of a bath



15000 LITERS

of water are needed for 1 kg of beef,

compared with **4000 LITERS**

for 1 kg of chicken.

ACTIONS: ENERGY

Completely **switching off** appliances on standby saves

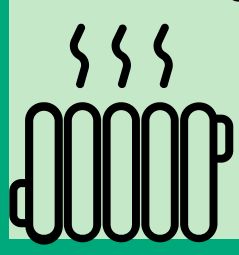
10%. electricity

Insulating your home (attic, walls, windows) can reduce your heating bill by

25%.

3X less electricity used for a **machine at 30°** than at 90°.

Turning down the heating by 1°C saves 7% energy



replacing 5 light bulbs with LEDs saves 75% of electricity.

25%. of heat loss can be reduced by installing **thick curtains in winter.**

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50. Mobilité Durable : réduire l'empreinte carbone de votre entreprise (noos.global)
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53. L'eau, une ressource à préserver | Particuliers | Agir pour la transition écologique | ADEME

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