

# Climate changes



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GREEN  
INDUSTRY  
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# Understanding environmental problems - why is it so important?

- Recognizing global challenges
- Creating effective strategies
- Inspiration and education of others
- Influence on decisions made
- Social responsibility

# Global environmental protection goals

- Preserving biodiversity.
- Sustainable use of natural resources. • Protection of ecosystems. • Fighting climate change.
- Sustainable development.
- Water and sea protection.
- Education and raising public awareness. • Cooperation with other entities

# What is climate change?

- Climate change is a term referring to changes in long-term atmospheric conditions, such as temperature and rainfall, occurring in a given area. For example, 20,000 years ago, much of the United States was covered with glaciers.

We now have a warmer climate and fewer glaciers in the United States.

# Definitions

- The greenhouse effect

- The greenhouse effect or greenhouse effect is a physical phenomenon, as a result of whose temperature on the planet's surface increases. This follows due to radiation, including heat, being trapped in the atmosphere planets by certain gases. This can be compared to how a greenhouse works, where solar radiation penetrates the glass but the heat is retained inside, causing the temperature to increase. In the case of a planet, these atmospheric gases act like a "glass". greenhouse", which increases the temperature on its surface.

- Greenhouse gases

- Greenhouse gases are gaseous substances that play a major role in generating the greenhouse effect in the Earth's atmosphere.

- Air pollution

- Air pollutants include all substances such as gases and liquids and particulate matter, which is found in the atmosphere and is not typical air components nor occur in slightly elevated levels concentrations compared to its natural composition.

# Causes of climate change

## Energy Production

Generating electricity and heat by burning fossil raw materials is the source of a significant portion of global greenhouse gas emissions.

## Production of Goods

Industry and manufacturing produce greenhouse gas emissions, mainly by burning fossil fuels to produce the energy needed to produce goods such as cement, iron, steel, electronics, plastics, clothing and many others.

## Cutting down forests

Clearing forests to convert areas for agriculture, grazing and other purposes results in emissions because cut trees release the carbon they store.

## Transport

Road transport has the biggest impact on emissions because internal combustion engines use petroleum products such as gasoline to power vehicles.

## Food production

Food production generates emissions of carbon dioxide, methane and other greenhouse gases in many ways.

## Excessive Consumption

The richest 1% of the world's population is collectively responsible for more greenhouse gas emissions than the poorest 50% of the population.

# Consequences of climate change

- Extreme weather events •
- Sea level rise • Threats to biodiversity • Problems with food supply • Droughts and vegetation fires
- Floods
- Poverty and displacement

# What gases are classified as gases? greenhouse?

Carbon dioxide

Methane

Nitrous oxide

Hydrofluorocarbons

Perfluorocarbons

Nitrogen trifluoride



# Greenhouse gases and their impact on global warming

- Because different greenhouse gases have different amplifying effects greenhouse gas, this is usually converted to carbon dioxide (CO<sub>2</sub>) equivalent to enable comparisons between them.
- In 2021, greenhouse gas emissions resulting from economic activities in the European Union amounted to 3.6 billion tons of CO<sub>2</sub> equivalent, which is 22% less than in 2008.
- CO<sub>2</sub> accounted for almost 80% of the total amount of greenhouse gases emitted in the EU European Union in 2021, while methane came in second place, responsible for over 12% of emissions. • It is worth noting that methane does not stay in the atmosphere as long as CO<sub>2</sub>, but it absorbs solar energy much more effectively. It is also a harmful air pollutant and can lead to explosions if leaked.
- Fluorinated greenhouse gases, although emitted in smaller quantities, collectively account for approximately 2.5% of greenhouse gas emissions in the European Union. However, despite being smaller in quantity, these gases retain heat in the atmosphere much more effectively than CO<sub>2</sub>.

# CARBON FOOTPRINT

Carbon footprint is a measure of the amount of greenhouse gases, primarily carbon dioxide (CO<sub>2</sub>), released into the atmosphere as a result of human activity or produced during production, consumption, transport, and energy consumption. It determines the impact of a given product, service, process or activity on climate change by measuring the total amount of greenhouse gas emissions, most often expressed in tonnes of CO<sub>2</sub> or in carbon dioxide equivalent units. A carbon footprint helps you understand how a product or activity contributes to global warming and enables you to take action to reduce greenhouse gas emissions to protect the environment

# Factors influencing the carbon footprint

- Energy Production
- Transport:
- Industry and Production
- Agriculture
- Changes in Land Use • Food Waste
- Consumption and Waste



# Paris Agreement

## atmospheric

- The Paris Agreement, formally known as The United Nations Framework Agreement on Climate Change was concluded in December 2015 during the 21st Conference of the Parties (COP 21) United Nations Framework Convention on Climate Change (UNFCCC) in Paris.
- Climate change is a global issue world, therefore it needs the cooperation of various countries. The Paris Agreement is a strategy aimed at reducing global warming by specific actions.

# Main points of the Paris Agreement

- Long-term goal: Countries have agreed to keep the increase in global average temperature to well below 2°C compared to pre-industrial levels, aiming to limit it to 1.5°C.
- National commitments: Before and during the Paris conference, countries presented their own comprehensive action plans to reduce greenhouse gas emissions, known as "national contributions".
- Cyclical revisions: Countries have committed to presenting their plans every five years, setting more ambitious goals in each subsequent plan.
- Transparency: To ensure transparency and monitor progress, countries have committed to regularly reporting on their activities and informing the public about progress towards achieving their goals.
- Financial support: EU countries and other developed countries have declared continued financing of activities climate, supporting developing countries in reducing emissions and building resilience to the effects of climate change.

The Paris Agreement became legally valid on November 4, 2016, when the condition of its ratification was met by at least 55 countries that are responsible for at least 55% of global greenhouse gas emissions.

All EU member states have ratified the agreement.



# Features of green leaders in the fight against change climatic

- aware of ecological challenges and problems
- Committed to action
- Ability to inspire i mobilizing others to take action
- Sets an example for others own behavior
- Establishes cooperation with other organizations
- Educates societies about climate change and environmental protection

# How to prevent climate change

- Save energy at home
- Reduce, use again, fix and surrender recycled
- Travel sensibly
- Waste less food
- Change the energy source in your home

# Examples of steps that a Green Leader can take in the fight against climate change

Promoting renewable energy sources

Reduction of greenhouse gas emissions

Improving energy efficiency

Educating the public

Sustainable consumption

Afforestation and nature protection

Developing partnerships

Volunteering



# Challenges that may face a green leader

## Political Challenges

Carrying out changes for sustainable development requires strong and stable political support. Green leaders must convince other politicians, institutions and society of the importance and necessity of taking pro-ecological actions.

## Social Challenges

It is required to convince society of the importance of taking pro-ecological actions and the ability to change current consumer habits to more sustainable ones. This determines education and increasing people's awareness of the importance of ecological issues for the future. It is necessary to introduce education and inform the public about the benefits of pro-ecological practices

## Economic Challenges

The implementation of green technologies, renewable energy sources or new, ecological solutions requires significant investments. The transition to a more sustainable economic model involves upfront costs, which may constitute a barrier for some companies and cities.

## Economic Challenges

It is important that these actions do not negatively impact a company's or country's position in the global market, especially in sectors where other countries may not be moving in the same direction. It is necessary to maintain a balance between environmental compliance and a competitive position in the global market.

# Examples of potential solutions using renewable energy

Installing solar  
panels

Installation of solar  
collectors

use of heating systems  
using  
geothermal energy

Installation of  
small wind turbines

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