

CLIMATE ACTION

BARITAKI NEFELI



A few words...

- ▶ Humans are increasingly influencing the climate and the earth's temperature by burning fossil fuels, cutting down rainforests and farming livestock.
- ▶ This adds enormous amounts of greenhouse gases to those naturally occurring in the atmosphere, increasing the greenhouse effect and global warming.

Greenhouse gases

- ▶ Some gases in the Earth's atmosphere act a bit like the glass in a greenhouse, trapping the sun's heat and stopping it from leaking back into space.
- ▶ Many of these gases occur naturally, but human activity is increasing the concentrations of some of them in the atmosphere, in particular:
 - ▶ carbon dioxide (CO₂)
 - ▶ methane
 - ▶ nitrous oxide
 - ▶ fluorinated gases
- ▶ CO₂ is the greenhouse gas most commonly produced by human activities and it is responsible for 64% of man-made global warming. Its concentration in the atmosphere is currently 40% higher than it was when industrialisation began.
- ▶ Other greenhouse gases are emitted in smaller quantities, but they trap heat far more effectively than CO₂, and in some cases are thousands of times stronger. Methane is responsible for 17% of man-made global warming, nitrous oxide for 6%.

Causes of rising emissions

- ▶ Burning coal, oil and gas produces carbon dioxide and nitrous oxide.
- ▶ Cutting down forests (deforestation). Trees help to regulate the climate by absorbing CO₂ from the atmosphere. So when they are cut down, that beneficial effect is lost and the carbon stored in the trees is released into the atmosphere, adding to the greenhouse effect.
- ▶ Increasing livestock farming. Cows and sheep produce large amounts of methane when they digest their food.
- ▶ Fertilisers containing nitrogen produce nitrous oxide emissions.
- ▶ Fluorinated gases produce a very strong warming effect, up to 23 000 times greater than CO₂. Thankfully these are released in smaller quantities and are being phased down by EU regulation

Global warming

- ▶ The current global average temperature is 0.85°C higher than it was in the late 19th century. Each of the past three decades has been warmer than any preceding decade since records began in 1850.
- ▶ The world's leading climate scientists think human activities are almost certainly the main cause of the warming observed since the middle of the 20th century.
- ▶ An increase of 2°C compared to the temperature in pre-industrial times is seen by scientists as the threshold beyond which there is a much higher risk that dangerous and possibly catastrophic changes in the global environment will occur. For this reason, the international community has recognised the need to keep warming below 2°C

Consequences of climate action

- ▶ Climate change affects all regions around the world. Polar ice shields are melting and the sea is rising. In some regions extreme weather events and rainfall are becoming more common while others are experiencing more extreme heat waves and droughts.
- ▶ These impacts are expected to intensify in the coming decades.



Melting ice and rising seas

- ▶ When water warms up it expands. At the same time global warming causes polar ice sheets and glaciers to melt.
- ▶ The combination of these changes is causing sea levels to rise, resulting in flooding and erosion of coastal and low lying areas.



Extreme weather, shifting rainfall

- ▶ Heavy rain and other extreme weather events are becoming more frequent. This can lead to floods and decreasing water quality, but also decreasing availability of water resources in some regions.

Consequences of Europe

- ▶ Southern and central Europe are seeing more frequent heat waves, forest fires and droughts.
- ▶ The Mediterranean area is becoming drier, making it even more vulnerable to drought and wildfires.
- ▶ Northern Europe is getting significantly wetter, and winter floods could become common.
- ▶ Urban areas, where 4 out of 5 Europeans now live, are exposed to heat waves, flooding or rising sea levels, but are often ill-equipped for adapting to climate change.

Consequences for developing countries

- ▶ Many poor developing countries are among the most affected. People living there often depend heavily on their natural environment and they have the least resources to cope with the changing climate.

Risks for human health

- ▶ Climate change is already having an impact on health:
- ▶ There has been an increase in the number of heat-related deaths in some regions and a decrease in cold-related deaths in others.
- ▶ We are already seeing changes in the distribution of some water-borne illnesses and disease vectors.

Costs for society and economy

- ▶ Damage to property and infrastructure and to human health imposes heavy costs on society and the economy.
- ▶ Between 1980 and 2011 floods affected more than 5.5 million people and caused direct economic losses of more than €90 billion.
- ▶ Sectors that rely strongly on certain temperatures and precipitation levels such as agriculture, forestry, energy and tourism are particularly affected.

Risks for wildlife

- ▶ Climate change is happening so fast that many plants and animal species are struggling to cope.
- ▶ Many terrestrial, freshwater and marine species have already moved to new locations. Some plant and animal species will be at increased risk of extinction if global average temperatures continue to rise unchecked.



Reduce emissions

- ▶ Use your car less, whenever possible, instead use sustainable transportation, such as bicycling, or use public transportation more often. In the case of long-distance travel, trains are more sustainable than airplanes, which cause a great deal of the CO₂ emitted into the atmosphere. If you're into cars, remember that every kilometer that you increase your speed will considerably increase CO₂ emissions and expenses. According to the CE, each liter of fuel that your car uses, equals 2.5 kilos of CO₂ emitted into the atmosphere.
- ▶ <https://www.activesustainability.com/climate-change/6-actions-to-fight-climate-change/>

Save energy

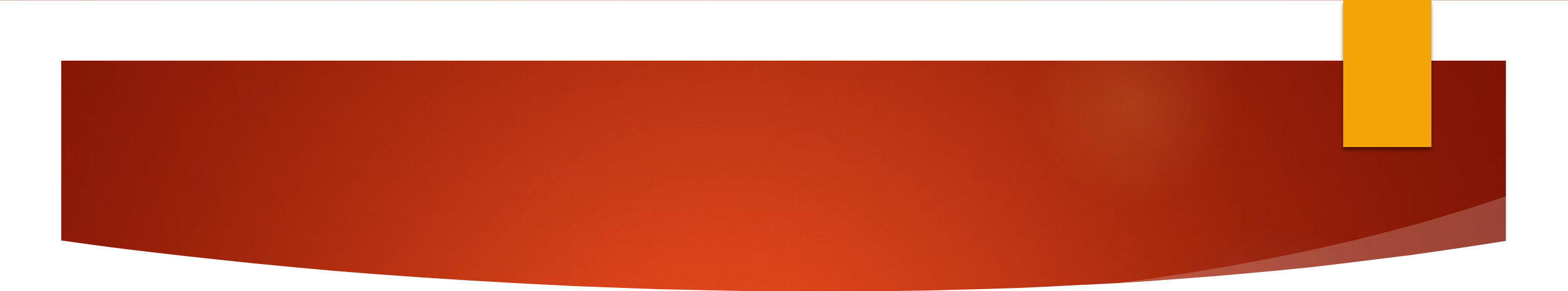
- ▶ Take a look at the labels on your appliances, and never leave them on standby. Always adjust the thermostat for heating and air conditioning. By being careful how we use home appliances, we can save energy and, of course, money at the end of the month

Act against forest loss

- ▶ As far as possible, avoid anything that may be a fire hazard. - If you want to buy wood, choose wood with a certification or seal showing its sustainable origin. - Plant a tree! Throughout its life, it can absorb up to a ton of CO₂.

Make demands from the government

- ▶ Demand that they take measures toward a more sustainable life, any way that you can: promote renewable energy, regulatory measures such as properly labelling products (fishing method used, labels that specify product origins, whether or not they are transgenic, etc.), promote more sustainable public transportation, promote the use of bicycles and other non-polluting transportation methods in the city, correctly manage waste through recycling/reuse, etc.



The population has more power than it realizes to demand measures from governments to raise global awareness of the global warming problem. Think globally, act locally. Your actions are needed in the fight against climate change. Can you think of any other things to do? Share them with us!

<https://www.activesustainability.com/climate-change/6-actions-to-fight-climate-change/>

"The sea, the great unifier, is man's only hope.
Now, as never before, the old phrase has a literal meaning:
we are all in the same boat."

—JACQUES YVES COUSTEAU

