

Six Degrees Can Change the World

Carbon Footprint → Amount of CO₂ that is released due to a specific activity

Carbon Sink → Something that removes CO₂ from the atmosphere. These are good! Forests and oceans are our 2 biggest carbon sinks. (Contain lots of photosynthesizing green plants).

Positive feedback loops → is a 'vicious cycle'. It is a situation in which creates a result and this result increases the original situation.

What happens if warmer by:

1° Celcius

Midwest USA/Canada – Farms very dry / drought. Need to haul water for cattle. Livestock/crops could die.

England – warmer – can grow what couldn't before. ie: wine grapes and fig trees.

Burning fossil fuels (coal, oil and natural gas) releases CO₂

Focus

Farming

Carbon Footprint → Amount of CO₂ that is released due to a specific activity

2° Celcius

Ocean is focus here → coral reefs are dying
→ melting of polar ice caps will raise ocean levels.

Focus

Oceans

Australia – coral reefs are 'bleaching' (dying) as the ocean warms up. Reefs are food and shelter for huge food webs. If they die, many many plants and animals die.

Ocean - many green plants (many very small – algae etc.) photosynthesize and take CO₂ from air.

- many small shelled animals take CO₂ out of the air (to make shells).

Warmer water will kill shelled animals! Therefore more CO₂ stays in air.

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3° Celcius

More extreme weather.

Focus

Extreme Weather

Heat waves – like summer 2003 in Europe especially France. 30,000 human deaths in Europe.

Photosynthesize could break down. Then plants won't take CO₂ out of air !

Major droughts – like Amazon River in 2005. Now very dry → fire than destroy forests.

Positive feedback loops → is a 'vicious cycle'. It is a situation in which creates a result and this result increases the original situation. ie: rainforest dry → so forest fires -→ so drier...so more forest fires etc. etc.

Scientists are running computer simulatins to predict changes.

4° Celcius

India's Ganges River fed by Himilayan glacier. It is melting very fast. May get flooding first and then drought.

Billions of Indian people will not have access to fresh water.

Melting glaciers will raise sea levels → flooding of coastal cities ie: New York and London, England.

'climate refugees' – people who leave their country because of climate conditions.

Focus

Water levels

5-6° Celcius

Extreme weather will be the norm.

Oceans will be 'dead'.

Focus

'Doomsday'

Solutions

Biggest source of CO2 = heating/cooling homes

How can you reduce? → house a bit cooler in winter (less heating), bit warmer in summer (less A/C or none at all).

→ less heat at night when you're sleeping in winter

2nd biggest source of CO2 = transportation

How can you reduce? → walk/bike or take bus instead of your own car

→ buy local (these product leave much smaller carbon footprint in transportation. Think about apples flown in from Australia!)

Much electricity is derived from burning fossil fuels. So reduce the amount of electricity you use personally. What could you do.....?

Engineering / Government – new ideas are being designed and governments are legislating for redu cing our carbon footprints. Better to think about what YOU can do!!