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Climate Change

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Outline

- Introduction: what is climate change?
- What is CO_2 & how harmful is it?
- Consequences for nature, animals & humans
- Practical example: pressure on sea turtles
- Short peek into the future
- What can one do?
- Handout

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What is climate change?

Climate:

- Average conditions of weather in a certain place

Climate change:

- Shifts and changes in these conditions
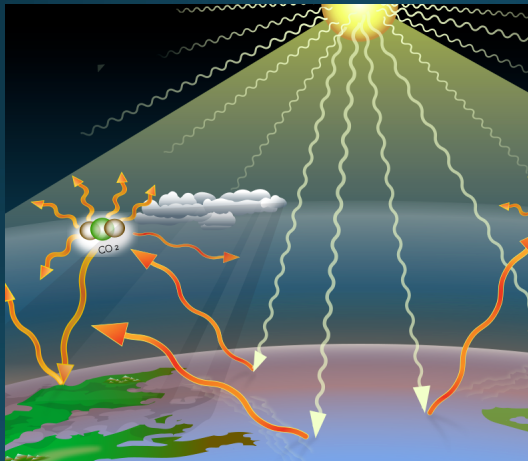
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What is climate change?

natural:

- Sun activities
- Volcano eruptions (…)

humanmade:

- Since 1800s human activities = main driver to increase climate change
- primarily due to the burning of fossil fuels like coal, oil and gas → CO_2 (un.org)

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CO₂ & the greenhouse effect

- Most of the energy used to warm the earth comes from the sun. Without greenhouse gases like CO₂, most of the heat radiation would escape through the atmosphere into space and be lost to the earth.

- The CO₂ and other greenhouse gases contained in the atmosphere absorb the heat radiation and immediately emit it again in all directions.

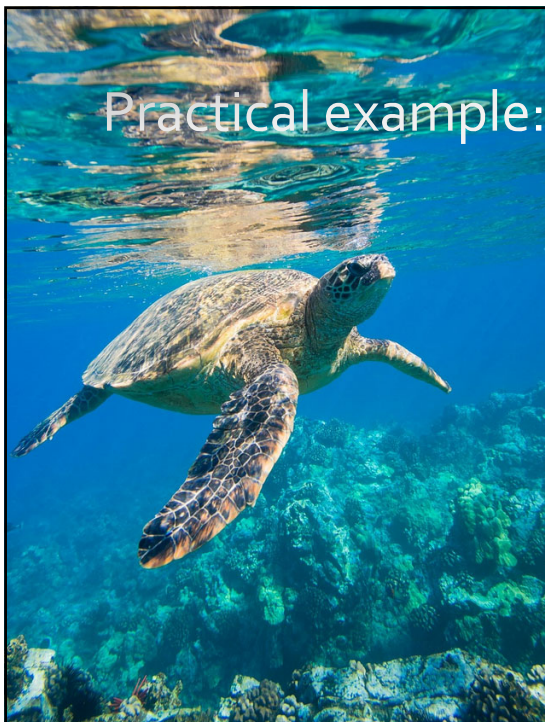- The atmosphere gets warmer like in a greenhouse

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Consequences for nature, animals & humans

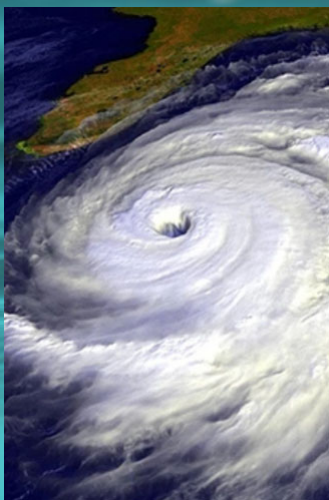| Nature	Animals	Humans
Rising sea levels and warmer oceans	Loss of habitat (Bsp)	Climate refugees and mass migration
Wildfires and longer drought periods	New competitors and feeding enemies	Risk of flooding and fire
Tropical cyclones and heavy rainfalls	Extinction of species	Health effects (water and food illnesses, …)

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Practical example: pressure on sea turtles

- Rising sea levels and more intense storms increasingly erode and destroy their beach habitats

- As ocean temperatures rise, changing water currents expose sea turtles to new predators

- the temperature of the beach sand, in which female sea turtles lay their eggs, influences the sex so the warming climate drives sea turtles to the brink of extinction by creating a scarcity of males. The warmer the sand the more females are born (NASA.gov)

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Short peek into the future

- No ice in the arctic by 2030

- 2,7°C global warming by 2100

- Increase the frequency, intensity, duration of extreme events

- PH value of ocean falls (→acidity)

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What can one do?

Here are some of my ideas:

- Riding the bus instead of using a car
- Instead of Air Condition, open the window for fresh air ☺
- Use stairs instead of the elevator
- Take shorter showers to reduce energy

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