



Erasmus+

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Climate change and its impact on ecosystems

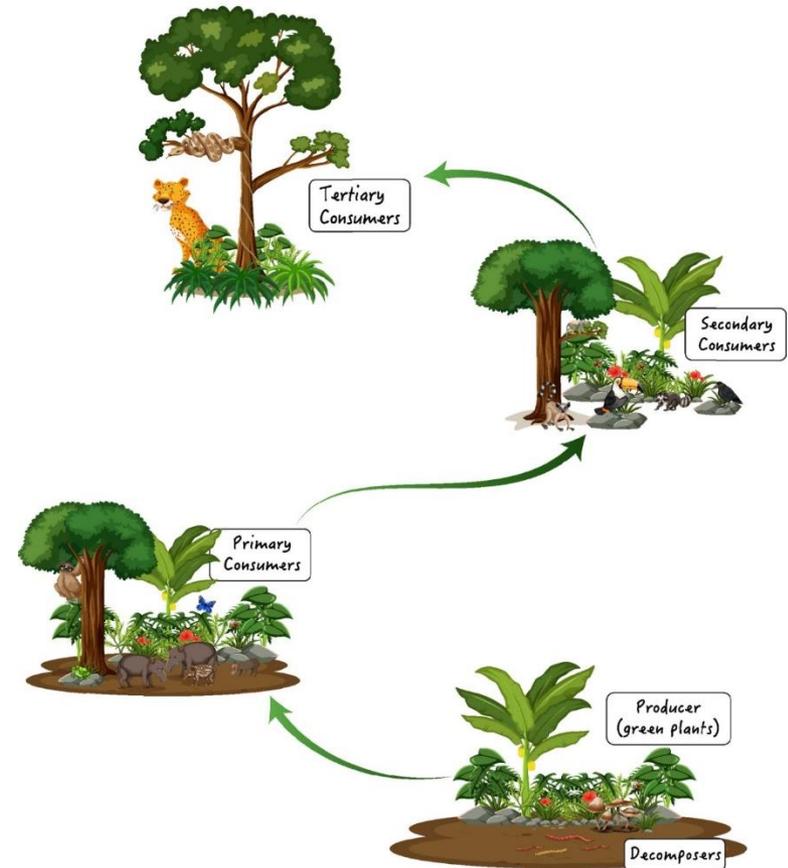
Living environment & living organisms

ECOSYSTEMS



The ecosystem components:

- ❑ abiotic: sunlight, air, water, soil
- ❑ biotic: organisms and their relationships (producers, consumers, reducers)



ECOSYSTEMS



The types of the ecosystem:

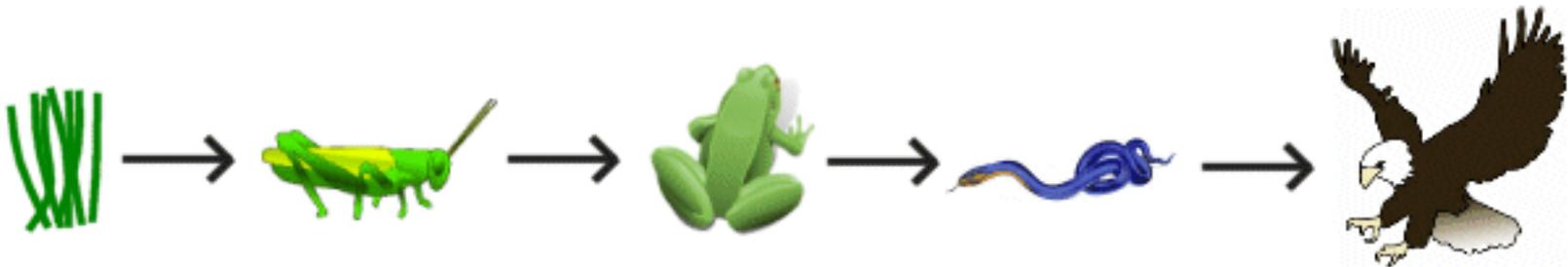
- terrestrial
- water
- natural
- artificial



ECOSYSTEMS



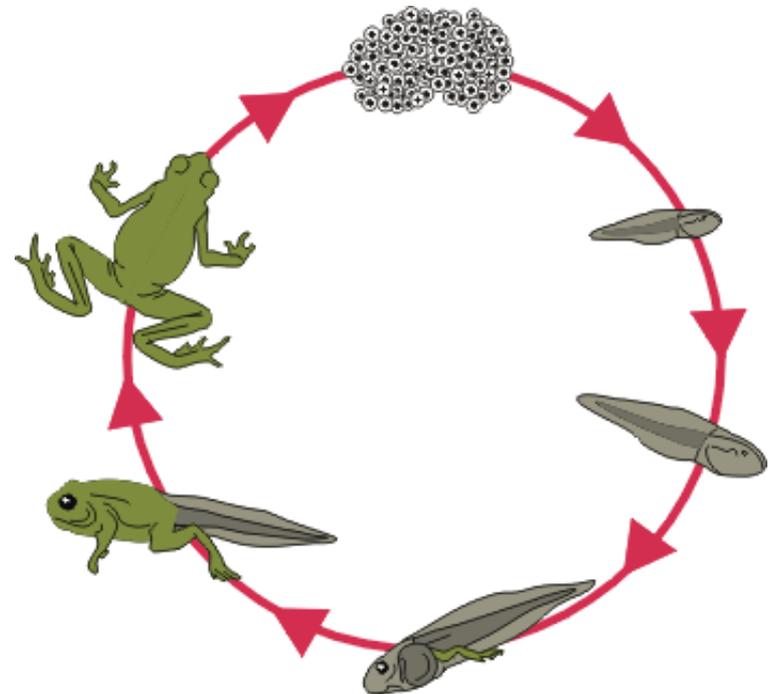
- ❑ Ecosystem = relationships
- ❑ Biotope = place
- ❑ Ecological niche = conditions



ECOSYSTEM EQUILIBRIUM



- Predators and prey
- Population curve
- Reproduction / Extinction

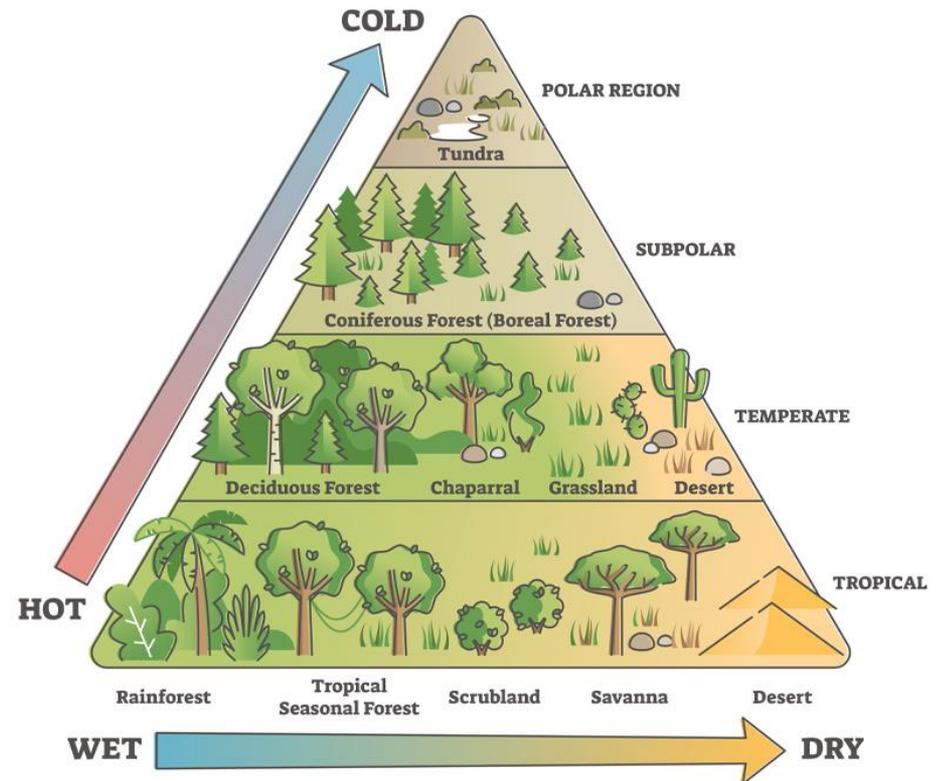


BIOMES

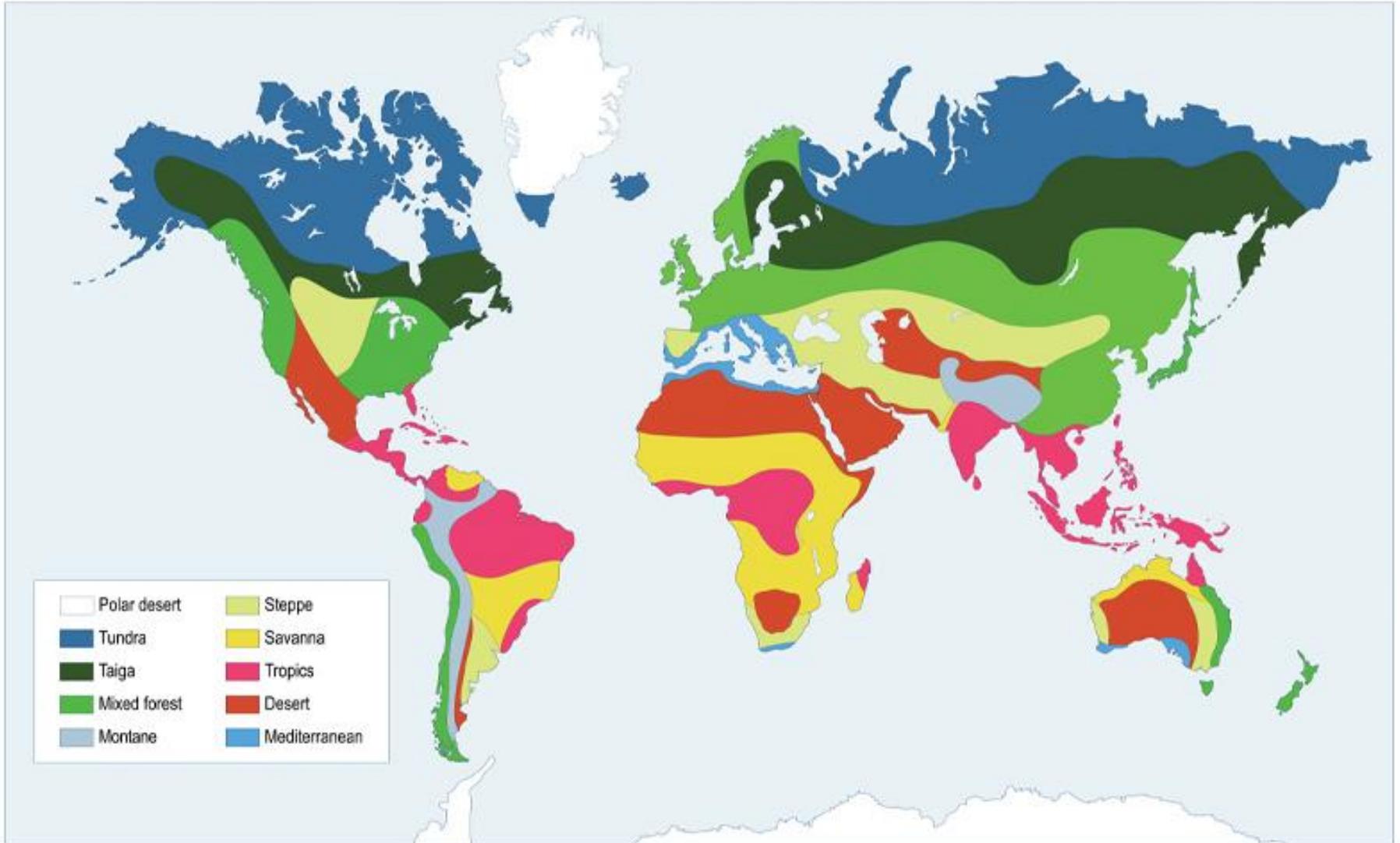


Land habitats = habitats are grouped into biomes.

- Climate
- Weather
- Temperature
- Precipitation
- Survival of organismus



BIOMES



CLIMATE – CLIMATE CHANGE



Climate vs. Weather

Climate zones

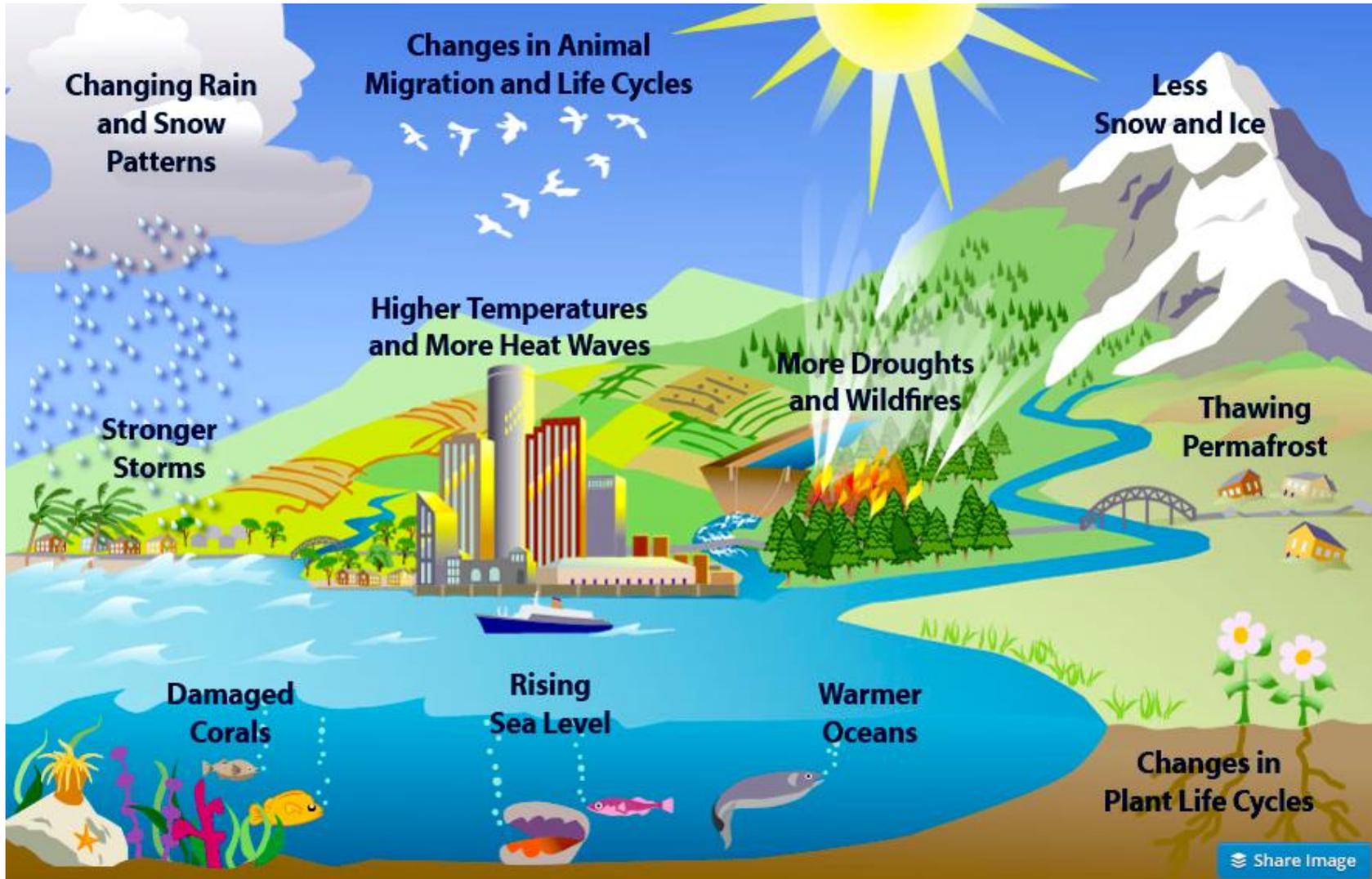
THE FACTORS:

Conditioned by people

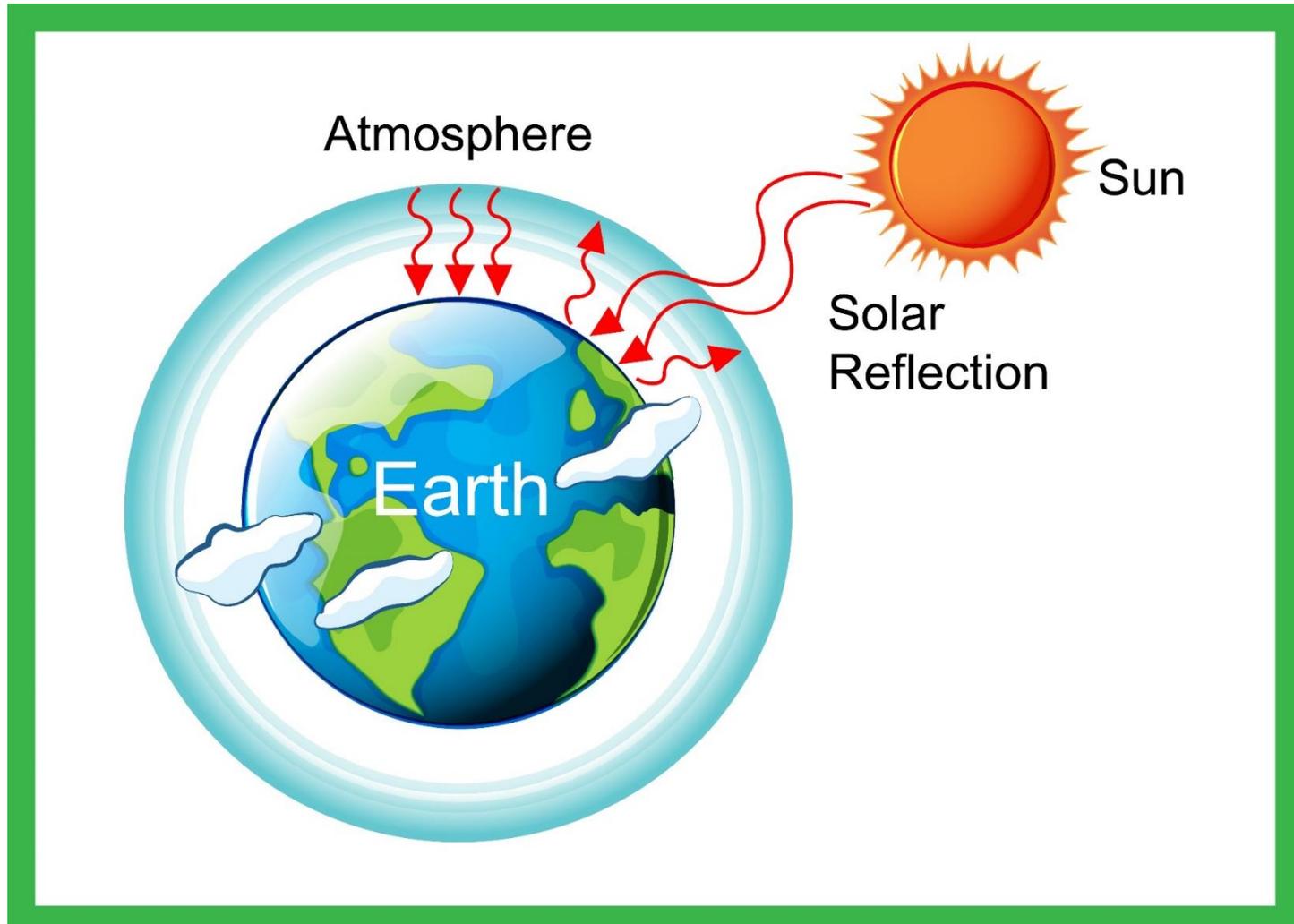
Natural



CLIMATE CHANGE – THE FACTORS



CLIMATE CHANGE – THE GREENHOUSE EFFECT

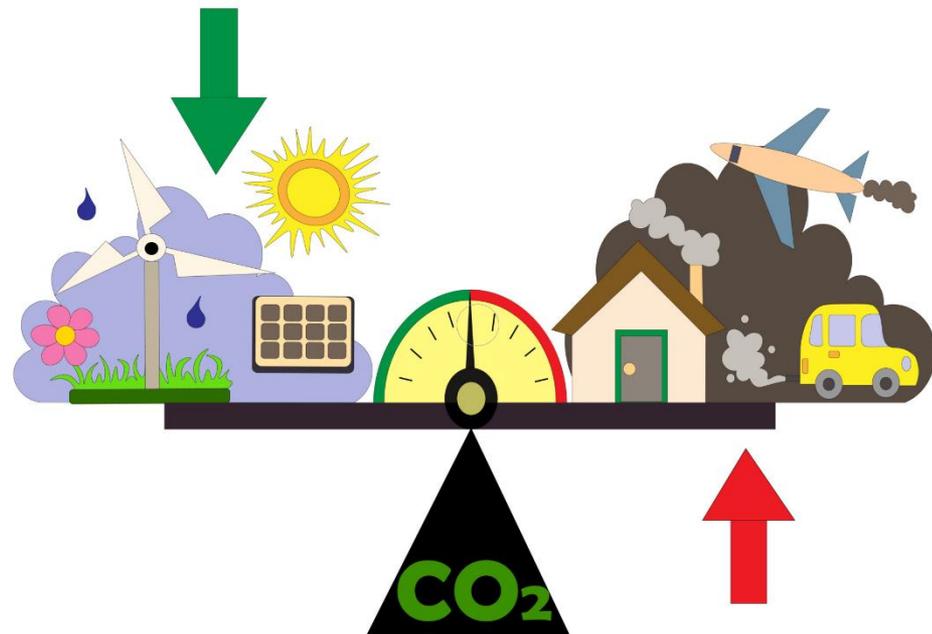


CLIMATE CHANGE – GLOBAL DIMMING



- ❑ Combustion / Global warming
- ❑ Too many particles in the air - light reflection

cooling



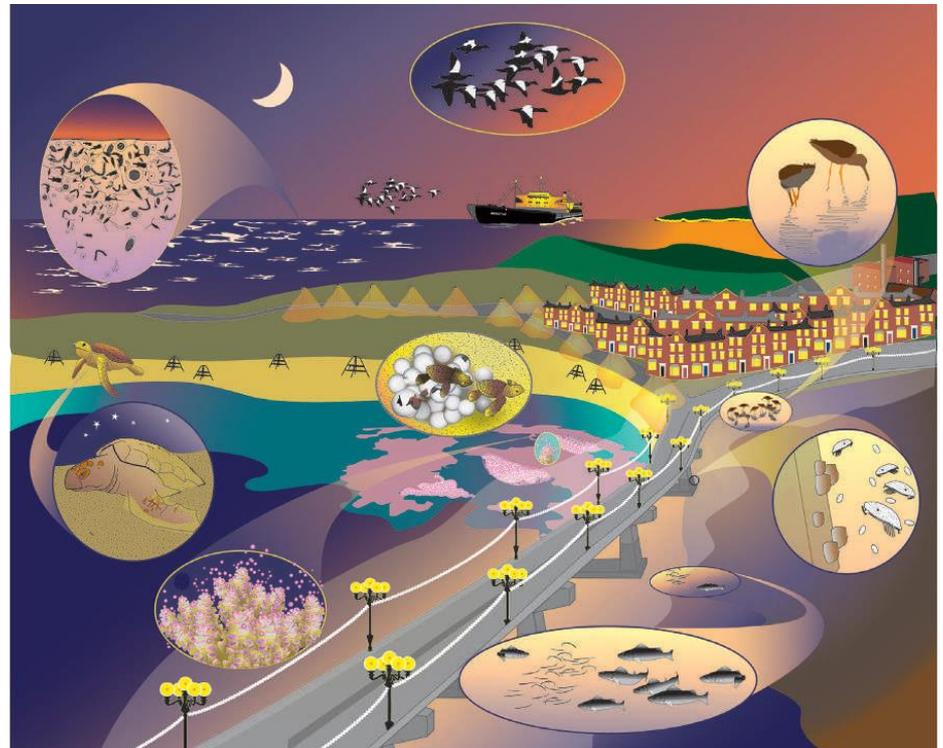
LIGHT POLLUTION



Light directed at the sky is reflected from particles in the atmosphere (dust, water vapor) and spreads far beyond the place of origin.

Clearer sky affects:

- Human health
- Environment



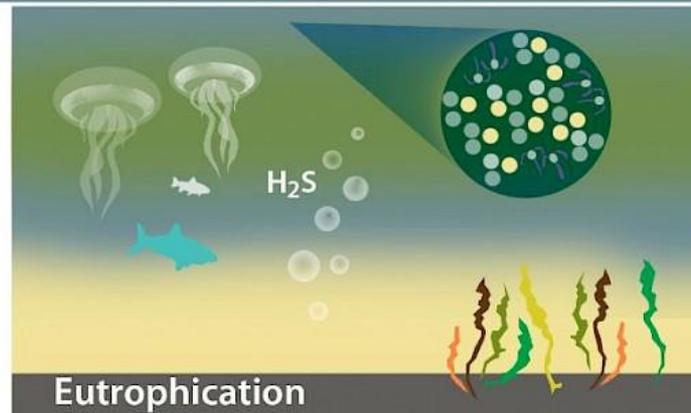
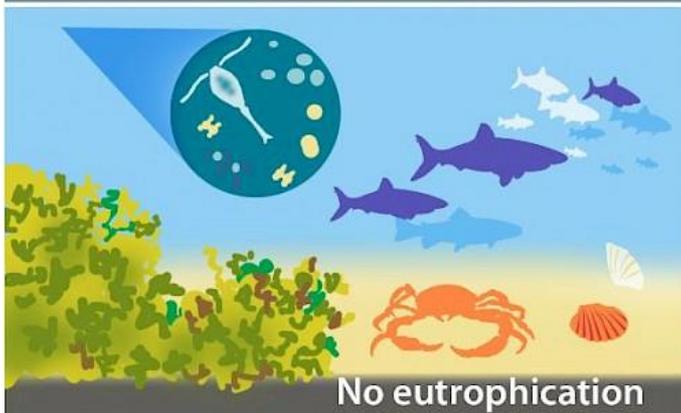
NEGATIVE HUMAN ACTIVITY



- ❑ Air pollution (fumes, gases)
- ❑ Soil contaminants (fertilization, spraying)
- ❑ Water pollution (water eutrophication / secondary pollution)



WATER EUTROPHICATION



CLIMATE CHANGE AND ECOSYSTEMS - EXAMPLES



Forest:

- shift of the upper forest limit
- change in production
- increased drought mortality of trees
- increasing frequency of forest fires,
- multiplication of pests

CLIMATE CHANGE AND ECOSYSTEMS - EXAMPLES



Water:

- groundwater level
- reduction of glacier / sea ice area
- ocean acidification
- warming and expansion of depleted oxygen dead zones

CLIMATE CHANGE AND ECOSYSTEMS - EXAMPLES



Animals:

- biodiversity loss
- changes in life cycles – migration to the north
- invasive species
- climate diseases

CLIMATE CHANGE AND ECOSYSTEMS - EXAMPLES



Weather:

- extreme drought - fires
- precipitation extremes – storms, floods, flooding
- tornado formation



PICTURES - USED SOURCES:



<https://www.vecteezy.com/>

<https://www.oum.ox.ac.uk/thezone/animals/life/images/cycle2.gif>

<https://blog.centreofexcellence.com/app/uploads/2021/07/Exploring-Earths-Beautiful-Biomes-body-2.jpg>

<https://blog.centreofexcellence.com/app/uploads/2021/07/Exploring-Earths-Beautiful-Biomes-body-1.jpg>

<https://d3n8a8pro7vhmx.cloudfront.net/factnet/pages/4841/attachments/original/1594926971/10-climate-effects-EPA-2.png?1594926971>

https://64.media.tumblr.com/81121d58055469171da1c2dd065b0d90/tumblr_npbnpnmbHh1qhgo13o1_1280.png

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