



Climatic Change & SUSTAINABILITY - A brief Overview

DEFORESTATION

- Cutting down forests and burning trees releases stored CO₂ into the atmosphere.
- Deforestation accounts for around 10% of global greenhouse gas emissions (WRI, 2021).
- Between 2015 and 2020, the world lost around 10 million hectares of forest annually (FAO, 2022).

INDIVIDUAL CONSUMPTION HABITS

- Overconsumption of resources, excessive energy use, and high waste generation contribute to increased emissions.
- The average American's carbon footprint is around 16 metric tons of CO₂ equivalent per year (EPA, 2022).

RESIDENTIAL AND COMMERCIAL BUILDINGS

- Fossil fuel combustion for heating, cooling, and lighting in buildings contributes to greenhouse gas emissions.
- In 2020, residential and commercial buildings accounted for around 13% of U.S. greenhouse gas emissions (EPA, 2022).

AGRICULTURE AND LIVESTOCK

- Livestock production (cattle, sheep, etc.) releases methane, a potent greenhouse gas.
- Agricultural practices like rice cultivation, fertilizer use, and manure management also contribute to emissions.
- Agriculture accounts for about 11% of global greenhouse gas emissions (IPCC, 2019).

TRANSPORTATION

- Burning of fossil fuels for transportation (gasoline, diesel) releases greenhouse gases like carbon dioxide (CO₂) and methane.
- In 2020, transportation accounted for 27% of total U.S. greenhouse gas emissions (EPA, 2022).
- Emissions from transportation have increased by about 25% since 1990 (IPCC, 2021).

WASTE MANAGEMENT

- Decomposition of organic waste in landfills releases methane and other greenhouse gases.
- Waste management practices accounted for about 3% of global greenhouse gas emissions in 2020 (IPCC, 2022).

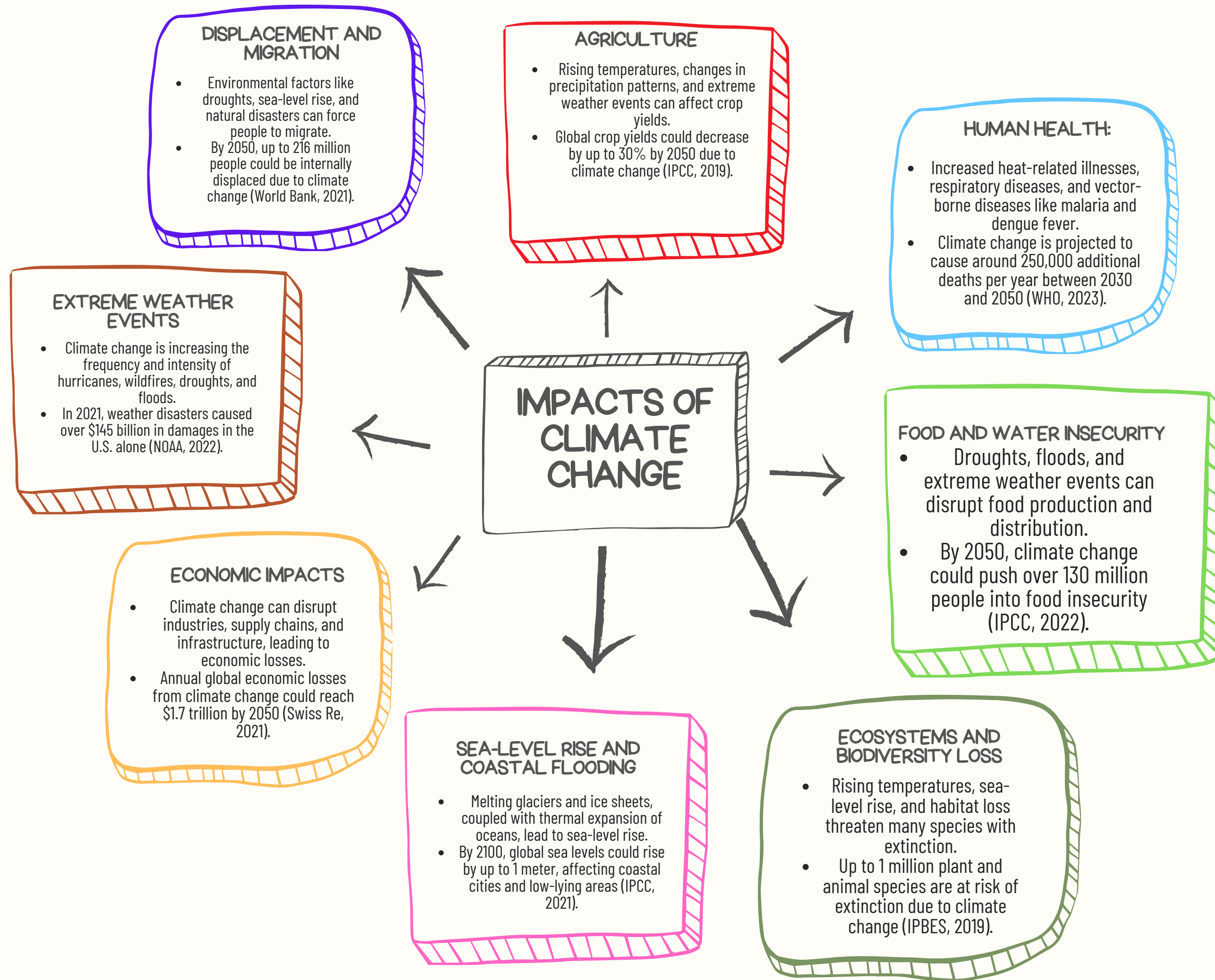
ELECTRICITY GENERATION

- Burning of coal, natural gas, and oil for electricity production releases large amounts of CO₂ and other greenhouse gases.
- In 2020, electricity generation accounted for 25% of U.S. greenhouse gas emissions (EPA, 2022).
- Global electricity demand is projected to increase by 50% by 2040 (IEA, 2022).

INDUSTRIAL PROCESSES

- Manufacturing processes, particularly in the chemical, metal, and mineral industries, release greenhouse gases.
- Industrial processes accounted for about 6% of global greenhouse gas emissions in 2020 (IPCC, 2022).

CLIMATE CHANGE CAUSES



REDUCE ENERGY CONSUMPTION

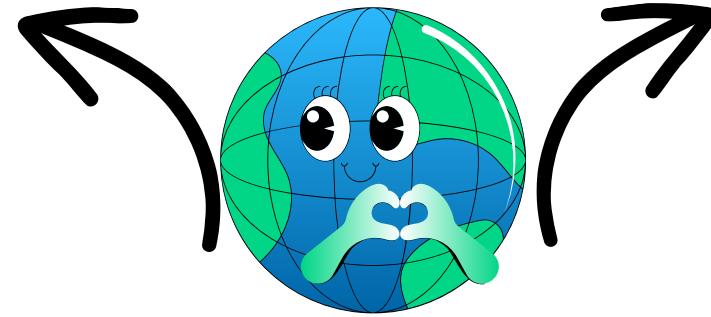
- Adopt energy-efficient practices at home and in daily life, such as using energy-efficient appliances, turning off lights and electronics when not in use, and adjusting thermostat settings.
- According to the IEA, improving energy efficiency could contribute up to 40% of the emissions reductions needed to reach net-zero emissions by 2050 (IEA, 2020).

SHIFT TO RENEWABLE ENERGY SOURCES

- Support and advocate for the transition to renewable energy sources like solar, wind, and hydroelectric power.
- Renewable energy sources accounted for only 11% of global energy consumption in 2019 (IEA, 2021).

SUSTAINABLE TRANSPORTATION

- Opt for public transportation, carpooling, cycling, or walking whenever possible to reduce emissions from personal vehicles.
- Transportation accounts for around 24% of global CO2 emissions (IEA, 2021).



Mitigation Measures

REDUCE WASTE AND PROMOTE RECYCLING

- Adopt a zero-waste lifestyle by reducing consumption, reusing products, and recycling as much as possible.
- In 2019, only 13.5% of municipal solid waste was recycled in the United States (EPA, 2022).

SUSTAINABLE DIET AND FOOD CHOICES

- Reduce consumption of meat and dairy products, which have a higher carbon footprint.
- Adopt a plant-based or flexitarian diet, and support local and sustainable agriculture.
- Livestock production accounts for around 14.5% of global greenhouse gas emissions (FAO, 2022).

REFORESTATION AND CONSERVATION

- Participate in tree-planting initiatives and support organizations working to protect and restore forests.
- Forests absorb around 30% of the CO2 released from burning fossil fuels (FAO, 2022).

ADVOCATE FOR CLIMATE ACTION

- Raise awareness about climate change and its impacts through social media, community events, and engagement with policymakers.
- Support and participate in climate strikes, protests, and other forms of activism.

ADVOCATE FOR CLIMATE ACTION

- Support companies that prioritize sustainability, ethical practices, and environmental responsibility.
- Divest from fossil fuel companies and encourage others to do the same.

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