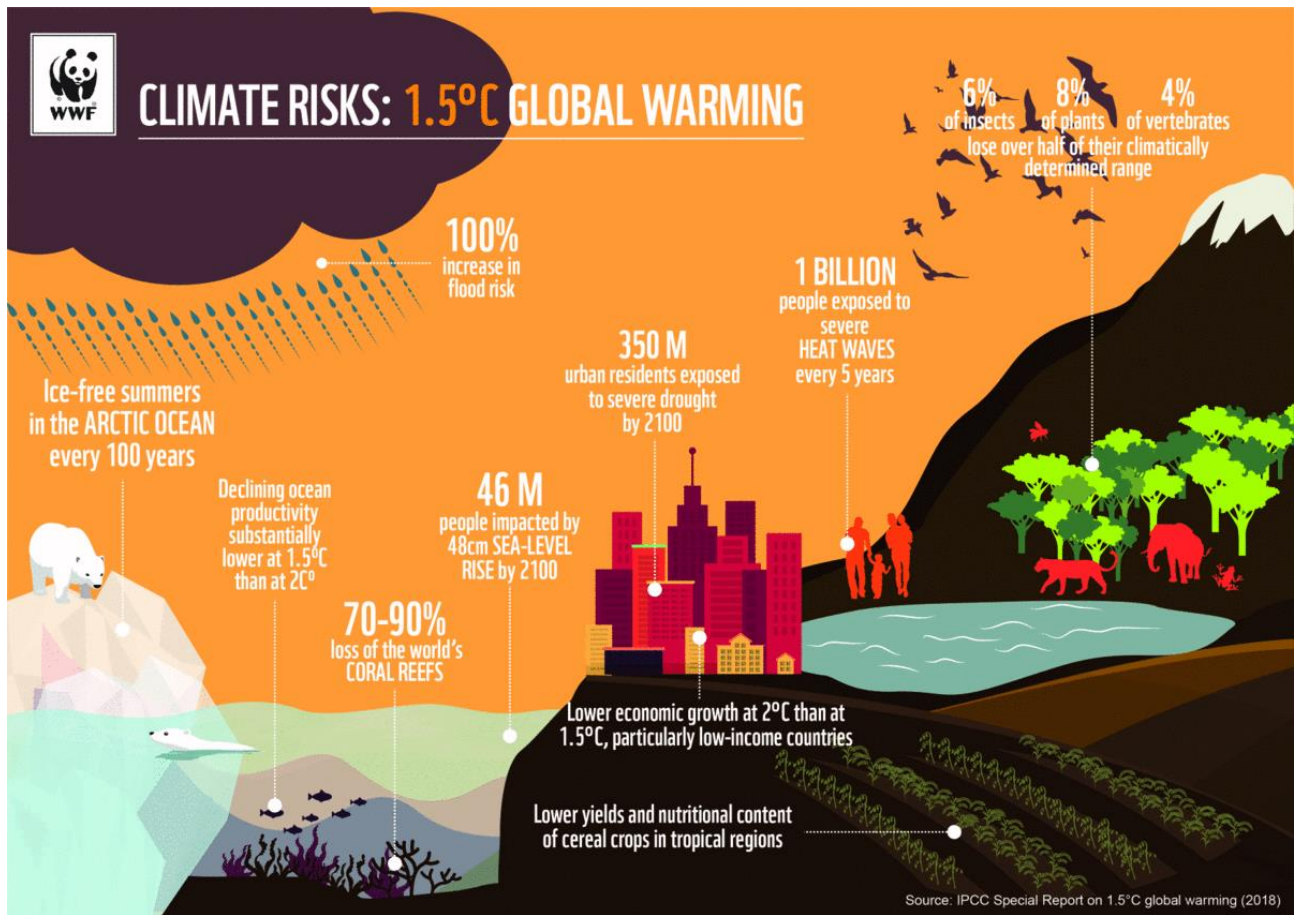




Climate Change

- **Climate change** refers to the **increasing changes in the measures of climate** (e.g., wind patterns, precipitation, temperature, extreme weather, lengths of seasons, etc.) **over long periods of time**. Global warming, the increase in Earth's average temperature, is only one aspect of climate change.
- **97% of scientists worldwide agree** that climate-warming trends over the past century are most likely **caused by human activities**, particularly those that increase the “greenhouse effect”.
- The “**greenhouse effect**” describes warming that occurs when gases in Earth's atmosphere trap heat that is radiated from Earth's surface, preventing the heat from escaping into space.
- Gases that contribute to the “greenhouse effect” include **water vapor, carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons (CFCs)**.
- The concentration of atmospheric carbon dioxide has greatly **increased over the last century due to the burning of fossil fuels** like coal and oil. Concentrations of other greenhouse gases have also been increased through the clearing of land for agriculture, industry, and other human activities.
- **Evidence of climate change** includes: (1) rising seas levels, (2) rising global temperatures, (3) warming oceans, (4) shrinking ice sheets, (5) declining arctic sea ice, (6) glacial retreat, (7) extreme weather events, (8) ocean acidification, and (9) decreased snow cover.
- The **effects of climate change** include rising temperatures, longer growing seasons, changing precipitation patterns, increased droughts and heat waves, more intense hurricanes, rising sea levels, and compromised ecosystems.
- Scientists believe the **solution** is to reduce and stabilize the levels of heat-trapping greenhouse gases in the atmosphere (“mitigation”) and to adjust to climate change that is already happening (“adaptation”).



Resources

- World Wildlife Fund: www.worldwildlife.org
- Climate Change Resource Center: <https://www.fs.usda.gov/ccrc/>
- Global Education Project: <https://www.theglobaleducationproject.org/climate-change/>
- US Environmental Protection Agency (EPA): www.epa.gov
- National Resources Defense Council: www.nrdc.org
- NASA: Climate Change: <http://climate.nasa.gov>
- NASA's Climate Kids: <http://climatekids.nasa.gov>
- World Conservation Network: <https://wildnet.org/>
- Wildlife Conservation Society: www.wcs.org