



Global Warming

BY

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- ✓ Global warming which is also referred to as climate change, is the observed rise in the average temperature of the Earth's climate system the global surface temperature is likely to rise a further 0.3 to 1.7 ° C in the lowest emissions scenario, and 2.6 to 4.8 ° C in the highest emissions scenario .These readings have been recorded by the “national science academies of the major industrialized nations”. Future climate change and impacts will differ from region to region. Expected effects include increase in global temperatures, rising sea levels, changing precipitation, and expansion of deserts.

Geenhouse gases and climate change

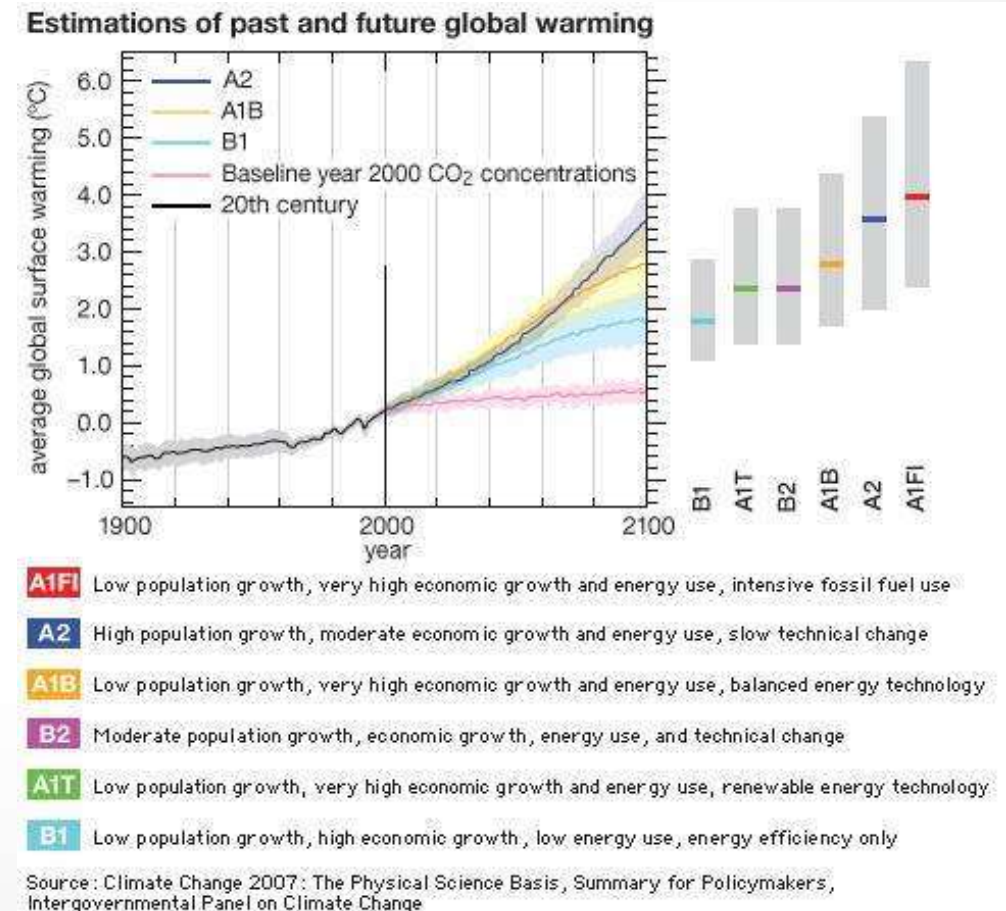
- ❖ Giving voice to a growing conviction of most of the scientific community, the Intergovernmental Panel on Climate Change (IPCC) was formed in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP).

- ❖ In 2013 the IPCC reported that the interval between 1880 and 2012 saw an increase in global average surface temperature of approximately 0.9°C (1.5°F). The increase is closer to 1.1°C (2.0°F) when measured relative to the preindustrial (i.e., 1750–1800) mean temperature.

global warming scenarios

Graph of the predicted increase in Earth's average surface temperature according to a series of climate change scenarios that assume different levels of economic development, population growth, and fossil fuel use. The assumptions made by each scenario are given at the bottom of the graph.

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Global warming scenarios

- Graph of the predicted increase in Earth's average surface temperature according to a series of climate change scenarios that assume different levels of economic development, population growth, and fossil fuel use.
- A special report produced by the IPCC in 2018 honed this estimate further, noting that human beings and human activities have been responsible for a worldwide average temperature increase of between 0.8 and 1.2 ° C (1.4 and 2.2 ° F) of global warming since preindustrial times, and most of the warming observed over the second half of the 20th century could be attributed to human activities.
- It predicted that the global mean surface temperature would increase between 3 and 4 ° C (5.4 and 7.2 ° F) by 2100 relative to the 1986–2005 average should carbon emissions continue at their current rate.



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- The predicted rise in temperature was based on a range of possible scenarios that accounted for future greenhouse gas emissions and mitigation (severity reduction) measures and on uncertainties in the model projections. Some of the main uncertainties include the precise role of feedback processes and the impacts of industrial pollutants known as aerosols, which may offset some warming.

Human Impact

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Greenhouse effect on Earth

- ❑ The greenhouse effect on Earth. Some incoming sunlight is reflected by Earth's atmosphere and surface, but most is absorbed by the surface, which is warmed.
- ❑ Infrared (IR) radiation is then emitted from the surface. Some IR radiation escapes to space, but some is absorbed by the atmosphere's greenhouse gases (especially water vapour, carbon dioxide, and methane) and reradiated in all directions, some to space and some back toward the surface, where it further warms the surface and the lower atmosphere.

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