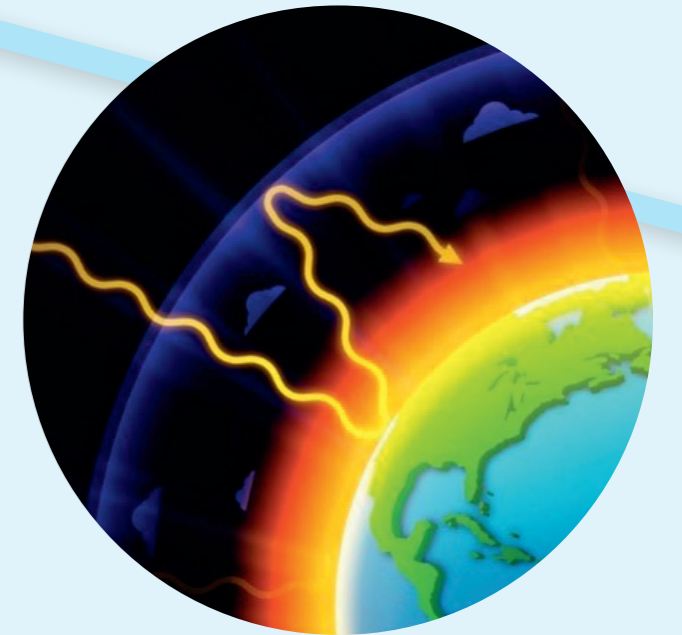


Greenhouse gas contribution to climate change

Increasing levels of greenhouse gas in the atmosphere lead to **global warming** – temperatures are now increasing 3-4 times faster in the Arctic than for the entire Globe

The Greenhouse Effect

Greenhouse gases are transparent to incoming short wave solar radiation, while they effectively reflect outgoing long wave radiation back to Earth, leading to warming. This warming, denoted 'The Greenhouse Effect', is essential for life on Earth, which otherwise would have a mean surface temperature of -18°C.



What is the problem?

Greenhouse gas concentrations

Land use changes and burning of fossil fuel to support a growing human population has resulted in increased emissions of greenhouse gases to the atmosphere over the past 200 years.

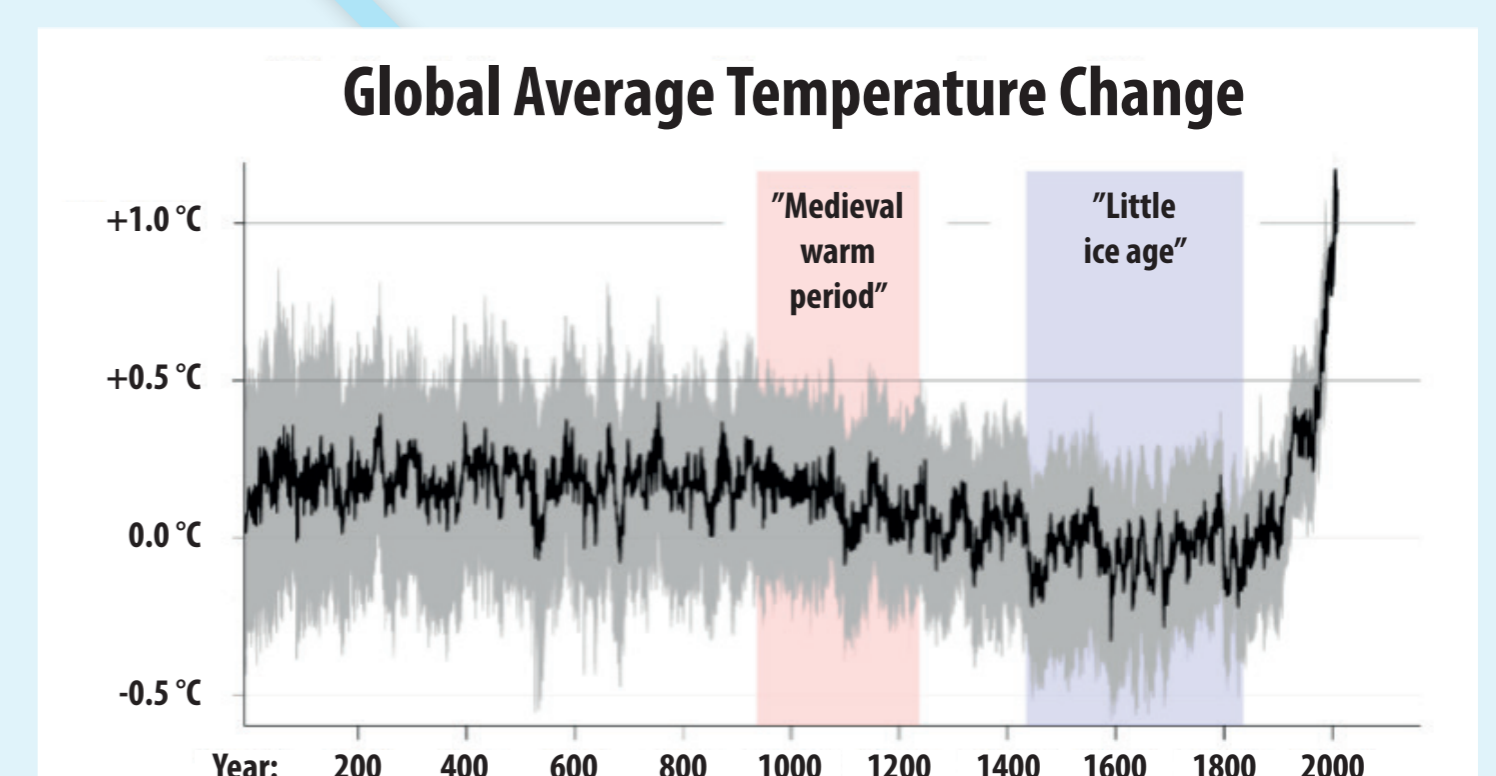
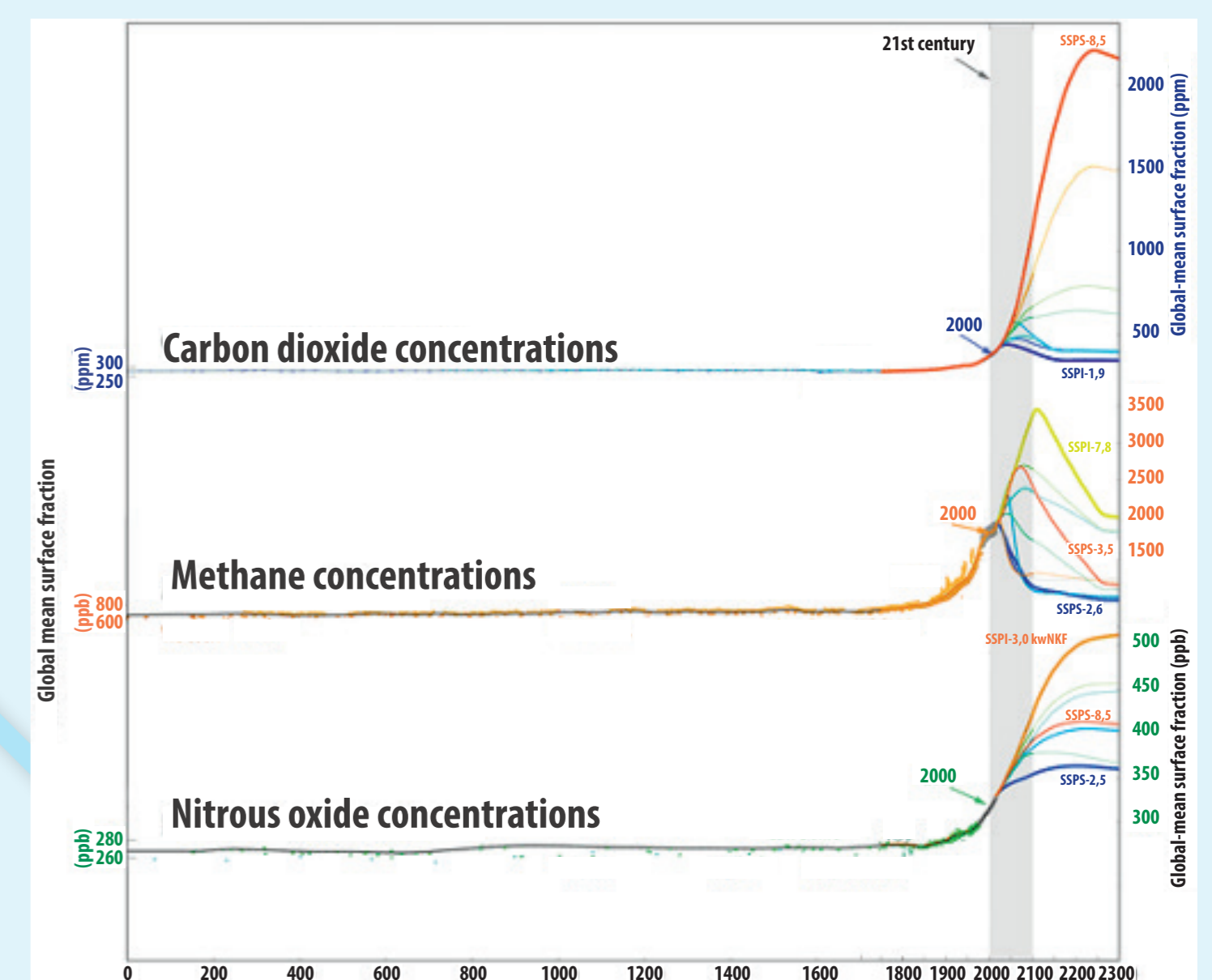
Increasing temperatures and global challenges

The greenhouse gas emissions have increased global temperatures dramatically compared to recent historic temperature changes.

The warming has led to higher temperatures, more frequent weather extremes (storms, regional drought/flooding), changing ecosystems, etc. It is expected that this will likely lead to increased international conflicts over water and other natural resources, and an increasing number of climate refugees.

The Paris Agreement is a legally binding treaty on Climate Change adopted by 196 Parties at the UN Climate Change Conference in Paris, France, in 2015. The aim is to limit the global temperature increase to 1.5°C above pre-industrial levels. The World Weather Organisation (WMO) estimates that there is a 66% chance that we will exceed 1.5°C before 2027.

Immediate actions are therefore required by governments and people.



What can you do?

You can help minimising Climate Change by:

1. **Reducing your own contributions, i.e.:**
 - **Save energy at home** - energy efficient houses and electronics (turn them off, when not in use).
 - **Use sustainable energy sources at home** – switch to solar, hydro, wind or geothermal energy.
 - **Make your money count** – buy local, durable, used, recycled, and environmental friendly products.
 - **Reduce consumption** - share or borrow things, repair, reuse and sort waste for recycling.
 - **Eat local food and reduce consumption of meat and dairy products.**
 - **Minimise food waste.**
 - **Walk, bike or use public transport.**
 - **Switch to an electric vehicle.**
 - **Consider your long-distance travels** – reduce and take train when possible.
2. **Speaking up**
 - **Encourage your friends and workplace to be more sustainable and put pressure on governments to find political solutions to minimise human caused Climate Change.**

<https://www.un.org/en/actnow/ten-actions>

Water vapour is the most important greenhouse gas on Earth, but Carbon Dioxide (CO₂), Methane (CH₄) and Laughing Gas (N₂O) are common greenhouse gases with significant greenhouse effects.