

ACADEMIA

Core Concepts and Terms

- Global mean surface temperature (GMST): Estimated global average of near-surface air temperatures over land and sea ice, and sea surface temperatures over ice-free ocean regions, with changes normally expressed as departures from a value over a specified reference period. When estimating changes in GMST, near-surface air temperature over both land and oceans are also used.¹⁹ {1.2.1.1}
- **Pre-industrial:** The multi-century period prior to the onset of large-scale industrial activity around 1750. The reference period 1850–1900 is used to approximate pre-industrial GMST. {1.2.1.2}
- **Global warming:** The estimated increase in GMST averaged over a 30-year period, or the 30-year period centred on a particular year or decade, expressed relative to pre-industrial levels unless otherwise specified. For 30-year periods that span past and future years, the current multi-decadal warming trend is assumed to continue.
- **Net zero CO₂ emissions:** Net zero carbon dioxide (CO₂) emissions are achieved when anthropogenic CO₂ emissions are balanced globally by anthropogenic CO₂ removals over a specified period.
- Carbon dioxide removal (CDR): Anthropogenic activities removing CO₂
 from the atmosphere and durably storing it in geological, terrestrial, or ocean
 reservoirs, or in products. It includes existing and potential anthropogenic
 enhancement of biological or geochemical sinks and direct air capture and
 storage, but excludes natural CO₂ uptake not directly caused by human activities.
- Total carbon budget: Estimated cumulative net global anthropogenic CO₂
 emissions from the pre-industrial period to the time that anthropogenic CO₂
 emissions reach net zero that would result, at some probability, in limiting global warming to a given level, accounting for the impact of other anthropogenic emissions.
- Remaining carbon budget: Estimated cumulative net global anthropogenic CO₂ emissions from a given start date to the time that anthropogenic CO₂ emissions reach net zero that would result, at some probability, in limiting global warming to a given level, accounting for the impact of other anthropogenic emissions.
- **Temperature overshoot:** The temporary exceedance of a specified level of global warming.
- Emission pathways: In this Summary for Policymakers, the modelled trajectories of global anthropogenic emissions over the 21st century are termed emission pathways. Emission pathways are classified by their temperature trajectory over the 21st century: pathways giving at least 50% probability based on current knowledge of limiting global warming to below 1.5°C are classified as 'no overshoot'; those limiting warming to below 1.6°C and returning to 1.5°C by 2100 are classified as '1.5°C limited-overshoot'; while those exceeding 1.6°C but still returning to 1.5°C by 2100 are classified as 'higher-overshoot'.
- Impacts: Effects of climate change on human and natural systems. Impacts can have beneficial or adverse outcomes for livelihoods, health and well-being, ecosystems and species, services, infrastructure, and economic, social and cultural assets.
- **Risk:** The potential for adverse consequences from a climate-related hazard for human and natural systems, resulting from the interactions between the hazard and the vulnerability and exposure of the affected system. Risk integrates the likelihood of exposure to a hazard and the magnitude of its impact. Risk also can describe the potential for adverse consequences of adaptation or mitigation responses to climate change.
- Climate-resilient development pathways (CRDPs): Trajectories that strengthen sustainable development at multiple scales and efforts to eradicate poverty through equitable societal and systems transitions and transformations while reducing the threat of climate change through ambitious mitigation, adaptation and climate resilience.

(https://report.ipcc.ch/sr15/)