IPCC 5th Assessment Cycle (2008-2014):
Human influence on the climate system is clear.

Changes in climate have caused impacts in natural and human systems.

Continued GHG emissions will cause further warming and amplify existing risks.

Multiple pathways exist to likely limit warming to below 2°C.
Warming of the climate system is unequivocal
Ocean warming dominates the increase in energy stored in the climate system
Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history.
Global surface temperature change for the end of the 21st century is likely to exceed 1.5°C relative to 1850–1900 for all scenarios except RCP2.6.
Further warming will increase the likelihood of severe, pervasive and irreversible impacts for people and ecosystems.
Global mean sea level will continue to rise over the 21st century... and beyond..
Climate change will amplify existing risks and create new risks for natural and human systems.
Global mean warming

All CO₂ emissions since 1750
Global mean warming

All CO₂ emissions since 1750
Any climate target implies a limited carbon budget, with a warming of 0.8 to 2.5°C. This implies 1000 billion tons of carbon.
Budget for the 2°C target: 790 bill t C

CO₂ emissions until 2014*: −545 bill t C

Remaining emissions: 245 bill t C

CO₂ emissions in 2014*: 10.1 bill t C

Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.

* updated from IPCC 2013, WGI SPM
2°C world

4.5°C world

IPCC 2013, Fig. SPM.8; IPCC 2014 Fig. SPM.7
Today we have a choice.