



Future Pathway for Adaptation, Mitigation and Sustainable Development

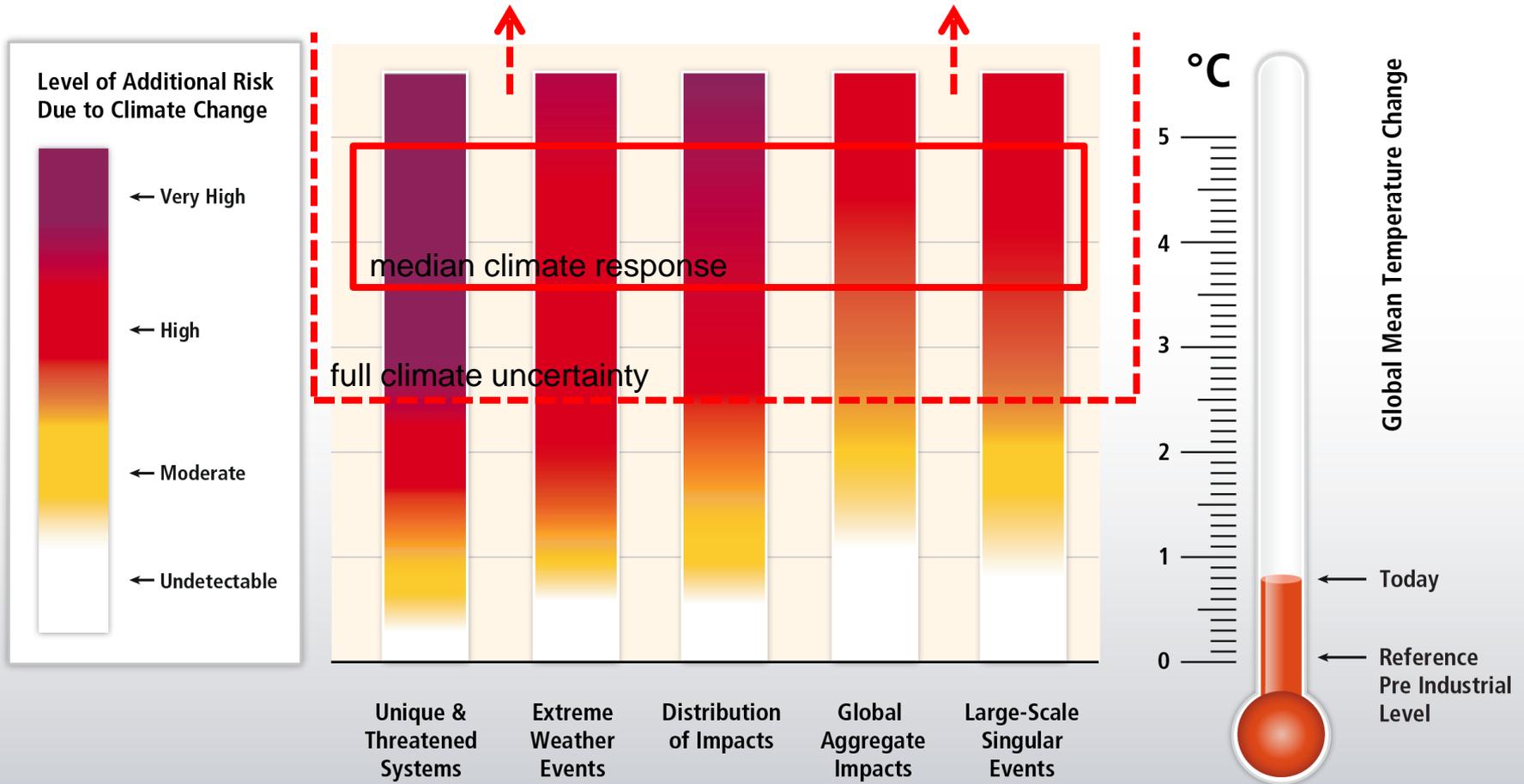
Ottmar Edenhofer, Co-Chair IPCC WGIII
Structured Expert Dialogue
2 December 2014, Lima, Peru

IPCC AR5 Synthesis Report

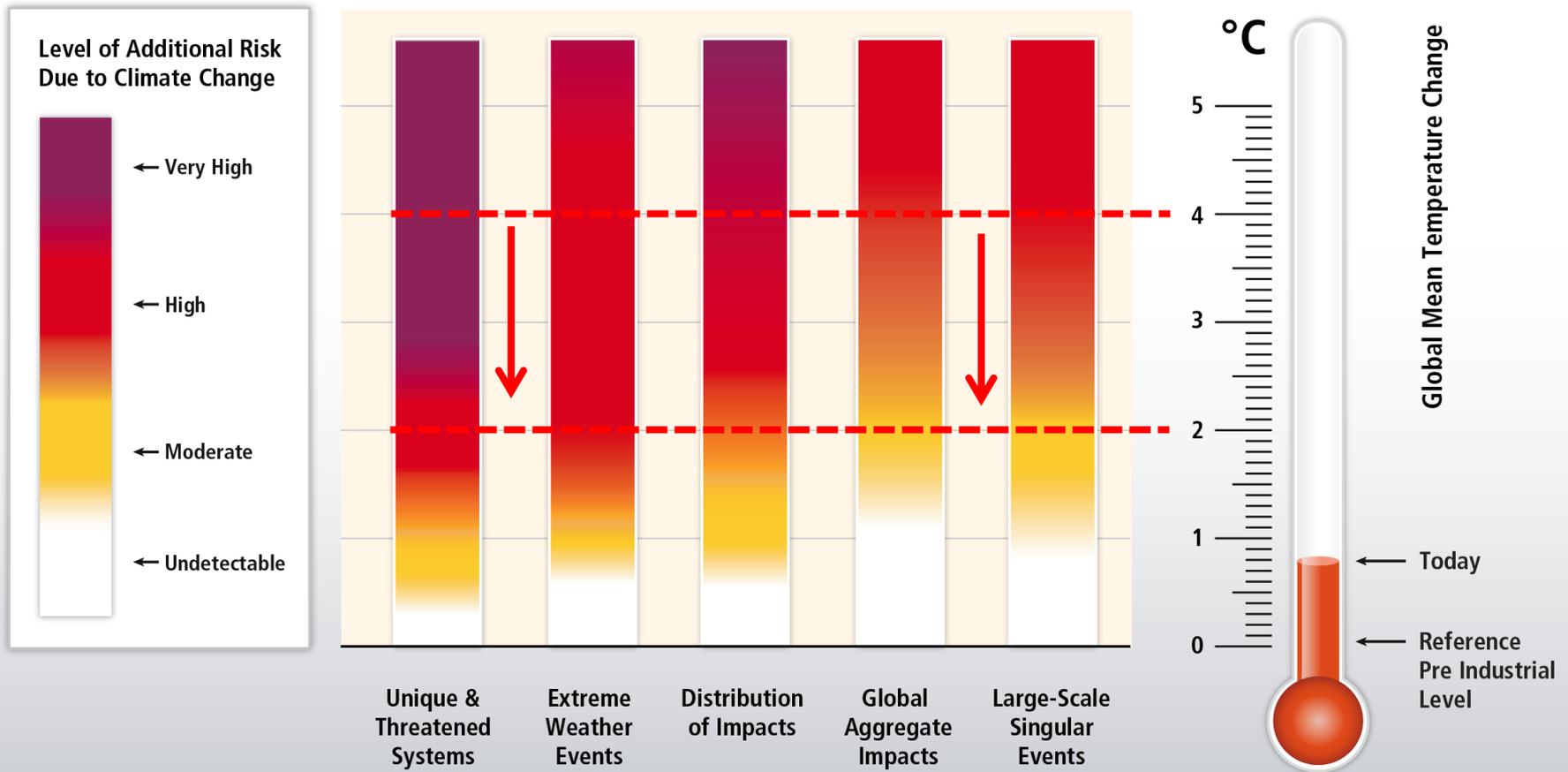
ipcc
INTERGOVERNMENTAL PANEL ON climate change



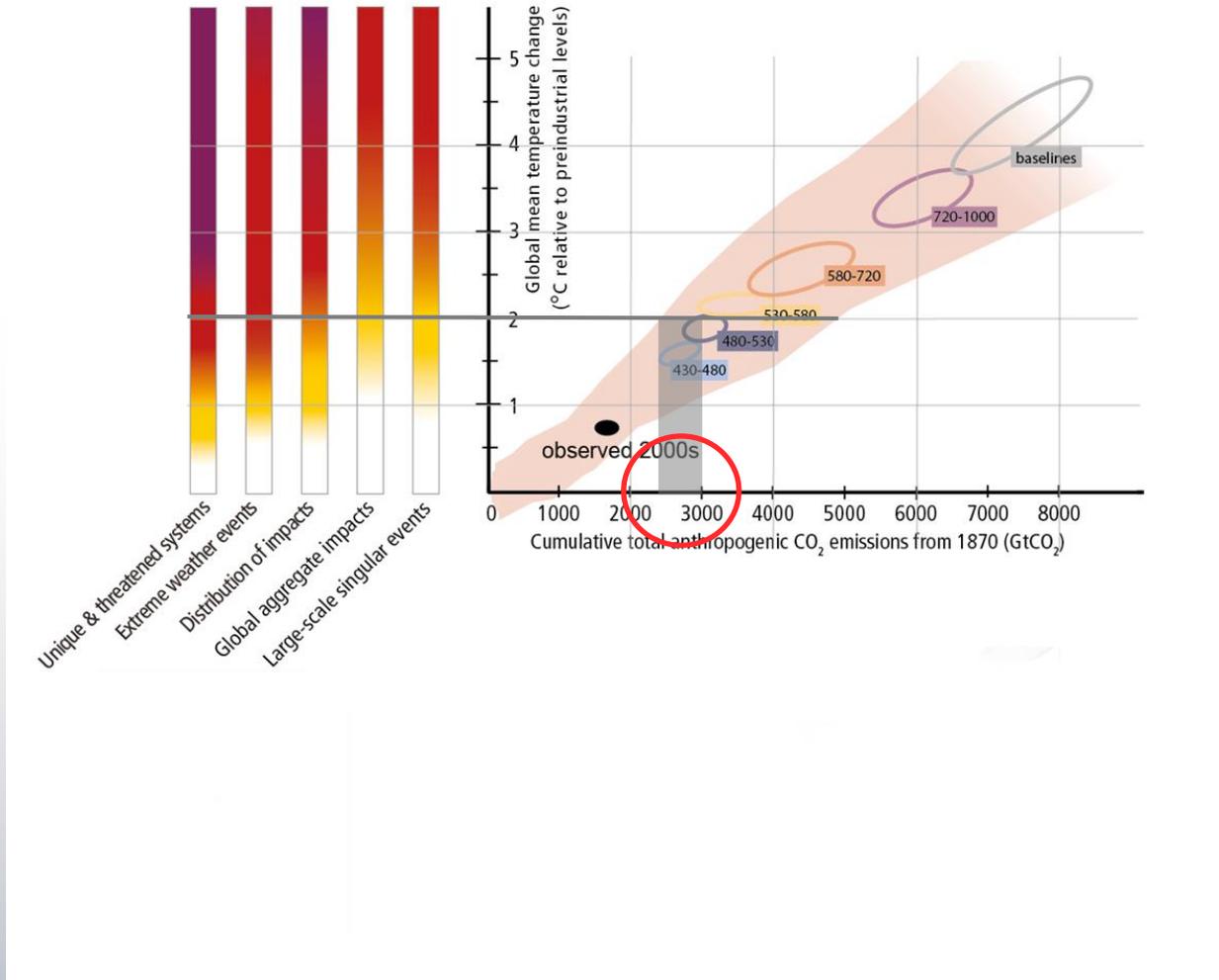
If current trends continue, warming by the end of the 21st century will lead to high to very high risk of severe, widespread, and irreversible impacts globally.



Substantial and sustained cuts in GHG emissions can significantly reduce climate risks.



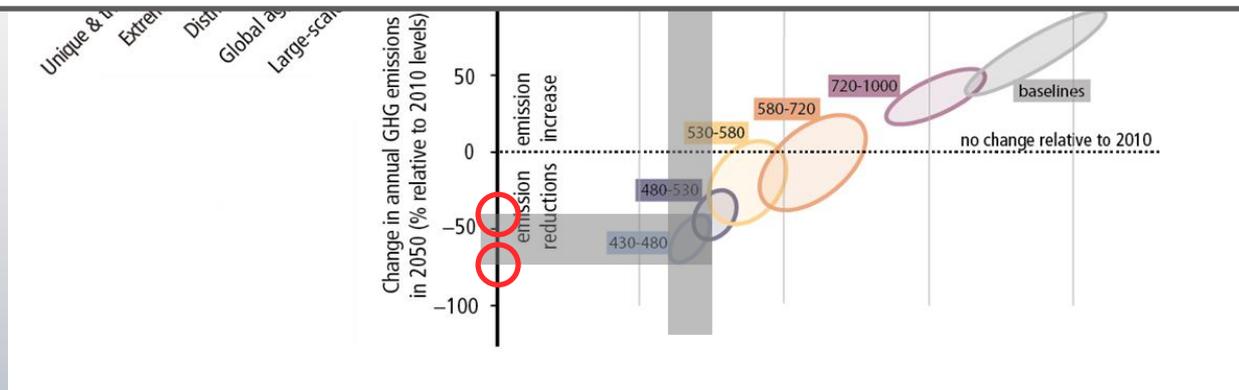
Risks from climate change depend on cumulative CO₂ emissions...



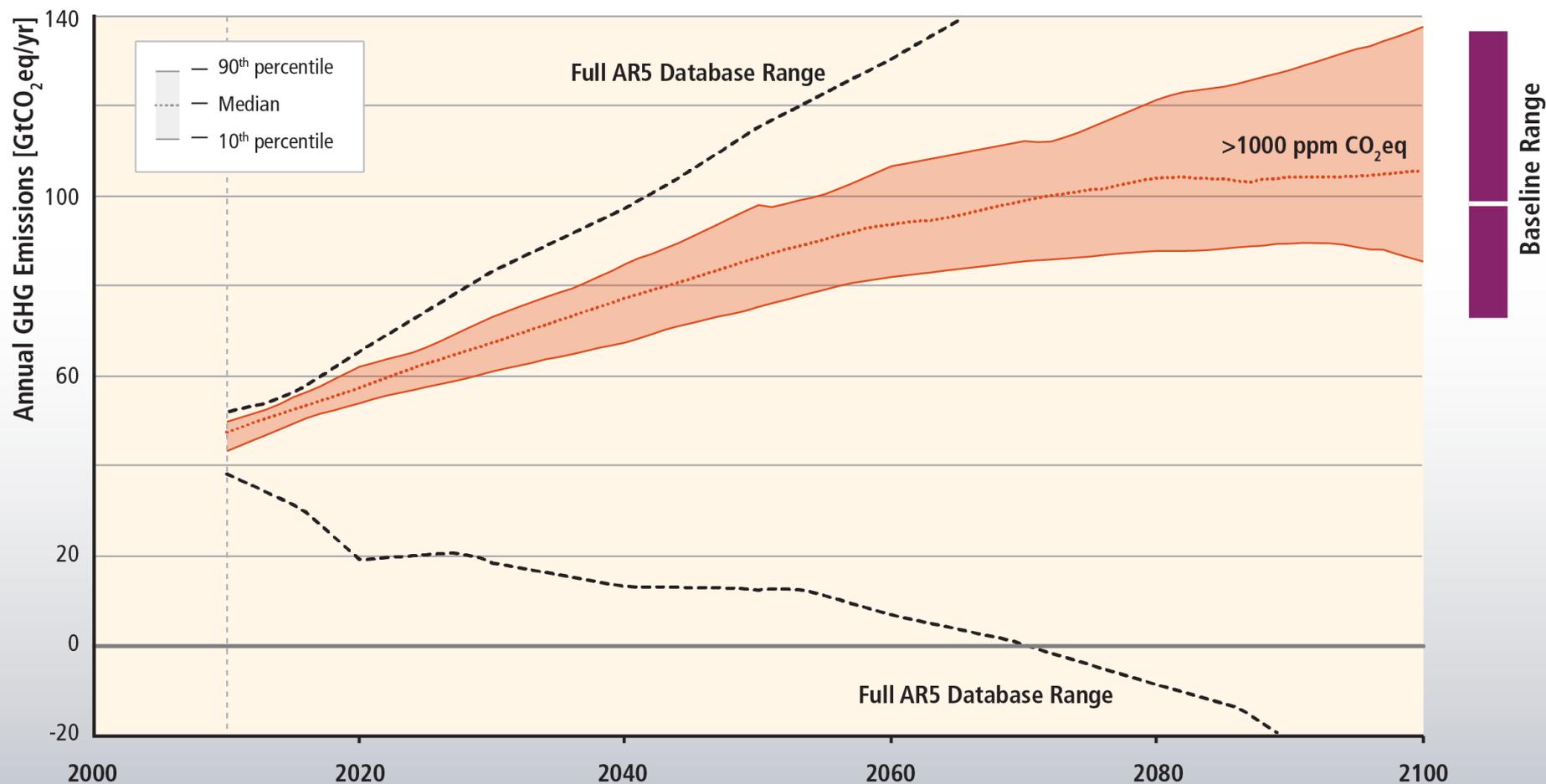
...which in turn depend on annual GHG emissions over the next decades.



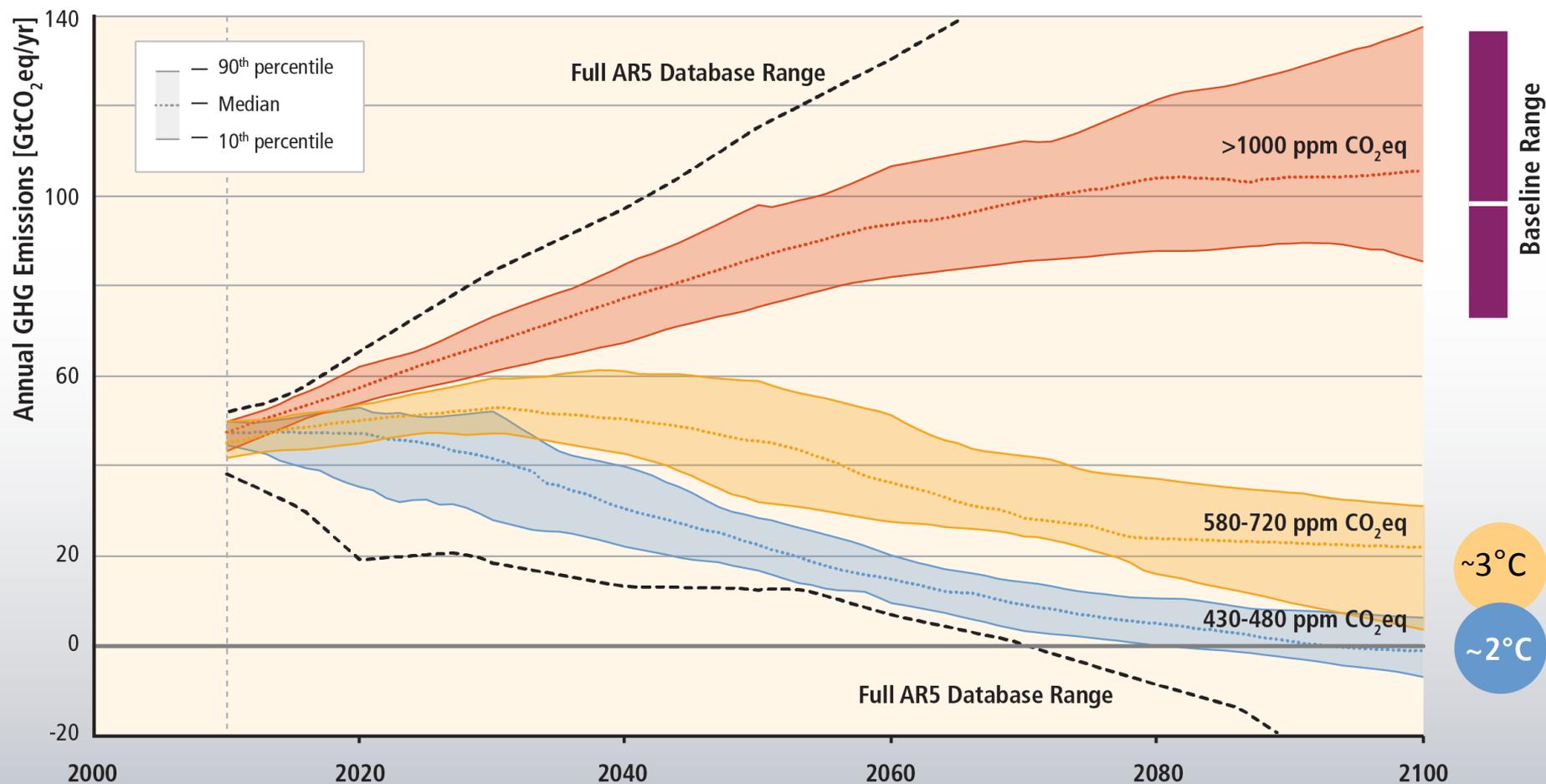
There are co-benefits and there are risks of mitigation. But the risks of mitigation do not involve the possibility of severe, widespread, and irreversible impacts as do the risks from climate change.



Stabilization of atmospheric concentrations requires moving away from the baseline – regardless of the mitigation goal.



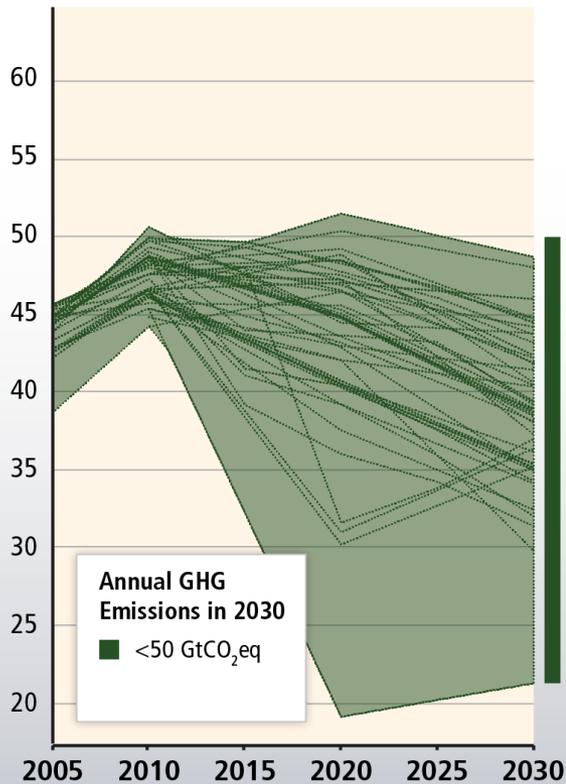
Stabilization of atmospheric concentrations requires moving away from the baseline – regardless of the mitigation goal.



Delaying mitigation increases the difficulty and narrows the options for limiting warming to 2°C.

Before 2030

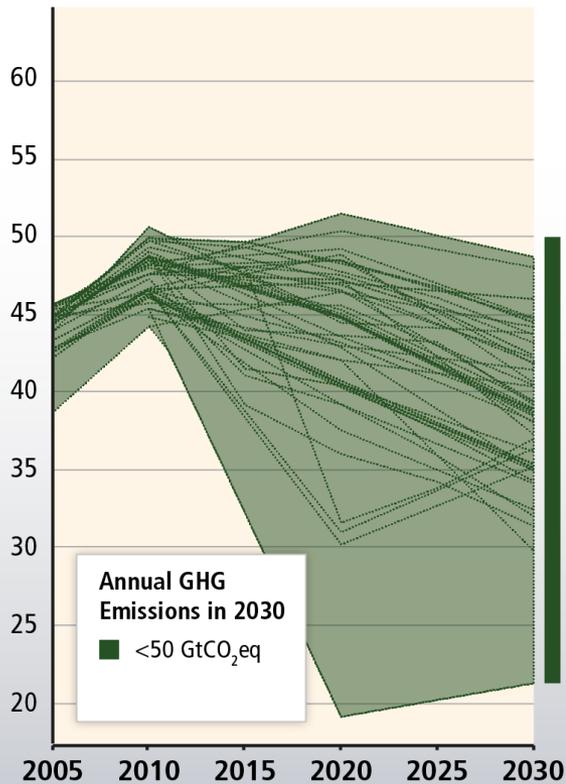
GHG Emissions Pathways [GtCO₂eq/yr]



Delaying mitigation increases the difficulty and narrows the options for limiting warming to 2°C.

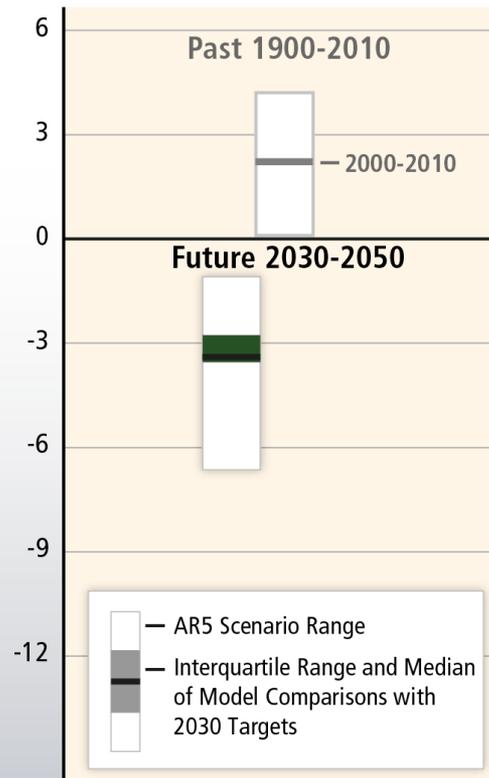
Before 2030

GHG Emissions Pathways [GtCO₂eq/yr]



After 2030

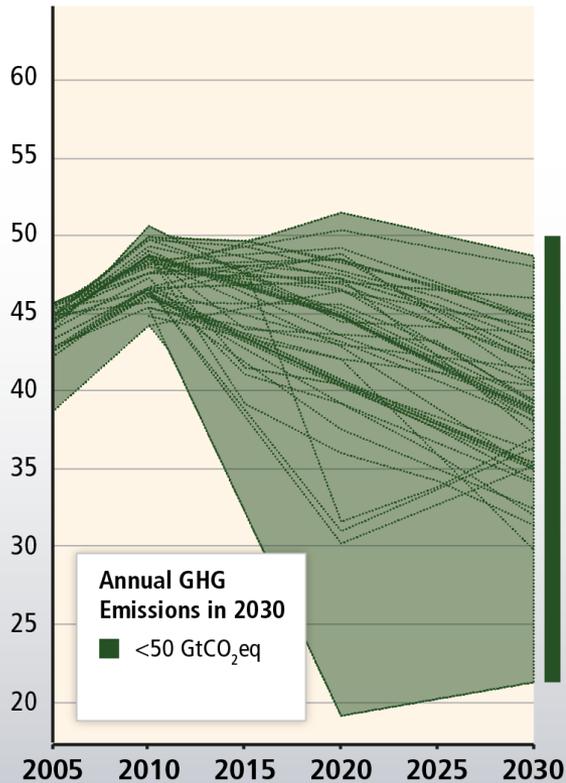
Rate of CO₂ Emission Change [%/yr]



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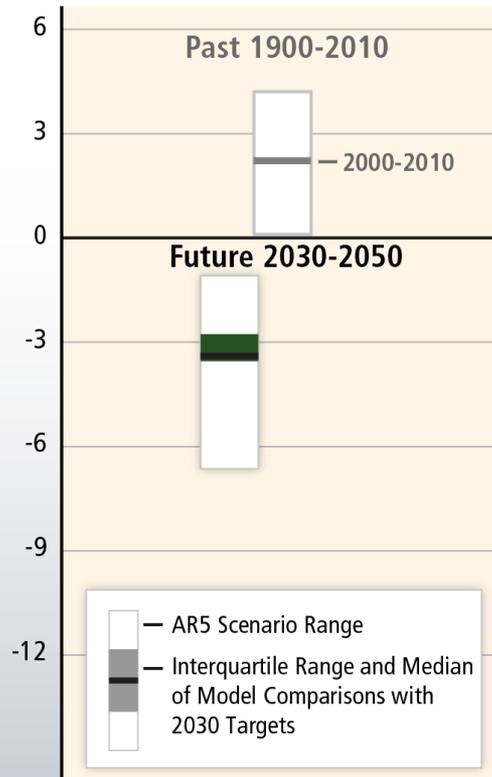
Before 2030

GHG Emissions Pathways [GtCO₂eq/yr]

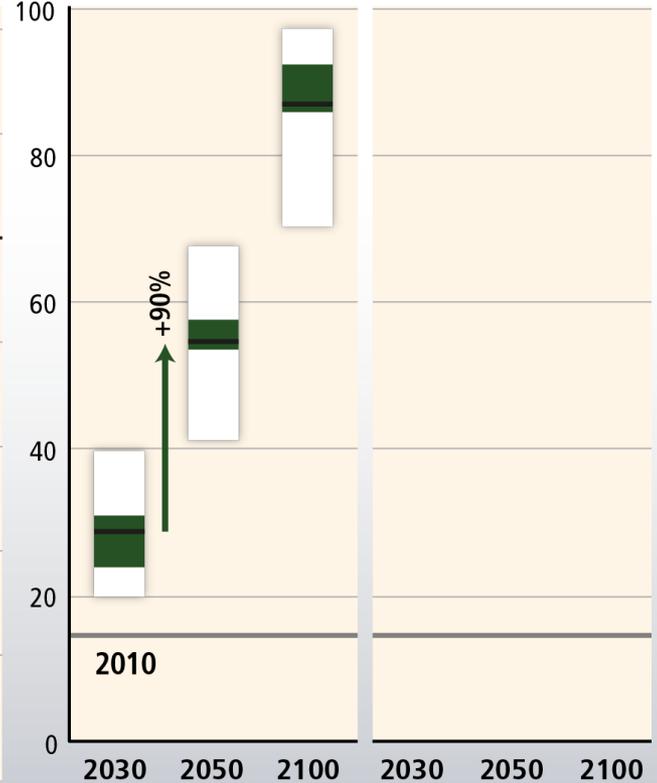


After 2030

Rate of CO₂ Emission Change [%/yr]



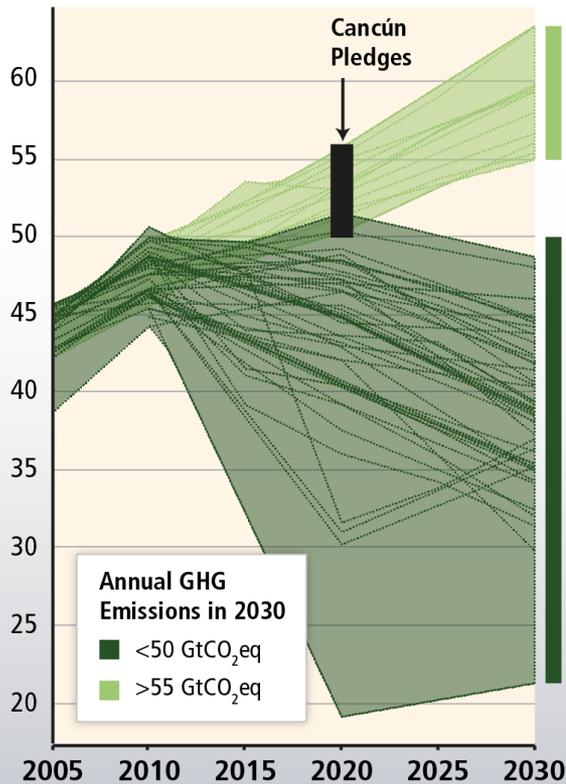
Share of Low Carbon Energy [%]



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Before 2030

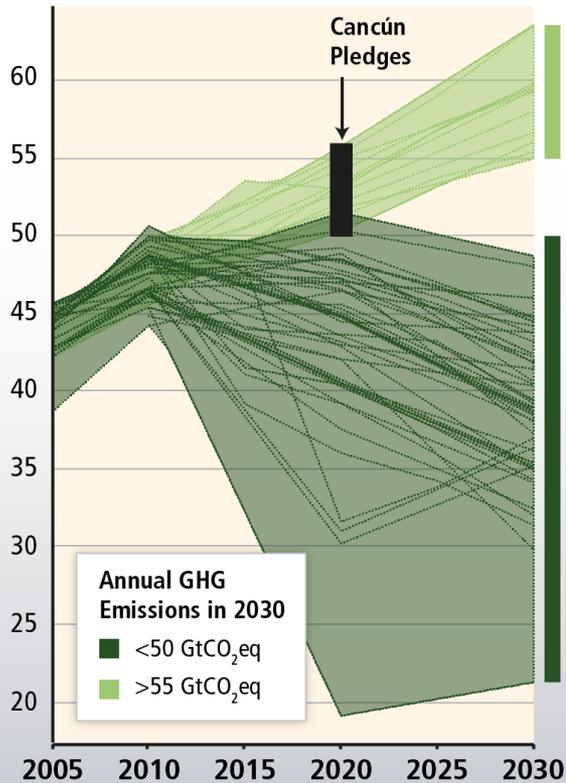
GHG Emissions Pathways [GtCO₂eq/yr]



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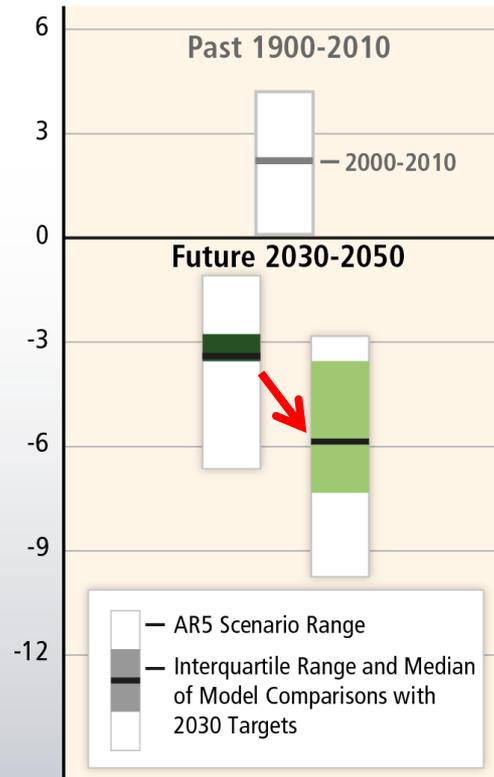
Before 2030

GHG Emissions Pathways [GtCO₂eq/yr]

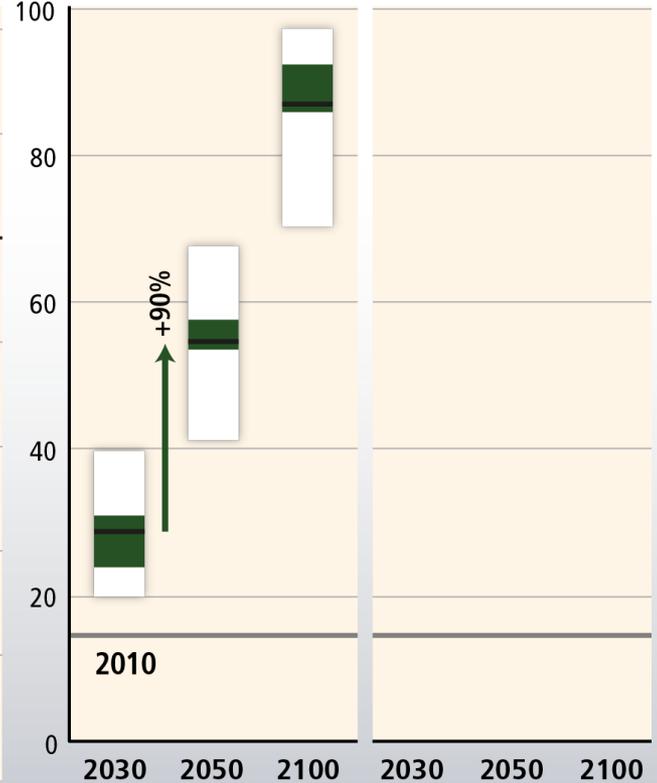


After 2030

Rate of CO₂ Emission Change [%/yr]



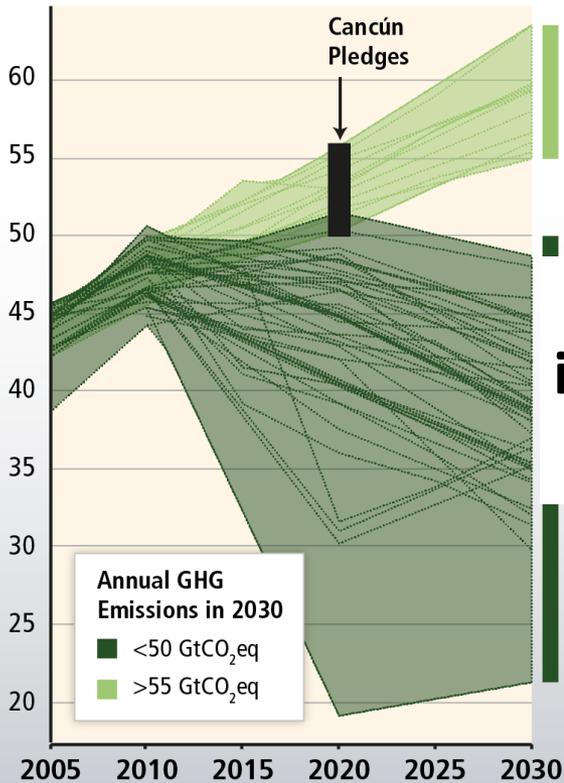
Share of Low Carbon Energy [%]



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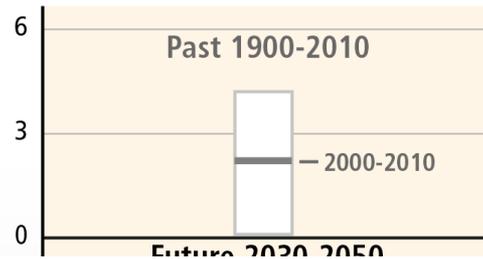
Before 2030

GHG Emissions Pathways [GtCO₂eq/yr]

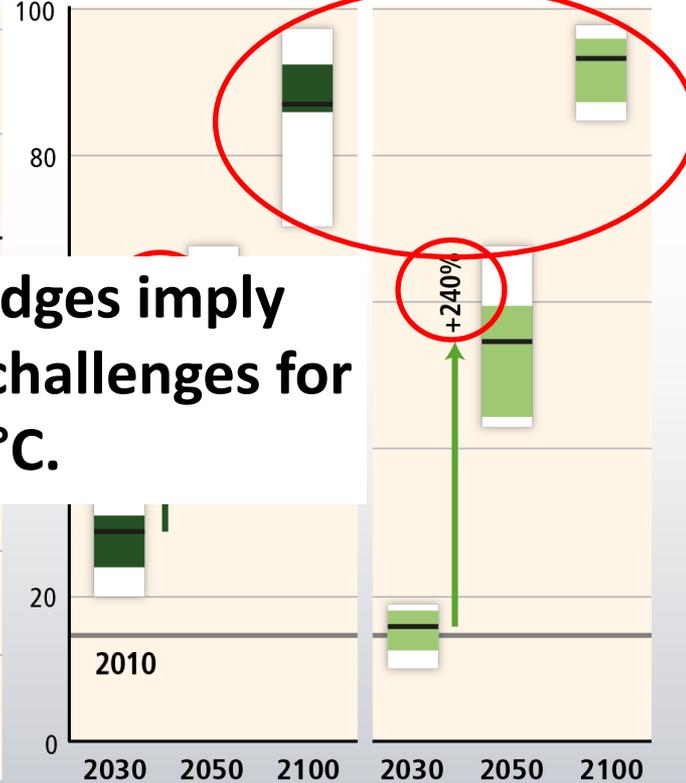


After 2030

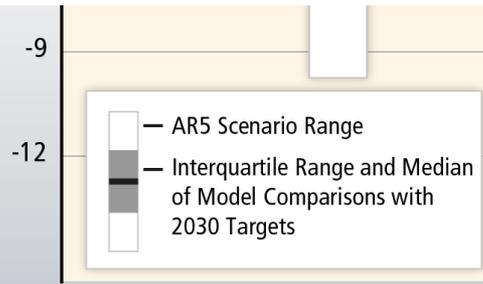
Rate of CO₂ Emission Change [%/yr]



Share of Low Carbon Energy [%]



Current Cancun Pledges imply increased mitigation challenges for reaching 2°C.



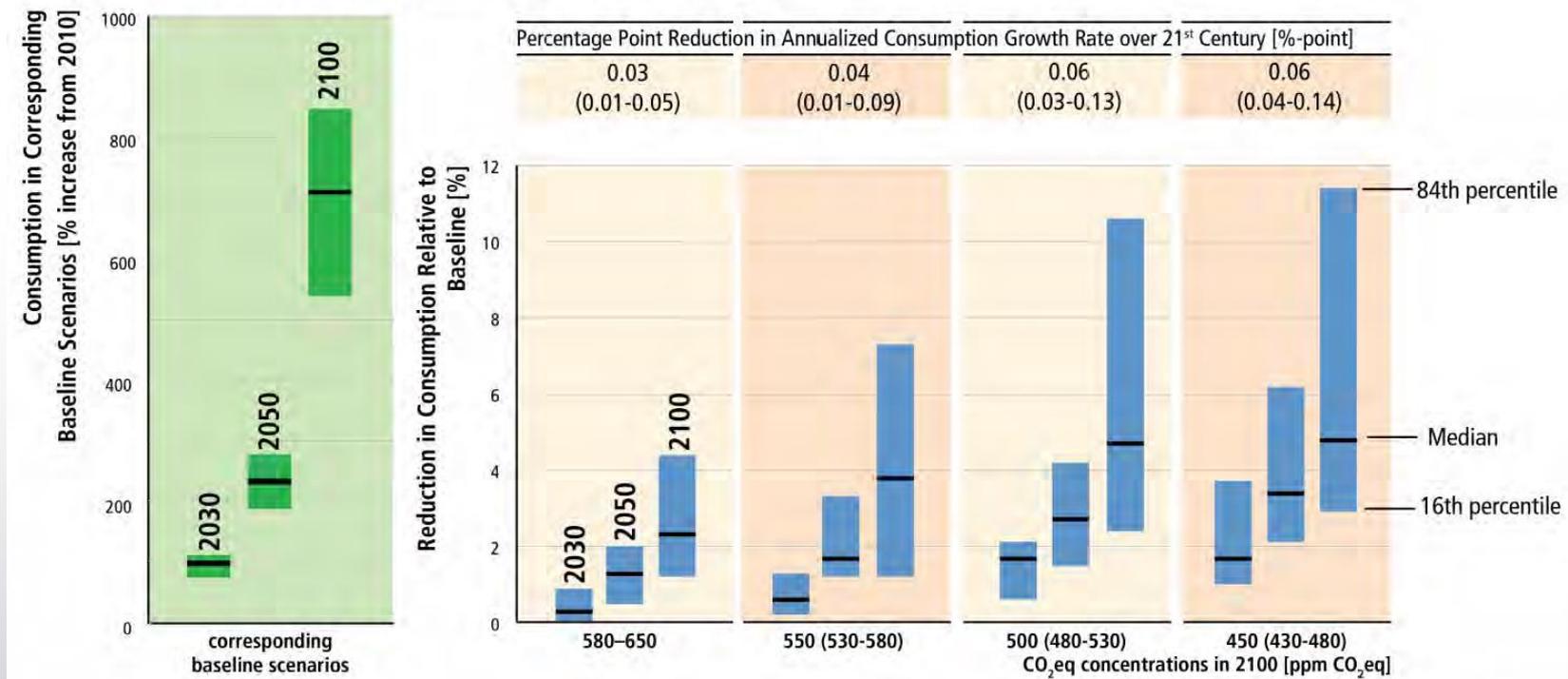
Scientific evidence on the 1.5°C goal remains limited.

Comprehensive assessment is difficult in the absence of multi-model comparison study and limited number of studies. Studies characterized by:

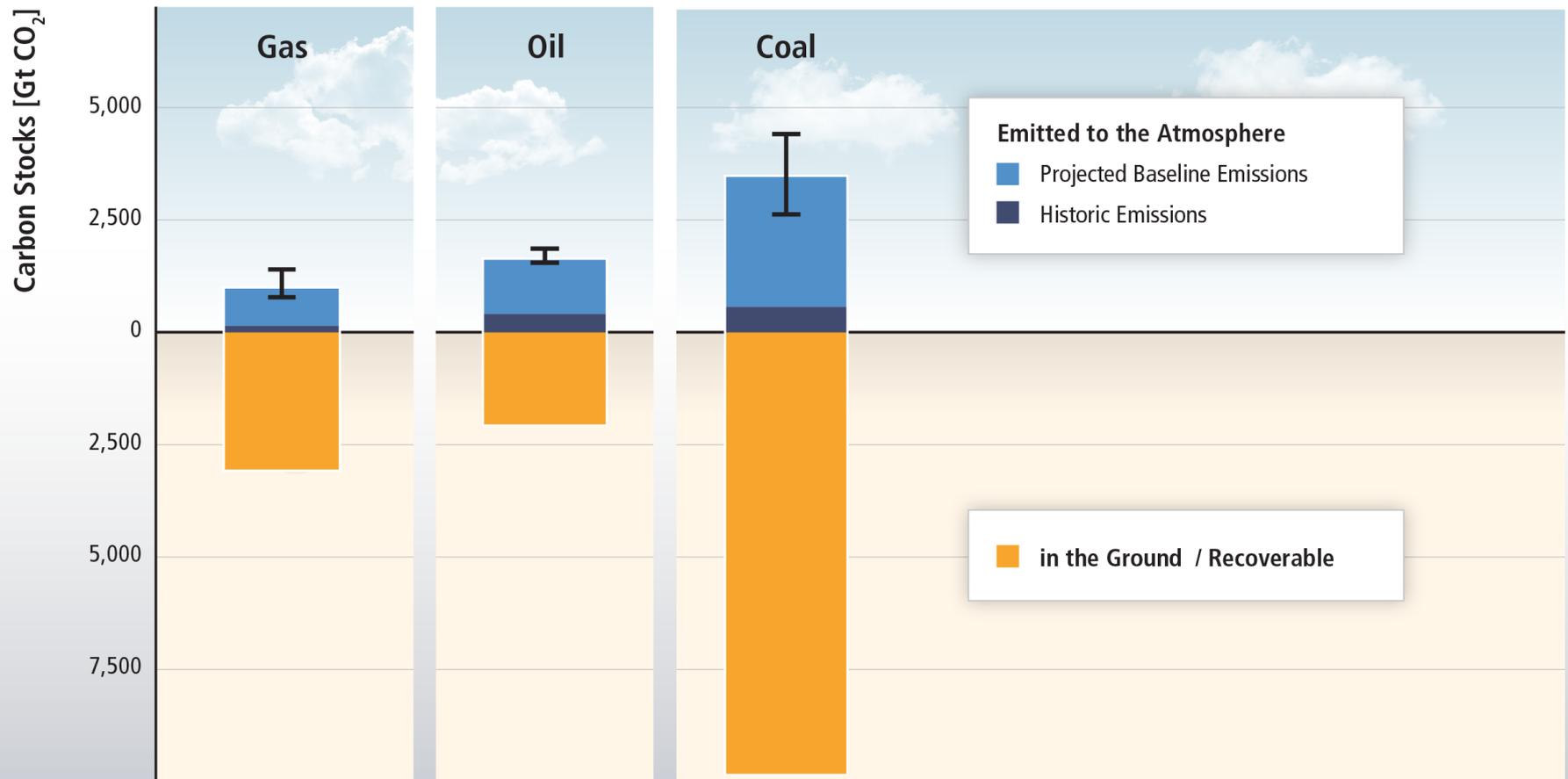
- Temperature overshoot and large scale application of CDR
- Immediate mitigation action
- Rapid upscaling of the *full* set of technologies
- Development along a low energy demand pathway

Global costs rise with the ambition of the mitigation goal.

Global Mitigation Costs and Consumption Growth in Baseline Scenarios



Climate change is a global commons problem.



CLIMATE CHANGE 2014

Mitigation of Climate Change

www.mitigation2014.org