

SLCP Climate Benefits

Avoided global warming

Rapid implementation of SLCP mitigation measures, together with measures to reduce CO₂ emissions, would greatly improve the chances of keeping the Earth's temperature increase to less than 2°C relative to pre-industrial levels.

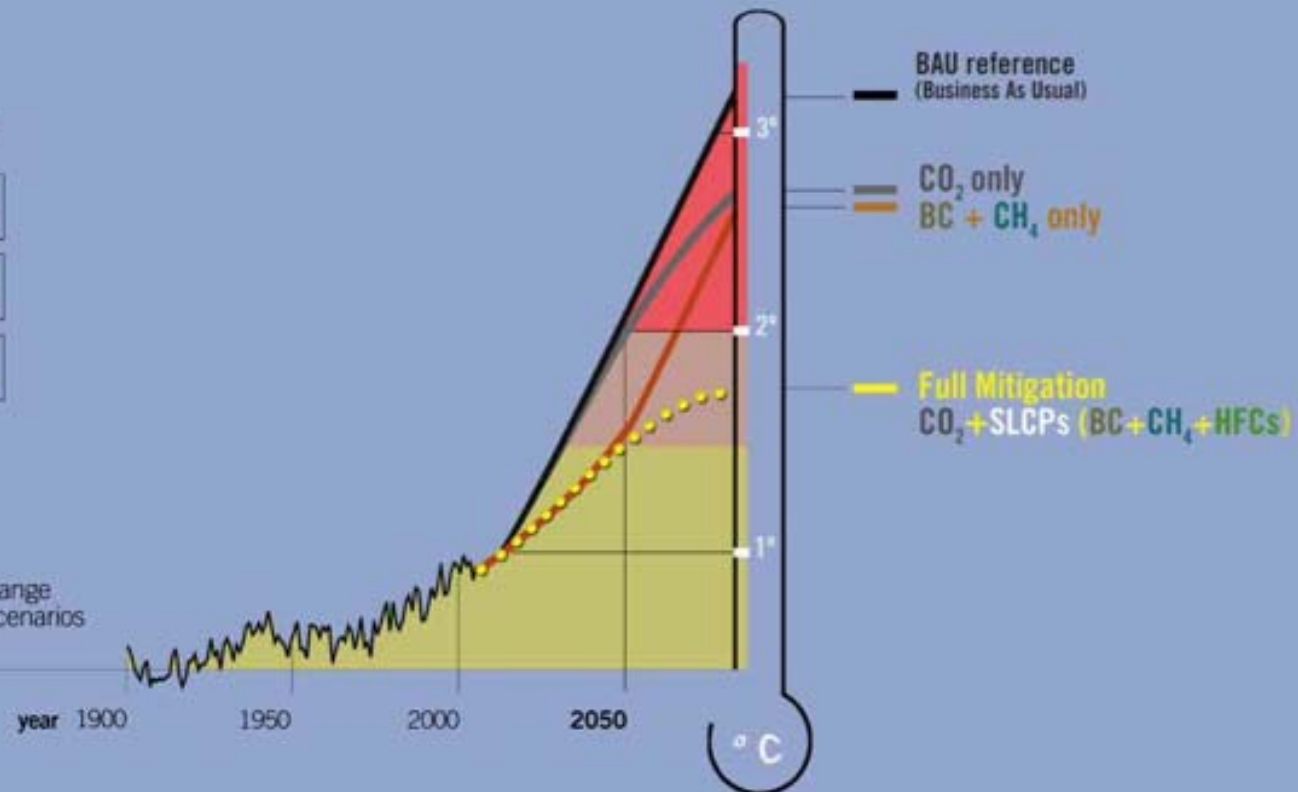
**AVOIDED
GLOBAL
WARMING** by 2050

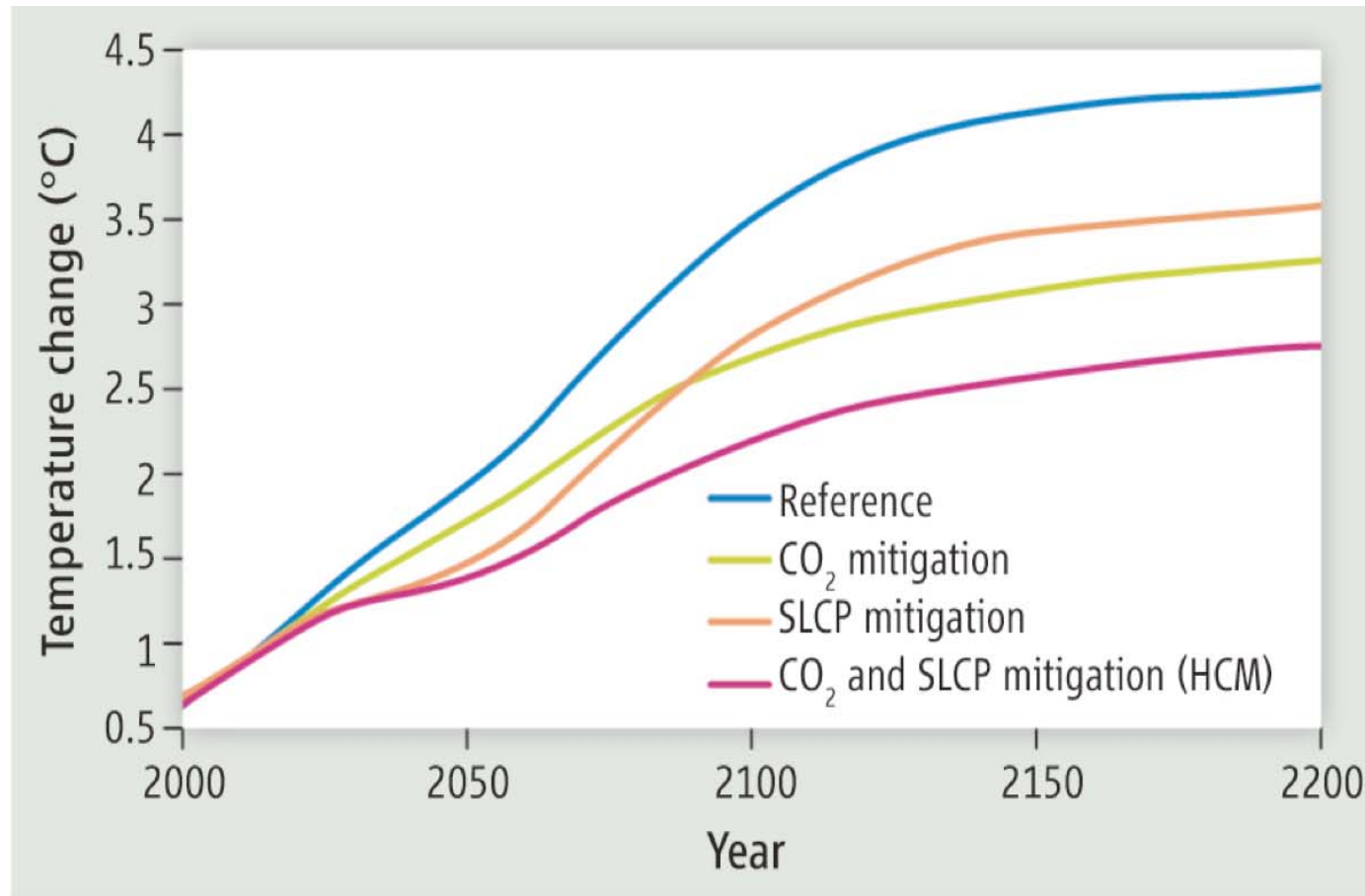
BC + CH₄ 0.5°C

HFCs 0.1°C

SLCPs 0.6°C

Simulated temperature change
under various mitigation scenarios
CO₂, BC, CH₄, HFCs





2013

Model simulated temperature change under business-as-usual and various emissions mitigation scenarios. The 'Reference' scenario depicts CO₂ emissions peaking in 2080, followed by a steep reduction, with SLCP emissions remaining at or above current levels. The 'CO₂ mitigation' scenario depicts CO₂ emissions reduced by 20% by 2050 and continue to slowly decline until they reach the 'reference scenario'. The 'SLCP' mitigation scenario depicts 80% cuts in black carbon and 40% cuts in methane between 2010 and 2050. The 'HCM' scenario depicts the simultaneous

The deepest cuts

Our guide to the actions that have done the most to slow global warming

To slash or to trim

Emission reductions by policies/actions, bn tonnes CO₂ equivalent

Policy/Action	Cumulative emissions	Period	Annual emissions*
Montreal protocol ¹	135.0bn	1989-2013	5.6bn
Hydropower worldwide ²	2.8bn	2010	2.8bn
Nuclear power worldwide ²	2.2bn	2010	2.2bn
China one-child policy ³	1.3bn	2005	1.3bn
Other renewables worldwide ²	600m	2010	600m
US vehicle emissions & fuel economy standards ^{†4}	6.0bn	2012-25	460m
Brazil forest preservation ⁵	3.2bn	2005-13	400m
India land-use change ⁶	177m	2007	177m
Clean Development Mechanism ⁷	1.5bn	2004-14	150m
US building & appliances codes ⁴	3.0bn	2008-30	136m
China SOE efficiency targets ⁸	1.9bn	2005-20	126m
Collapse of USSR ⁹	709m	1992-98	118m
Global Environment Facility ¹⁰	2.3bn	1991-2014	100m
EU energy efficiency ¹¹	230m	2008-12	58m
US vehicle emissions & fuel economy standards ^{†4}	270m	2014-18	54m
EU renewables ¹¹	117m	2008-12	29m
US building codes (2013) ¹²	230m	2014-30	10m
US appliances (2013) ¹²	158m	2014-30	10m
Clean technology fund ¹³	1.7bn	project lifetime	na
EU vehicle emission standards ¹⁴	140m	2020	na

CATEGORIES:

Energy production
Transport
Other regulations
Global treaties
Land & forests
Other

Climate Protection from the Montreal Protocol and Kyoto Protocol including HFC banks

