Six different choices to be made by the international community

	Description	Proponent	Claim & Assumptions	Immediate Risks	Implementation cost	Damage Costs
Brown curve	**Business as usual (BAU)**	Fossil Fuel industry and associated lobbyists	aims to maintain the status quo; assumes that CC is slow, natural and inevitable	risks catastrophic impacts on climate and sea level from tipping points, most immediately in the Arctic	costs nothing to implement	costs an escalating sum as damage from CC continues to escalate for the foreseeable future; and severely disadvantages poorer countries
Green curve (solid)	**Complete decarbonisation by 2050**	IPCC	claims to minimise the worst effects of climate change; assumes CC is slow and tipping points are decades away	risks catastrophic impacts (as for brown) because removal of SO2 cooling causes even faster global heating	costs a significant percentage of GDP over several decades for complete decarbonisation of the economy and transition to renewables	costs an escalating sum as damage from CC continues to escalate for several decades – possibly into the next century; and severely disadvantages poorer countries including those which currently rely on fossil fuel imports or exports to support their economies
Red curve (solid)	**CDR plus methane removal to reduce CO2e by natural methods**	CCRC, NOAC and some CDR/biochar groups	aims to reduce CO2e below 1980 values and cooling the planet; assumes CC and SLR is slow and tipping points are decades away	high risk of catastrophic climate change and sea level rise because CO2 cannot be removed fast enough in relation to emissions	cost estimates vary from <$10 to >$30 per tCO2 removed according to method (e.g. ocean fertilisation or soil carbon enhancement)	cost of damage grows for several decades; has potential to improve food production in poorer countries or the seas around them
Red curve (dashed)	**CDR uses tech methods to reduce CO2 to 300 ppm by 2050**	F4CR	aims to restore the climate to a safe state by 2050; assumes CC is slow and tipping points are decades away	high risk of catastrophic climate change and sea level rise because CO2 cannot be removed fast enough in relation to emissions	cost estimates from $100 to $800 per tCO2 removed;	cost of damage grows for several decades; has no obvious means to improve equitability.
Blue curve	**Cooling tech to reduce Arctic temperature**	CCRC, PRAG and AMEG	aims to prevent potential catastrophes associated with sea ice retreat, GIS disintegration, methane outburst from permafrost and AMOC disruption; assumes abrupt CC and SLR pose an extremely high risk		annual cost estimates vary from tens of millions of dollars for MCB with seawater spray to tens of billions of dollars for SAI with SO2	
Purple curve	**Cooling to limit global warming. (can include regional cooling to improve equitability)**	CCRC, PRAG, NOAC, MEER and a few other groups	aims to keep mean temperature below 2C this century and limit SLR from ocean expansion; assumes CC is slow and tipping points are decades away		annual cost similar to blue above (except higher for MEER)	