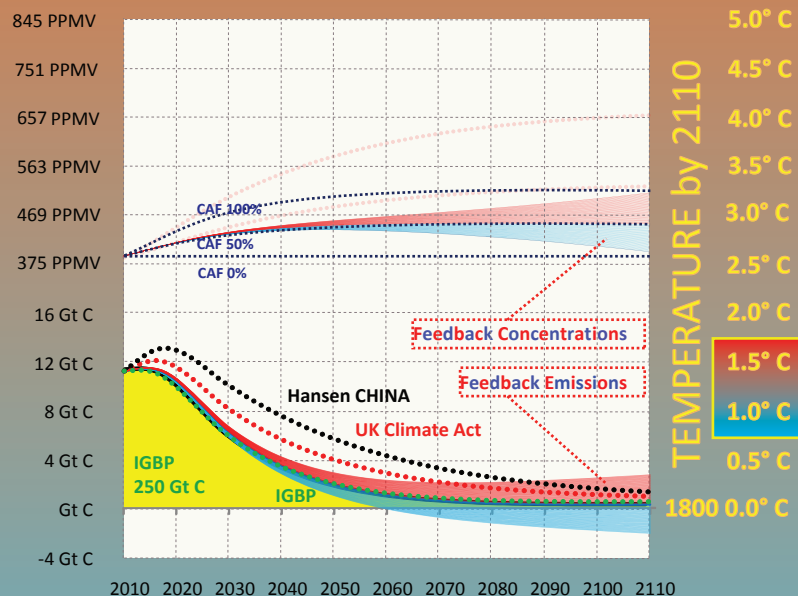


CONTRACTION & CONCENTRATIONS

Potential FEEDBACK CONCENTRATIONS from Potential FEEDBACK EMISSIONS is a real threat still omitted from Climate Models

CARBON CONTRACTION BUDGET

Here IGBP 250 Gt C (2010 2110)

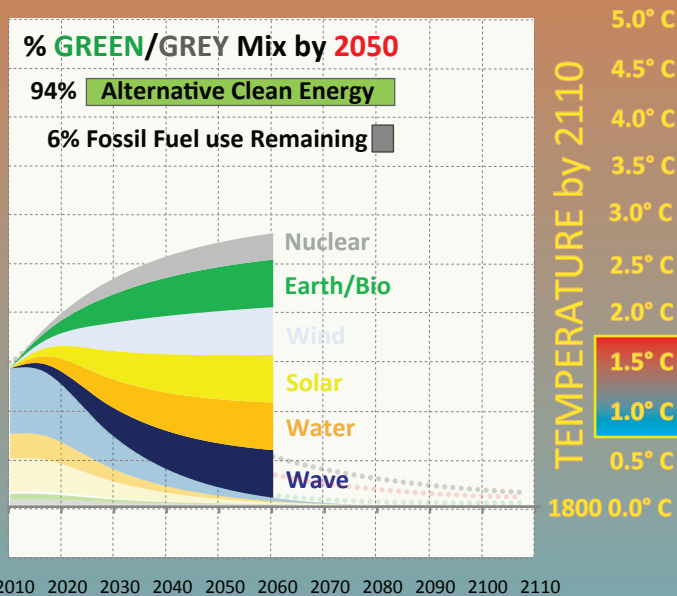


CONTRACTION & CONVERSION

If Carbon Contraction is to complete by 2050, converting to emissions-free technologies to replace rising energy demand is necessary.

CONTRACTION & CONVERGENCE

Regional Shares of Global Carbon Budget Remain Proportional to Population 2010

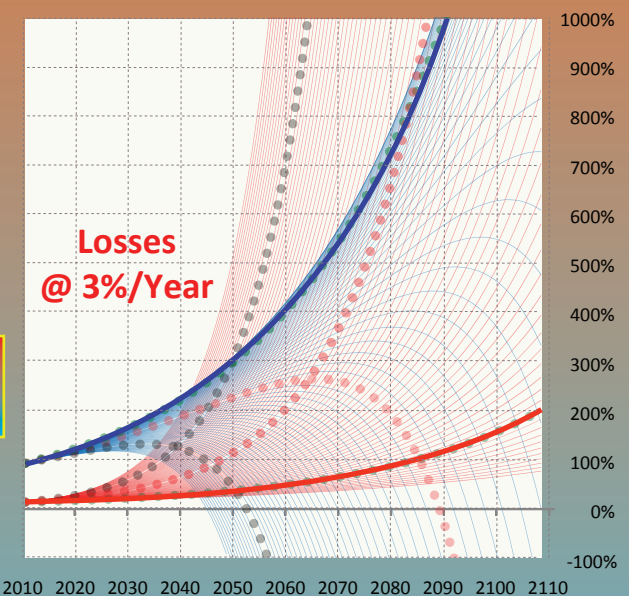


DAMAGES & GROWTH

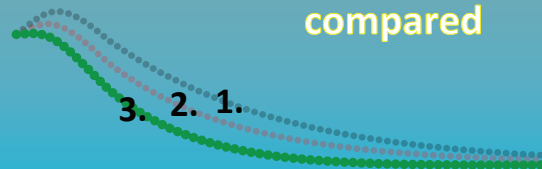
Future Potential Damage Trends are shown in the RED FIELD ranging in 80 steps from 2%/Year to 10%/Year.

GROWTH minus DAMAGES

Overall growth is projected at 3%/Year. Damage Trends subtracted from Growth are shown in the BLUE FIELD in 80 steps.



3 CONTRACTION BUDGETS compared



1. (High) HANSEN CHINA 516 Gt C
2. (Medium) UK Climate Act 395 Gt C
3. (Low) IGBP 250 Gt C

TEMPERATURE 1°C up since 1800

If Carbon Contraction to zero completes by +/- 2060, a further temperature rise could be to less than an overall 2°C rise since pre-industrial.

However, there is uncertainty about the extent of this, as it depends on the climate-sensitivity and the strength of the feedback emissions:concentrations response.

EXISTING DAMAGE TRENDS

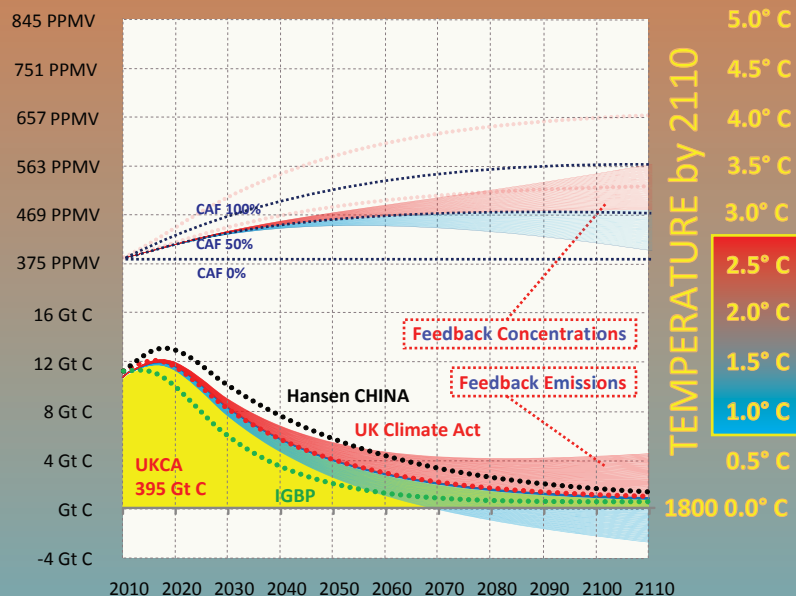
Munich Re-Insurance has kept records of losses from 'natural disasters' over 50 years. Increasingly weather-related, the trend-average has been 6%/Year (3% Insured + 3% Uninsured). Together these now equal around 2% of GDP. If these trends continue, the effect on growth could become catastrophic.

CONTRACTION & CONCENTRATIONS

Potential FEEDBACK CONCENTRATIONS from Potential FEEDBACK EMISSIONS is a real threat still omitted from Climate Models

CARBON CONTRACTION BUDGET

Here UKCA 395 Gt C (2010 2110)

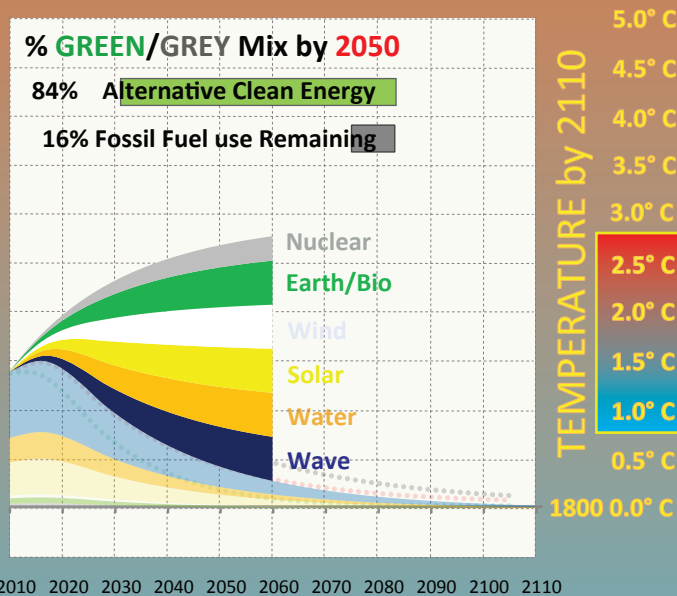


CONTRACTION & CONVERSION

If Carbon Contraction is to complete by 2050, converting to emissions-free technologies to replace rising energy demand is necessary.

CONTRACTION & CONVERGENCE

Regional Shares of Global Carbon Budget Remain Proportional to Population 2010

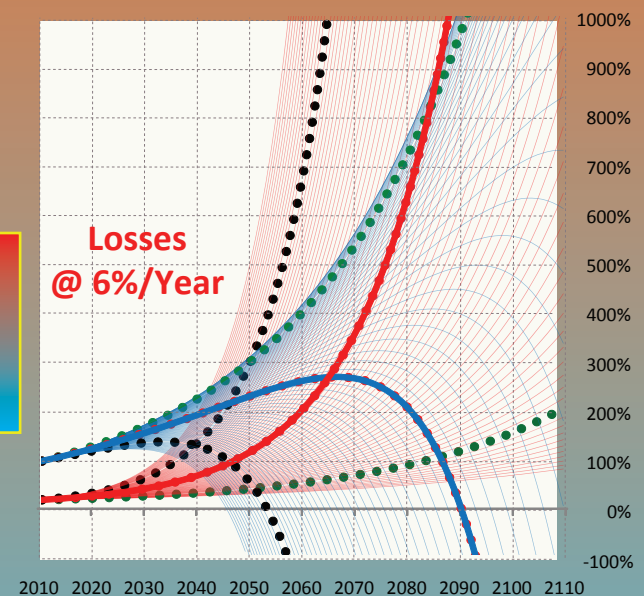


DAMAGES & GROWTH

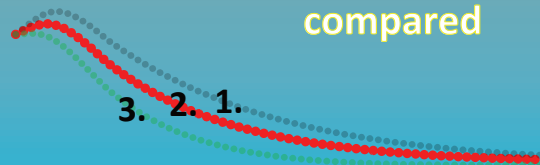
Future Potential Damage Trends are shown in the RED FIELD ranging in 80 steps from 2%/Year to 10%/Year.

GROWTH minus DAMAGES

Overall growth is projected at 3%/Year. Damage Trends subtracted from Growth are shown in the BLUE FIELD in 80 steps.



3 CONTRACTION BUDGETS compared



1. (High) HANSEN CHINA 516 Gt C
2. (Medium) UK Climate Act 395 Gt C
3. (Low) IGBP 254 Gt C

TEMPERATURE 1°C up since 1800

If Carbon Contraction to zero completes by +/- 2100, a further temperature rise can be considerably more than an overall 2°C rise since pre-industrial.

However, there is uncertainty about the extent of this, as it depends on the climate-sensitivity and the strength of the feedback emissions:concentrations response.

EXISTING DAMAGE TRENDS

Munich Re-Insurance has kept records of losses from 'natural disasters' over 50 years. Increasingly weather-related, the trend-average has been 6%/Year (3% Insured + 3% Uninsured).

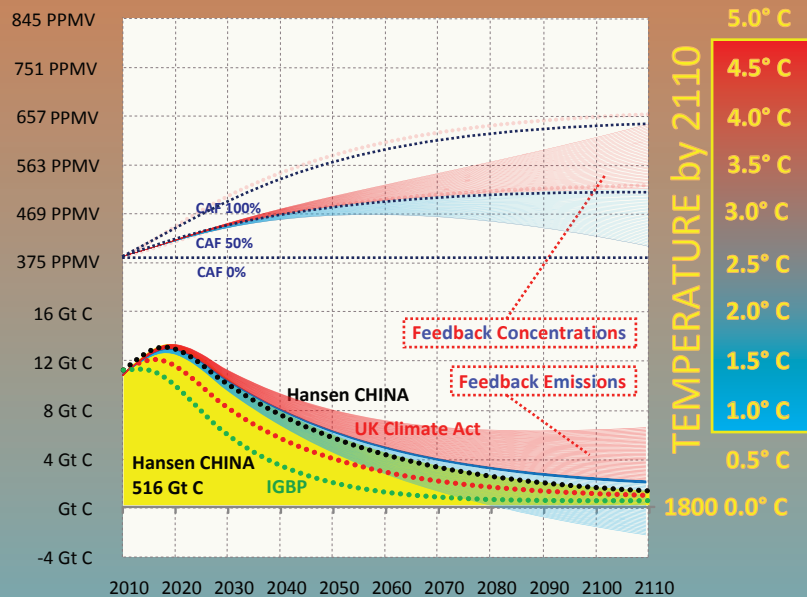
Together these now equal around 2% of GDP. If these trends continue, the effect on growth could become catastrophic.

CONTRACTION & CONCENTRATIONS

Potential FEEDBACK CONCENTRATIONS from Potential FEEDBACK EMISSIONS is a real threat still omitted from Climate Models

CARBON CONTRACTION BUDGET

Here Hansen CHINA 518 Gt C (2010 2110)

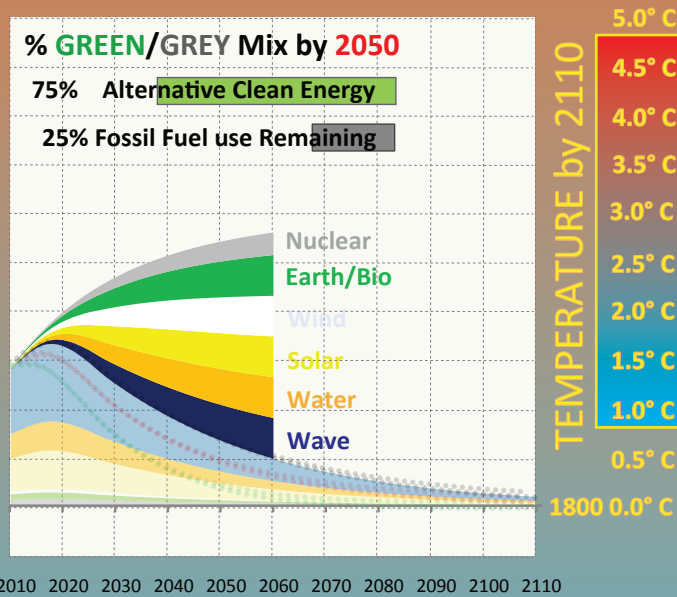


CONTRACTION & CONVERSION

If Carbon Contraction is to complete by 2050, converting to emissions-free technologies to replace rising energy demand is necessary.

CONTRACTION & CONVERGENCE

Regional Shares of Global Carbon Budget Remain Proportional to Population 2010

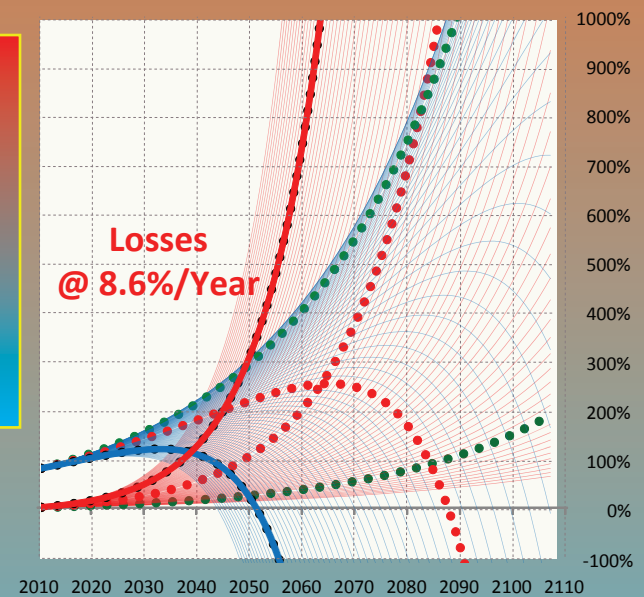


DAMAGES & GROWTH

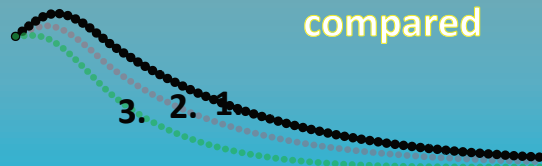
Future Potential Damage Trends are shown in the RED FIELD ranging in 80 steps from 2%/Year to 10%/Year.

GROWTH minus DAMAGES

Overall growth is projected at 3%/Year. Damage Trends subtracted from Growth are shown in the BLUE FIELD in 80 steps.



3 CONTRACTION BUDGETS compared



1. (High) HANSEN CHINA 516 Gt C
2. (Medium) UK Climate Act 395 Gt C
3. (Low) IGBP 254 Gt C

TEMPERATURE 1°C up since 1800

If Carbon Contraction to zero completes by later than 2100, a further temperature rise will be more like 5°C than the overall target of 2°C rise since pre-industrial.

However, there is uncertainty about the extent of this, as it depends on the climate-sensitivity and the strength of the feedback emissions:concentrations response.

EXISTING DAMAGE TRENDS

Munich Re-Insurance has kept records of losses from 'natural disasters' over 50 years. Increasingly weather-related, the trend-average has been 6%/Year (3% Insured + 3% Uninsured).

Together these now equal around 2% of GDP. If these trends continue, the effect on growth could become catastrophic.