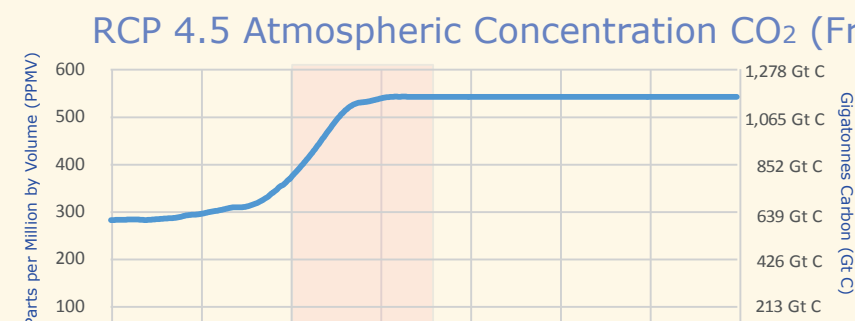
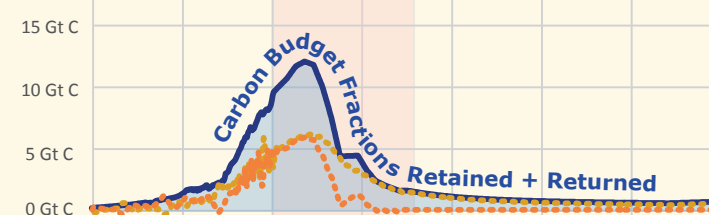


This RCP 4.5 'scenario', widely promulgated by UKMO/IPCC as 'policy advice', is significantly inaccurate & misleading. A runaway feedback effect of rapid warming and climate changes is not unlikely if this scenario is pursued. This makes nonsense of the 'source-sink-equilibrium' at 543 PPMV (2150 onwards) the scenario demonstrates. Top 3 RCP scenarios all use this methodology: - 'assert PPMV stability beyond date 'x''; compute budget 'y' that gives; 'z', 100% sink-efficiency by 'x'.



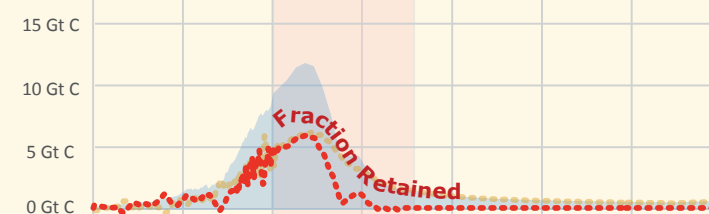
Between 2000 and 2150 this RCP 4.5 scenario adds 172 PPMV or 367 Billion tonnes of carbon (Gt C) to the atmosphere. Note that after 2150 concentrations *have gone & remain flat at 543 PPMV*. Not shown here, precisely matching this PPMV curve, the Watts per square meter stop rising, having risen from 2 in 2000 to 4.456 in 2150, this represents a temperature rise of about + 3.5° Celsius.

RCP 4.5 Carbon Budget = Fraction **Retained** (in the Atmosphere) + Fraction **Returned** (to Sinks Land/Ocean)



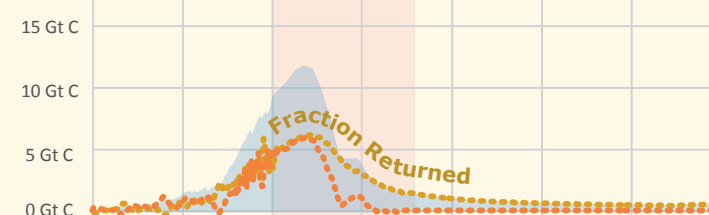
Between 2000 and 2150 this RCP 6.0 scenario has a carbon budget of CO2 emissions totalling 1,091 billion tonnes of carbon (Gt C). The fraction-**retained** in the atmosphere plus the fraction-**returned** to the sinks precisely equal 100% of the budget. Along with stable PPMV/W/m2 after 2150, RCP 4.5 shows a theoretical 'equilibrium' that is completely false in the real world.

RCP 4.5 Fraction of Carbon Budget **Retained** (in the Atmosphere) 34% of Budget (in Gt C)



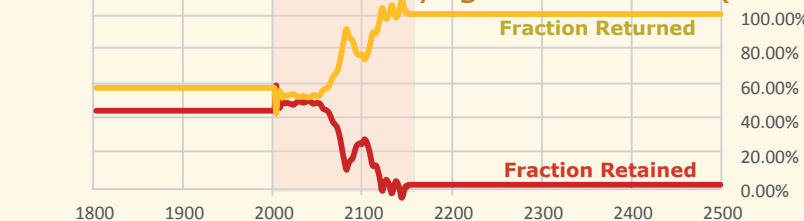
Between 2000 and 2150 this RCP 4.5 scenario shows a budget fraction-**retained** in the atmosphere totalling 371 billion tonnes of carbon (Gt C). Note that this is 34% of the Carbon Budget of 1,091 billion tonnes of carbon (Gt C) in this period.

RCP 4.5 Fraction of Carbon Budget **Returned** (to Sinks Land/Ocean) 66% of Budget (in Gt C)



Between 2000 and 2150 this RCP 4.5 scenario shows a budget fraction-**returned** to the sinks totalling 720 billion tonnes of carbon (Gt C). Note that this is 66% of the Carbon Budget 1,901 billion tonnes of carbon (Gt C) in this period. Note also that from 2150 onwards, annual budget emissions equal 100% of the fraction-**returned** annually.

RCP 4.5 'Sink-Efficiency' goes to 100% (i.e. sinks reabsorb 100% of annual budget emissions by 2150) & both Fractions equal 100% of Budget.



Thus after 2150, as the fraction of the budget **returned** to the sinks annually equals precisely the budget emissions themselves, in this specific sense only, 100% 'sink-efficiency' (equilibrium between sources and sinks) is reached from 2150 onwards. Overall, between 2000 and 2150, the fraction-**retained** plus the fraction-**returned** equal 100% of the carbon Budget. Asserting this as "sloppy maths", UKMO continue to deny that this methodology is the UKMO/IPCC's own work.

GCI October 2015
CARBON BUDGET ACCOUNTING TOOL
<http://cbat.info/#domain-1>

UKMO deny this methodology was used. They also don't know how to model Rapid Interactive Feedback Effects [RIAFE] potential as future [a] human budget emissions are unknown & [b] rates of RIAFE are unknowable but can't be ignored. <http://cbat.info/>