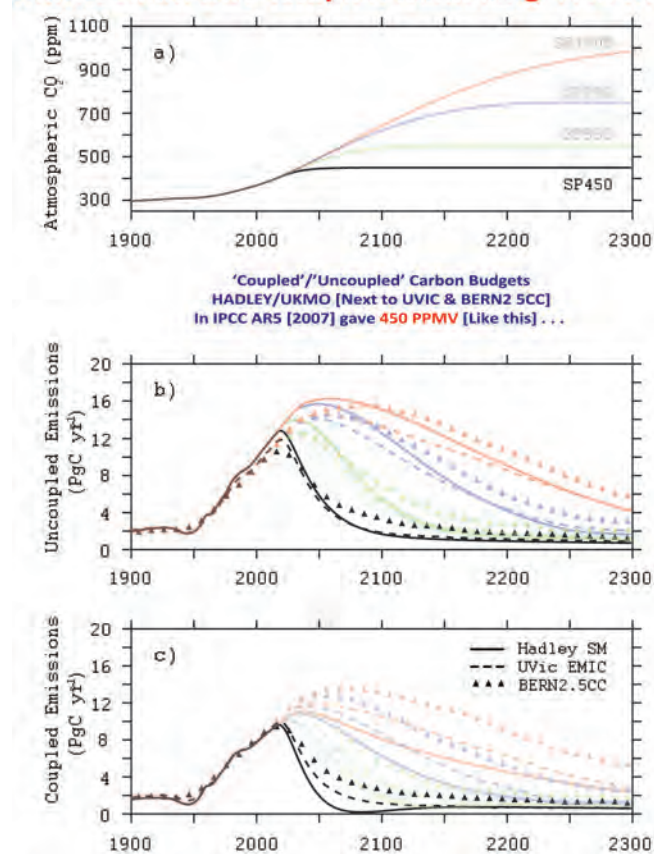


# UKMO'S ABOUT-FACE ON THE EFFECT OF COUPLED CARBON-CYCLE MODELLING

Below is what was published in IPCC AR4 WG1 [2007] Hadley Coupled & Uncoupled for 450 PPMV [solid black lines]. 'Coupled-emissions' have to be lower than 'uncoupled-emissions' to achieve the 450 PPMV concentrations outcome.

This would mean also that if the uncoupled budget was held constant, and the model was then 'coupled', the PPMV outcome would be significantly higher than 450 PPMV, due to what Mr Richard Betts of the UKMO calls 'weaker sinks'. This was repeated to EAC [2009] by Mr Jason Lowe [UKMO].

## UKMO claim this 'Coupled Modelling' is in UKCA



Here is what became law in the UK Climate Act [UKCA 2008] compared with Hadley Coupled & Uncoupled IPCC AR4 for 450 PPMV. The Carbon-Budget in the Act [solid pinkish colour] is larger than UKMO's 'Coupled-Budget' & smaller than their 'Uncoupled-Budget' [in IPCC AR4 2007] where 'Coupled-emissions' need to be lower than 'uncoupled-emissions' to achieve the 450 PPMV concentrations outcome in IPCC AR4 [2007].

However, in this comparison a new feature is revealed in UKCA [2008]. For this, UKMO produced a 'coupled-emissions-budget' that was larger than the 'coupled-emissions-budget' in their IPCC AR4 exercise, but it also - AND THIS IS THE POINT AT ISSUE - resulted in: -

- [a] a PPMV pathway where concentrations are *falling* and not *rising*
- [b] which completely reverse Mr Betts' argument [that concentrations would be *rising* and not *falling* with coupling]
- [c] Jason Lowe UKMO giving evidence to EAC [2009] re-iterating that concentrations would rise & not fall for 'coupling'
- [d] in other words concealing this change from the EAC 2009 and now denying there was a change in the EAC 2013 enquiry.

