

The Hadley Centre's AVOID Programme has released a report claiming ocean acidification [pH reduction] will slow and stop by 2100 with the "2016 4% low" Emissions Scenario that underpins the UK Climate Act [see black arrow in graphic below **"Ocean Acidification Will Stop" Says Met Office**].

They have also confirmed in the letter at the link below that greater than '100% sink-efficiency' by 2050 in "2016 4% low" giving an outcome value for CO₂ concentrations of 420 ppmv by 2100 is 'not unreasonable'.

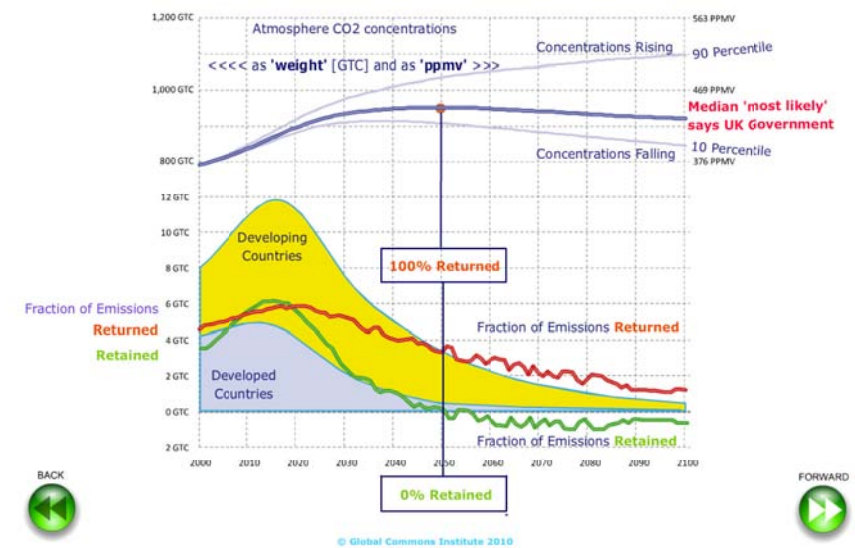
http://www.gci.org.uk/animations/Sources_and_Sinks_UK_Climate_Act.swf
[http://www.gci.org.uk/correspondence/Met_office_reply_aubrey_230710\[1\].pdf](http://www.gci.org.uk/correspondence/Met_office_reply_aubrey_230710[1].pdf)

However, adding up the CO₂ under the 'fraction-retained' curve [shown in the graphic they've agreed alongside] where 100% sink-efficiency is claimed by 2050, shows over One Trillion Tonnes CO₂ is added to the ocean 2000-2100. So, while the Hadley Centre's AVOID Programme follows the "2016 4% low" scenario, they now also report that oceanic acidification increases from around 8.1 in 2000 to 8 in 2050 *but that it will flatten to 7.99 by 2100*. But they claim this though accepting that cumulative oceanic CO₂ deposition accelerates throughout the period in question.

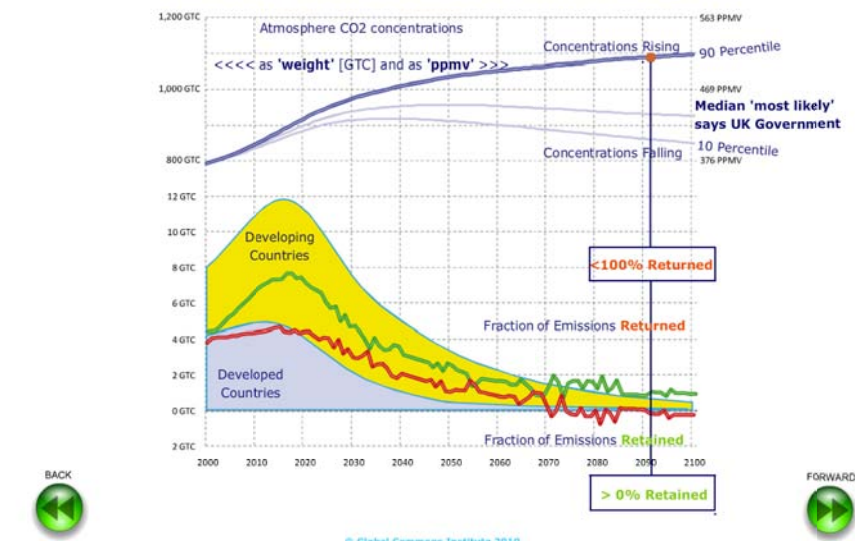
They say therefore that while cumulative oceanic CO₂ deposition, the main cause of acidification, rises to over One Trillion Tonnes CO₂ by 2100, the oceanic acidification stops, the oceanic CO₂ sink will recover and so CO₂ concentrations will decrease.

This cannot be. Acidification cannot stop while CO₂ deposition increases and a 40% die-off of oceanic zoo-plankton has already been reported since 1950 which matches the acidification curve shown below. If oceanic CO₂ deposition increases, acidification increases and the ocean CO₂ sink will regress. So there will nothing like 100% sink-efficiency by 2050 as claimed by the Hadley Centre. As shown in the animation, sink-efficiency of 100% might at best be achieved by 2090 by when CO₂ concentrations will have risen to over 500 ppmv taking temperature well over 2 degrees.

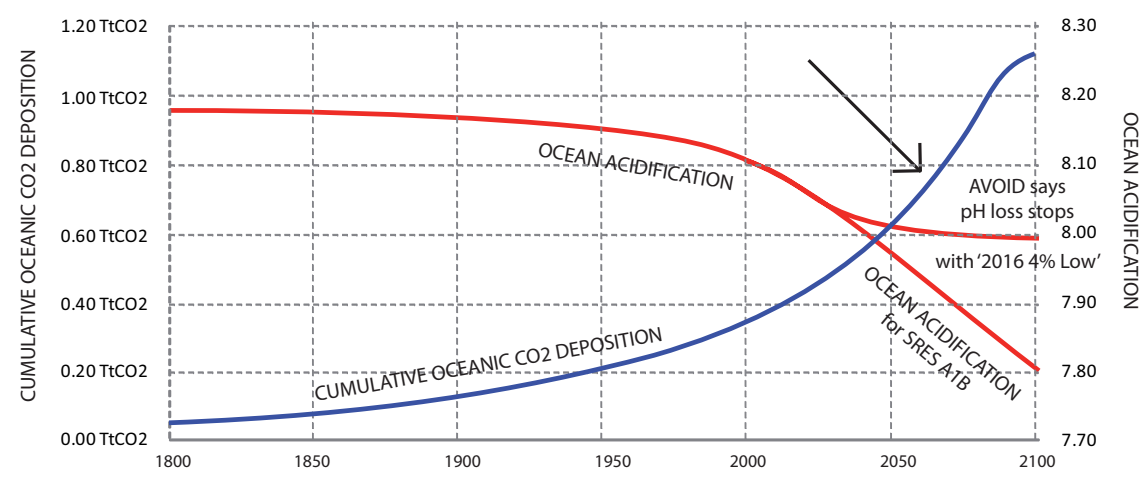
Numbers in UK Climate Act & at COP-15 Contraction-Concentrations: Contraction-Convergence



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"OCEAN ACIDIFICATION WILL STOP" [says Met Office . . .] WHY?



GCI's letter of concern to the Minister Huhne at DECC is here: - http://www.gci.org.uk/correspondence/GCI_Letter_to_Chris_Huhne_2a_final.pdf