



IEAGHG Information Paper; 2012-IP19: Update on Ocean Fertilisation News

Background: IEAGHG IP-12

In an earlier information paper (IP12/2012) we provided an update on research work completed in 2004 on ocean fertilisation which was reported by the National Oceanic and Atmospheric Administration to the US Congress in 2010. For reference the NOAA report can be found at www.gc.noaa.gov/documents/2010_climate_fert_rept_Congress_final.ppt

We concluded in the previous Information Paper that despite the new research some of the fundamental issues with regard to ocean fertilisation remain namely:

- the techniques ability to make a significant impact on the stabilisation of atmospheric CO₂ emissions cannot be readily quantified
- the significant concerns regarding the environmental risks associated with ocean fertilisation remained

Overall it was considered that ocean fertilisation was still not looking to be a realistic mitigation option.

In a more recent paper published in the International Journal of Global Warming (, says while iron fertilisation of high-nutrient, low-chlorophyll regions of the ocean captures and stores carbon dioxide from the atmosphere, it does not store carbon long enough to be an attractive contributor to climate management.

The authors conclude that Iron fertilisation is more expensive than carbon capture and storage (CCS) and is much more expensive than the Australian carbon price, which is currently charged at \$23 per tonne of carbon dioxide. The study used average results from iron fertilisation experiments conducted in the Southern Ocean and concluded that the mean price will be over US \$400 per tonne of carbon dioxide sequestered from the atmosphere for 100 years or more.

A more extensive report can be found on the University of Sydney's web site at:

http://sydney.edu.au/news/84.html?newscategoryid=2&newsstoryid=10740&utm_source=console&utm_medium=news&utm_campaign=cws.

The University of Sydney research work adds to the concerns raised by the earlier NOAA report and add further concern that the abatement costs of this option is such that it makes it uncompetitive with CCS.

I think the closing statement on the University of Sydney's article sums this up neatly.

"Attention at the university will now focus on other ocean carbon storage strategies that have promise to store carbon at less than \$23 per tonne of carbon dioxide."

We wish them luck and will follow their research with some interest.

Note the International Journal of Global Warming can be found at:
<http://www.inderscience.com/jhome.php?jcode=IJGW>

John Gale
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