Southern Ocean found to be Sequestering Carbon but at a Cost

by David Beniuk via joyce - Herald Sun *Monday, Jul 30 2012, 3:58am*
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Scientists discover carbon 'burial' sites

> AUSTRALIAN scientists have helped discover that carbon is being buried in the Southern Ocean by huge diving currents.

It was previously thought that the oceans absorbed CO2 uniformly, scientists from the CSIRO and the Antarctic Climate and Ecosystem Cooperative Research Centre have mapped hotspots where Carbon sequestering occurs.

The Southern Ocean absorbs about 40 per cent of the CO2 emissions absorbed by the world's oceans.

"The reason global warming comes about is because the ocean at the moment can't keep up," CSIRO senior research scientist Richard Matear told AAP.

The new study, published in the journal Nature Geoscience, has found that carbon is drawn down from the surface and locked away by currents 1000 kilometres wide.

Localised systems of winds, currents and whirlpools, known as eddies, create "funnels" for carbon to be stored 1000 metres below the surface.

"Our study identifies these pathways for the first time and this matches well with observationally derived estimates of carbon storage in the ocean interior," Dr Matear said.

The team, which also included scientists from the British Antarctic Survey, used small robotic probes known as Argo floats.

Eighty floats were deployed in the Southern Ocean in 2002, allowing scientists to collect temperature and salinity information over the past decade.

The team also analysed data collected from ship-based observations since the 1990s.

Dr Matear said the oceans might be doing us a favour by storing our emissions, but he also warned that carbon was changing their make-up, with the affects felt in areas like coral reefs.

"The ocean's mitigating global warming by taking up our carbon," he said.

"But by putting the carbon in the ocean you're actually changing the chemistry of the ocean."

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