Media release.

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Scientists map the potential for natural forest regrowth to capture carbon, in world-first study

A major new study that maps potential aboveground carbon accumulation rates for forest regrowth across the globe has been published in the journal Nature.

Researchers from Australia's national science agency CSIRO joined scientists from 17 other countries to publish a first of its kind, 'wall-to-wall' global, 1km resolution map that highlights areas with the greatest carbon returns, when they are allowed to reforest naturally.

The report, led by The Nature Conservancy, highlights the role of natural forest regrowth and refines previous international estimates, said co-author Dr Stephen Roxburgh, Principal Research Scientist at the CSIRO.

Dr Roxburgh said CSIRO supported the study through the supply of datasets, including 72 stands of natural regeneration that CSIRO had surveyed for biomass carbon.

These datasets were collected for the Australian Government's national greenhouse gas accounting program. The datasets were also used to better understand the carbon storage potential from restoring degraded woody vegetation.

This global study complements recent Australian work on carbon accumulation rates for planted and naturally regenerating stands of woody biomass across Australia. Human induced natural regeneration of woody vegetation is currently the dominant contributor to Australia's greenhouse gas emission reduction strategy under the Emissions Reduction Fund.

The study found that climate, rather than past land use, was the most important driver of potential carbon accumulation, with the work providing an important benchmark to assess the global potential of forest regrowth as a climate mitigation strategy, said Dr Roxburgh.

This project is jointly funded by CSIRO and the Australian Government's National Environmental Science Program.

The report is available here and further comment from The Nature Conservancy is available here.

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Poplar box woodland regrowth in Australia (image: Stephen Roxburgh)



Mulga natural regeneration in Australia (Image: John Larmour)



Native forest regeneration in one of Australia's Great Barrier Reef catchments (Image: John Larmour)