

Reforestation projects capture more carbon than industrial plantations

Reforested damaged rainforests are more efficient at capturing carbon than softwood monoculture plantations, throwing into question views on the efficiency of industrial monoculture plantations.



Credit: John Kanowski

Dr John Kanowski, Regional Ecologist, North Eastern Australia for the Australian Wildlife Conservancy, studied three types of projects: monoculture plantations of native hoop pines, mixed species plantations, and rainforest restoration projects comprised of a diverse range of rainforest trees. All the projects were 12–14 years old.

Dr Kanowski found that densely stocked restoration plantings stored significantly more carbon in above-ground biomass than the evenly spaced monoculture plantations of native conifers. They also tended to store more carbon than mixed species timber plantations.

‘Reforestation projects also had more large trees and they had a higher wood density than plantation conifers and greater diversity of other tropical species like birds,’ he says.

The findings challenge the existing view of monoculture plantations. The Australian government's National Carbon Accounting Tool Box predicts that monoculture plantations would sequester 40 per cent more carbon than restoration plantings in northern Australia.

With restoration projects more expensive than monoculture plantations, it is unlikely that carbon markets will favour restoration, says Dr Kanowski. ‘To be an attractive prospect for the markets, new reforestation techniques and designs are going to be required. [The] new designs will have to ensure that restoration can provide a habitat for rainforest life and store carbon at a cost comparable to industrial monoculture.’

From **ECOS** online <http://www.ecosmagazine.com/?paper=EC10004>