

## Carbon-diversity co-benefits in Australian forest plantings

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Restoration ecology is full of competing priorities; meeting one goal can often mean trading-off the ability to meet others. One example is the apparent trade-off between carbon storage to mitigate climate change and diversity for ecosystem services and conservation. Despite this, community ecology theory predicts that diversity will have a positive effect on community productivity, suggesting that the two goals may be complementary. I will discuss recent research on the co-benefits of carbon and diversity in Australian forest plantings using inventory data collected from wide rainfall, age, productivity and diversity gradients. We examined how planting growth was affected by species and functional diversity at a continental scale, and also within smaller environmental groupings. We found that diversity had no consistent effect on productivity, positive or negative. Our findings suggest that while planting diverse forests doesn't appear to provide a bonus for carbon sequestration, there is also no penalty.