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**Carbon sequestration potential of land-cover types in the agricultural landscape of eastern Amazonia, Brazil**

A long tradition of slash-and-burn agriculture has transformed the tropical rain forest of eastern Amazonia into an agricultural landscape with signs of degradation. This study assesses the biomass accumulation of secondary forest and its potential to take up atmospheric carbon compared to cropland, pastures or oil palm plantations. In their aboveground biomass, secondary forests accumulate approximately 94 tons of carbon per hectare when 30 years old and 20 m high. In the study region, secondary forests store around 5 % of the carbon released by the conversion of primary forest areas into agricultural land and might need to be considered a candidate for carbon trading in the future.