Modeled changes on functional diversity and carbon storage driven by drought in the Amazon forest: a plant-trait vs. PFT-based comparison

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Introduction

The possible modification in Amazon forest's ability to absorb and store carbon due to climate change is permeated with uncertainties (Finegan et al., 2015), and the role of functional diversity on this ecosystem process is poorly explored (Poorter et al., 2015; Sakschewski et al., 2016; Sitch et al., 2008). Dynamic global vegetation models (DGVMs) have been widely used to explore the question from a biogeochemical perspective (Cramer et al., 2001; Scheiter, Langan, & Higgins, 2013) providing substantial contribution to our current knowledge of the Amazon forest ecology and resilience (Díaz & Cabido, 1997; Prentice et al., 2007; Scheiter et al., 2013). For instance, the projected possibility of a large-scale degradation