**Caveats**

Like in all modeling studies, it is necessary to take into account the caveats related to model simplifications and assumptions in order to better understand the results and identify possible next steps for model improvements or even for new studies. The first, and probably the most important, is based on the fact that the model does not present a plant hydraulics module yet, then we were not able to use direct variant traits that are connected to moisture stress impacts on essential plant hydraulics features, such as vulnerability to cavitation and embolism. This representation is crucial considering that several studies have claimed that the decrease in carbon storage due to moisture stress is not, necessarily, linked to a decrease in carbon availability (i.e., carbon starvation) but much more related to hydraulic failure (Eller et al., 2018; Doughty et al., 2015; Phillips et al., 2010; Rowland et al., 2015). Also, our model does not consider the effects of biotic interaction such as mechanistic competition and facilitation, what seems to play a vital role in determining community assembly and ecosystem functioning (Mori et al., 2013). Also, nutrient cycling representation on vegetation models, mainly nitrogen and phosphorus, have been shown to be essential for a reliable representation of carbon storage along Amazon basin. In that sense, we strongly recommend that further studies using vegetation models, including CAETÊ, that aim to understand the impacts of moisture stress on Amazon forest carbon stock, should consider plant hydraulics traits, biotic interactions and nutrient cycling. All these features are being implemented in CAETÊ.

Regarding functional diversity analysis, for this study, we considered the whole Amazon basin as a single ecological unit, which may lead to an oversimplification of diversity within the basin. In order to avoid it, we strongly recommend that future studies consider using the framework described in Carmona et al (2016) to integrate functional diversity across scales, in this case from grid cells to the whole Amazon basin. By employing this framework, it would be feasible to look into functional diversity in different Amazon basin regions, and it could be used to advance further on the understanding of the connection between functional diversity and ecosystem functioning.

Finally, the reduced precipitation scenario applied in this work was essential to test the posed hypotheses, however, it does not reflect a realistic scenario in which the foreseen drought for the studied region is not homogeneous in space, in time and in magnitude. Hence, further studies may consider using more reliable scenarios for drought patterns and also consider other climatic variables such as temperature and CO2 concentration, also predicted to suffer changes in the next early decades.