Hi, Carlos

I would like to thank you very much for your return. Sorry for the late response but I’m also a bit slow on these crazy days.

So, first I will try to clarify you my design. As I said, in this study we used the vegetation model that we are developing (CAETÊ). For this paper we emcompassed only the Amazon basin. We applied two climatic scenario: regular climate (refence climatology from 1980-2010) and reduced precipitation (homogenous decrease in precipitation of 50% for the whole basin). We aimed to understand the impact of reduced precipitation on functional diversity and on the ability of the forest to absorb and store carbon. For this, we used six functional traits: allocation and residence time for leaves, aboveground woody tissues and fine roots. In order to understand the role of functional diversity on the response of Amazon forest, we initiated the model using two types of approaches that provided us two levels of initial funcional diversity: high and low. For the low diversity approach we used 3 tropical PFTs and the values of the functional traits were assigned by consulting previous literature (Table 1). For the high functional diversity we used a trait-based modelling approach in which the values of the traits are randomly sampled from ranges of values for each functional traits (Table 2), what creates a functional space with thousands of trait value combinations what we call as Plant Life Strategy (PLS; Fig. 1) from which we sample 3000 PLS (this modelling framework was primarily based on the one used by Pavlick et al, 2013 – Biogeosciences (doi:10.5194/bg-10-4137-2013). All the grid-cells are initiated with the same amount and indentity of PFTs/PLS, and with envinronmental filtering, the trade-offs between the functional traits and the physiological processes we end up with each grid-cell with its own community. From this we were able to create TPDs and analyze the distribution of all 6 traits, comparing both the two modelling approaches and the climatic scenarios.

With the TPDs we were able to see the functional transformation of the communities with the reduced precipitation and also how the initial value of functional diversity (high/low) affects the results. However, I’m having some troubles in represent the graphs of the TPDs. I’m sending you the figure with the TPDs for the allocation traits. If I plot the scenarios and the two functional initial conditions together it becomes impossible to see the details for the high diversity approach because the density of the predominant traits in the low diversity approach is much higher (Fig. 2). If I plot the approaches separately the *y* axis show different dimensions and it makes a bit hard to compare them (Fig. 3). Do you have some advice to deal with this?

p.s.: see the figures and tables on a separate .pdf file.

I am very greatfull for your help.

Best wishes