O título não deveria conter algo relacionado ao resultado?

-Functional diversity determinines carbon sink strenght to drought: a case study in Amazon basin using a trait-based model

- Low precipitation leads to a functional reorganization on Amazon forest:

-Reduced precipitation is able to change community functional diversity and carbon storage of Amazon forest: the value of trait-based modelling

Change on functional diversity and carbon storage of Amazon forest with drought: the value of trait-based modelling

-Trait based modelling allows functional diversity analysis but do not improve biogeochemestry representation: a case study with reduced precipitation

Changes on Amazon forest functional organization and diversity in a drought scenario: a case study showing the importance of trait-based modelling

* (DOUGHTY et al., 2015a)⁠: alocação para dossel….análise através de plots na Amazonia em varios países da America do Sul (seca de 2005 e 2010)
* (DOUGHTY et al., 2015b)⁠: análise através de plots (Amazonia em vários paises), torres de fluxo e modelo. Analisaram a sazonalidade na alocação. Padrão geral: para dossel na seca e para raízes na wet season (NÃO É MUITO CLARO PRA MIM….talvez não colocar esse estudo, já que não lidou diretamente com “experimento” de seca)
* (SEVANTO; DICKMAN, 2015)⁠: ao que se conhece até o presente momento, o efeito da seca depende de vários fatores estagio do ciclo de vida; severidade da seca, tempo do estudo. Aparentemente, uma seca leve aumenta o particionamento para raízes, enquanto que seca mais severa poderia reduzir o fluxo e o particionamento para componentes abaixo do solo
* (METCALFE et al., 2010): experimento de redução de 50% de chuva. No plot de exclusão: um pouco mais para o dossel do que troncos e raízes. The ‘functional balance’ theory suggests that plants might respond to the TFE treatment by shifting partitioning of C towards roots, at the expense of other tissues, where photo- synthate can be used to increase water uptake (Thornley, 1972; Cannell & Dewar, 1994). Our data provide no clear support for this theory: the proportions of total NPP invested in roots and foliage slightly declined in the TFE plot compared with the control (although these mean plot differ- ences were well within 95% confidence intervals)
* (DOUGHTY et al., 2014)⁠: We explore this question with a novel four-year high-temporal-resolution data set of carbon allocation from two forest plots in the Bolivian Amazon. Following the drought, carbon allocation increased initially towards the canopy, and then in the following year, allocation increased towards fine-root production. For instance, in both plots allocation of NPP to wood varied from accounting for between ;25% and 35% of total NPP during the wet season to ;10–15% of total NPP in the dry season (Fig. 1c and Appendix: Fig. A1). There was a multiyear response in the allocation of NPP following drought, with increases in allocation to canopy NPP over the first year following the drought (2011), and then in allocation to fine-root NPP over the second year after drought (Fig. 3). Remarkably, this multiyear pattern was repeated in both plots. In both plots the increase in NPP was largely for increased canopy productivity, with little change in wood or fine-root production. Contrary to certain theoretical expectations (Bloom et al. 1985), root growth did not increase either during or the year following the drought when canopy NPP had increased, but in the year after (Fig. 2d). Immediately following the drought, NPP allocation shifted towards the canopy and away from wood and roots in 2011 (Fig. 3, bottom: arrow 1– 2). NPP allocation then shifted towards roots in 2012 and away from the canopy (Fig. 3, bottom: arrow 2–3). A small, longer-term shift away from wood allocation remained following the drought period. Dry-season declines in woody NPP have been demonstrated at many other tropical forests, are usually interpreted as evidence that water limitation affects overall photosynthesis and productivity, which results in slower growth rates (Doughty et al. 2013). Both plots showed consistent shifts in allocation patterns following the 2010 drought (Fig. 3). BothBoth plots initially shifted allocation towards the canopy. At the shallow-soil site, this allocation towards the canopy came at the expense of the normal seasonal allocation towards roots. This is surprising because it has been theorized that forests may allocate more carbon towards roots during a drought (Bloom et al. 1985) and our plots did not, and in fact only increased root growth two years following the drought .It is unclear whether the shift in allocation from wood to roots is a longer-term trend or whether the plot will return to the previous allocation patterns in future years. If it does not return, this would have interesting climate implications for a region that may experience more droughts in the future, since less carbon locked in the woody biomass would reduce ecosystem-level C sequestration rates.
* (MALHI; DOUGHTY; GALBRAITH, 2011):⁠ collate and analyse a global dataset of NPP allocation in tropical forests, and compare this with the representation of NPP allocation in 13 terrestrial ecosystem models On average, the data suggest an equal partition- ing of allocation between all three main components (mean 34+6% canopy, 39+10% wood, 27+11% fine roots), but there is substantial site-to-site variation in allocation to woody tissue versus allocation to fine roots. The mean allocation of the ecosystem models is close to the mean of the data, but the spread is much greater, with several models reporting allocation partitioning outside of the spread of the data.Across sites the major component ofvariation ofallocation is a shifting allocation between wood and fine roots, with allocation to the canopy being a relatively invariant component of total NPP. This suggests the dominant allocation trade-off is a ‘fine root versus wood’. The relatively low variance in allocation to canopy NPP indicates that shifting allocation between wood and fine roots is the dominant cause of variation in NPP allocation.
* The model uncertainties regarding responses on carbon allocation (MALHI; DOUGHTY; GALBRAITH, 2011)
* (HOFHANSL; GABRIEL SINGER AND WOLFGANG WANEK, 2015)⁠⁠: found increase in WP with MAP and dry season leght.

**CHANGES ON FUNCTIONAL COMPOSITION**

* AGUIRRE-GUTIÉRREZ et al., 2019: We explore how key ecosystem’s biogeochemical properties have shifted over time as a consequence of multi-decadal drying. Notably, we find that drier tropical forests have increased their deciduous species abundance and generally changed more functionally than forests growing in wetter conditions, suggesting an enhanced ability to adapt ecologically to a drying environment.
* ENQUIST; ENQUIST, 2011; Together, our results show that over relatively short time scales, community composition and the functional dominance may be more responsive to climate change than recovery to past disturbances. Our findings point to the importance of assessing proportional changes in forest composition and not just changes in absolute numbers. Our findings are also consistent with the hypothesis that tropical tree species exhibit differential sensitivity to changes in precipitation. Predicted future decreases in rainfall may result in quick differential shifts in forest function, physiognomy, and species composition. Quantifying proportional functional composition offers a basis for a predictive framework for how the structure, and diversity of tropical forests will respond to global change.
* (ZHANG et al., 2018)⁠
* ESQUIVEL-MUELBERT et al., 2018;
* (FARRIOR et al., 2013)⁠
* SAKSCHEWSKI ET AL 2016
* PHILLIPS et al., 2010;

See Loreau and Hector 2001

Bartlett, Megan K.

Detto, Matteo

Pacala, Stephen W.

2019

Theoretical consequences of trait-based environmental filtering for the breadth and shape of the niche : New testable hypotheses generated by the Traitspace model

Drought-induced shifts in the floristic and functional composition of tropical forests in Ghana.

Individual-based modelling of Amazon forests suggests that climate controls productivity while traits control demography

Carbon-based models of individual tree growth: A critical appraisal

Carbon storage in tropical forests correlates with taxonomic diversity and functional dominance on a global scale

da Costa et al 2010

Predicting shifts in the functional composition of tropical forests under increased drought and CO2 from trade-offs among plant hydraulic traits

Relationships between functional diversity and ecosystem functioning: A review

Trait probability density (TPD): measuring functional diversity across scales based on TPD with R

Integrating abundance and functional traits reveals new global hotspots of fish diversity.

Resilience in ecology: Abstraction, distraction, or where the action is?

Functional traits and niche-based tree community assembly in an Amazonian forest.

Residence times of woody biomass in tropical forests

Functional structure of biological communities predicts ecosystem multifunctionality

**TRATA DAS DIFERENTES FACETAS DA DF**

(SONG et al., 2014)⁠

(FUNK et al., 2017)⁠(DÍAZ et al., 2007)⁠(MASON et al., 2005)⁠