

# Carbon dynamics and biodiversity conservation in the Southern Brazilian Atlantic Forest

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Poster Session Online

Southern Brazilian Atlantic Forest (BAF): threats related to deforestation, climatic and anthropogenic changes → impacts to biodiversity conservation and carbon cycling

Do taxonomic, functional and phylogenetic diversity predict carbon dynamics across Southern BAF?

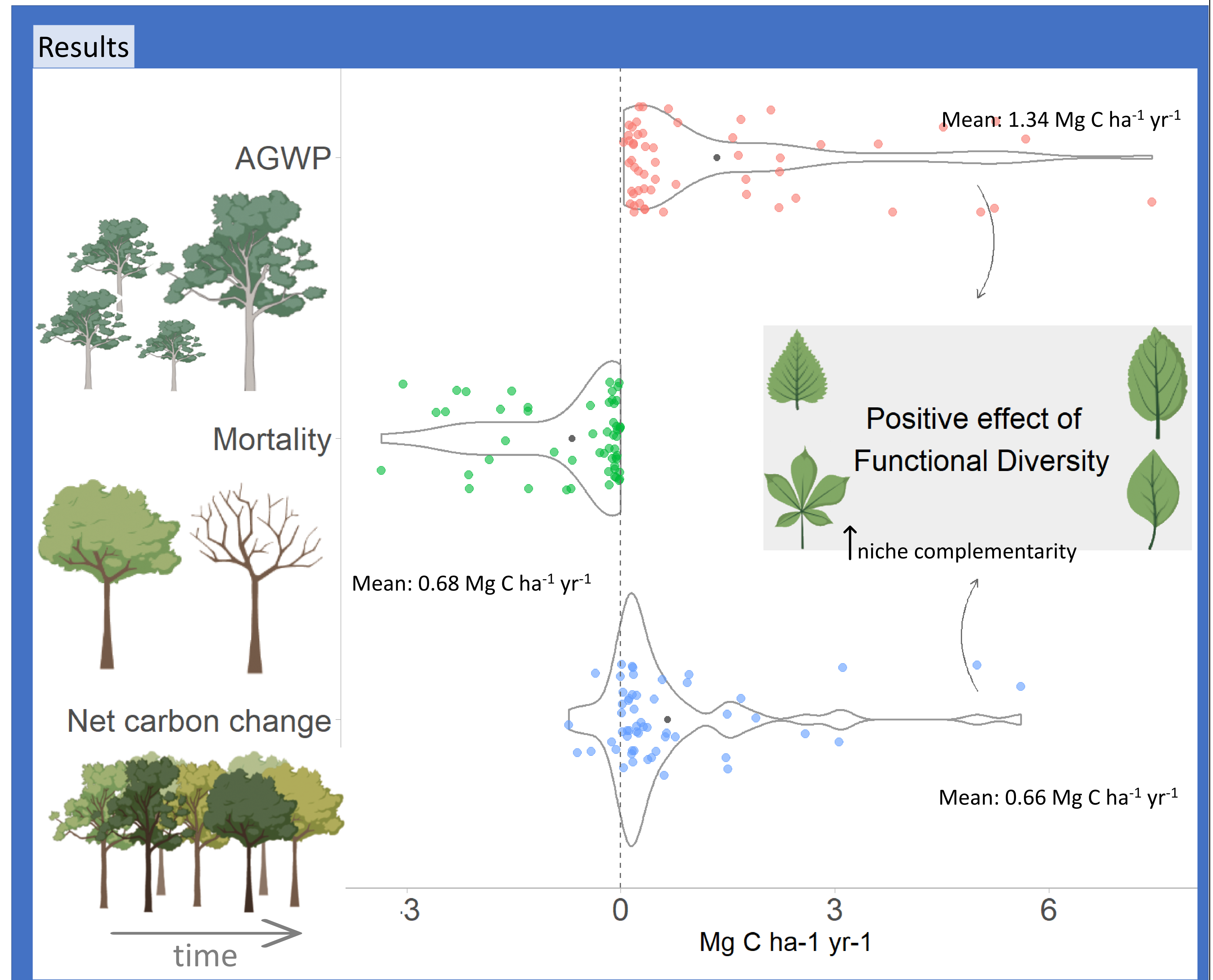
## Data obtention

- 52 permanent plots across Southern BAF
- At least two census across time
- Old-growth and successional forests (15-25, 26-50, >50 years)
- Carbon estimates: individual biomass → community biomass → carbon estimation (biomass\*0.456)

## Data analysis

- Forest productivity (AGWP): carbon gains (tree growth + recruitment)
- Mortality: carbon losses due to tree mortality
- Net carbon change: AGWP - Mortality
- Taxonomic diversity: Inverse Simpson Index
- Functional diversity: Rao Q
- Phylogenetic diversity: Mean Pairwise Distance
- Linear mixed models, considering forest age as random effect

Forest protection of the endangered BAF → conserving biodiversity and carbon cycling processes, such as forest carbon sink



Presented at:

Vegetation dynamics and succession  
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