Master thesis

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Mémoire de stage

présenté par

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Contents

Résumé et Abstract

Écrire le résumé français ici…

Write the english abstract here…

Acknowledgments

I would like to thank…

Introduction

- Introduce why tropical rainforest are such a good study case
- Define biodiversity
- Define ecosystem functionning
- Define ecosystem services
- Introduce tropical sylviculture
- Define selective logging
- Introduce biodiversity erosion in tropical rainforests ant its impact
- Introduce Loreau partitionning
- Introduce the interest of modelling
- Introduce the idea to look at biodiversity as both a parameter and an output

Tropical rainforests have fascinated ecologists due to their outstanding diversity [Connell, 1978].

Tropical forests are primary ecosystems in terms of biodiversit and carbon storage [Lewis et al., 2004].

High biodiversity from tropical rainforests is the source of many ecosystem functions, which support ecosystem services.

Biodiversity and ecosystem functionning field is emmering [Loreau, 2000].

Selective logging is increasing in tropical forests.

Tropical logging accounts for one eight of global timber production [Blaser et al., 2011].

Selective logging represents a major threat to biodiversity [Gibson et al., 2013].

1 Materials and methods

1.1 TROLL simulator

1.1.1 Abiotic environment

1.1.2 Photosynthesis

1.1.3 Autotrpohic respiration

1.1.4 Carbon uptake

1.1.5 Tree growth

1.1.6 Seed dispersion, production and recruitment

1.1.7 Mortality

1.2 TROLL sensitivity analysis

1.2.1 Functional traits

1.2.2 Seed rain

1.3 Disturbance

1.3.1 Disturbance module

1.3.2 Design of experiment

1.3.3 Outputs anlaysis ?

1.3.3.1 Resistance and resilience metrics

1.3.3.2 Biodiversity partitioning

1.4 Selective logging

1.4.1 Selective logging module

1.4.1.1 Designation

1.4.1.2 Selection

1.4.1.3 Rotten trees

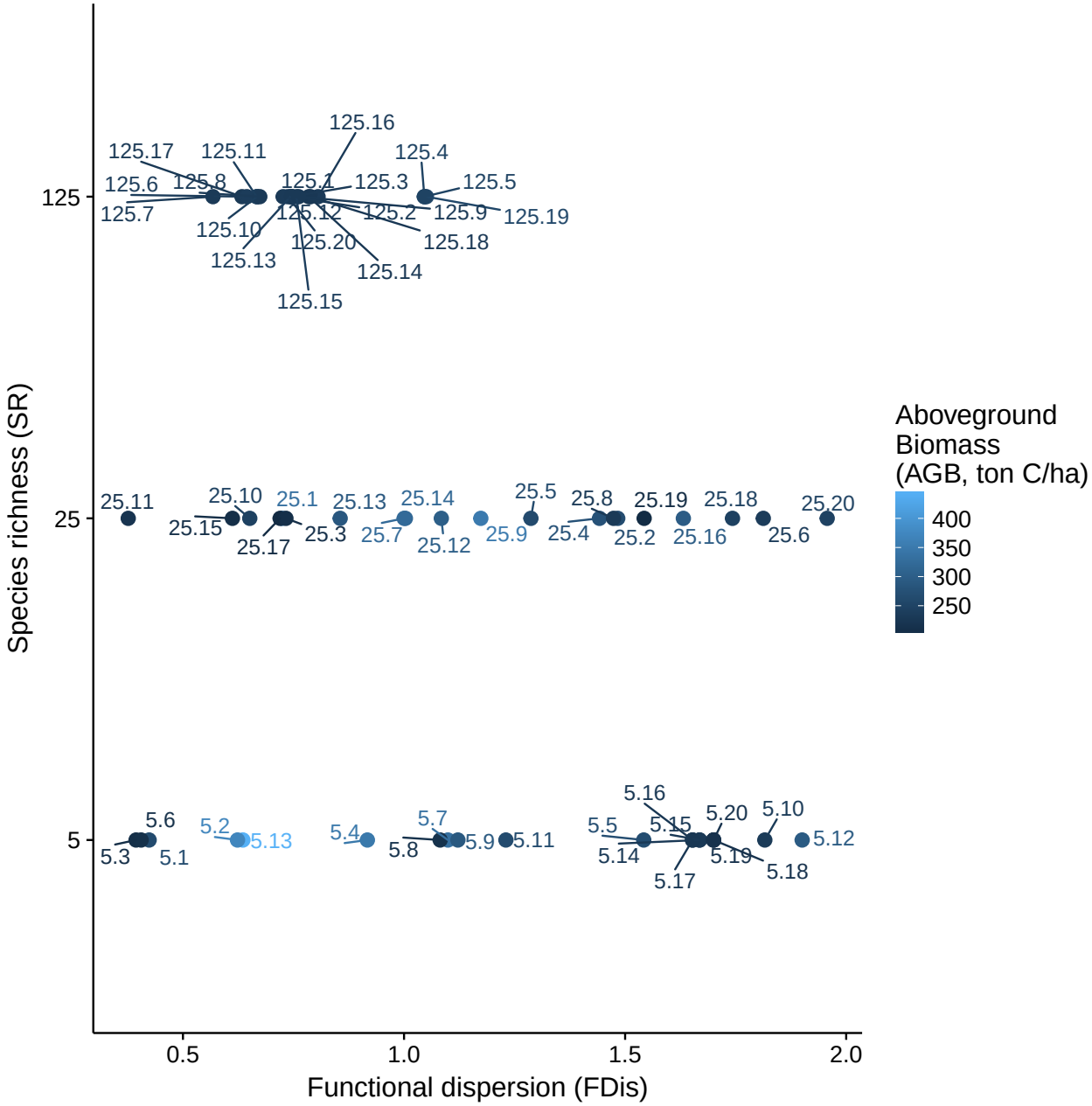

Figure 1: Experimental design before disturbance. Communities are implemented along a gradient of species richness (SR) and functional dispersion (FDis) resulting in a broad range of aboveground biomass (AGB). FDis was caluclated based on 4 functional traits (leaf mass per area, wood specific gravity, maximum diameter, maximum height).

1.4.1.4 Felling

1.4.1.5 Tracks

1.4.1.6 Gap damages

1.4.2 Design of experiment

1.4.3 Outputs analysis ?

1.4.3.1 Resistance and resilience metrics

1.4.3.2 Biodiversity partitioning

2 Results

3 Discussion

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