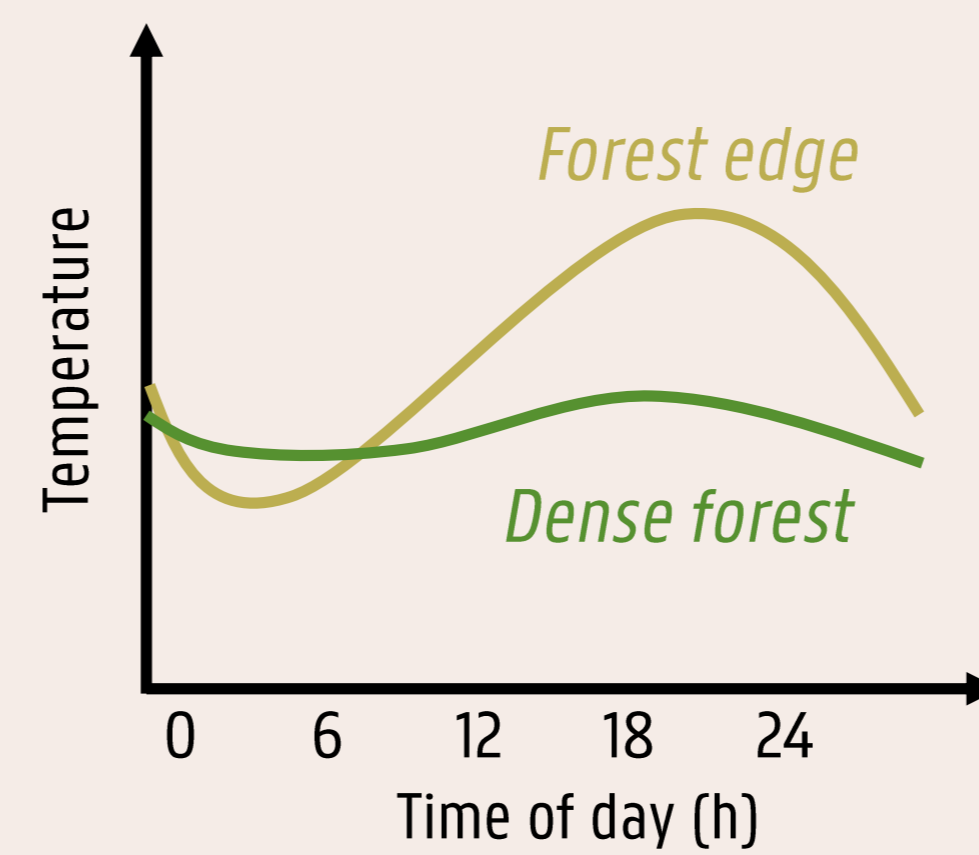


THE IMPACT OF MACROCLIMATE, MANAGEMENT AND EDGE-TO-CORE GRADIENTS ON FOREST STRUCTURE

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Background information

- **Forest edges** form a transition zone between forest interior and adjacent non-forest habitat. These transition zones (*within 100 m of the forest edge*) encompass approximately 20% of the remaining global forested area and are unique concerning functions, ecosystem services and structure.
- Forest edge **structure and composition** play a key role in establishing a typical forest microclimate (*the whole set of climatic parameters assessed near the ground on a small spatial scale*) which helps to buffer the effects of climate change on understorey communities. Though, **forest management** could disturb this process through the removal of structural elements.
- Before gaining insight into how edge structure shapes the microclimate we need to fully understand the **variation and the drivers of forest edge structure**.

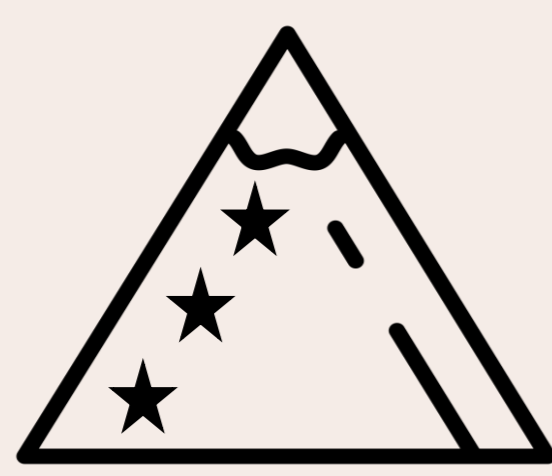


Objectives

- Understand how forest edge structure varies across Europe
- Study how structural differences modify the microclimate (*future research*)

Set up

225 plots across 45 edge-to-core transects



9 European regions

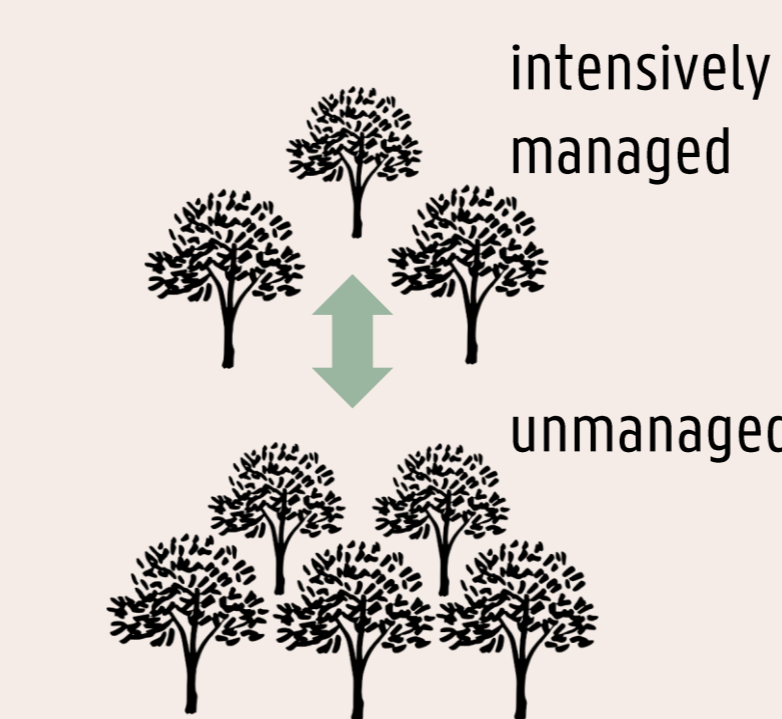
3 elevational levels

- ☆ Region without elevational gradient (only lowland)
- ★ Region with elevational gradient

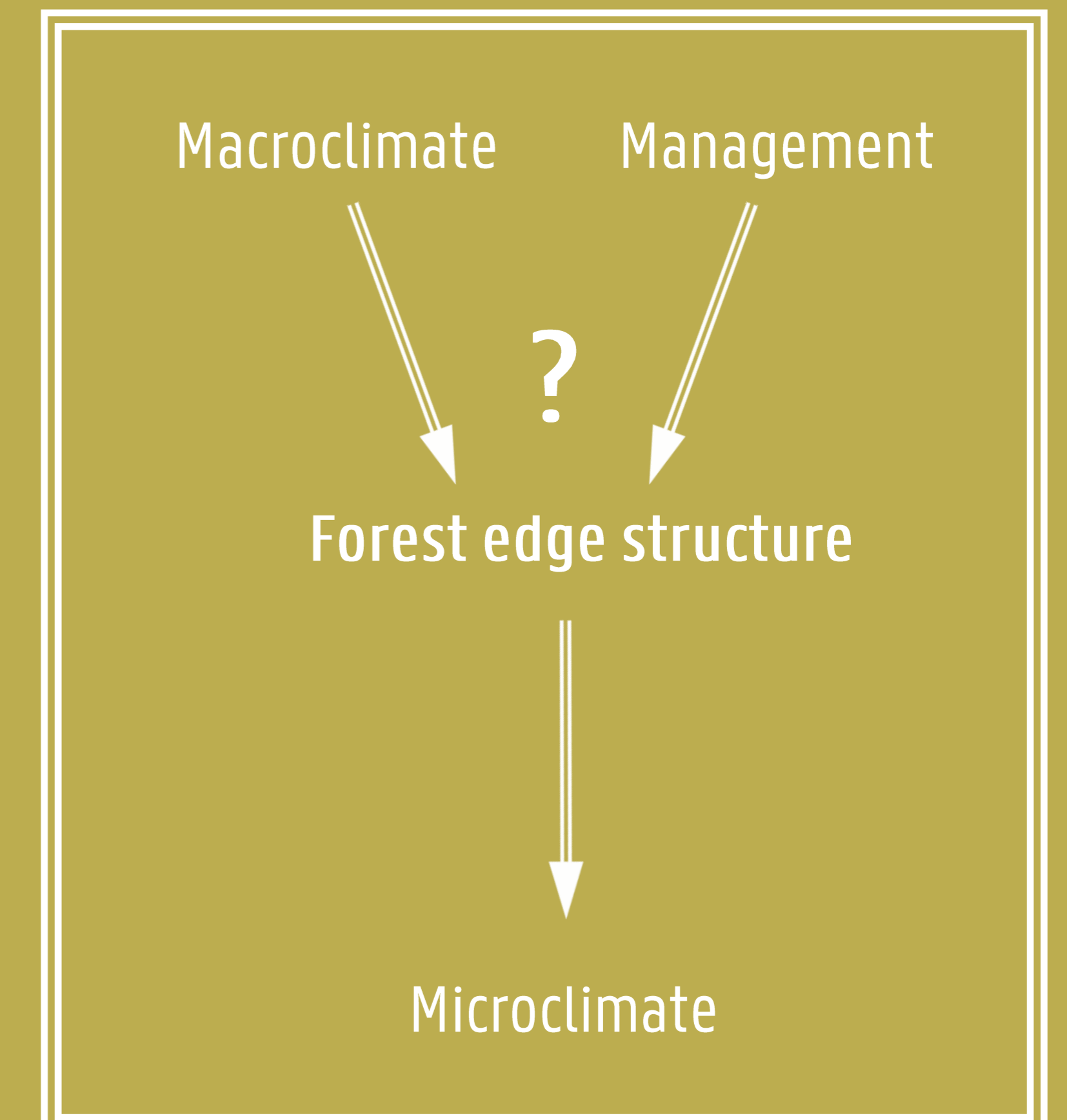
MACROCLIMATE

forest patch

45 edge-to-core transects



3 MANAGEMENT regimes

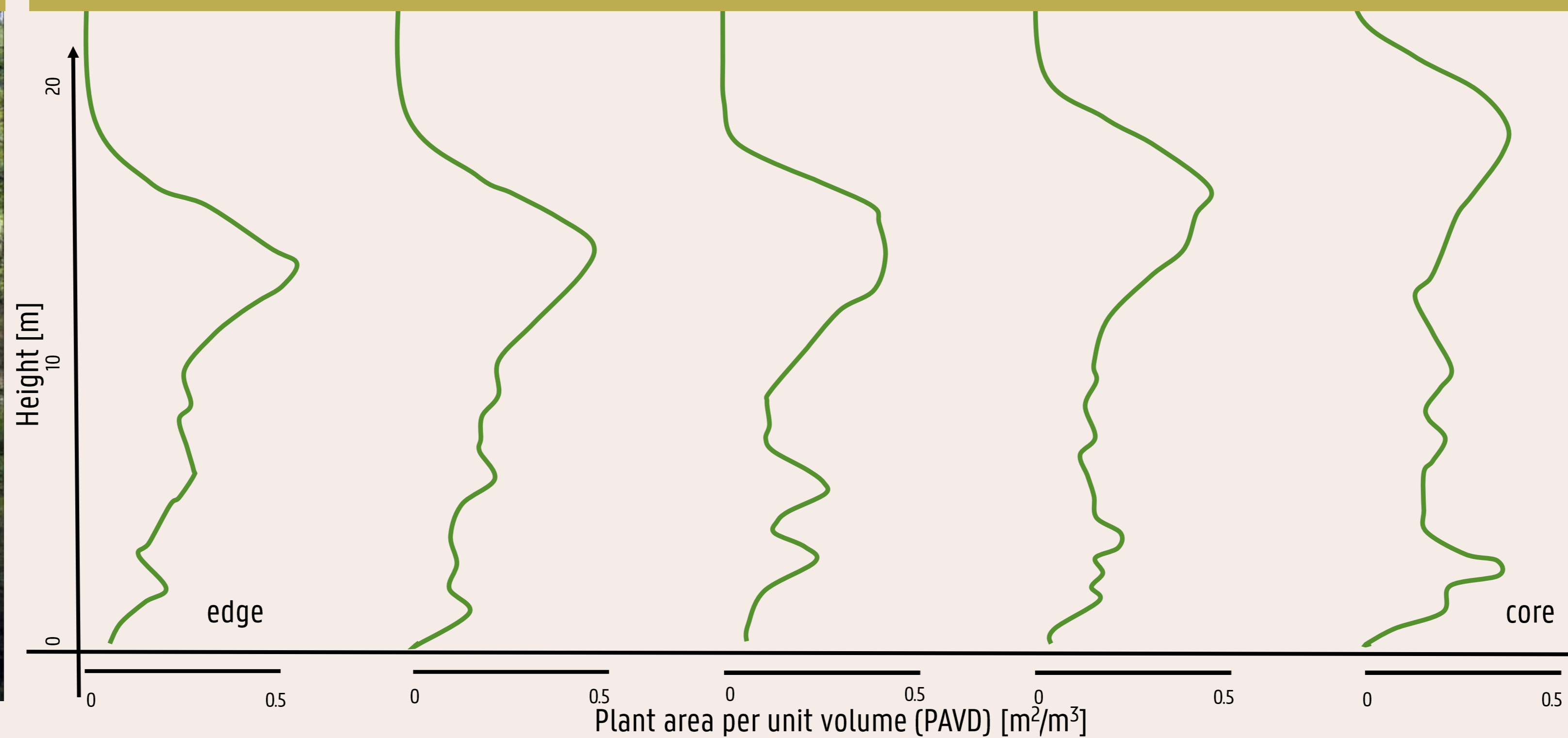


Method

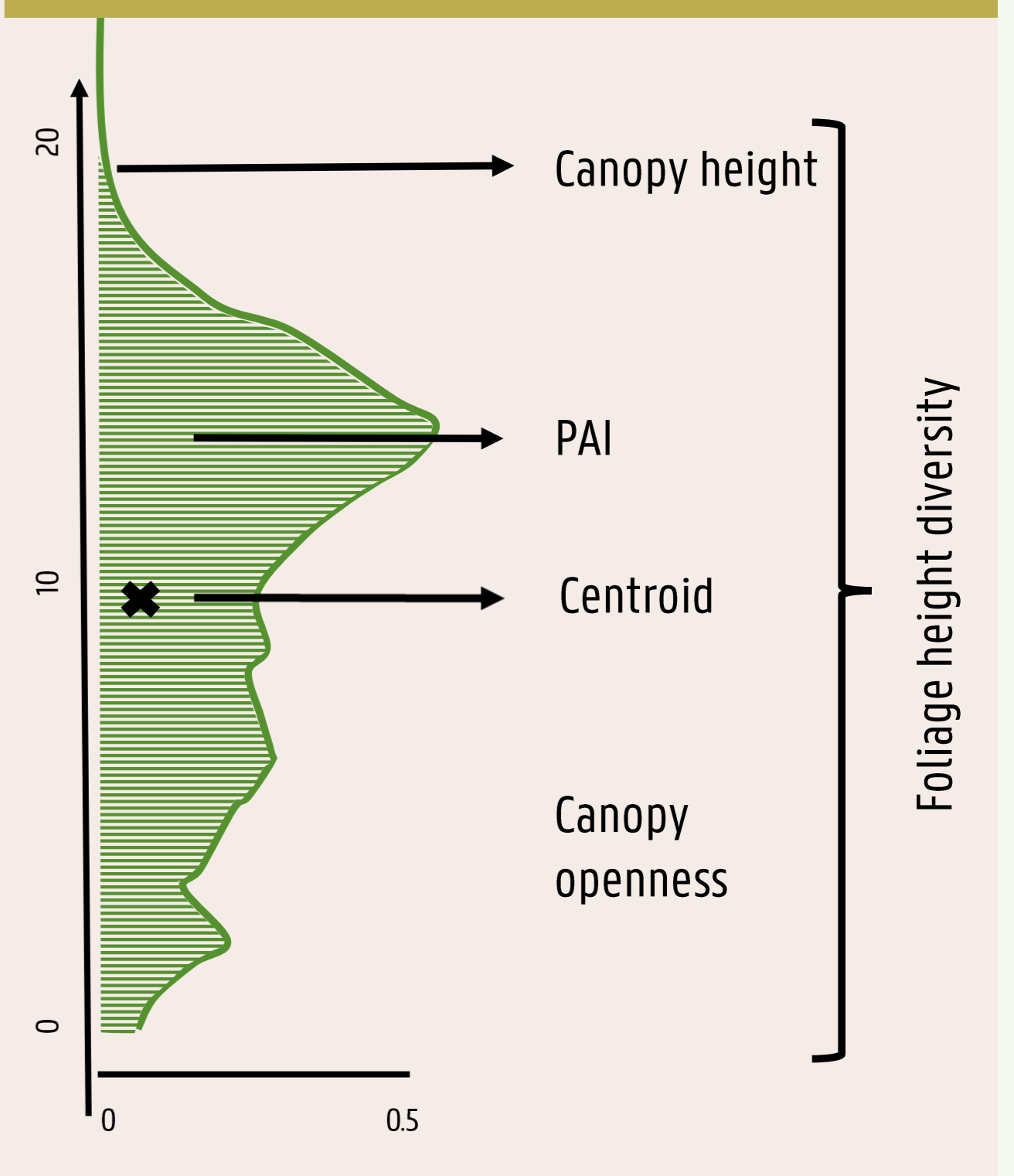
1. Collecting TLS data



2. Constructing vertical plant profiles

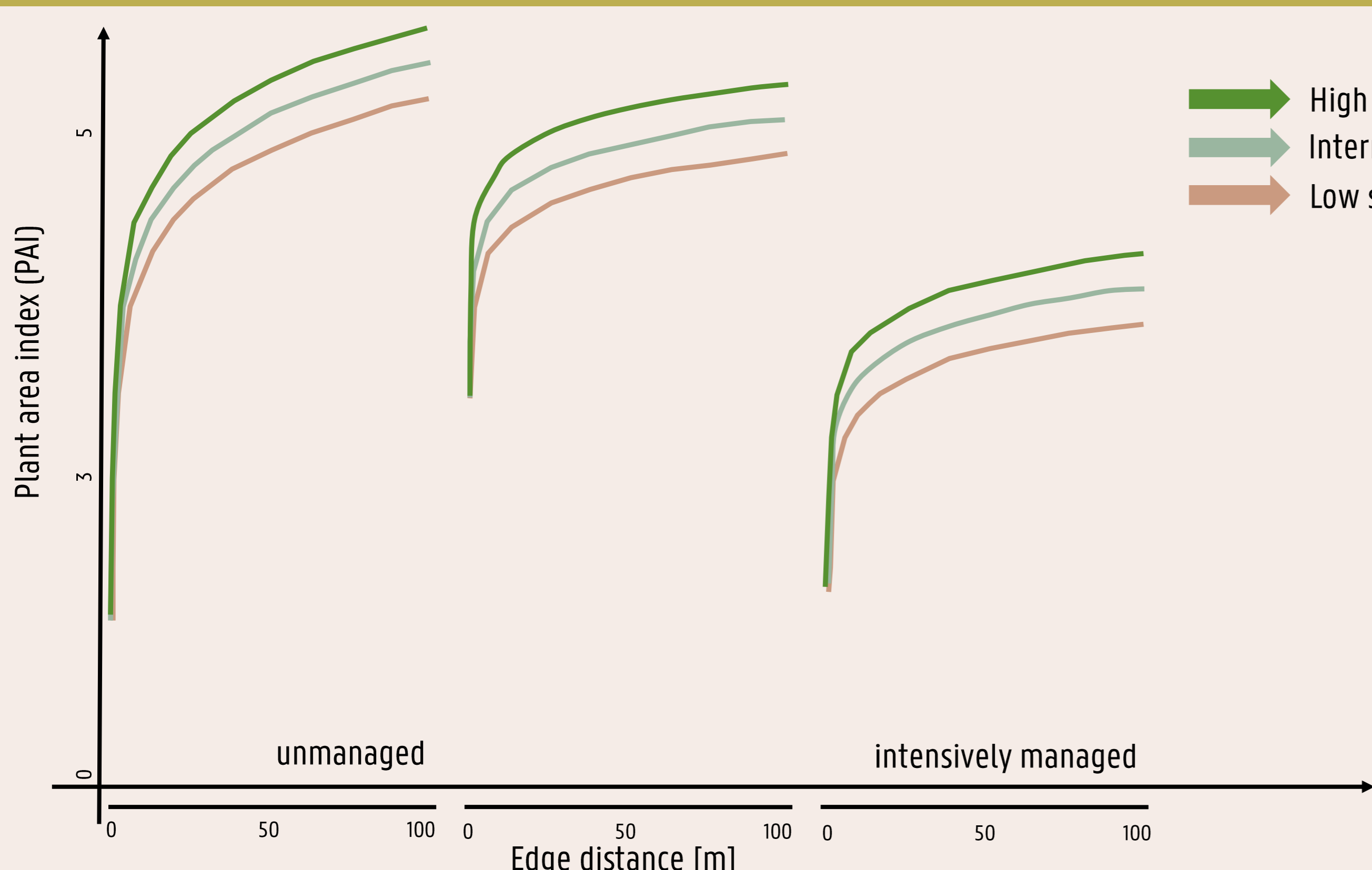


3. Extracting structural metrics



Results & General conclusion

Predicted values of PAI



Management, macroclimate and species composition affect forest edge structure

*Shade tolerance is the capacity for growth in the shade; species with a high shade tolerance require low light availabilities to be able to grow

Future research

- Study the relationship between forest edge structure and microclimate
- Build a predictive model of forest microclimates
- Provide site and situation specific guidelines on forest edge management

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