

# The Pfynwald experiment:

an important part of our granted SNF project

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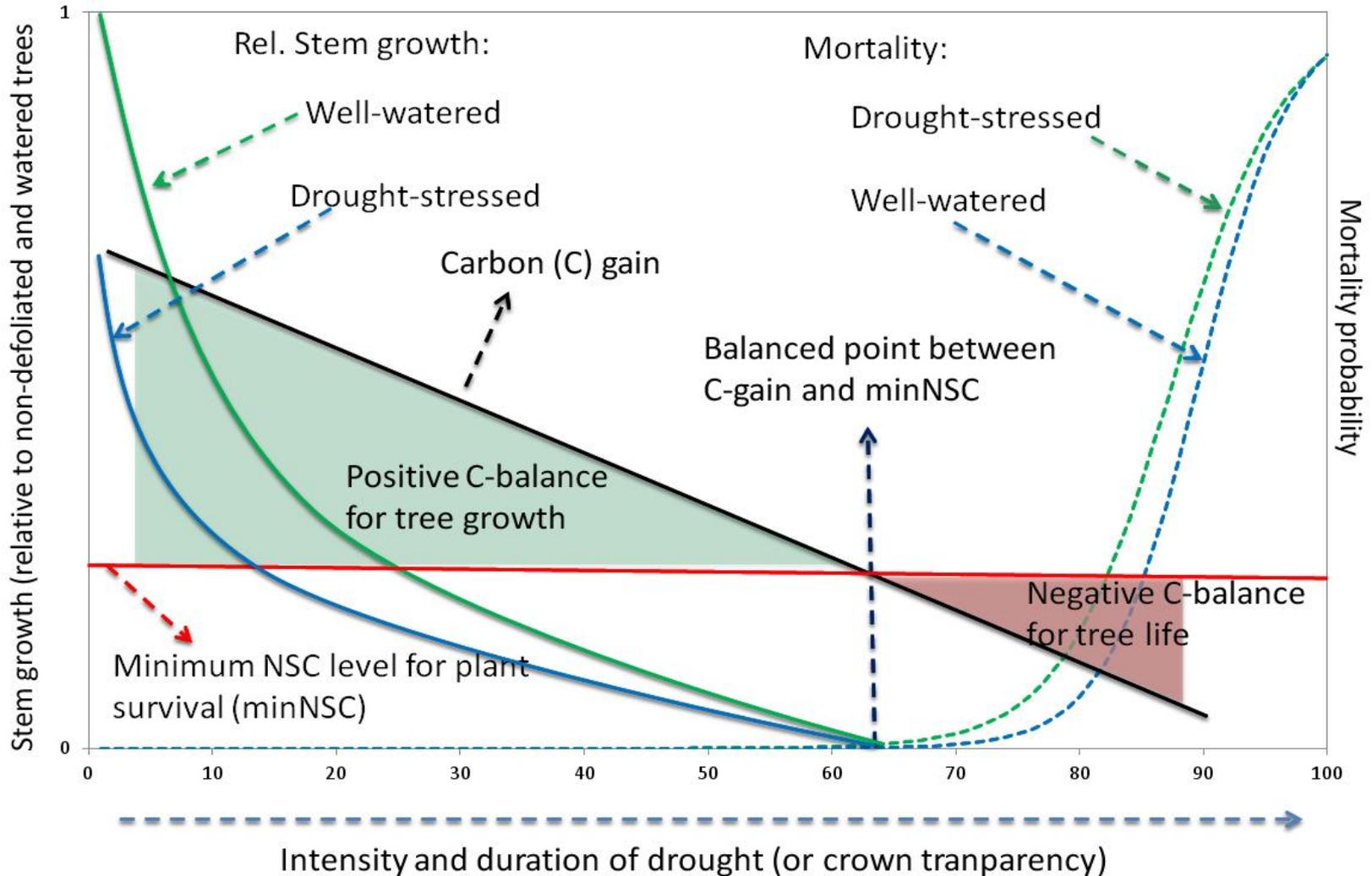
# The SNF project mainly aims to explore:

- a minimum NSC level (NSC = non-structural carbohydrates)

and

- the interactions between NSC level and nutrient (N, P) availability in relation to water availability

# Conceptual model

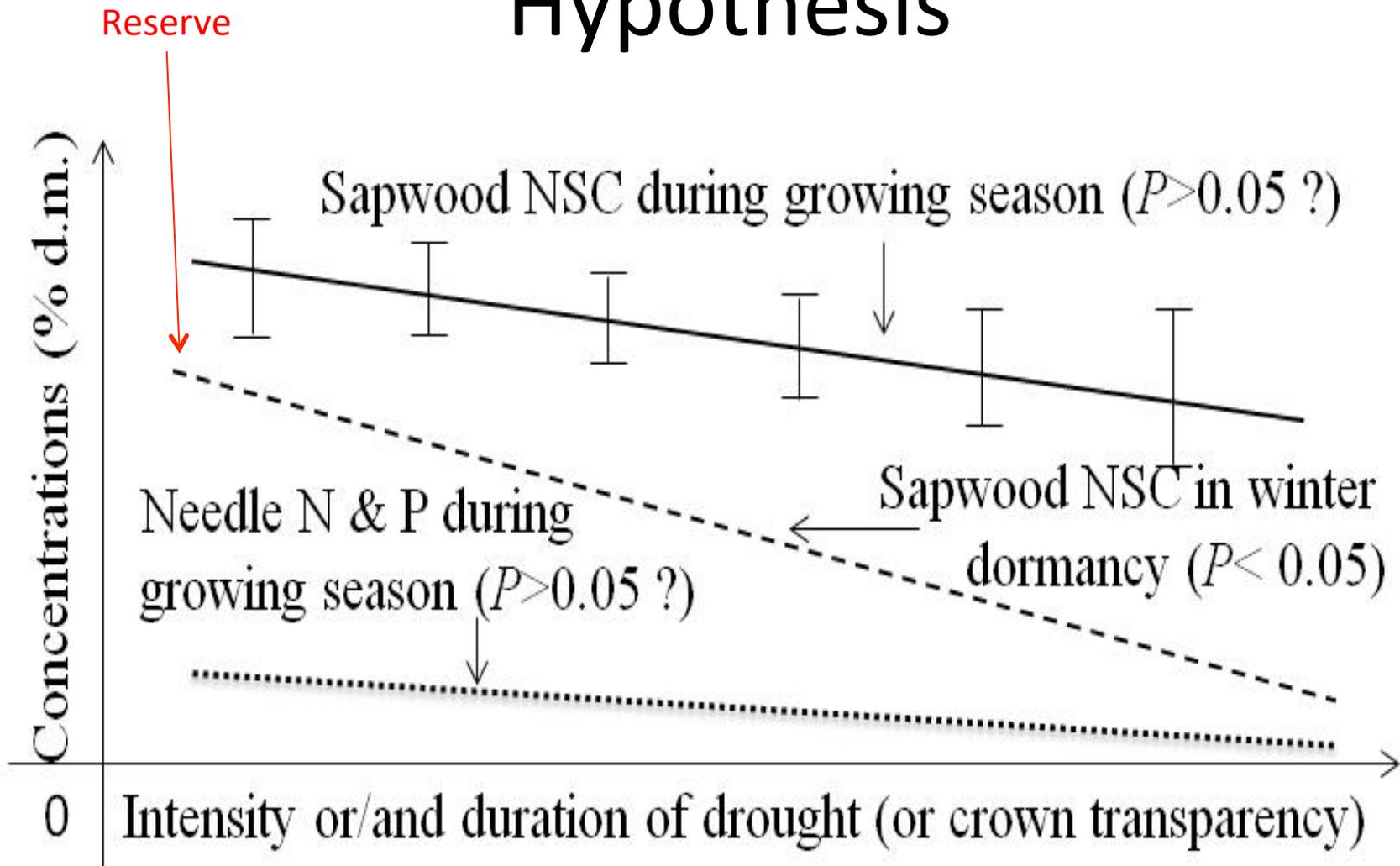




# Experiments of the SNF project

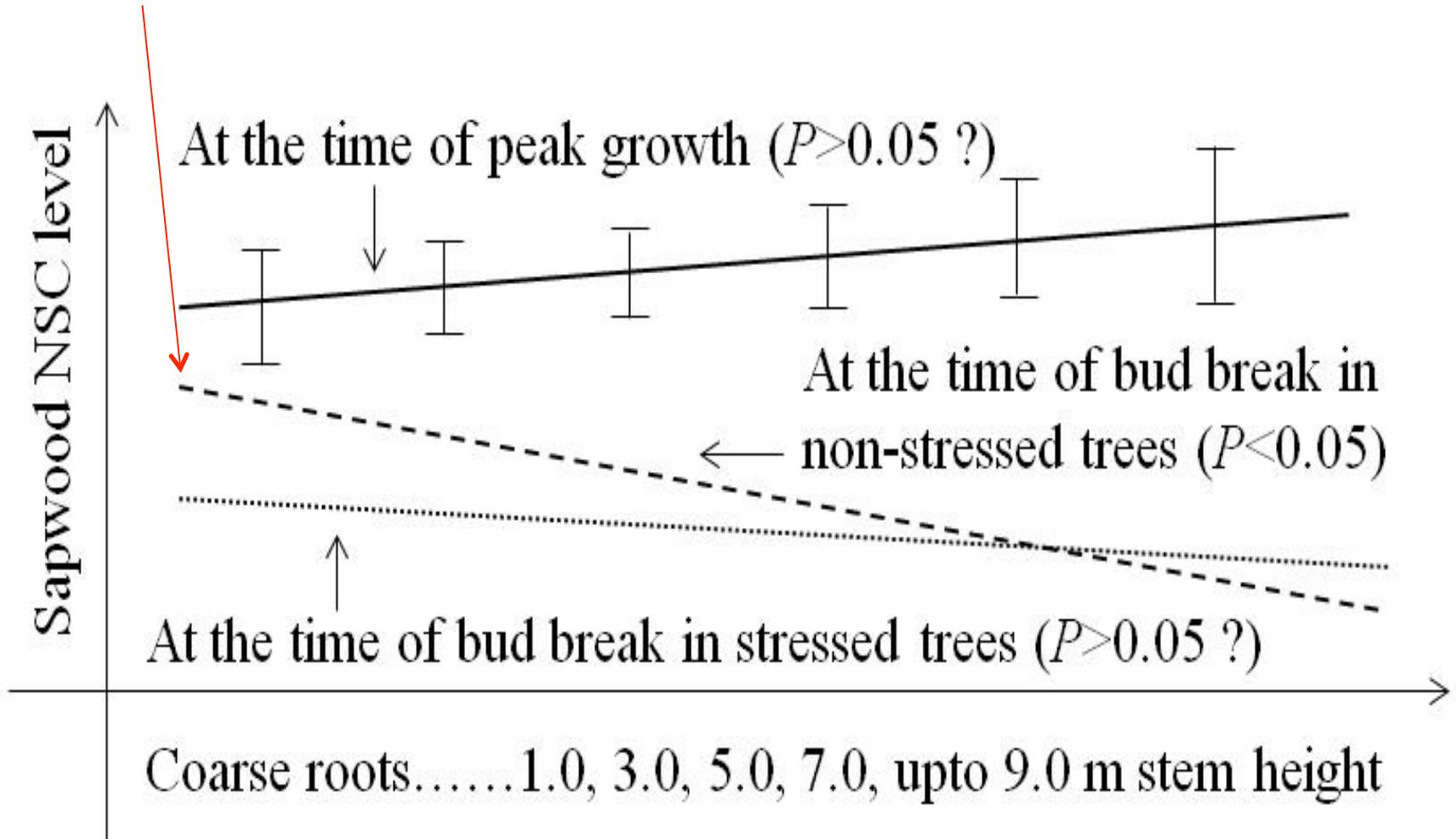
- **Large sample investigation in the long-term irrigation experiment Pfynwald**
- A controlled experiment - defoliation + drought + nutrient supply (WSL Modelökosystem-anlage)

# Hypothesis



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Re-mobilization



# Sample trees

(drought stressed vs. non-stressed)  
(more vs. less needled)

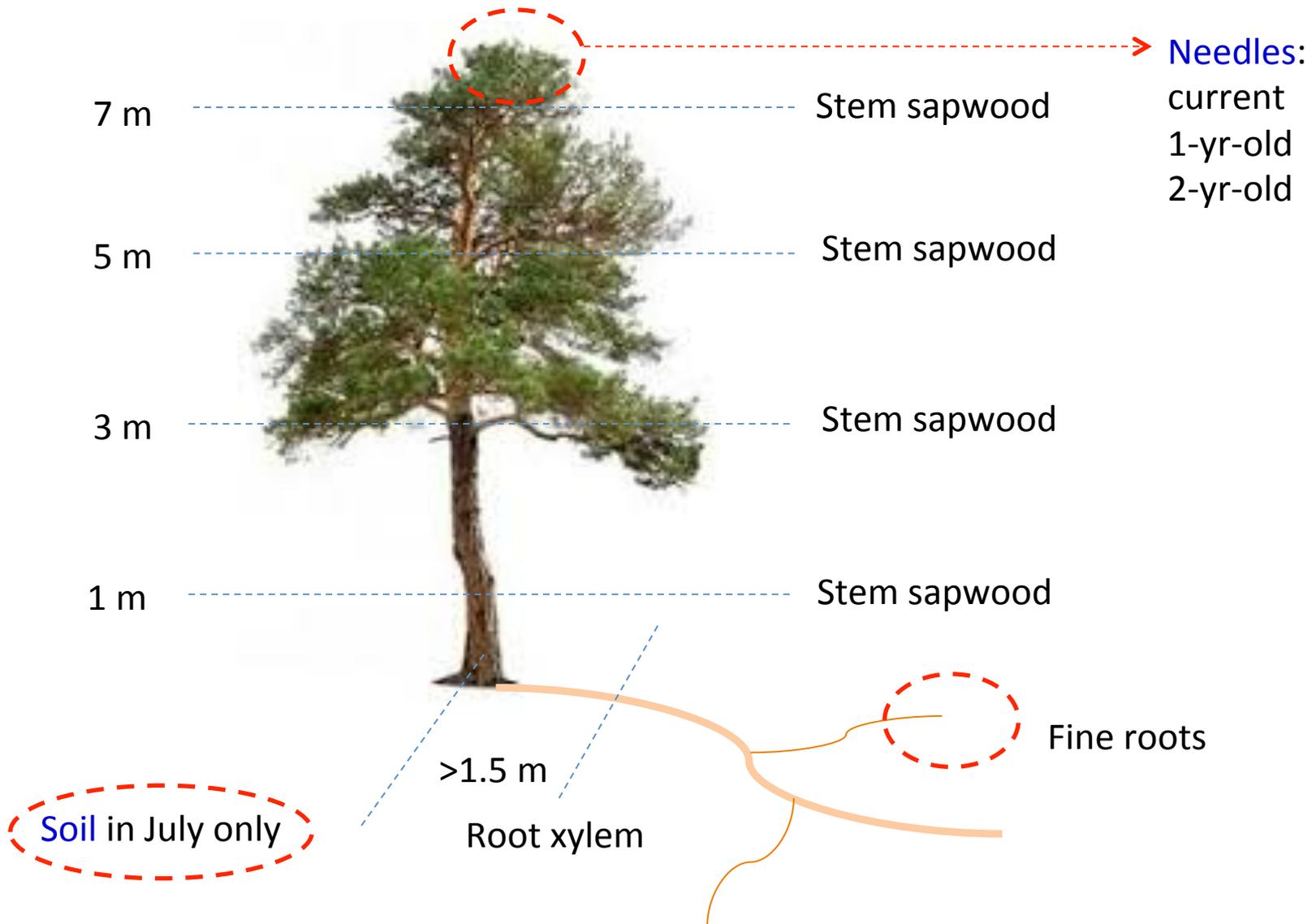
- **Crown transparency** of trees in irrigated (**WP**) and non-irrigated plots (**NP**) are classed into <20%, 21-40%, 41-60%, 61-80%, >80% (5 classes)
- 10 – 15 sample trees for each class in both **WP** and **NP** (a total of **100 – 150 trees**) (?)

# Sampling dates

(Winter vs. Summer)

- Winter - Feb. 2015
- at the time of bud break – March/April 2015
- peak growth – mid-July 2015

# Samples



# Measurements

- Needles:  $^{13}\text{C}$ , NSC, N, P
- Xylem: NSC, N, P
- Soil total and available N and P

Thanks