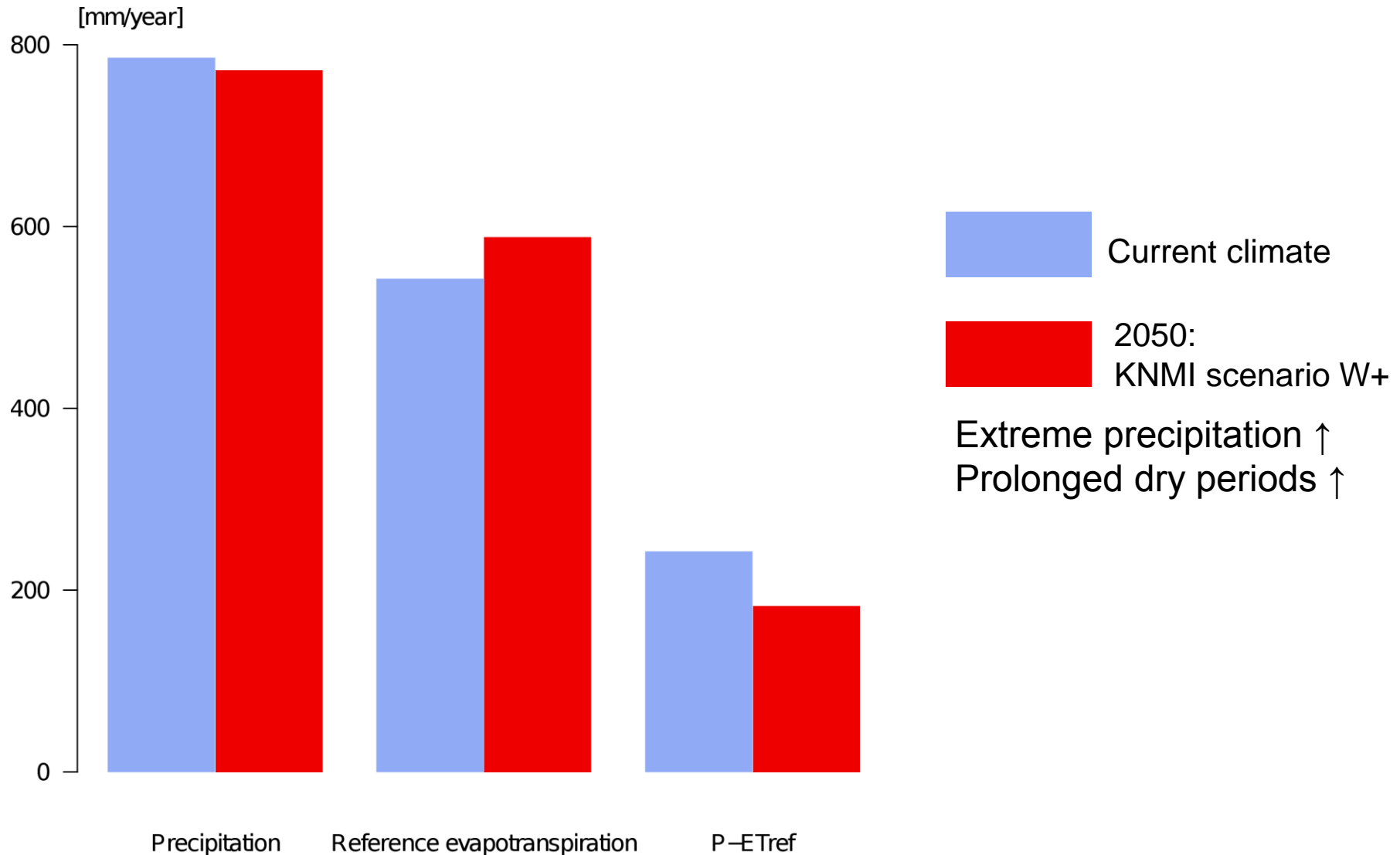




# The future groundwater recharge: evapotranspiration response of natural vegetation to climate change

Bernard Voortman, Ruud Bartholomeus, Jan-Philip Witte  
Vienna, 2 May 2011

# Climate change and the water balance



# Micro climate and vegetation

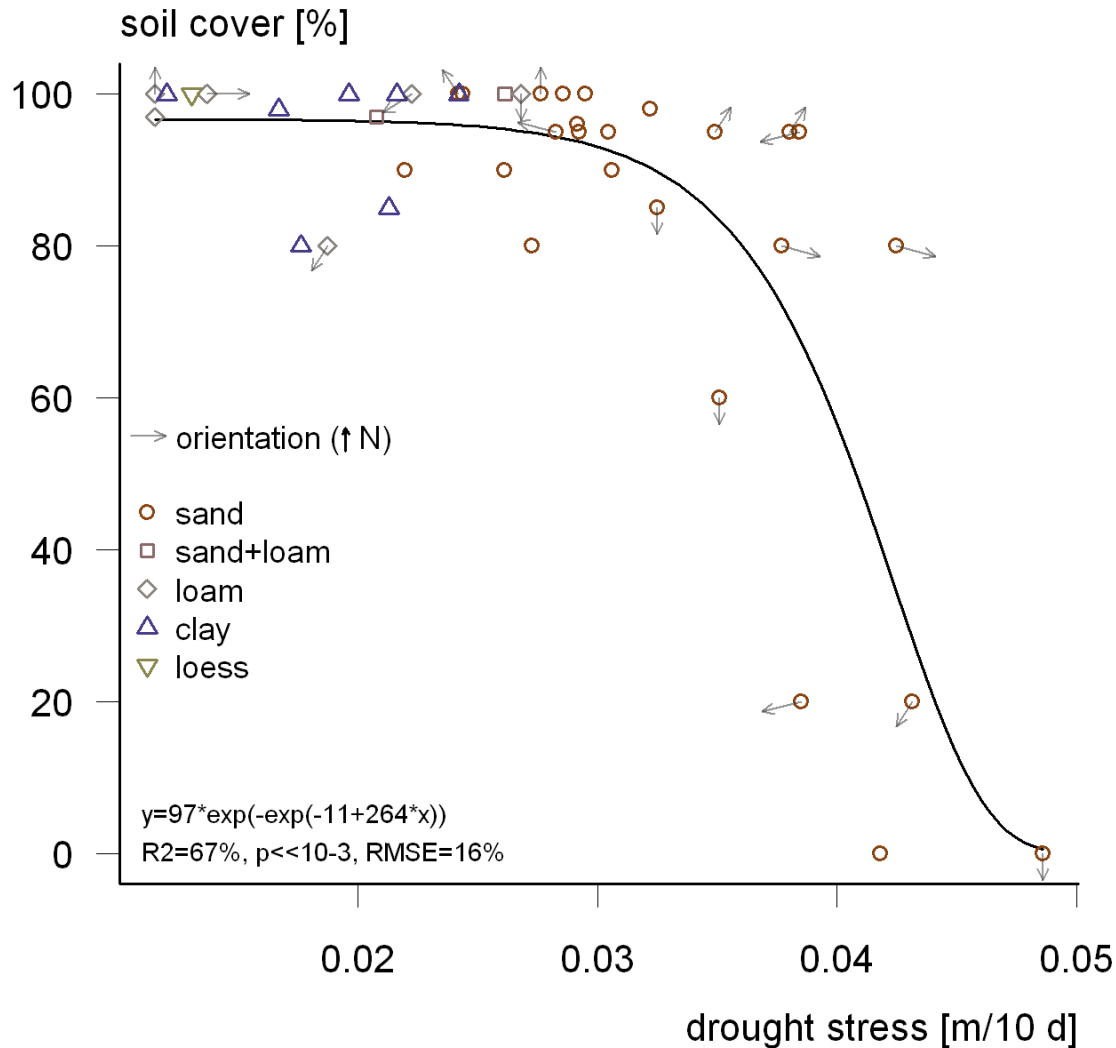


**North slopes**

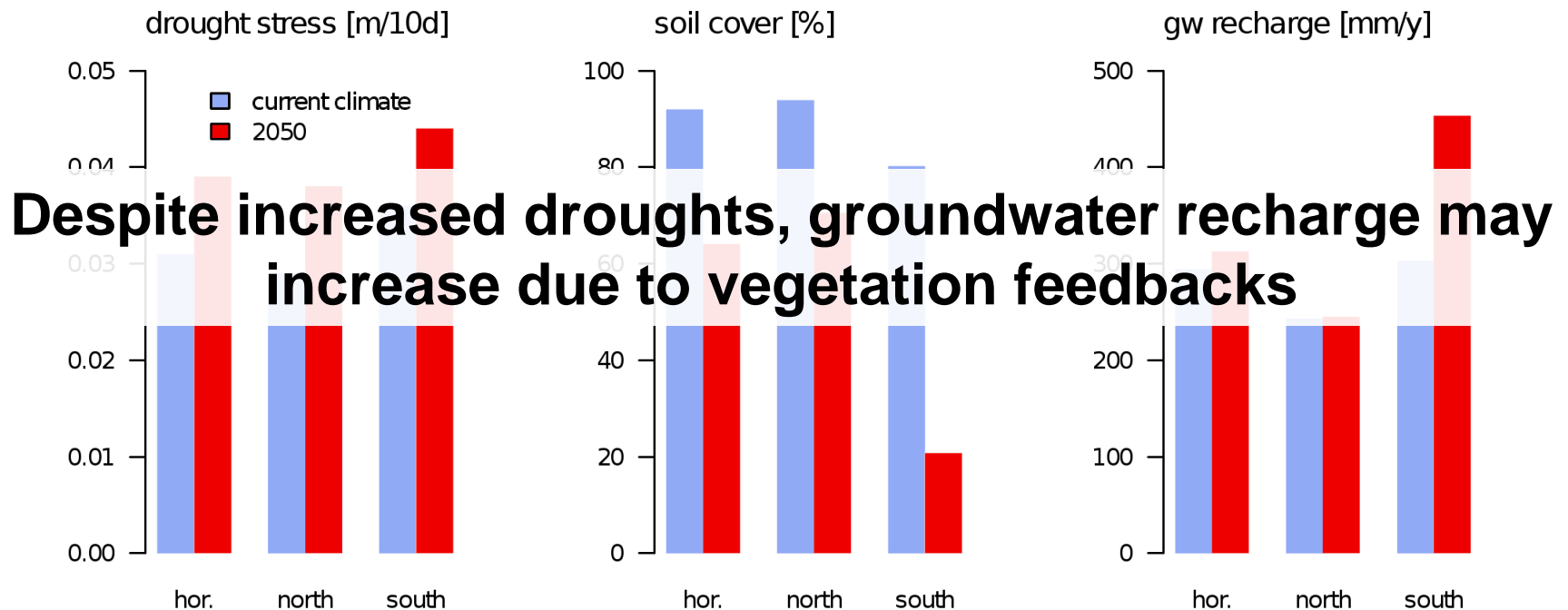


**South slopes**

# Empirical relationship, drought stress - soil cover



# Climate change – Vegetation – Water balance

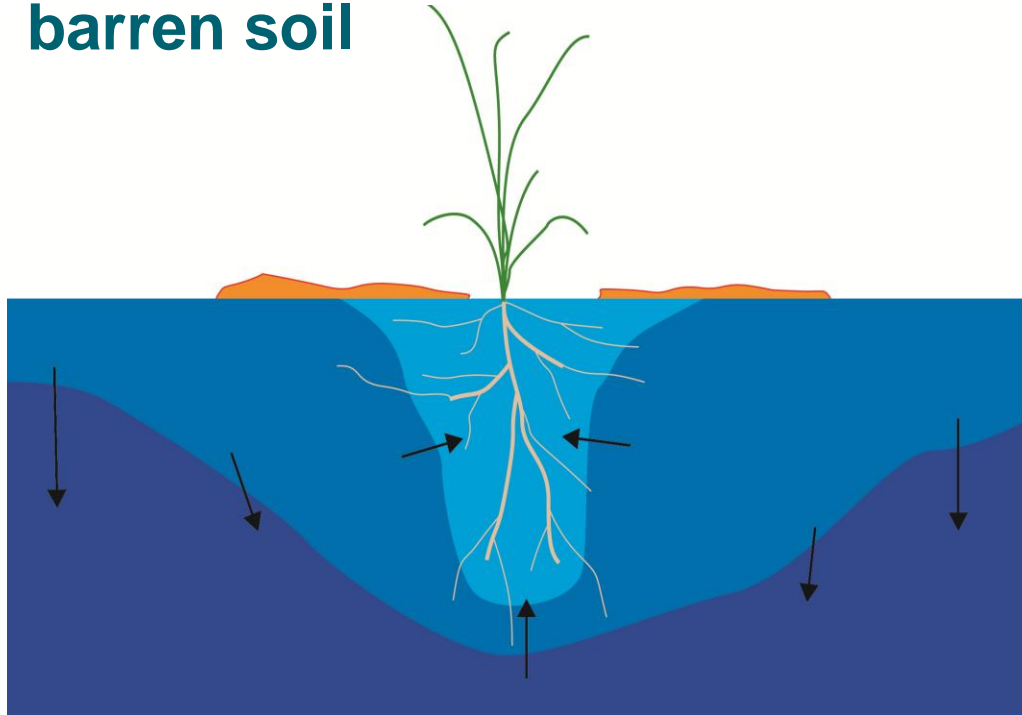


# Research outline

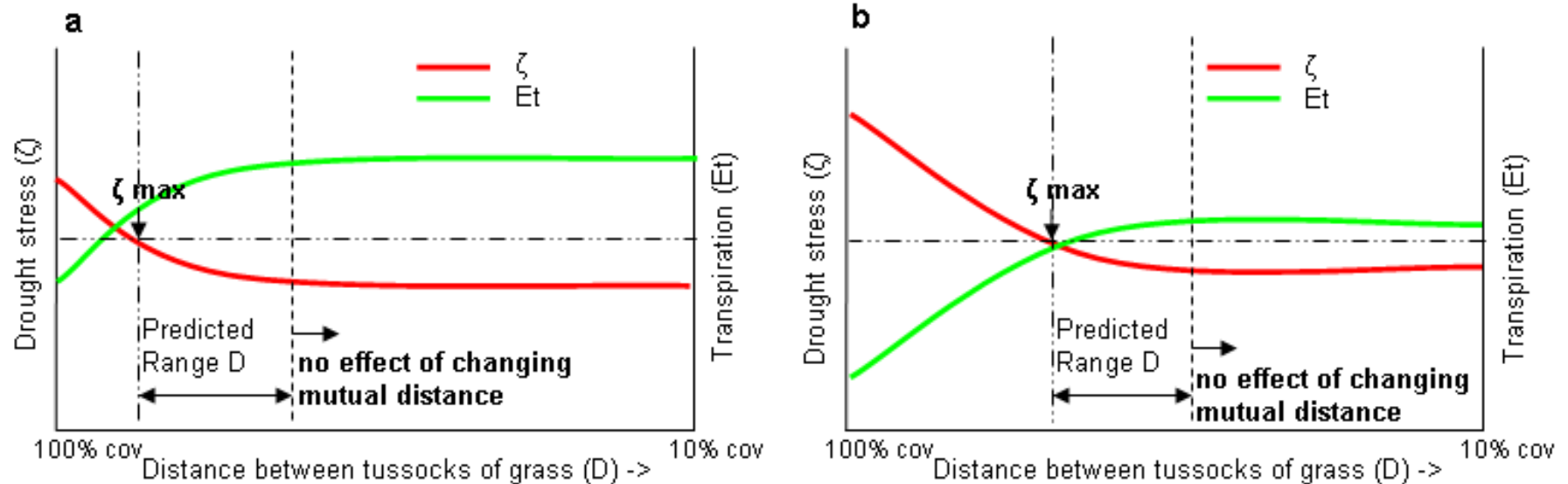
1. Moss and lichen evaporation
2. Plant available water in sandy soils
3. A conceptual model to estimate the vegetation coverage

## 2. Plant available water

**25 % of plant available water  
might come from surrounding  
barren soil**

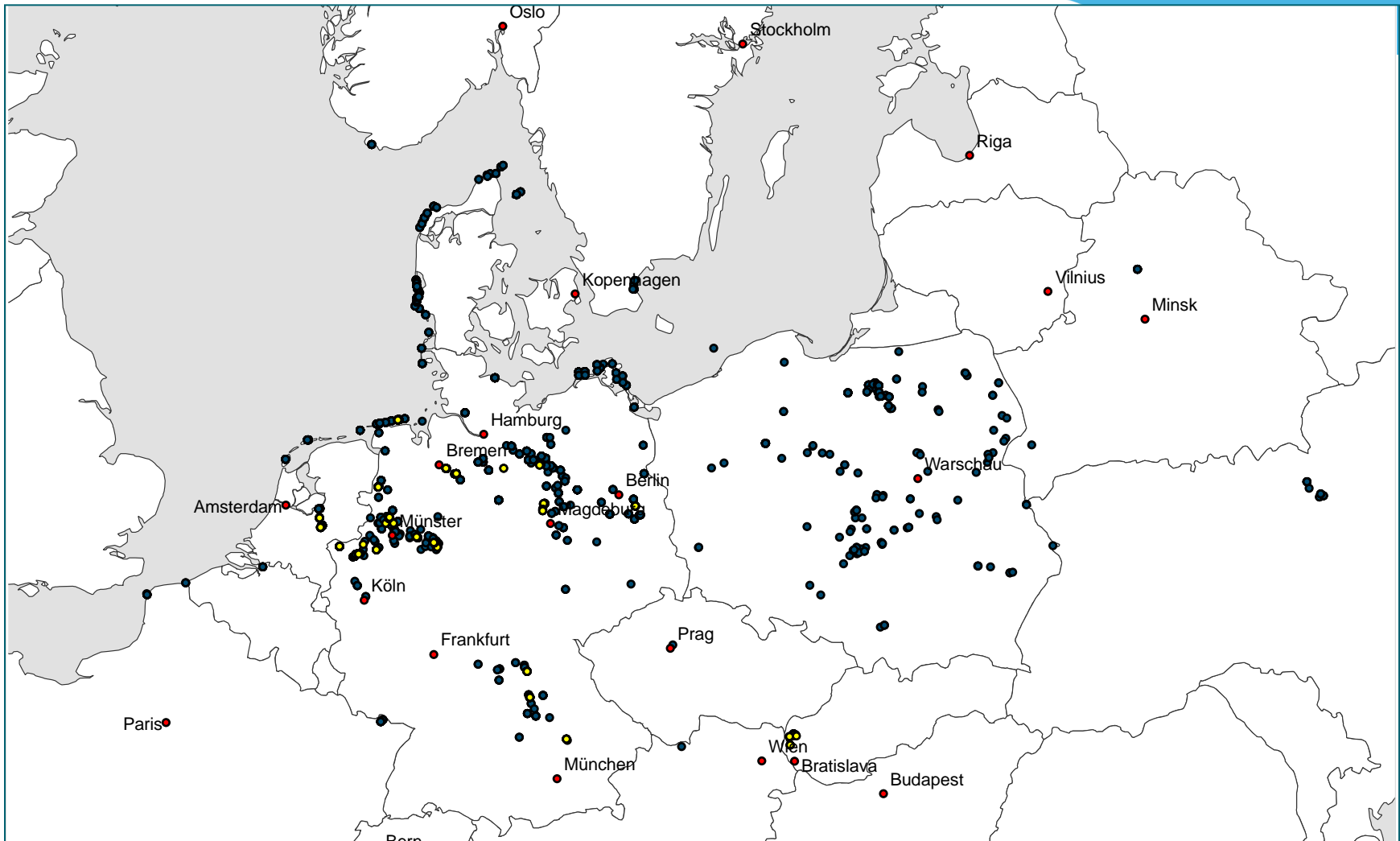


### 3. A conceptual model to estimate the vegetation coverage





# 3000 vegetation records spread over EU



# Questions ?

**2100?**

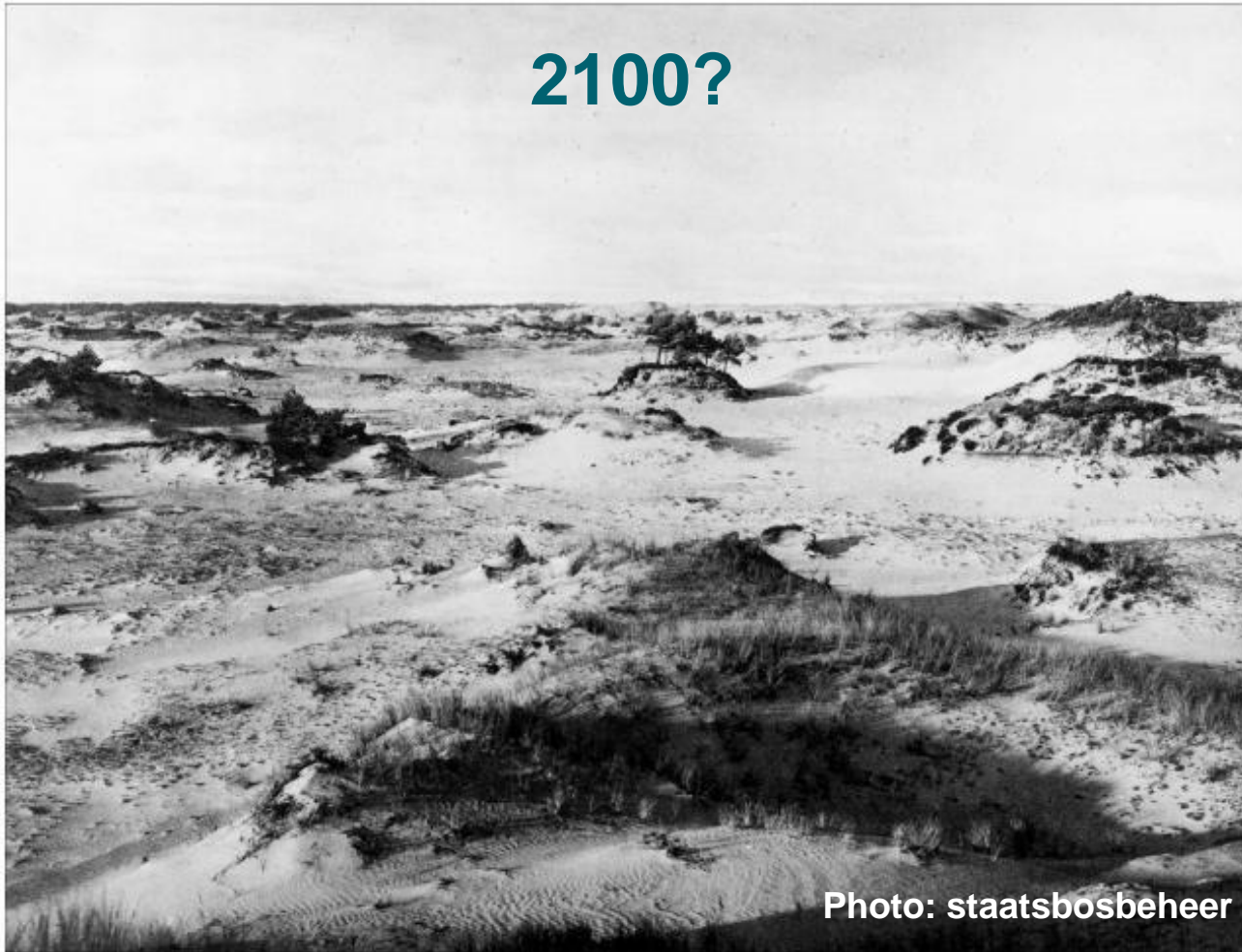


Photo: staatsbosbeheer