Joint exercise: Mapping oak (Quercus) distribution in Scandinavia over the last 12,000 years using pollen data selected from the European Pollen Database (EPD)

EXERCISE 1 – group 1
Mapping Fagus pollen distribution in Europe during the Holocene using ArcGIS
Time steps:
11 000 cal yr BP: 11 500 – 10 500 cal yr BP
9 000 cal yr BP: 9 500 – 8 500 cal yr BP
7 000 cal yr BP: 7 500 – 6 500 cal yr BP
5 000 cal yr BP: 5 500 – 4 500 cal yr BP
3 000 cal yr BP: 3 500 – 2500 cal yr BP
1 000 cal yr BP: 1 500 – 500 cal yr BP
Exploring both presence and percentage values!!!

EXERCISE 1 – group 2
Mapping Fagus pollen distribution in Europe during the Holocene using ArcGIS
Time steps:
10 000 cal yr BP: 10 500 – 9500 cal yr BP
8 000 cal yr BP: 8 500 - 7500 cal yr BP
6 000 cal yr BP: 6 500 – 5 500 cal yr BP
4 000 cal yr BP: 4 500 – 3 500 cal yr BP
2 000 cal yr BP: 2 500 – 1500 cal yr BP
0 cal yr BP: 500 – -50 cal yr BP
Exploring both presence and percentage values!!!

EXERCISE 1 – group 3
Mapping Picea pollen distribution in Europe during the Holocene using ArcGIS
Time steps:
11 000 cal yr BP: 11 500 – 10 500 cal yr BP
9 000 cal yr BP: 9 500 – 8 500 cal yr BP
7 000 cal yr BP: 7 500 – 6 500 cal yr BP
5 000 cal yr BP: 5 500 – 4 500 cal yr BP
3 000 cal yr BP: 3 500 – 2500 cal yr BP
1 000 cal yr BP: 1 500 – 500 cal yr BP
Exploring both presence and percentage values!!!

EXERCISE 1 – group 4
Mapping Picea pollen distribution in Europe during the Holocene using ArcGIS
Time steps:
10 000 cal yr BP: 10 500 – 9500 cal yr BP
8 000 cal yr BP: 8 500 - 7500 cal yr BP
6 000 cal yr BP: 6 500 – 5 500 cal yr BP
4 000 cal yr BP: 4 500 – 3 500 cal yr BP
2 000 cal yr BP: 2 500 – 1500 cal yr BP
0 cal yr BP: 500 – -50 cal yr BP
Exploring both presence and percentage values!!!
EXERCISE 2

Mapping the distribution of *Fagus* and *Picea* during the Holocene in Europe according to the pollen percentages threshold values proposed by Lisitsyna *et al.* (2011) in the paper “Exploring pollen percentages threshold values as an indicator for the regional presence of major European trees”.

The main aim of this exercise is to underline the difference between the occurrence of pollen and the “real” presence of the species in the forest.

The threshold value suggested by the authors for beech and spruce is 1%: this means that the regional presence of a tree is attested only for samples with a pollen percentage>1.

Exploring the most important differences between the results of exercise 1 and exercise 2.
References


