

Pinus pinea cone potential production suitability map

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Background

Interpretative cartography was used to develop site quality models for forest species growth and their productions.

Objectives

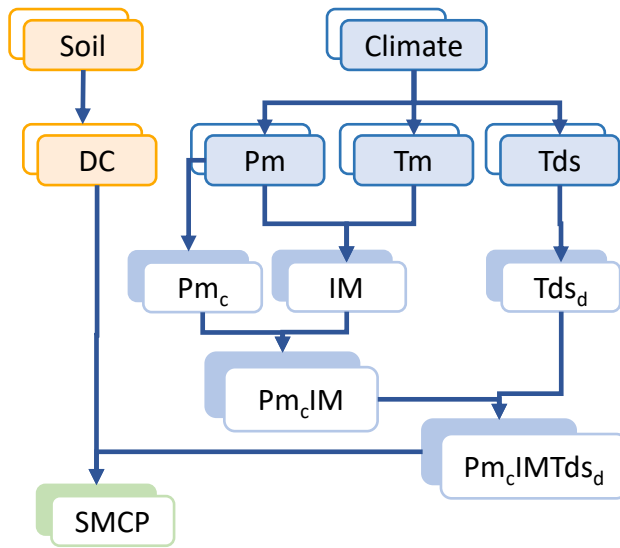
Development of a cone potential production suitability map.

Materials and methods

Soil diagnostic characteristics, precipitation, temperature and Martone index were used with expert and spatial analysis in geographical information systems.

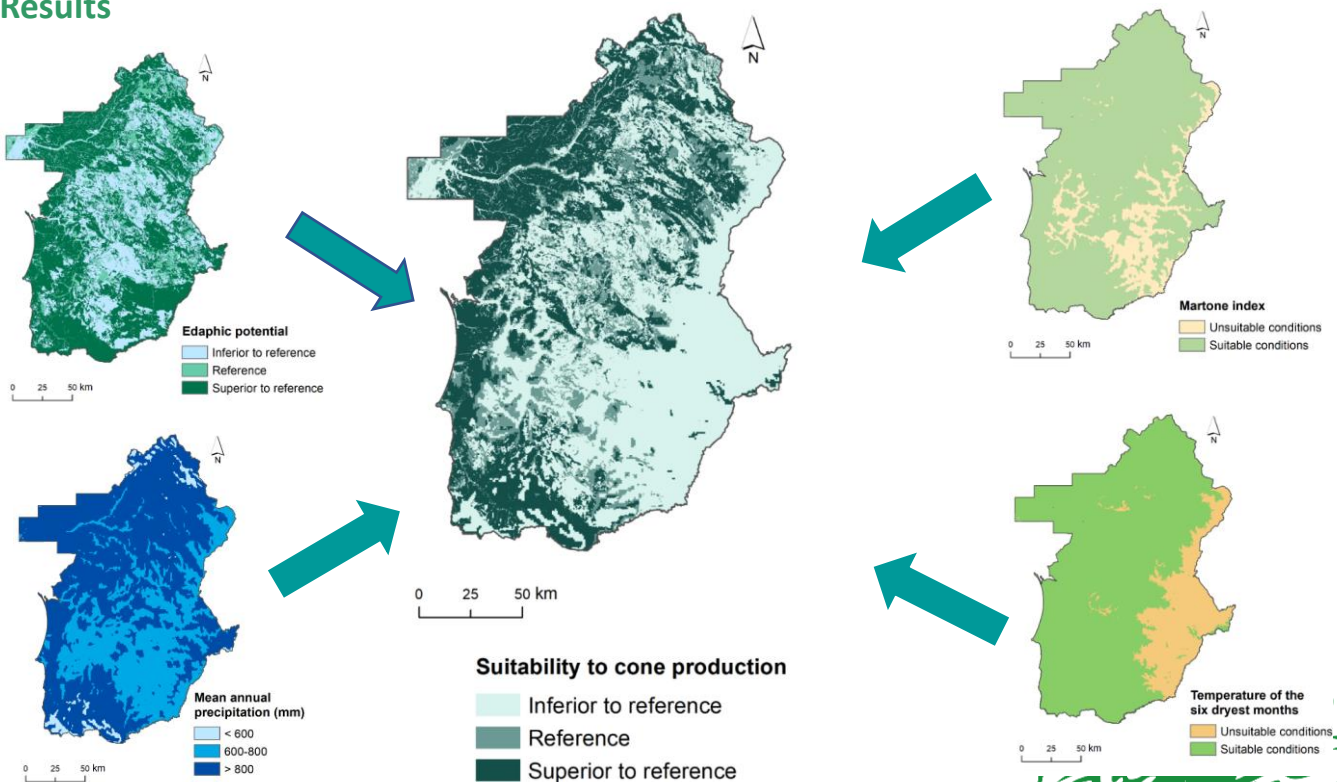
Three suitability classes for cone production: reference, superior to reference and inferior to reference.

Reference class corresponds conditions of soil and climate that have potential to produce cones, that is where soil and climate are not limiting factor. The superior and inferior to reference classes have less and more limitations to cone potential production, respectively.



- DC** diagnostic characteristics
- Pm** mean annual precipitation
- Tm** the mean annual temperature
- Tds** mean temperature of the six driest months
- Pm_c** mean annual precipitation reclassified
- IM** Martone aridity index
- Tds_d** mean temperature of the six driest months reclassified in a dummy variable
- Pm_cIM** water availability potential
- Pm_cIMTds_d** climatic potential
- SMCP** suitability map for umbrella pine cone potential production

Results



Final considerations

The suitability map for *Pinus pinea* cone potential production developed enabled the identification of the areas with potential for umbrella pine cone production, as function of soil and climate. The areas with the best potential are located in the west and north of the study area. The most limiting factors in this areas are the soil diagnostic characteristics. In the east and south the limiting factors are precipitation and temperature.