

# SIMANFOR

## Model for *Pinus halepensis* Middle Ebro Valley (Aragón) and Cataluña (Spain)

### Model

Phalepensis Cataluña y Aragón

Individual tree growth model for *Pinus halepensis* in Cataluña and Aragón (Spain)

### Model description

- Species: *Pinus halepensis* Mill.
- Species SFNI (Spanish Forest National Inventory) code: 24
- Geographical area: middle Ebro Valley (Aragón) and Cataluña
- Geographical area (administrative): Huesca, Zaragoza, Girona, Barcelona, Lleida and Tarragona

### Model requirements and recommended use

- Initial inventory requirements: age and dominant height of the plot; expan and dbh of the trees. Slope of the plot is needed in order to calculate mushrooms variables
- Geographical area: middle Ebro Valley (Aragón) and Cataluña, closer places and another places with similar characteristics (assuming differences)
- Stand type: monospecific stands
- Execution recommended time: 10 years executions (growth equation developed by using that criteria)
- Site Index is defined as top height at a base age of 60 years



Figure 1: *Pinus halepensis*



Figure 2: Detalles de *Pinus halepensis*

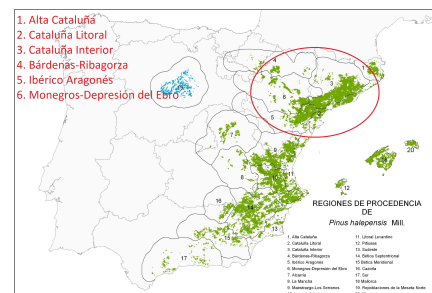


Figure 3: Regiones de procedencia de *Pinus halepensis* en España

# Bibliography

## SIMANFOR model recommended citation:

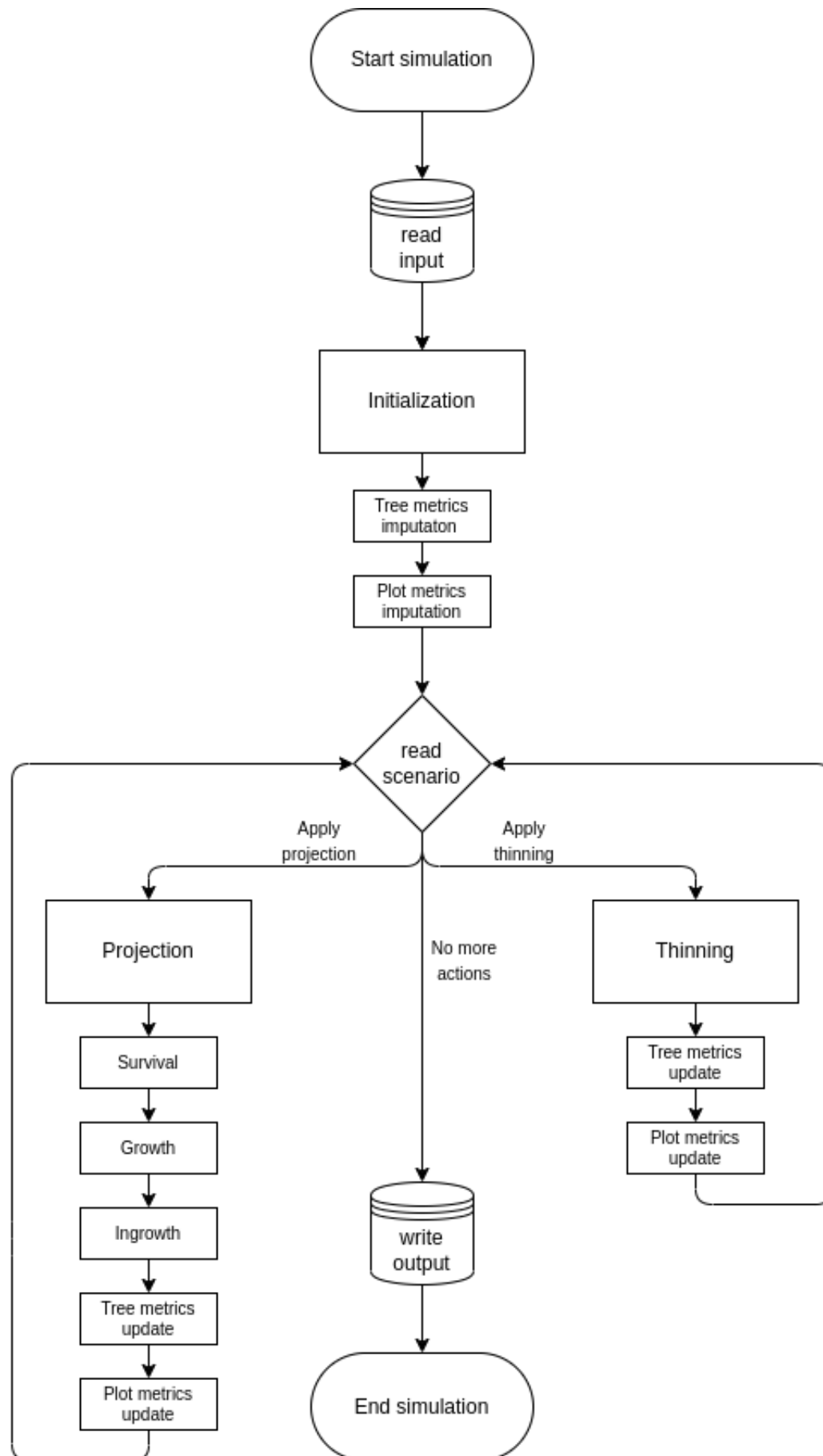
SIMANFOR (year). Individual tree growth model independent from distance for Aleppo pine (*Pinus halepensis*) in Middle Ebro Valley and Cataluña (Spain). <https://www.simanfor.es/>

## Model components:

- **Site Index equation:**  
Saldaña AMC (2010). Bases para la gestión de masas naturales de *Pinus halepensis* Mill. en el Valle del Ebro (Doctoral dissertation, Universidad Politécnica de Madrid)  
Rojo A, Saldaña, AM, Barrio-Anta M, Notivol-Paíno E, Gorgoso-Varela JJ (2017). Site index curves for natural Aleppo pine forests in the central Ebro valley (Spain)
- **Diameter growth equation:**  
Trasobares A, Tomé M, Miina J (2004). Growth and yield model for *Pinus halepensis* Mill. in Catalonia, north-east Spain. Forest ecology and management, 203(1-3), 49-62
- **Ingrowth equation:**  
Trasobares A, Tomé M, Miina J (2004). Growth and yield model for *Pinus halepensis* Mill. in Catalonia, north-east Spain. Forest ecology and management, 203(1-3), 49-62
- **Ingrowth distribution:**  
By default
- **General calculations: bal, g, slenderness, normal circumference:**  
Standard equations
- **Generalized height-diameter equation:**  
Saldaña AMC (2010). Bases para la gestión de masas naturales de *Pinus halepensis* Mill. en el Valle del Ebro (Doctoral dissertation, Universidad Politécnica de Madrid)
- **Taper equations over bark (volume):**  
Saldaña AMC (2010). Bases para la gestión de masas naturales de *Pinus halepensis* Mill. en el Valle del Ebro (Doctoral dissertation, Universidad Politécnica de Madrid)
- **Biomass equations:**  
Ruiz-Peinado R, del Río M, Montero G (2011). New models for estimating the carbon sink capacity of Spanish softwood species. Forest Systems, 20(1), 176-188
- **Technological wood uses information:**  
Rodríguez F (2009). Cuantificación de productos forestales en la planificación forestal: Análisis de casos con cubiFOR. In Congresos Forestales
- **Value for Reineke Index equation:**  
Aguirre A, Condés S, del Río M (2017) Variación de las líneas de máxima densidad de las principales especies de pino a lo largo del gradiente estacional de la Península Ibérica. 7 Congreso Forestal Español

## Figures:

- **Figure 1:** extracted from Accurimbono with license CC BY-SA 3.0
- **Figure 2:** extracted from The New York Public Library
- **Figure 3:** extracted from MAPA



## Contacts

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## Related information

**SIMANFOR** - Support System for the Simulation of Sustainable Forest Management Alternatives. Website (<https://www.simanfor.es/>) and GitHub repository <https://github.com/simanfor>

**iuFOR** - University Institute for Sustainable Forest Management. Website: <http://sostenible.palencia.uva.es/> y <https://iufor.uva.es/>

**ETSIIAA Palencia** - Higher Technical School of Agricultural Engineering of Palencia. Website: <http://etsiiaa.uva.es/>

**UVa** - University of Valladolid. Website <https://www.uva.es>

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