

SIMANFOR

Model for *Pinus pinaster atlantica* stands Galicia inland and León (Spain)

Model

Ppinaster_at_stand_gal_inland_v01.py

Model description

- Specie: *Pinus pinaster* Ait. subsp. *atlantica*
- Spanish Forest Inventory (SFI) code: 26
- Geographical area: Galicia inland and León (Castilla y León)
- Geographical area (administrative): center/south Lugo, Ourense and León



Figure 1: *Pinus pinaster*

Model type

- Category: stand growth
- Model level: stand
- Reproduction methods: seedling forest
- Stand structure: even-aged stands
- Species composition: monospecific stands
- Forest origin: natural



Figure 2: Details of *Pinus pinaster*

Model requirements and recommended use

- Initial inventory requirements: age, dominant height and density of the plot
- Geographical area: Galicia inland and León, closer places and another places with similar characteristics (assuming differences)
- Stand type: monospecific stands, resinated or not
- Execution recommended time: 1 year executions (survival, growth and ingrowth equations developed by using that criteria)
- Site Index is defined as top height at a base age of 20 years

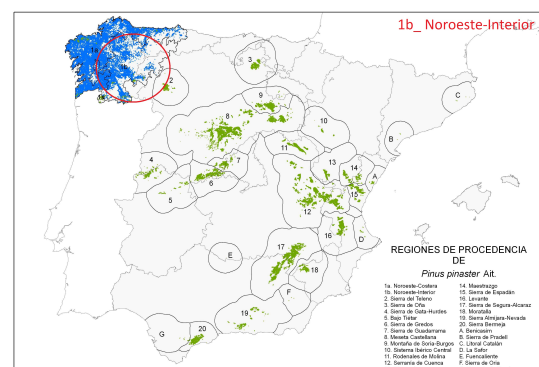


Figure 3: Provenance regions of *Pinus pinaster* in Spain

Bibliography

Complete SIMANFOR model recommended citation):

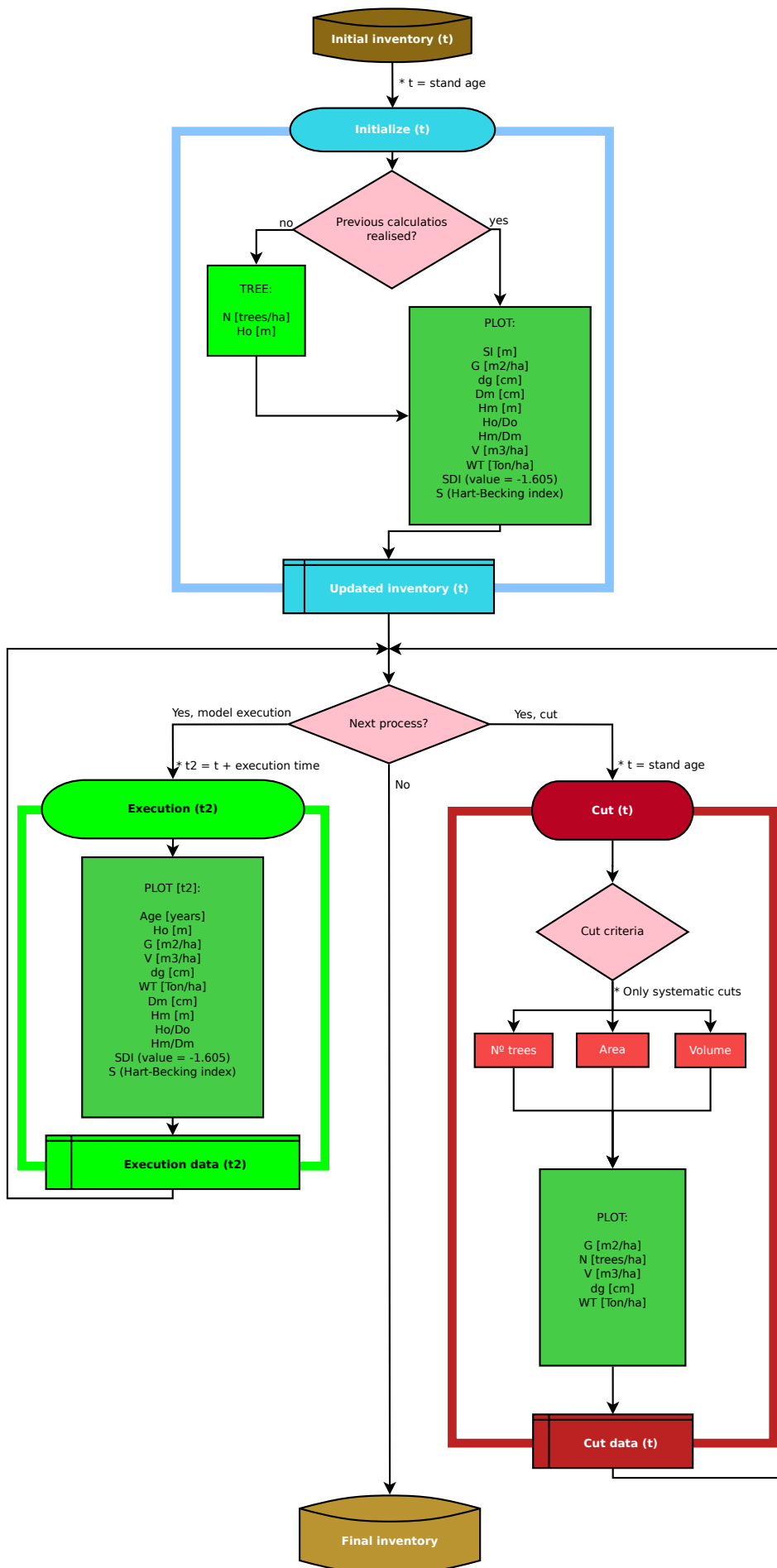
SIMANFOR (2022). Stand growth model for maritime pine (*Pinus pinaster atlantica*) in Galicia inland and León (Spain).

Model components:

- **Calculations by using tree data** (just in cases when that information is not available at the initial inventory):
Density and Dominant Height
- **Site Index equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Dominant Height Growth equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Initial and Growth Basal Area equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Volume equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Mean Height and Diameter equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Biomass equation:**
Diéguez-Aranda U, Rojo A, Castedo-Dorado F, et al (2009). Herramientas selvícolas para la gestión forestal sostenible en Galicia. Forestry, 82, 1-16
- **Quadratic Mean Diameter, Hart and Reineke Index equations:**
Standard equations
- **Harvest equations:**
Harvest equations developed by using equations mentioned before.

Figures:

- **Figure 1:** by Felipe Castilla, website <http://www.arbolapp.es/especies/ficha/pinus-pinaster/>
- **Figure 2:** by 'A description of the genus *Pinus*', Aylmer Bourke Lambert
- **Figure 3:** extracted from MAPA



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Interest Links

SIMANFOR - Support system for simulating Sustainable Forest Management Alternatives. Accessed 11 May 2021, in <https://www.simanfor.es/>

iuFOR - Sustainable Forest Management Research Institute UVa-INIA. Accessed 11 May 2021, in <http://sostenible.palencia.uva.es/>

ETSIIAA Palencia - Higher Technical School of Agricultural Engineering of Palencia. Accessed 11 May 2021, in <http://etsiiaa.uva.es/>

UVa - University of Valladolid. Accessed 11 May 2021, in <https://www.uva.es>

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