

SIMANF{R}

Model for *Pinus sylvestris* stands Iberian and Central Systems (Spain)

Model

Psylvestris_stand__SILVES__si-sc__v01.py

Model description

- Specie: *Pinus sylvestris* L.
- Spanish Forest Inventory (SFI) code: 21
- Geographical area: Iberian and Central Mountains
- Geographical area (administrative): Madrid, Segovia, Soria and Burgos

Model type

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

Model requirements and recommended use

- Initial inventory requirements: age, mean height, basal area and density of the plot
- Geographical area: Madrid, Segovia, Soria and Burgos, closer places and another places with similar characteristics (assuming differences)
- Stand type: monospecific stands

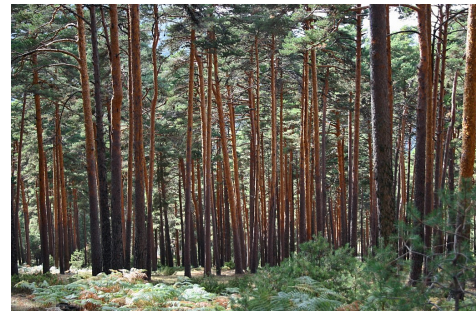


Figure 1: *Pinus sylvestris* stand



Figure 2: Details of *Pinus sylvestris*

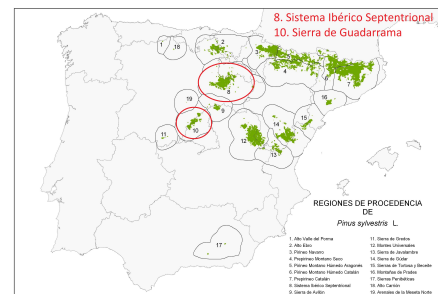


Figure 3: Provenance regions of *Pinus sylvestris* in Spain

- Execution recommended time: 10/15 years executions (survival and growth equations developed by using that criteria)
- Site Index is defined as top height at a base age of 100 years

Bibliography

Complete SIMANFOR model recommended citation):

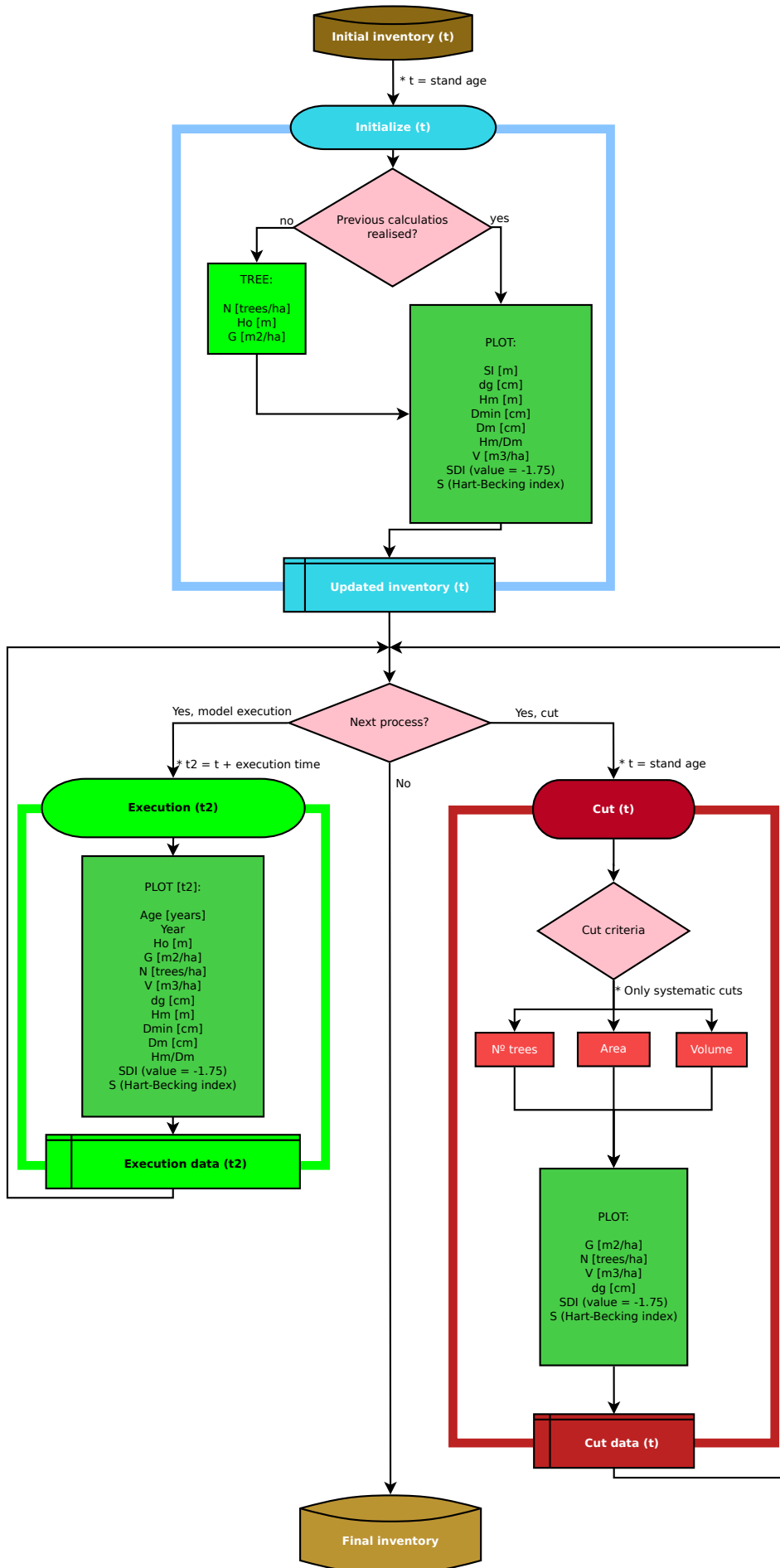
SIMANFOR (2022). SILVES, a stand growth model for scots pine (*Pinus sylvestris*) in Iberian and Central Mountains (Spain).

Model components:

- **Calculations by using tree data** (just in cases when that information is not available at the initial inventory):
Density, Basal Area and Dominant Height
- **Site Index and Quality Index equations:**
Rojo A, Montero G (1996). El pino silvestre en la Sierra de Guadarrama MAPA
- **Dominant Height Growth equation:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Survival equation:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Basal Area Growth equation:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Volume and Volume Growth equation:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Mean Height, Mean Diameter and Minimum Diameter equations:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Value for Reineke Index equation:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA
- **Quadratic Mean Diameter and Hart Index equation:**
Standard equations
- **Harvest equations:**
del Río M, Montero G (2001). Modelo de simulación de claras en masas de *Pinus sylvestris* L (No. 04; SD396. 5, R5.). INIA

Figures:

- **Figure 1:** by ClémentGodbarge commonswiki assumed (based on copyright claims). Own work assumed (based on copyright claims)., CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=323975>
- **Figure 2:** public domain, <https://commons.wikimedia.org/w/index.php?curid=5291505>
- **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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