



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

The Swedish National Forest Inventory

# TaxWebb analysis tool

Data description



**TaxWebb Analysis tool - Data  
description**

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**Cover photograph:** Åke Bruhn, SLU.

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— Data description

**The data available in TaxWebb is collected and compiled by the Swedish National Forest Inventory based at the Swedish University of Agricultural Sciences, Sweden.**

## General information

All of the statistics in TaxWebb are for productive forest land. Searches can be made for all productive forest land for the years 2005 to the latest statistics or for productive forest land outside formally protected areas for the years 1985 to the latest statistics.

### Land use class

*Productive forest land* – Land that is suitable for forest production and is not significantly used for other purposes. Production is at least 1 m<sup>3</sup>sk (stem volume with bark above the stump and including top) per hectare and year.

### Protected areas

Productive forest land within formally protected areas. In order to give a fair representation over time current boundaries supplied by the Swedish Environmental Protection Agency are used for all years.

## Measures

### Area (1000 ha)

Area in thousands of hectares (ha)

### Standing volume (million m<sup>3</sup>sk)

### Standing volume per ha (m<sup>3</sup>sk/ha)

Standing volume of living trees. Standing volume is for all trees that have reached a height of 1.3m

(breast height).

### Dry weight biomass (million tonnes DW)

Tree stem biomass for all trees of at least 1.3m. The units are millions tonnes of dry biomass.

### Volume dead wood (million m<sup>3</sup>)

### Volume dead wood per ha (m<sup>3</sup>/ha)

All dead wood with a diameter of at least 10 cm. Available from 1994 and onwards. As the values are presented as a five year moving average represented by the middle year the first year available is 1996 (1994, 1995, 1996, 1997, 1998). The units are m<sup>3</sup> and not m<sup>3</sup>sk as caliper of dead wood can be either with or without bark depending on the stage of decomposition.

## Dimensions

### Ownership categories

*Companies* – Includes listed companies that are not owned by the state, local or regional municipalities.

*Individual owners* – Private owners, estates or non-listed companies.

*Other owners* – Includes state owned land, listed companies where the state owns a controlling share (Sveaskog), local and regional municipality owned land and other collectively owned land. Also included here are some privately owned lands such as those owned by the church and public commons.

### Maturity classes

Maturity classes describe a forests development



*Forest in final felling stage (D1). Photograph Åke Bruhn, SLU.*

stage from a forest management perspective. Standards and residual stands are excluded when maturity classes are determined.

majority of the dominant and co-dominant trees have a diameter <10cm at 1.3m.

**Maturity class** (includes both of the following)

**Maturity class broad classification**

**Maturity class detailed classification**

**A-Bare forest land**

Includes both bare forest land and very sparse forest. In thicket stage forest the stem density is lower than the Forestry Acts level for satisfactory regeneration and in older forest the degree of stocking is lower than 0.3.

**B –Thicket stage forest**

Thicket stage forest and young forest where more than half of the dominant and co-dominant trees have a diameter < 10cm at 1.3m. The average height is main crops height after an eventual pre-commercial thinning.

**B1-Plant forest<1.3 m**

Average height less than 1.3 m.

**B2-Young forest 1.3–3.0 m**

Average height between 1.3 and 3.0 m.

**B3-Young forest>3.0 m**

Average height greater than 3.0 m. The

**C-Thinning stage forest**

The majority of the dominant and co-dominant trees have a diameter >10cm at 1.3m. The stand age is lower than the minimum age for final felling according to the Forestry Act.

**C1- Un-thinned forest < 20 cm**

Un-thinned forest where several of the dominant and co-dominant trees have a diameter <20cm at 1.3m.

**C2-Thinned stage forest < 20 cm**

Thinned forest where several of the dominant and co-dominant trees have a diameter <20cm at 1.3m

**C3,C4-Thicker thinning stage forest > 20 cm**

Forest younger than the minimum age for final felling where several of the dominant and co-dominant trees have a diameter >20 cm at 1.3m or forest older than the minimum final felling age where thinning should be undertaken again.

## **D–Final felling stage forest**

### **D1–Younger final felling stage forest**

Final felling stage forest. The stand age is higher than the minimum age for final felling but lower than the recommended age for final felling

### **D2– Older final felling stage forest**

Final felling stage forest. The stand age is higher than the recommended age for final felling

## **Forest types**

The tree species proportions are defined as their proportion of the basal area when the average stand height is greater or equal to 7m otherwise as the proportion of the main crop stems.

**Forest type** (includes both of the following)

**Forest type broad classification**

**Forest type detailed classification**

### **Pine or Lodgepole pine forest**

Pine 65 percent or more or Lodgepole pine 65 percent or more.

#### **Pine forest excl. Lodgepole pine forest**

Pine 65 percent or more.

#### **Lodgepole pine forest**

Lodgepole pine 65 percent or more.

### **Spruce forest**

Spruce 65 percent or more.

### **Mixed conifer forest**

Neither of the above definitions but conifers 65 percent or more.

### **Mixed forest**

More than 35 percent and less than 65% broadleaves.

### **Valuable broadleaves forest**

Broadleaves 65 percent or more and 45 percent or more valuable\* broadleaves.

### **Broadleaves forest excl. valuable broadleaves**

Broadleaves 65 percent or more and less than 45 percent valuable\* broadleaves or birch 65 percent or more.

#### **Birch forest**

Birch 65 percent or more

## **Other broadleaves forest**

Broadleaves 65 percent or more and less than 45 percent valuable\* broadleaves.

### **Bare**

Degree of stocking is 0, no tree proportions registered.

\*Valuable broadleaves are Oak, Beech, Dutch elm, European Ash, Lime, Norway maple, Hornbeam and Wild cherry.

## **Conifer proportion**

### **Broadleaves proportion**

Conifer and broadleaves proportion as their proportion of the basal area when the average stand height is greater or equal to 7m otherwise as the proportion of the main crop stems. Bare means no tree proportions were registered.

0–4 %

5–14 %

15–24 %

25–34 %

35–44 %

45–54 %

55–64 %

65–74 %

75–84 %

85–94 %

95–100 %

**Bare**

## **Older, broadleaves rich forest**

Broadleaves rich is defined as at least 3/10 (25%) of the basal area is broadleaves if the average stand height is greater or equal to 7m otherwise 3/10 (25%) of the crop stems. Older forest is defined as older than 80 years in Northern Sweden plus the counties of Dalarna, Värmland and Örebro and older than 60 years in central and southern Sweden excluding the counties of Dalarna, Värmland and Örebro.

**Yes** – Complies with the criteria for older, broadleaves rich forest.

**No** – Does not comply with the criteria for older, broadleaves rich forest.

## **Old forest**

Older forest is defined as older than 140 years in Northern Sweden plus the counties of Dalarna, Värmland and Örebro and older than 120 years



in central and southern Sweden excluding the counties of Dalarna, Värmland and Örebro.

**Yes** - Complies with the criteria for old forest

**No** - Does not comply with the criteria for old forest

### Stand age

The basal area weighted mean stand age (for stands with a stand height under 7 meters a arithmetic mean age is used). The age class 0-2 years includes bare forest stands and thicket stage stands with an age of 1-2 years. Standards and residual stands are excluded when stand age classes are determined.

**Stand age** (includes both of the following)

**Stand age 40 year classes**

**Stand age 20 year classes**

0-40 (years)

0-20 (years)

21-40

41-80

41-60

61-80

81-120

81-100

101-121

121+

121-140

141-160

161+

### Site productivity

Expresses a site's productive capacity as an average increment in m<sup>3</sup>sk per hectare and year. Site productivity is calculated from a site index estimated using site factors.

1.0-1.9 (m<sup>3</sup>sk/ha and year)

2.0-2.9

3.0-3.9

4.0-4.9

5.0-5.9

6.0-6.9

7.0-7.9

8.0-8.9

9.0-9.9

10.0-10.9

11.0-11.9

12.0+

### Site moisture class

A reflection of the average conditions for a site.

**Dry** – Dry ground. The groundwater level is deeper than 2 meters.

**Mesic** – The groundwater level has an average depth of 1-2 m.

**Moist** – Moist ground. Includes the class Moist/Mesic-Moist. The groundwater level has an average depth of less than 1 meter.

**Wet** – Saturated ground. The groundwater forms permanent water pools on the surface.

### Diameter

Diameter measurements in mm including bark at breast height (1.3m).

0-99 (mm)

100-199

200-299

300-399

400-499

500-599

600-

### Tree species

"Pine" and "Pine excl. Lodgepole pine" include mountain pine and other pine species. "Spruce" includes other picea- and abies-species., exotic spruce and other conifers.

### Tree Species

**Tree species pine, spruce, broadleaves**

**Tree species detailed classification**

**Pine**

Pine excl Lodgepole pine

Lodgepole pine

**Spruce**

**Broadleaves**

Birch

Oak

Beech

Other valuable broadl.

Other broadl.

### Decomposition class

**Hard dead wood** – The stem's volume is comprised of 90 percent or more hard dead wood with a hard mantel. The stem is affected to only a very minor degree by wood decomposing





Small white tag with illegible text.





*Dead wood. Photograph: Åke Bruhn, SLU.*

organisms. Included here is raw dead wood from newly felled or naturally deceased trees.

**Decomposed dead wood** – The stem’s volume is comprised of 10-100 percent of soft or very soft wood.

**Position**

**Standing dead wood** – Standing or leaning dead wood.

**Lying dead wood** - Lying dead wood

**Time**

**Year** – Middle year in a series of five consecutive years

**1985**

Average for the years 1983, 1984, 1985, 1986 and 1987

**1986**

Average for the years 1984, 1985, 1986, 1987 and 1988

...

...

...

**2011**

Average for the years 2009, 2010, 2011, 2012 and 2013

...

**etc**



## Geography

The geographic boundaries for counties used in TaxWebb are from the Swedish Mapping, Cadastral and Land Registration Authority's 1:100000 scale GSD road map © Lantmäteriet.

Whole country

Region

County

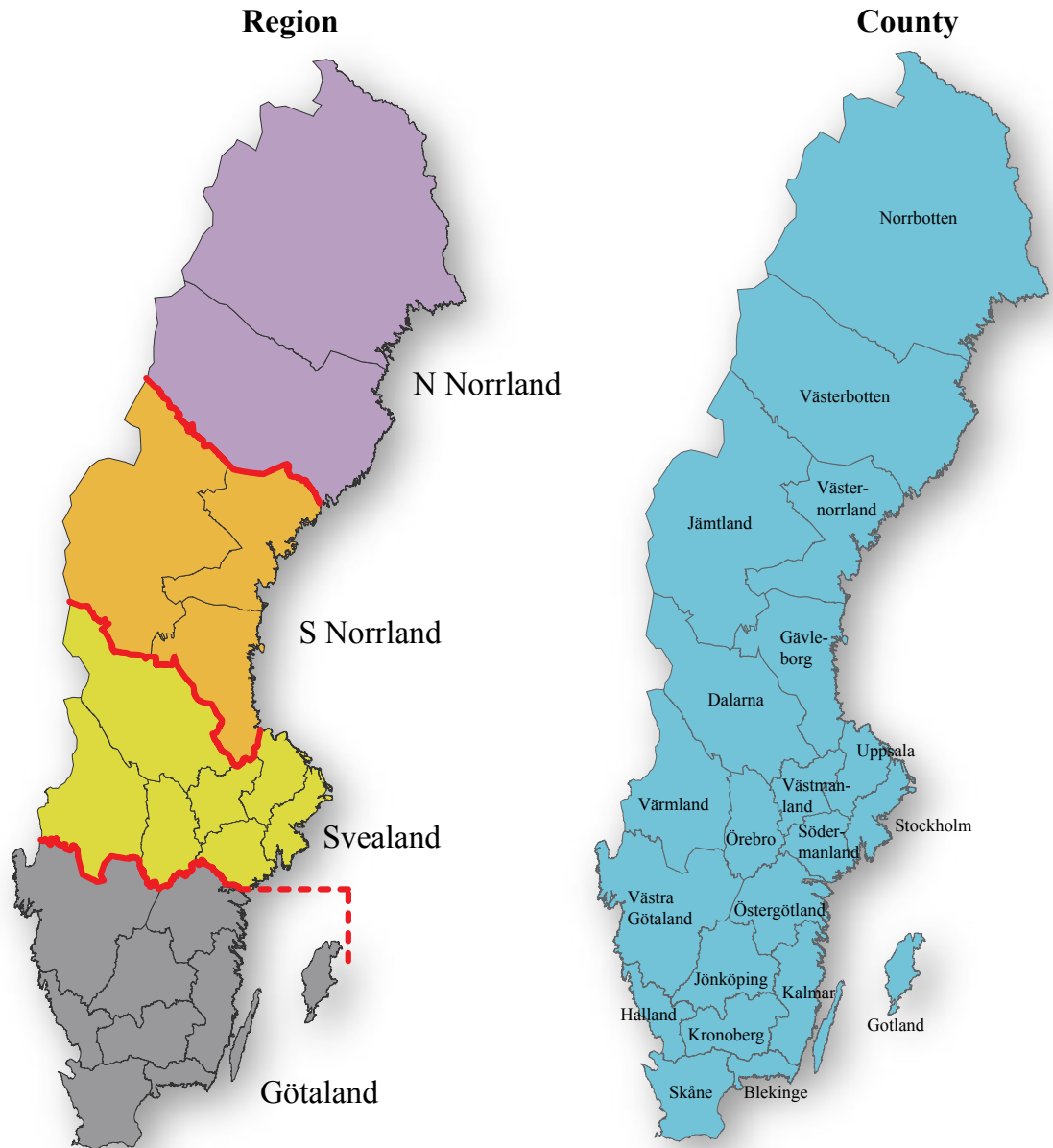
Biographical region (Nordic Council of Ministers 1984)

Biographical region (Article 17)

Forest in proximity of high mountains

Swedish Forest Agency region

Swedish Forest Agency district



*Some of the boundaries used in TaxWebb*

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The Swedish University of Agricultural Sciences has its main locations in Alnarp, Skara, Umeå and Uppsala.  
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