



Supply Base Report: Scandbio AB

Main (Initial) Audit

www.sbp-cert.org

Completed in accordance with the Supply Base Report Template Version 1.4

For further information on the SBP Framework and to view the full set of documentation see www.sbp-cert.org

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2 Description of the Supply Base

2.1 General description

Feedstock types: Secondary, Tertiary

Includes Supply Base evaluation (SBE): No

Feedstock origin (countries): Sweden

2.2 Description of countries included in the Supply Base

Country:Sweden

Area/Region: Sweden all regions

Exclusions: No

Scandbio AB consider all of Sweden as its supply base.

Scandbio AB sources:

Species (English) Latin

Scots pine Pinus sylvestris

Norway spruce Picea abies

- Scandbio AB have approximately 80 suppliers who sources from Sweden.

Forest cover

Most of Sweden is covered by boreal forest which in its natural state contains a patchwork of habitats shaped by various disturbance regimes, notably fires, storms and flooding. Owing to the large North-South extent of the country, there is a considerably variation in climate and soil conditions, and both conditions favour tree growth in the South. Sweden's forests are among the most northerly in the world. The warming effect of the Gulf Stream permit forest growth at the latitudes that are characterized by treeless tundra in other parts of the world. Most of the country is covered by coniferous forests, but there is a small zone of mainly deciduous forests in the south.

According to the latest forest inventory "Riksskogstaxeringen" with the report "Skogsdata 2021" from 2021 the total land area of Sweden is 40.7 mill ha's (100%). Of these 28.1 mill

ha's (69 %) are forest area and 23.5 mill ha's (58 %) of these are defined as productive forests.

Scots pine (*Pinus sylvestris*) and Norway spruce (*Picea abies*) are the dominant tree species in all Sweden. Lodgepole pine (*Pinus contorta*) and the deciduous species Birch (*Betula pendula*), Aspen (*Populus tremula*) and Alder (*Alnus glutinosa*) are used to some extent in northern Sweden. European larch (*Larix decidua*), Douglas fir (*Pseudotsuga menziesii*) and Sitka spruce (*Picea sitchensis*) and oak (*Quercus robur*) and Beech (*Fagus sylvatica*) is used in the south. The main part of the deciduous forest cover is naturally regenerated.



Figure 1. Standing volume by species. 1956-2015. Productive forest land. Excluding national parks, nature reserves and nature protection areas that are protected from forestry as of 2017.

(Source: https://www.slu.se/globalassets/ew/org/centrb/rt/dokument/skogsdata/skogsdata_2018_webb.pdf)

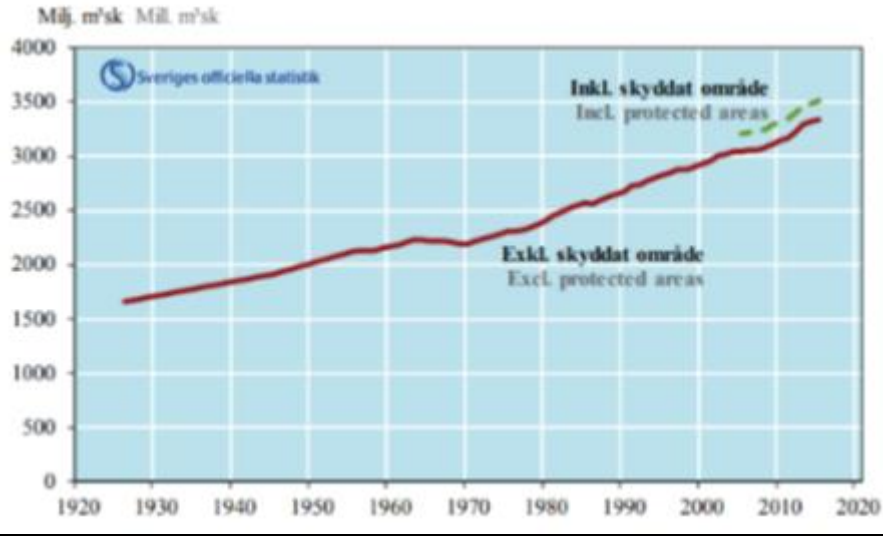


Figure 2. Total standing volume. 1926-2015. All land use classes excluding high mountains and urban land.

(Source: https://www.slu.se/globalassets/ew/org/centrb/rt/dokument/skogsdata/skogsdata_2018_wbb.pdf)

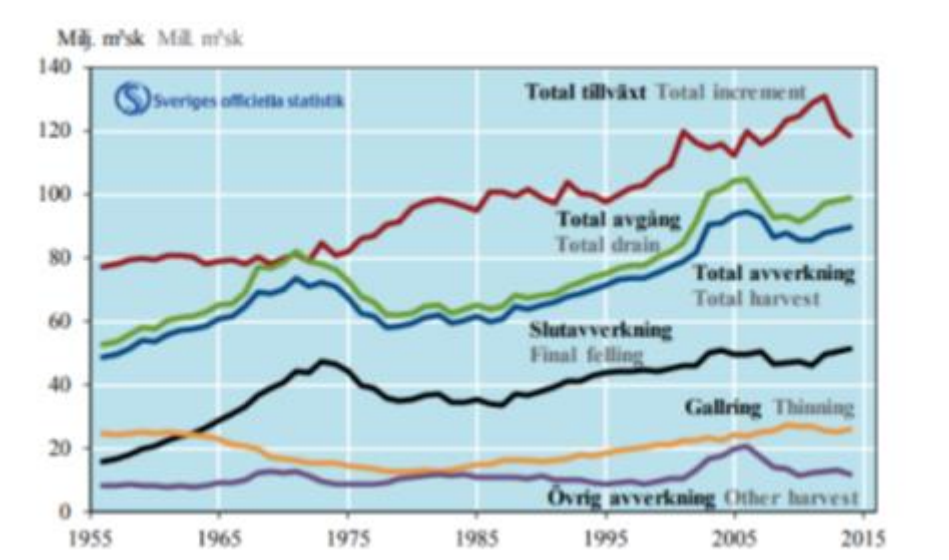


Figure 3. Annual average volume increase, total harvest and distribution by types of fellings. 1956-2014

Ownership

In Sweden there are at least 3 layers of tenure regimes influencing forest use and forestry: Private land tenure, rights to use the land held by the Sami people in the northern parts of Sweden and the right of public access. While the private ownership of forest is based on possession rights, the two other forms relate to user rights.

Private ownership has been important, first and foremost as a basis for sustainable land use and long-term planning and investments in the regeneration of forests. About half of all forest land in Sweden is owned by private enterprises. There are some 200,000 families with forests area bigger than 5 ha's and most farms are passed on from one generation to the next. The average holding is 50 ha's. Some 90,000 family forest entities are members of a forest cooperative. All the cooperatives together form a National Federation of Family Forest Owners, who seeks to influence national and international forest policies. Some of the cooperatives also run their own sawmills and pulp-industries in a competitive manner.

A small number of large private sector industrial forest enterprises own approx. 25 % of all forest land in Sweden. Only a few Swedish companies have forest holdings combined with industrial capacity. Industrial enterprises tend to buy wood on stumpage basis from private forest owners.

There are 23 pulp and paper enterprises with approx. 50 productions facilities in total and 60 sawmill enterprises with around 115 mills in Sweden. Sawmills, which for the most part are owned by private sector enterprises and do not normally have forest on their own.

Most of the State forest belongs to the state-owned company Sveaskog, which accounts for 14 % of all forest land. Sveaskog is Sweden's largest single forest owner and supply logs, pulp wood and biofuel for 130 large industrial customers.

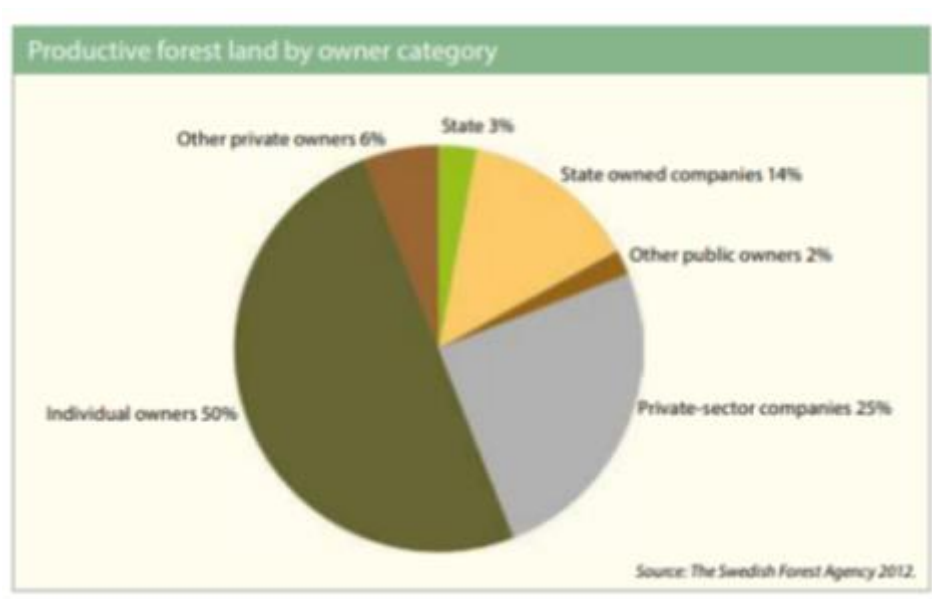


Figure 4. Productive forest land by owner category

(Source: https://www.skogsstyrelsen.se/globalassets/in-english/forests-and-forestry-in-sweden_2015.pdf)

Management Practices

National Forest Policy. The main intention of the Swedish National Forest Policy is to ensure sustainable forest management and it focuses on three major objectives, one for production, one for environmental concerns and one for social concerns.

To obtain a long-term sustainable flow of timber from the forests, an even age-class distribution on the regional level is a long-term target in forest policy.

The legal demands on forestry are mainly set by the Forestry Act and the Environmental Code.

The forest sector is considered a commercial sector which should be economically self-sustained and not subsidized. There are, however some state subsidies to enhance the forest sector's environmental value.

The National Forest Policy is influenced by several international regulations and agreements:

- EU Timber Regulation
- Newly adopted sustainability criteria in EU Renewable energy directive (RED II)
- The Habitat Directive
- The Water Framework Directive
- Convention on Biological Diversity (CBD)
- UN Framework Convention on Climate Change (UNFCCC)
- United Nations Forum on Forests (UNFF)

High and long-term sustainable production of forest raw material combined with social and environmental considerations are the primary goal for most forest owners.

Swedish forest management is highly influenced by market-driven processes of forest-certification following the schemes of FSC and PEFC.

As an extra precaution all final-felling operations above 0,5ha needs to be reported and approved by Swedish forest agency before implementation.

Forest management planning is extensively used by forest managers in everyday forestry as a tool for production planning and for implementing conservation measures.

The most used regeneration method is planting. Almost 400 mill seedlings are planted each year and soil preparation is often a prerequisite for successful regeneration. The planting operation is mostly carried out manually, but research on mechanized tree planting is ongoing. The seedlings have traditionally been treated with pesticides to protect against pests, but nowadays more environment friendly mechanical protection is used to greater extent.

More than half of the annual industrial supply originates from private forest entities. More than 70 % of the yearly wood volume procured in Sweden originates from final felling, with the rest coming from thinning operations.

Harvest operations are usually planned with consideration to natural and cultural features. The harvesting is almost totally mechanized and is carried out with single grip harvesters that measures both length and diameter and thus optimizing the wood revenue

More than 90 % of the forest operations, -planting, cleaning, logging and transportation, are carried out by contractors.

Socio-Economic setting

Sweden is a country dominated by forests and has a rather low population density with only 22 inhabitants per square kilometre. The country cover 450 thousand km² and is 1574 km north to south. Sweden is the third largest country in EU by area and has a population of 10.5 mill inhabitants. The country holds almost 1 % of the world's commercial forests, but provides 10 % of the sawn timber, pulp and paper that is traded on the global market.

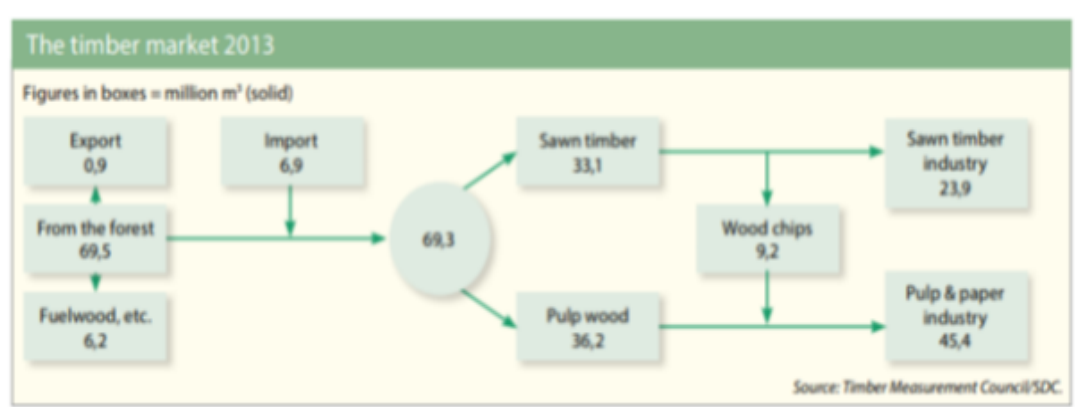


Figure 5. Timber supply chain

The Swedish forest products industry provides direct employment for almost 60,000 people. Together with subcontractors and the forest operations, including transportation the sector source about 200,000 jobs. In several counties, the forest products industry accounts for 20 % or more of industrial employment.

Wood-based bioenergy as part of the Swedish energy balance and harvests in forest

Approximately 95% of the harvested Swedish woody biomass is delivered either to a sawmill or a pulp industry. A small part of it, is of low value for the industry and it is discarded and instead used as bioenergy internally or externally. During the industry process there will always be various parts of residue and most of it will be recovered as bioenergy, direct or later in the value chain. The produced products as boards, paper etc. are also a source for bioenergy, though they after usage and re-circulation is sorted out and ends up as biofuel in the energy sector. Approximately 50% of the felling ends up as wood bioenergy in Sweden.

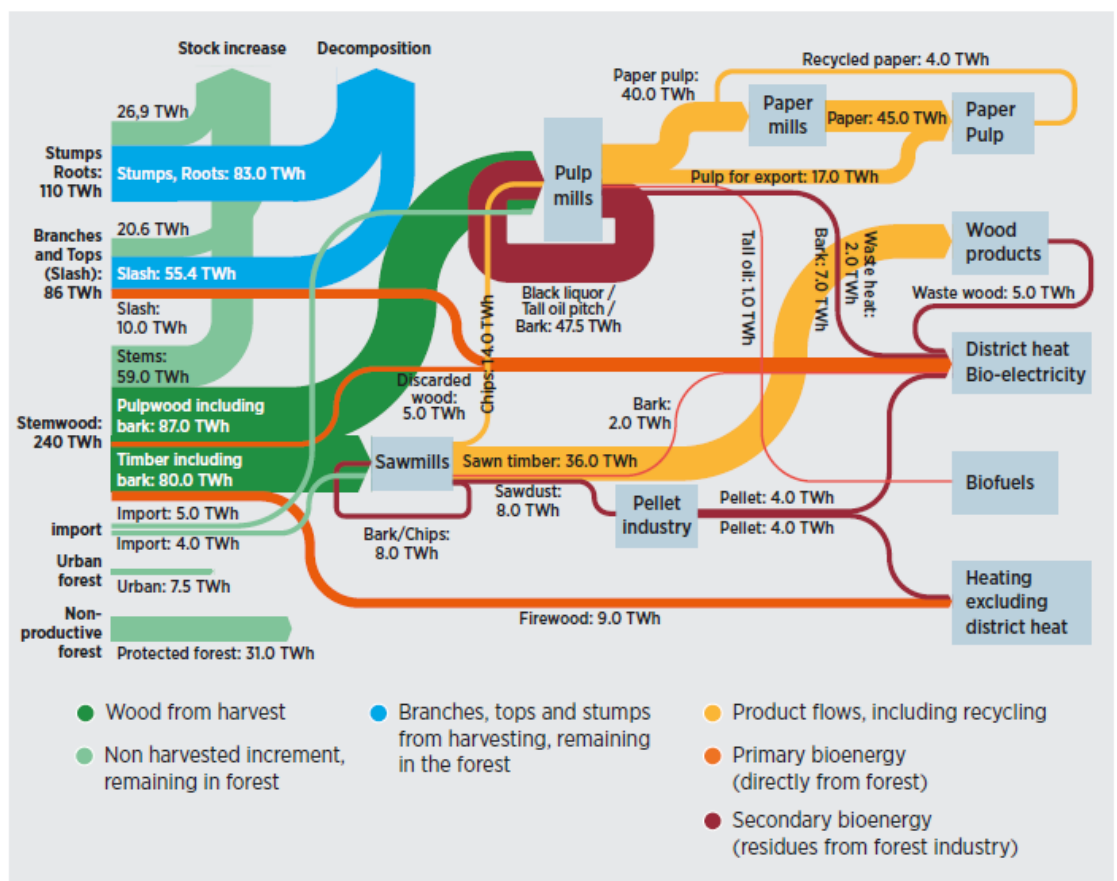


Figure 6. Biomass and energy flows from Swedish forest
 Source: Bioenergy from boreal forest, Swedish approach to sustainable wood use. IRENA, International Renewable Energy Agency 2019 © IRENA

Certification

In Sweden operating both FSC and PEFC certification systems.

19 627 439 ha are FSC certified (Q2 May 2021).

(Source:<https://fscint.maps.arcgis.com/apps/webappviewer/index.html?id=06188ad39e5344db96a4a181e135c393&mobileBreakPoint=300>)

16 425 463 ha are PEFC certified (PEFC Global Statistics, March 2021).

(Source:Facts and figures - PEFC - Programme for the Endorsement of Forest Certification)

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Conservation CITES or IUCN species

There are no species from CITES lists fauna in Sweden that Scandbio AB receives.

Status of IUCN defined in table.

Species (English)	Latin	CITES status*	IUCN classification**
Scots pine	Pinus sylvestris	Not on the list	Least Concern
Norway spruce	Picea abies	Not on the list	Least Concern

*<http://checklist.cites.org/>

**<https://www.iucnredlist.org/search?l>

for the energy industry or used

- . Together with the felled trees for firewood is this combined around 8% of harvested volumes.
- Newly adopted sustainability criteria in EU Renewable energy directive (RED II)

2.3 Actions taken to promote certification amongst feedstock supplier

Scandbio give higher priority for certified feedstock and note as a demand in contracts that FSC certified and Controlled wood material is preferred then possible.

2.4 Quantification of the Supply Base

Supply Base

- a. **Total Supply Base area (million ha):** 23,50
- b. **Tenure by type (million ha):**18.48 (Privately owned), 5.02 (Public)
- c. **Forest by type (million ha):**23.50 (Boreal)
- d. **Forest by management type (million ha):**23.50 (Managed natural)
- e. **Certified forest by scheme (million ha):**19.67 (FSC), 16.43 (PEFC)

Describe the harvesting type which best describes how your material is sourced: Mix of the above

Explanation: Only residues from sawmills and wood processing industry

Was the forest in the Supply Base managed for a purpose other than for energy markets? Yes - Majority

Explanation: Sawdust and shavings from sawmills and wood processing industry

For the forests in the Supply Base, is there an intention to retain, restock or encourage natural regeneration within 5 years of felling? Yes - Majority

Explanation: Swedish law demand that new forest is established within five years after a clear cutting.

Was the feedstock used in the biomass removed from a forest as part of a pest/disease control measure or a salvage operation? Yes - Minority

Explanation: Bark beetle is a current problem and precedes cutting if the tree is infected. Most forest owners follow the procedur "seek and pick" for minimize impact and utilize the value in the infected trees.

Feedstock

Reporting period from: 01 Aug 2020

Reporting period to: 31 Jul 2021

- a. **Total volume of Feedstock:** 1-200,000 tonnes
- b. **Volume of primary feedstock:** 0 N/A
- c. **List percentage of primary feedstock, by the following categories.**
 - Certified to an SBP-approved Forest Management Scheme: N/A
 - Not certified to an SBP-approved Forest Management Scheme: N/A
- d. **List of all the species in primary feedstock, including scientific name:** N/A
- e. **Is any of the feedstock used likely to have come from protected or threatened species?** N/A
 - Name of species: N/A

- Biomass proportion, by weight, that is likely to be composed of that species (%): N/A
- f. **Hardwood (i.e. broadleaf trees): specify proportion of biomass from (%):** N/A
- g. **Softwood (i.e. coniferous trees): specify proportion of biomass from (%):** N/A
- h. **Proportion of biomass composed of or derived from saw logs (%):** N/A
- i. **Specify the local regulations or industry standards that define saw logs:** N/A
- j. **Roundwood from final fellings from forests with > 40 yr rotation times - Average % volume of fellings delivered to BP (%):** N/A
- k. **Volume of primary feedstock from primary forest:** N/A N/A
- l. **List percentage of primary feedstock from primary forest, by the following categories. Subdivide by SBP-approved Forest Management Schemes:**
 - Primary feedstock from primary forest certified to an SBP-approved Forest Management Scheme: N/A
 - Primary feedstock from primary forest not certified to an SBP-approved Forest Management Scheme: N/A
- m. **Volume of secondary feedstock:** 1-200,000 tonnes
 - Physical form of the feedstock: Sawdust
- n. **Volume of tertiary feedstock:** 1-200,000 tonnes
 - Physical form of the feedstock: Shavings

Proportion of feedstock sourced per type of claim during the reporting period				
Feedstock type	Sourced by using Supply Base Evaluation (SBE) %	FSC %	PEFC %	SFI %
Primary	0,00	0,00	0,00	0,00
Secondary	0,00	85,00	0,00	0,00
Tertiary	0,00	15,00	0,00	0,00
Other	0,00	0,00	0,00	0,00

3 Requirement for a Supply Base Evaluation

Is Supply Base Evaluation (SBE) is completed? No

N/A

4 Supply Base Evaluation

4.1 Scope

Feedstock types included in SBE: N/A

SBP-endorsed Regional Risk Assessments used: Not applicable

List of countries and regions included in the SBE:

N/A

4.2 Justification

N/A

4.3 Results of risk assessment and Supplier Verification Programme

N/A

4.4 Conclusion

N/A

5 Supply Base Evaluation process

N/A

6 Stakeholder consultation

N/A

6.1 Response to stakeholder comments

N/A

7 Mitigation measures

7.1 Mitigation measures

N/A

7.2 Monitoring and outcomes

N/A

8 Detailed findings for indicators

Detailed findings for each Indicator are given in Annex 1 in case the Regional Risk Assessment (RRA) is not used.

Is RRA used? N/A

9 Review of report


9.1 Peer review

N/A

9.2 Public or additional reviews

N/A

10 Approval of report

Approval of Supply Base Report by senior management			
Report Prepared by:	Gert Pettersson 	Management team member	16 Nov 2021
	Name	Title	Date
The undersigned persons confirm that I/we are members of the organisation's senior management and do hereby affirm that the contents of this evaluation report were duly acknowledged by senior management as being accurate prior to approval and finalisation of the report. N/A			

Annex 1: Detailed findings for Supply Base Evaluation indicators

N/A