

Commercial fellings

Quality Report

Table of contents

1	Contact.....	4
1.1	Contact organisation	4
1.2	Contact organisation unit.....	4
1.3	Contact name	4
1.4	Contact person function	4
1.5	Contact mail address.....	4
1.6	Contact email address	4
1.7	Contact phone number	4
1.8	Contact fax number	4
2	Metadata update	4
2.1	Metadata last certified.....	4
2.2	Metadata last posted	4
2.3	Metadata last update	5
3	Statistical presentation	5
3.1	Data description	5
3.2	Classification system.....	5
3.3	Sector coverage.....	5
3.4	Statistical concepts and definitions.....	5
3.5	Statistical unit.....	7
3.6	Statistical population.....	7
3.7	Reference area	7
3.8	Time coverage.....	7
3.9	Base period.....	8
4	Unit of measure	8
5	Reference period.....	8
6	Institutional mandate	8
6.1	Legal acts and other agreements.....	9
6.2	Data sharing	9
7	Confidentiality.....	9
7.1	Confidentiality - policy	9
7.2	Confidentiality - data treatment.....	10
8	Release policy.....	10
8.1	Release calendar	10
8.2	Release calendar access	10
9	Frequency of disseminations	10

Quality Report

10	Dissemination format.....	11
10.1	News release.....	11
10.2	Publications.....	11
10.3	On-line database	11
10.4	Other.....	11
10.5	Documentation of methodology	11
10.6	Quality documentation	12
11	Quality management.....	12
11.1	Quality assurance.....	12
11.2	Quality assessment	12
12	Relevance	12
12.1	User needs.....	12
12.2	User satisfaction	12
12.3	Completeness.....	13
13	Accuracy and reliability	13
13.1	Overall accuracy and reliability	13
13.2	Sampling error	13
13.3	Non-sampling error	13
13.3.1	Coverage error	13
13.3.2	Measurement error	13
13.3.3	Non-response error	14
13.3.4	Processing error	14
13.3.5	Model-based error	14
14	Timeliness and punctuality	14
14.1	Timeliness	14
14.2	Punctuality.....	14
15	Coherence and comparability.....	14
15.1	Comparability - geographical.....	14
15.2	Comparability - over time	14
15.3	Coherence - cross domain	15
15.3.1	Coherence between sub annual and annual statistics	15
15.3.2	Coherence with National Accounts	16
15.4	Coherence - internal.....	16
16	Cost and burden	16
17	Statistical processing.....	16
17.1	Source data	16

Quality Report

17.2	Frequency of data collection.....	16
17.3	Data collection	16
17.4	Data validation.....	17
17.5	Data compilation.....	17
17.6	Seasonal adjustment	18
18	Comment	18

Quality Report

1 Contact

1.1 Contact organisation

Natural Resources Institute Finland

1.2 Contact organisation unit

Statistical services

1.3 Contact name

Tiina Sauvula-Seppälä

1.4 Contact person function

Senior Statistician

1.5 Contact mail address

Natural Resources Institute Finland

Statistical services

PL 2

00791 Helsinki

1.6 Contact email address

tietopalvelu@luke.fi

1.7 Contact phone number

+358 29 532 6000

1.8 Contact fax number

+358 29 532 6101

2 Metadata update

2.1 Metadata last certified

30.6.2022

2.2 Metadata last posted

30.6.2022

3 Statistical presentation

3.1 Data description

The statistics give monthly information on industrial roundwood removals and on harvested energy wood volumes. In addition, information on forestry labour and machines used in harvesting is included. The monthly statistics provide preliminary information on fellings during a calendar year, before the final statistics are completed. Monthly statistics do not give information by area. Monthly information is given for the whole of Finland. The annual statistics give information on the total felling volumes. Information on felling volumes is given by municipality, county, and for the whole of Finland.

3.2 Classification system

Data on fellings is collected by ownership category. Ownership categories are: non-industrial private, forest industries, and Metsähallitus. Until 2008, non-industrial private forests also included those forests owned by municipalities or parishes that were not managed by Metsähallitus. Forest industries include enterprises that forestry enterprises are shareholders of.

Roundwood is classified as follows: pine, spruce, and hardwood logs; pine, spruce, and hardwood pulpwood. The classifications for energy wood are: delimbed stems, whole-trees, logging residues, and stumps.

3.3 Sector coverage

The statistics cover nearly all commercial fellings in Finland.

3.4 Statistical concepts and definitions

Roundwood includes industrially unprocessed stemwood harvested fresh from a forest. Volumes of roundwood are given as solid volumes, cubic metres over bark (m³). The statistics include domestic roundwood harvested for the use of the forestry industry or export abroad, and stemwood, stumps, and logging waste harvested for energy generation. Wood from

rent or freight saws and fuelwood of small-scale housing is not included in the statistics.

Industrial roundwood is classified as logs or pulpwood based on diameter. Wood must also meet other diameter and quality requirements that have been agreed upon.

Industrial roundwood

- Roundwood assortments: pine, spruce, and hardwood logs; pine, spruce, and hardwood pulpwood.
- Minimum diameter of logs, measured from on top of bark: pine logs 15cm, spruce logs 16cm, hardwood logs 18cm
- Pulpwood includes pulpwood, small-diameter logs, and spar blanks

Energy wood

- Divided into delimbed stems, whole-trees, logging residues, and stumps.

Data on fellings is collected by ownership category:

- Private, non-industrial forests include forests owned by municipalities or parishes, and until 2008, state-owned forests that were not managed by Metsähallitus.
- State-owned forests
- Forest industries, which includes enterprises that forestry enterprises are shareholders of.

Fellings of private, non-industrial forests are divided by sales type harvesting for standing sales and delivery sales:

- In standing sales, the seller authorises the buyer to harvest wood from a predetermined area in their forest. The buyer is responsible for felling and transporting the wood to a location along a long-distance delivery route, and for the costs of these operations. The prices of timber assortments are determined as stumpage prices. The date of recording the labour of harvesting determines which month or statistical year the data is recorded for.
- In delivery sales the seller is responsible for felling and short-distance transporting of the wood to a storage location.

Pricing is based on roadside prices. The date of receiver measurement determines which month or statistical year the batch of wood is recorded for.

The labour force in harvesting industrial roundwood is classified as **felling** and **haulage**. Machinery is classified into harvesters, forwarders, and timber lorries. Data includes fellings by enterprises, Metsähallitus, and harvesting services of forest management associations. The labour force and forestry machinery of independent harvesting by forest owners is not included in the statistics.

3.5 Statistical unit

Data on commercial fellings is collected from buyers of wood (including forest management associations) and Metsähallitus.

3.6 Statistical population

The statistical population is formed by enterprises (including forest management associations) buying roundwood domestically, and by Metsähallitus.

3.7 Reference area

Monthly statistics do not give information by area. Monthly information is given for the whole of Finland.

The regional unit in annual statistics is counties.

3.8 Time coverage

Monthly information is available from:

- Commercial fellings 7/1981
- Harvesting of energy wood 1/2017
- Labour force and forestry machines in harvesting of industrial roundwood 1/1990

Yearly information is available from:

- Commercial fellings, the whole of Finland 1982
- Commercial fellings by forest ownership category and by county 2015
- Harvesting volumes of energy wood by county 2016

Quality Report

- Commercial fellings 1955

3.9 Base period

The statistics are not an index.

4 Unit of measure

Volumes of harvested roundwood are given as solid volumes, cubic metres over bark.

5 Reference period

Month, calendar year

6 Institutional mandate

The duties of the Natural Resources Institute Finland have been defined in the Act on the Natural Resources Institute Finland (561/2014) and the Act on the Food and Natural Resources Statistics (562/2014). The Act on the Food and Natural Resources Statistics defines the duties of the Natural Resources Institute Finland to be compiling and publishing statistics regarding:

- 1) the structure, production methods, and input in production of agriculture; the production of crops, horticulture, and livestock; the environmental effects of production, and the prices of agricultural products,
- 2) commercial utilisation of forests, activity of the wood market, conservation and maintenance of forests,
- 3) fishing, aquaculture, fisheries, the market of fisheries, and
- 4) the safety of food products.

The act gives the Natural Resources Institute Finland extensive permissions to collect information on agriculture, horticulture, aquaculture, processing and trade of agricultural and aquacultural products, forestry, and the processing and trade of wood.

The Statistics Act (The Statistics Act 280/2004, 361/2013) legislates on, including but not limited to, data collection, data processing, and duty of disclosure. In addition to the Statistics Act, the Personal Data Act and the Act on the Openness of

Government Activities are applied when processing data for compiling statistics.

The main document guiding our actions is the perennial European statistical programme, approved by the European Parliament and the Council of Europe, based on which the commission produces an annual work programme. The statistics included in the European Statistical Programme are prescribed in the Council Regulation 322/97.

The Statistical Office of the European Union, Eurostat, and the statistical offices of EU countries must apply the EU's Statistics Act when compiling statistics following the work programme. As a supranational regulation, it surpasses the national Statistics Act but in practice there are no contradictions between the Statistics Acts of the EU and Finland.

6.1 Legal acts and other agreements

The statistics are compiled based on the Act on the Natural Resources Institute Finland (561/2014), the Act on Food and Natural Resource Statistics (562/2014), and the Statistics Act (280/2004).

6.2 Data sharing

The statistics are published on the Natural Resources Institute Finland website. A webpage, announcements, news, and blogs regarding the statistics can be found on the website of the Natural Resources Institute Finland. Tables relating to the statistics are available on the statistics database of the Natural Resources Institute Finland. The annual volumes of roundwood removals are important base data for statistics regarding, for example, Roundwood removals and drain of the growing stock and Profitability of the forestry industry.

Data is supplied yearly to Eurostat, FAO, and OECD.

7 Confidentiality

7.1 Confidentiality - policy

Confidentiality is a base principle of statistics and assures the confidential processing of data provided by informants, and the Natural Resources Institute Finland has undertaken to follow

this principle. Micro-data is confidential and must never be released for administrative decision-making, investigation, surveillance, legal proceedings, or similar purposes.

7.2 Confidentiality - data treatment

The confidentiality of data collected for statistical purposes is guaranteed according to the Statistics Act (280/2004), the Personal Data Act (523/1999), the Act on the Openness of Government Activities (621/1999), and the EU General Data Protection Regulation (2016/679). Data is protected at all stages of processing using the necessary physical and technological solutions. The staff only has access to information necessary for their duties. Unauthorised people do not have access to spaces in which micro-data is processed. Staff members have signed a non-disclosure agreement when entering duty. Intentional breach of confidentiality will be penalised.

8 Release policy

The disseminations of the Natural Resources Institute Finland are published online on weekdays at 9:00. Data is public after it has been published on the website.

8.1 Release calendar

The publication dates are confirmed in autumn together with the action plans. The release calendar of the following year is published for users in the end of the year. The release calendar holds data on the dates of future publications. The publication dates are published in the calendar at first with an accuracy of one week, and two months prior to the publication date with an accuracy of a day. The calendar also contains direct links to already published statistical publication.

8.2 Release calendar access

[Statistical releases calendar | Natural Resources Institute Finland](#)

9 Frequency of disseminations

Monthly and yearly.

Quality Report

10 Dissemination format

10.1 News release

Preliminary data is published in February, and final data is published in June.

10.2 Publications

The Finnish Statistical Yearbook of Forestry until 2014, and since 2021 Finnish Forest Statistics 2018–2020

Report on economic conditions of the forestry sector, by the Natural Resources Institute Finland

The statistical office of the European Union, Eurostat, and the Food and Agriculture Organization of the United Nations, FAO, publish data from the statistics on their websites.

10.3 On-line database

[PxWeb - Commercial fellings](#)

10.4 Other

-

10.5 Documentation of methodology

The annual statistics on commercial fellings use stratified sampling. The statistical population is formed on the basis of the Finnish Tax Administration's data, reported to them yearly by wood buyers (approximately 670 wood buyers in 2020). The sample of the annual statistics includes all largest wood buyers and Metsähallitus, which is responsible for data on state-owned forests. The sample of the annual statistics includes 120–130 enterprises. Sampling is repeated every two years.

The monthly statistics on commercial fellings use stratified sampling. The population of the sample is based on the logging volumes of industrial roundwood, collected from the annual statistics on commercial fellings. The sample always includes all largest wood buyers, and Metsähallitus who is responsible for data on state-owned forests. The sample size is slightly below 30. The sample size is reviewed every two years.

-

11 Quality management

11.1 Quality assurance

The Natural Resources Institute Finland follows the Code of Practice and the Quality Assurance Framework of European statistics when compiling statistics. The Code of Practice concern the independence and accountability of statistics authorities, and the quality of processes and published data. The principles are compatible with and supplement the Principles of Official Statistics, agreed upon by the United Nations Statistical Commission. The quality criteria of official statistics in Finland are also compatible with the Code of Practice of European statistics. The principles are also compatible with the European Foundation for Quality Management.

The annual quality assurance of statistics performed by Statistics Finland includes statistics produced by the Natural Resources Institute Finland.

11.2 Quality assessment

The response material of the statistics is reviewed and edited on a monthly basis.

12 Relevance

12.1 User needs

-

12.2 User satisfaction

Feedback is collected from the users of the statistics, especially when revising the statistics. Feedback is also received directly. In addition, we investigated the wishes of users for developing the statistics in the autumn of 2021 and beginning of 2022, when updating the work programme for the Natural Resources Institute Finland. We follow the received feedback and take it into consideration in developing the statistics.

Quality Report

12.3 Completeness

-

13 Accuracy and reliability

13.1 Overall accuracy and reliability

The forestry industry in Finland is very concentrated. Data collection for the statistics closely matches the total material in terms of harvesting volumes. The sample includes approximately 95% of harvested industrial roundwood.

The statistical population and sample are reviewed approximately every two years. The monthly statistics do not suffer from non-response. Sources of error include missing data or faulty data provided by buyers. Even though we try to update the statistical population, its inadequate cataloguing is a potential source of mistakes. No data is available for quality assessment of data on labour force and forestry machinery.

Non-response by area is small in the annual statistics. Sources of error include missing data or faulty data provided by buyers. Even though we try to update the statistical population, its inadequate cataloguing is a potential source of mistakes.

13.2 Sampling error

The forestry industry in Finland is very concentrated. Data collection for the statistics closely matches the total material in terms of harvesting volumes. The sampling error is estimated to be very small. The standard error in the annual statistics is small (2–3%).

13.3 Non-sampling error

13.3.1 Coverage error

-

13.3.2 Measurement error

-

Quality Report

13.3.3 Non-response error

The monthly statistics do not suffer from non-response. The non-response in the annual statistics is approximately 5% of the number of respondents. The cause of non-response is usually small operators.

13.3.4 Processing error

-

13.3.5 Model-based error

-

14 Timeliness and punctuality

14.1 Timeliness

Statistics on commercial fellings are published monthly. Monthly data is provisional. The statistics are completed four to five weeks after the statistical month. Annual statistics are completed approximately five months after the statistical year.

14.2 Punctuality

The statistics have been published according to the publishing date declared in advance.

15 Coherence and comparability

15.1 Comparability - geographical

The area classification has changed during the history of the statistics. Until 1996 the regions consisted of the regions of forestry committees (19). Since 1996 the regional districts of the Finnish Forest Centre (13 in 2014) have been in use. Since 2015 information has been given by county. Due to these changes, data by area is not comparable across the different area classifications.

15.2 Comparability - over time

The classifications of timber assortments have remained unchanged throughout the history of the statistics. Publication of data by forest ownership category changed in 2008. Since 2008, published data on Metsähallitus has been combined with

the forest industry's fellings of forest industry-owned forests. This lowers the comparability of data by forest ownership category over time.

Harvesting volumes of energy wood were not published in the monthly statistics in 2014–2016 due to poor coverage of the data. Since 2017 the harvesting volumes of energy wood per month have been published more comprehensively and better classified.

Until 2014, the harvesting volumes of energy wood in the annual statistics were underestimated. In 2014–2015 harvesting volumes of energy wood were not published at all. A survey in 2016 increased the coverage of statistics on energy wood and as a result the results could be published.

The coverage of data on labour force and forestry machines in the monthly statistics has varied. Until 2012, data on the labour force and forestry machines was received from forest management associations for the monthly statistics (for January, May, and September). From 2012 to the end of 2016 data on labour force and forestry machines only covered the labour force and forestry machines for standing logging and logging of state-owned forests. Since the beginning of 2017, data on the labour force and forestry machines of forest management associations have been included monthly.

15.3 Coherence - cross domain

The accuracy of data in the statistics can be examined with the help of the statistics on Forest industries' wood consumption. However, it should be noted that the harvesting and consumption volumes in the statistics might not be from the same years.

15.3.1 Coherence between sub annual and annual statistics

The monthly statistics produce preliminary data on the commercial fellings over the calendar year for the whole of Finland. Final data is received from the annual statistics, which is completed later. Comparison of the preliminary and final data has proven that there is no significant difference in harvesting volumes between the two statistics. The year 2015 is an exception to this. The inclusion of forest management

Quality Report

associations in the annual statistics indicated the underestimation of harvesting volumes in monthly statistics.

15.3.2 Coherence with National Accounts

-

15.4 Coherence - internal

The data in the statistics is coherent. The statistics are a regularly conducted survey on the harvesting volumes of industrial roundwood and energy wood, and the labour force and forestry machines in harvesting of industrial roundwood in Finland.

16 Cost and burden

The burden for respondents is kept as low as possible. Responding to the monthly statistics happens with only one form. A similar form is used for the annual statistics, excluding the labour force and forestry machines. Respondents to the annual statistics might have more forms to fill, depending on the extent of the enterprise's branches of industries.

17 Statistical processing

17.1 Source data

Data for the statistics is collected by the Natural Resources Institute Finland monthly and yearly.

17.2 Frequency of data collection

Monthly and yearly.

17.3 Data collection

Data on the harvesting volume for the monthly statistics is collected with a sample including all largest wood buyers and Metsähallitus. The sample size is slightly under 30. The sample reviewed every two years. Monthly data on the volumes of commercial fellings is received from wood buyers as files and through web-forms.

Data on the harvesting volume for the annual statistics is collected with a sample including all largest wood buyers and Metsähallitus. The sample of the annual statistics includes 120–

130 enterprises. Data on the harvesting volume for the annual statistics is collected with a sample including all largest wood buyers and Metsähallitus. Data collection for the annual statistics is done mainly during the first two months of the year following the statistical year. The time limit for responding may be extended, if necessary, as the goal is to receive information from everyone included in the sample.

17.4 Data validation

The Natural Resources Institute Finland reviews the data before compilation. The data is compared to data from a corresponding time period and to data from a similarly sized reporting agent. If for example an abnormally large observation is spotted during the data compilation process, the authenticity of data is reviewed. Faulty data is fixed according to standardised instructions.

17.5 Data compilation

The sample of the monthly statistics has five strata, the first one of which represents the largest (over 500,000m³ of logging) operators (including Metsähallitus). The other strata represent medium-sized and small businesses. The logging volumes of the first stratum are summed for the statistics as they are. Data from the other strata is expanded using factors to represent the statistical population.

The sample of the annual statistics has three strata. The first sample includes the hundred largest buyers. The logging volumes of the enterprises in the stratum are calculated for the county the enterprises have reported them in. The second stratum represents small buyers of energy wood, and the third stratum represents small buyers of industrial roundwood. The logging volumes of these two strata are expanded using factors to represent the statistical population. The calculated logging volumes of industrial roundwood are seeded to counties in relation to the area of wood production in private, non-industrial forests. The volumes of energy wood are seeded to counties based on the total consumption of forest chips, collected from the statistics on Wood in Energy Generation. Data on the consumption of forest chips by county during the last two years is used for seeding.

Quality Report

17.6 Seasonal adjustment

-

18 Comment

-