

# Appendix 1. Statistics of the Natural Resources Institute Finland



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# 1. Statistics of the Natural Resources Institute Finland

This document includes descriptions of all statistics included in the Natural Resources Institute Finland's (Luke) statistical programme in 2025. More information about statistics is available in <a href="Luke's online statistical services"><u>Luke's online statistical services</u></a> (https://www.luke.fi/en/statistics).

# 2. Agricultural statistics

## 2.1. Structure of agriculture

#### 2.1.1. Structure of agricultural and horticultural enterprises (OSF, ESS)

The statistics include data about the number of agricultural and horticultural enterprises, land use, the average cultivation area, and the production line. Data about the number and age structure of farmers are also presented for privately owned agricultural and horticultural enterprises. The statistics also include data about agricultural machinery that are collected from farmers during the collection of data for the agricultural structural survey for 2023.

**Datasets:** The statistics are based on the register of agricultural and horticultural enterprises in which data about farms engaged in agricultural or horticultural production in Finland, whose financial size is at least EUR 2,000, is collected annually. The majority of the register's data content is based on data collected from farmers in conjunction with the official activities of the administrative body for rural industries. The data are complemented by data obtained in conjunction with other surveys.

**Development:** The compilation of the statistics will be made more effective, the spreadsheet structure will be updated, and new data about the number of organic farms will be produced. The development of the register of agricultural and horticultural enterprises, the primary source of data for the statistics, continues, as a result of which data can be better merged with other registers and statistics.

More information is available on the home page of the statistics on the structure of agricultural and horticultural enterprises.

#### 2.1.2. Agricultural and horticultural labour force (OSF, ESS)

The statistics include data about the number of employees in agriculture and horticulture, the annual workload, education, and gender. The statistics are updated every 3–4 years, when the Farm Structure Survey is conducted. Every 10 years, the survey is conducted as a comprehensive survey so that it is targeted at all agricultural and horticultural enterprises.

**Datasets:** Data about the agricultural and horticultural labour force are obtained from the statistical survey for the Farm Structure Survey and partly also from Statistics Finland (workload of permanent employees, based on data available in the Incomes Register) and the Farmers' Social Insurance Institution (workload of farm relief workers).

**Development:** Data was collected as part of the collection of data for the 2023 Farm Structure Survey. The data content addresses the requirements of the IFS regulation (Regulation (EU) 2018/1091 of the European Parliament and of the Council) and national data needs. Data available in the Incomes Register were used for the first time in conjunction with 2020 agricultural accounting. A long-term development goal is to further develop the use of the Incomes Register on the basis of experiences. Data for 2023 will be published during the spring of 2025.

More information is available on the home page of the statistics on agricultural and horticultural labour force.

#### 2.1.3. Other entrepreneurship in agriculture and horticulture (OSF, ESS)

The statistics include data about the number of diversified farms, the sector, the labour force and workload in other entrepreneurships, as well as the turnover of other entrepreneurships. The statistics are updated every 3–4 years, when the Farm Structure Survey is conducted. Every 10 years, the survey is conducted as a comprehensive survey so that it is targeted at all agricultural and horticultural enterprises.

**Datasets:** Data about other entrepreneurships in agricultural and horticultural enterprises are obtained from the statistical survey for the Farm Structure Survey.

**Development:** Data was collected as part of the collection of data for the 2023 Farm Structure Survey. The data content addresses the requirements of the IFS regulation (Regulation (EU) 2018/1091 of the European Parliament and of the Council) and national data needs. The use of the business register in the statistics on other entrepreneurships on farms is being investigated. A long-term goal is to identify the opportunity to use the business register for the statistics. Data for 2023 will be published during the spring of 2025.

More information is available on the home page of the statistics on other entrepreneurship in agriculture and horticulture.

#### 2.1.4. Energy consumption of agriculture and horticulture (OSF, ESS)

The statistics include data about the energy consumption of agriculture and horticulture by energy source, and by consumption volume and energy content. In addition to statistics for the whole of Finland, the available statistics are divided into the areas of the Centres for Economic Development, Transport and the Environment (ELY Centres). Data have also been classified according to the production line of farms. The statistics are updated every 3–4 years, when the Farm Structure Survey is conducted. Every 10 years, the survey is conducted as a comprehensive survey so that it is targeted at all agricultural and horticultural enterprises.

**Datasets:** Data about the energy consumption of agriculture and horticulture are obtained from the statistical survey for the Farm Structure Survey.

**Development:** The data obtained from the 2023 structural survey will be published by region in 2025. The question regarding the use of chips has been specified in the questionnaire for 2023. The estimation method for energy consumption data in interim years is being developed with Statistics Finland. This is part of the joint development project of Statistics Finland and Luke (Energy statistics: support to the Energy Union and the further disaggregation of final energy consumption, a grants project funded by Eurostat).

More information is available on the home page of the statistics on energy consumption of agriculture and horticulture.

#### 2.1.5. Livestock buildings and manure storages (ESS)

The statistics include data about livestock buildings, and the transfer and receipt, storage and handling of manure. The statistics are updated every 3–4 years, when the Farm Structure Survey is conducted. The data will next be collected in conjunction with the 2026 structural survey.

**Datasets:** Data about livestock buildings and manure storages of agricultural and horticultural enterprises are obtained from the statistical survey for the Farm Structure Survey.

**Development:** The imputation of data about farms that have not responded to the survey will be developed. The weighted value of a farm is estimated based on the number of livestock and the volume of manure produced.

More information is available on the home page of the statistics on livestock buildings and manure storages.

#### 2.1.6. Farmland management and irrigation (ESS)

The statistics include data about irrigable and irrigated arable land, the application of fertilisers and manure, the tillage of agricultural land, soil cover during winter, as well as the single-crop field area. The statistics are updated every 3–4 years, when the Farm Structure Survey is conducted. The data were collected in conjunction with the 2023 structural survey.

**Datasets:** Data about the irrigation areas of agricultural and horticultural enterprises, the application of fertilisers and manure, the tillage of agricultural land, and soil cover during the winter are obtained from the statistical survey for the Farm Structure Survey. The single-crop field area is calculated on the basis of parcel data obtained from the Finnish Food Authority.

**Development:** The imputation of data about farms that have not responded to the survey will be developed, and opportunities to obtain data about cultivation measures in electronic format from the crop planning software used by farmers will be investigated. Data for 2023 will be published during the spring of 2025.

More information is available on the home page of the statistics on farmland management and <u>irrigation</u>.

# 2.2. Livestock production

#### 2.2.1. Milk and milk product statistics (OSF, ESS)

The statistics include monthly and annual data about milk production, the number of milk producers, the production volumes of milk products, domestic sales, and stock levels. At an annual level, the statistics also include data about the consumption of milk on farms and the average production of dairy cows. The annual statistics include data about milk production and the number of farms by municipality, region and subsidy area.

**Datasets:** Data for the monthly statistics are collected from dairies using an online application (Kirnu). The collection of data covers all dairies receiving milk from producers, as well as dairy companies that manufacture milk products. Data about regional milk production are based on data received from the milk register. Data about the consumption of milk on farms are based on data collected from farmers through a sample survey approximately every three years.

**Development:** Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the milk and milk product statistics.

#### 2.2.2. Meat production (OSF, ESS)

The statistics include monthly and annual data on slaughter volumes of production animals. The statistics also include data about frozen meat stocks. The data are published at a national level.

On an annual level, the statistics include slaughter volumes of cows, pigs and sheep by region. The data are published by municipality, region and subsidy area. In addition, organic meat production are published annually in the statistics.

**Datasets:** Data about the slaughter of pigs and poultry, as well as frozen meat stocks, are collected from slaughterhouses through an online application. The slaughter volumes of cattle, sheep and goats are obtained from administrative animal registers. The volume of organic slaughter is collected once a year from slaughterhouses specialising in organic animals.

**Development:** Consideration of the requirements of the EU SAIO regulation currently under preparation in the data content of the statistics and in the methods employed.

More information is available on the home page of the meat production statistics.

#### 2.2.3. Egg production (OSF, ESS)

The statistics include the quantities of class A and B eggs purchased by egg packaging plants directly from farms and produced and processed by packaging plants in kilograms. Egg production volumes are presented in the statistics by production method: enriched battery cages, barn henhouses, free-range eggs and organic eggs.

**Datasets:** Data about the number of eggs received by packaging plants are based on data collected from egg packaging plants four times a year.

**Development:** Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics. This includes the planning of statistics on the direct sales of eggs and the use of eggs on farms.

More information is available on the home page of the egg production statistics.

#### 2.2.4. Number of livestock (OSF, ESS)

The statistics on the number of livestock include the number of cattle, pigs, sheep, goats and poultry by region and municipality. For cattle, the statistics include the number of cows, suckler cows, bulls, heifers and calves separately. For pigs, the statistics include the number of sows, boars, fattening pigs and piglets. For poultry, there are separate statistics for the number of chickens, chicks, cockerels, broilers, breeder hens, turkeys, breeder turkeys and other poultry. For sheep, the statistics are compiled separately for the number of ewes and other sheep.

**Datasets:** The number of poultry (1 April and the number of livestock places) is based on data collected once a year from farmers. The data are collected through an online application and by telephone interviews. The number of cattle on 1 May and 1 December is based on the cattle register and the number of sheep and goats on 1 May in the sheep and goat register. Data about the number of pigs on 1 April and 1 December are based on the pig register.

**Development:** Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics. This also includes the planning of statistics on the number of organic livestock.

More information is available on the home page of the statistics on the number of livestock.

### 2.3. Crop statistics

#### 2.3.1. Crop production statistics (OSF, ESS)

The statistics include data about the yields of the most important crops in Finland. The statistics cover cereals (wheat, rye, barley and oats), turnip rape, potatoes, sugar beet and grass crops. The final statistics include data at the level of the whole country and regions. The statistics present separate data about organic, conventional and total crop production. Four releases of the crop production statistics are produced annually. The first two releases are estimates that represent the ongoing harvest season's situation regarding crops with the largest cultivation areas at the level of the whole country. The third release is nearly as comprehensive as the final statistics.

**Datasets:** Regarding cultivation areas, data are collected from farms in conjunction with the official activities of the administrative body of rural industries. Data about harvested areas obtained from sampling surveys conducted for farms are used in the preliminary and final statistics. In statistical releases of estimates of harvest, data about crop production volumes are based on ProAgria's municipality-specific expert estimates. In the preliminary and final statistics, data about crop production volumes are based on sampling surveys to farms.

**Development:** International comparability and the publication of dry matter harvest data will be developed. Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379)

on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the crop production statistics.

#### 2.3.2. Horticultural statistics (OSF, ESS)

The statistics represent the structure and production of horticultural enterprises engaged in commercial activities in outdoor, greenhouse and mushroom production. The statistics include data about the area and yields of horticultural crops cultivated in outdoor and greenhouse production at the level of the whole country and by region. Cultivated mushrooms are reported at a national level. The statistics are compiled once a year, with energy consumption statistics being compiled approximately every three years. Data are available from 1984.

**Datasets:** Production data are collected from farmers by means of an annual online survey, supplemented by telephone interviews regarding farmers who have not responded to the survey.

**Development:** The calculation of the value of horticultural production will be developed with Luke's research activities and Statistics Finland. Importing previous time series into Luke's

statistics database (PxWeb spreadsheets) is being planned. Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the horticultural statistics.

#### 2.3.3. Utilised agricultural area (OSF, ESS)

The statistics include data about the cultivated area of the most important crops, the fallow area and the area of other agricultural land on agricultural and horticultural farms in Finland.

**Datasets:** Data about the cultivated area included in the statistics on utilised agricultural area cover data about farms included in the register of agricultural and horticultural enterprises. Most of the data is obtained from the registers of the data system of rural administration.

**Development:** Adding organic production areas to the data content. Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the statistics on utilised agricultural area.

#### 2.3.4. Estimated area sown to winter crops (ESS)

The statistics include an estimate of the area sown with winter wheat, rye, triticale and barley, winter turnip rape and rapeseed, and the direct seeding area by region. The aim of the compilation of the statistics is to already estimate the area sown to winter crops during the growing season.

**Datasets:** The data are collected in conjunction with the crop production survey from all farms included in the survey.

**Development:** Connecting the statistics to the statistics on utilised agricultural area is being considered.

More information is available on the home page of the statistics on the estimated area sown to winter crops.

# 2.3.5. Statistics on the purchase, use and storage of cereals and protein and oilseeds (OSF, ESS)

The statistics include the purchase volumes of cereals and protein and oilseeds by parties that purchase cereals and protein and oilseeds directly from farmers, the usage volume in industries that use cereals and proteins and oilseeds per quarter, and the volume of stocked cereals and protein and oilseeds by parties that purchase and use cereals and protein and oilseeds twice a year.

**Datasets:** The data are collected using the Viljo data collection application from all enterprises that trade or use cereals and protein and oilseeds, and enterprises that use cereals and protein and oilseeds and purchase cereals and protein and oilseeds directly from farmers and/or use wholegrain cereals and/or have stocks of cereals and protein and oilseeds. Data providers include mills, malting plants, feed plants and other industries using cereals and protein and

oilseeds, as well as cereal distributors. Data about purchases and use are requested on a quarterly basis and stockpile data every six months.

**Development:** Addressing the requirements set out in the SAIO regulation (regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the statistics on the purchase, use and storage of cereals and protein and oilseeds.

#### 2.3.6. Use of crops on farms (OSF, ESS)

The statistics include the volumes of cereals (wheat, barley, oats and rye) stocked, purchased and used on farms (million kg) by harvest year.

**Datasets:** The data are based on a crop production survey targeted at farms and on a survey targeted at enterprises purchasing cereals from farms, as well as expert estimates. The crop production survey is conducted for farms in October and November.

**Development:** Development needs will be assessed on the basis of feedback received from customers, and new potential data sources will be identified. Connecting the statistics to the cereals balance sheet statistics is being considered.

More information is available on the home page of the statistics on the use of crops on farms.

#### 2.3.7. Food potato storage statistics

The food potato storage statistics estimate the volume of potatoes used as food potatoes in stock on farms and the total volume of food and food-industry potatoes. Total stock volumes also include potatoes intended as seed potatoes.

**Datasets:** The data are collected by means of sample surveys from farms where the total area of food and food-industry potatoes is at least five hectares. The data are collected using an online questionnaire.

The statistics have been discontinued. The final publication of the statistics took place on 13 November 2024.

More information is available on the home page of the food potato storage statistics.

#### 2.3.8. Cereals balance sheet

The statistics summarise the supply and demand of cereals by cereal type (wheat, rye, oats and barley) during the harvest year (1 July X - 30 June X + 1). The balance sheet identifies the production, initial and final stockpiles, export and import volumes and domestic consumption by cereal type.

**Datasets:** Data for the cereals balance sheet are collected from different data sources. The most important sources include Luke's crop production statistics, statistics on the use and stockpiles of cereals on farms and by industries, as well as the foreign trade statistics of Finnish Customs.

**Development:** The reliability of data sources will be monitored and any new data sources will be assessed. The statistics will probably include crop balance sheet data in accordance with the SAIO regulation from the harvest year of 1 July 2025 – 30 June 2026.

More information is available on the home page of the cereals balance sheet statistics.

#### 2.3.9. Use of pesticides in agriculture (ESS)

The statistics represent the use of pesticides in the cultivation of the most important crops in agricultural and horticultural production in Finland.

**Datasets:** Crop-specific data about the areas and volumes of pesticides used have been collected from farmers every five years in conjunction with the collection of data for the crop production statistics and horticultural statistics. Data about available pesticides and the concentrations of their active substances are obtained from the plant protection product register of the Finnish Safety and Chemicals Agency (Tukes). Data were collected in 2013 and 2018. Data will next be collected for the statistics on the use of pesticides in agriculture at the beginning of 2025 when data about the use of pesticides in 2024 will be collected. After this, the statistics will be compiled in accordance with the SAIO regulation starting from data for 2026 and annually from 2028. Opportunities to establish a joint register, in which data about the use of crop protection products would be collected from crop planning software used on farms, based on farmers' consent given for the use of data, is being investigated with other authorities and system suppliers.

**Development:** Opportunities to obtain pesticide data in electronic format from crop planning software used by farmers will be investigated. More detailed data about the use of glyphosate products will be collected. Data collected by public administration will be used.

More information is available on the home page of the statistics on the use of pesticides in agriculture.

# 2.4. Producer prices of agricultural products and foreign trade

#### 2.4.1. Producer prices of agricultural products (OSF, ESS)

The statistics measure the absolute prices received by farmers for agricultural products. The statistics include producer prices for milk, meat, eggs, cereals, turnip rape and rapeseed, and food potatoes, as well as horticultural products. The producer prices for milk, meat and eggs are prices on the farm. The prices of cereals, turnip rape and rapeseed are reported as delivered to the first point of receipt, and the price of potatoes as delivered to the packaging plant. Statistics on producer prices are compiled for specific product qualities and as averages of all quality classes. Data are published using both monthly and annual prices.

**Datasets:** The data are collected monthly from enterprises that buy agricultural products from farms using an online app. The collection of prices for horticultural products has been outsourced. Data about adjustment payments paid to milk producers are collected once a year. There are a total of six different data collection processes, targeted at five different groups: dairies, slaughterhouses, egg packaging plants, enterprises purchasing cereals from farms, and food potato packaging plants.

**Development:** Addressing the requirements of the new EU SAIO regulation in the data content of the statistics and in the methods employed.

More information is available on the home page of the statistics on producer prices of agricultural products.

#### 2.4.2. Land purchase prices and agricultural land rents (ESS)

The statistics cover the prices of purchased and rented agricultural land in Finland.

**Datasets:** Agricultural land rents are obtained from the dataset of agricultural profitability accounting (FADN). Agricultural land purchase prices are obtained from the statistics on property purchase prices maintained by the National Land Survey of Finland.

**Development:** National publication of statistics on the purchase prices of agricultural land in accordance with the new Eurostat methodology. Addressing the requirements set out in the SAIO regulation (EU 2022/2379) on statistics on agricultural input and output, applicable from 1 January 2025) in the data content and methodology of the statistics.

More information is available on the home page of the statistics on land purchase prices and agricultural land rents.

#### 2.4.3. Foreign trade in agri-food products (OSF, ESS)

The statistics on foreign trade in agri-food products include data about Finland's imports and exports of agri-food products. The statistics include CN codes 1–24 and sugar products and modified starches. Monthly statistics include preliminary data about foreign trade and annual statistics include final confirmed data. In the statistics, data about exports are presented by country of destination and data about imports by country of origin. The statistics include data about product volumes and values. Product values are nominal values.

**Datasets:** Statistical data are compiled on the basis of the International Trade Statistics (Uljas, uljas.tulli.fi) of Finnish Customs.

The statistics will be discontinued after data for 2024 have been published. The final monthly statistics will be published in March 2025 and the final data for the annual statistics will be updated in September 2025.

More information is available on the home page of the statistics on foreign trade in agri-food products.

# 2.5. Other agricultural statistics

#### 2.5.1. Balance sheet for food commodities

The balance sheet for food commodities is a comprehensive balance sheet for the whole of Finland. Its aim is to identify the available food volumes from production to consumption. The calendar year-specific balance sheet identifies the production of different foodstuffs, changes in stocks, export and import volumes, and domestic consumption. Part of domestic consumption remains in food consumption. Foodstuff consumption per capita can be calculated by dividing the net food consumption by the average population in the review year.

**Datasets:** Data for the balance sheet for food commodities are collected from different data sources. The most important sources include Luke's production and crop production statistics, statistics on the use of cereals on farms and by industries, fish consumption and hunting statistics, as well as the foreign trade statistics of Finnish Customs.

The statistics will be discontinued after the publication of final data for 2023 and preliminary data for 2024. The final publication of the statistics will take place in June 2025.

More information is available on the home page of the balance sheet for food commodities.

#### 3. Forest statistics

#### 3.1.1. Ownership of forest land (OSF)

The statistics present data about the number of forest property entities owned by non-industrial private holdings, private persons and other groups, as well as about forest land areas. Forest holdings consist of forest properties of a single owner located in the area in question. These are recorded according to the location of the forest. A forest property entity includes all forest properties of a single owner, and they are recorded according to the owner's place of residence. The number of these ownership units and the area of forest land are presented by the size class of the area. With regard to forest ownership by private persons, these data are presented by major region, while data about other forest owner groups are compiled for the whole country.

**Datasets:** The statistics are prepared using data available in the Tax Administration's registers. The statistics include total data about the ownership and surface areas of properties in the entire country. The figures were calculated by the Tax Administration until 2013. In 2019, the calculations were transferred to Luke which has calculated the results using unit-specific data obtained from the Tax Administration starting from 2013.

The statistics have been discontinued. The final publication of the statistics regarding data for 2016 took place in 2019.

More information is available on the home page of the statistics on the ownership of forest land.

#### 3.1.2. Commercial fellings (OSF, ESS)

The statistics include monthly and annual data about the volumes of industrial roundwood and energy wood harvested for industrial use by assortment and owner group. In addition, the statistics include monthly data about the harvesting labour force and machine volumes. The monthly statistics do not include any regional division, and the data concern the whole of Finland. The annual data are published by region, using the division of the regions of Finland starting from 2015, and by municipality from 2021.

**Datasets:** In the monthly statistics, data about commercial felling volumes are collected through a sample survey. The sample used for the monthly statistics includes five strata, the first of which represents the largest wood buyers, while the other represent small and medium-sized enterprises. The sample used for the monthly statistics consists of slightly more than 20 buyers of wood. The sample size is checked every two years. The population of the sampling for the annual statistics consists of data based on annual notifications submitted by wood buyers to the Finnish Tax Administration. In the annual statistics, data about commercial felling volumes are also collected through a sample survey. The sample consists of three strata, the first of which represents the largest buyers of wood, the second small buyers of energy wood, and the third small buyers of industrial wood. The sample used for the annual statistics consists of approximately 110 buyers of wood.

**Development:** The data content of the statistics on commercial fellings will be developed by including felling volumes relative to the forest land area and felling volumes by felling method.

More information is available on the home page of the commercial felling statistics.

#### 3.1.3. Total roundwood removals and drain (OSF, ESS)

The statistics cover annual data about total roundwood removals and drain in Finland. Total roundwood removals, or the total stemwood felling volume, consist of stemwood felled for the manufacture of forest industry products and the generation of energy, and stemwood harvested for forest owners' private use, including wood felled for exports. Total drain, or stemwood excluded annually from the growing tree stocks in forests in Finland, includes, in addition to total roundwood removals, the volume of stemwood left in forests as logging residues during the statistical year (removal waste) and naturally died stemwood remaining in forests (natural drain). The data are published by region, using the division of the regions of Finland starting from 2015.

**Datasets:** Total roundwood removals and drain are calculated on the basis of other statistics and data published by Luke. Annual statistics on commercial fellings cover nearly all logs and pulpwood felled in Finland. The volume of stemwood sawn for private use by non-industrial private forest owners is added to these figures. It has been determined by means of small-scale sawmill surveys conducted every 10 years. The most recent data are from 2010. Total energywood removals consist of stemwood consumed as fuelwood in small-scale housing, as well as domestic stemwood harvested for energy generation at heat and power plants. The most recent data about fuelwood consumption is from the heating season of 2016/2017.

Estimates of forest waste and natural drain, included in roundwood drain, are based on the measurements and calculations in Luke's National Forest Inventory.

**Development:** The data are published in April following the statistical year. The data content of the statistics will be developed by adding information about removals and drain relative to the forest area, as well as key figures that measure the ratio between realised removals and the estimated felling potential.

More information is available on the home page of the statistics on total roundwood removals and drain.

#### 3.1.4. Volumes and prices in industrial roundwood trade (OSF, ESS)

The statistics present data about volumes and prices of industrial roundwood purchased by the forest industries from non-industrial private forests. Quantities are presented in solid cubic metres (m³) and prices in EUR per solid cubic metre (EUR/m³). The statistics are prepared by roundwood assortment, type of trade (standing and delivery sales), and also by felling method in standing sales starting from 2011. Wood price regions comprising the regions of Finland are used in monthly statistics that contain preliminary data. The number of these regions increased to eight at the beginning of 2020. The final annual statistics also include data divided according to the regions of Finland.

**Datasets:** The wood volumes and average prices presented in the wood trade statistics are based on wood trade agreements signed by buyers and sellers of wood. Data about wood trade by the largest buyers are collected by the Finnish Forest Industries Federation, which submits it to Luke. In addition, Luke collects statistical data from medium-sized forest industry companies and forest management associations. The datasets represent more than 90 per cent of the industrial roundwood purchased by forest industries from non-industrial private forests. The data are not expanded to correspond to all wood trade in non-industrial private forests.

**Development:** The presentation method of the statistics was harmonised, and the duration of the time series provided in Luke's statistics portal was extended during 2021 and 2022. In 2024, the electronic collection of data directly from wood buyers' data systems was increased. The investigation of the opportunities to compile statistics on wood trade priced according to the whole stem will continue, and the compilation of the statistics will begin, if possible.

More information is available on the home page of the statistics on volumes and prices in industrial roundwood trade.

#### 3.1.5. Volumes and prices in energywood trade (ESS)

The statistics present data about volumes and prices of energywood purchased from forest owners for use as raw material for forest chips. Quantities are presented in solid cubic metres (m³) and prices in EUR per solid cubic metre (EUR/m³). The statistics are compiled by energywood assortment and type of trade (standing and delivery sales). Preliminary data are published on a quarterly basis and the final data are published per calendar year. Wood price areas composed of the regions of Finland are used as the regional division in the statistics.

**Datasets:** The wood volumes and average prices presented in the statistics are based on wood trade agreements signed by buyers and sellers of wood. If necessary, wood buyers will convert the data included in their wood trade agreements into the units used in the statistics. Data about wood trade by the largest buyers are collected by the Finnish Forest Industries Federation, which submits it to Luke. In addition, Luke collects statistical data from medium-sized forest industry companies and forest management associations. The datasets represent approximately half of the energywood purchased from non-industrial private forests. Data collection is not based on sampling, and the data are not expanded to correspond to all wood trade in non-industrial private forests.

**Development:** In 2024, the electronic collection of data directly from wood buyers' data systems was increased. The aim is to increase the coverage of data. A new production system for the statistics will be finalised and deployed.

More information is available on the home page of the statistics on volumes and prices in energywood trade.

#### 3.1.6. Wood consumption (OSF, ESS)

The statistics include annual data on the wood volumes consumed in the manufacture of forest industry products and the generation of energy in Finland. Statistical data are presented in more detail per location of use and as total wood consumption in all uses. The updated statistics were published for the first time in 2023. Forest industries' wood consumption, the use of wood as energy, wood pellets, fuelwood consumption in small-scale housing and wood consumption by smaller sawmills, published previously as separate statistics, have been merged into these statistics.

**Datasets:** The volumes of forest industries' wood consumption are based on data collected annually from companies. In addition, the consumption of roundwood by smaller sawmills has been identified through separate surveys conducted every ten years, with the most recent data concerning 2010. Data about the volumes of wood pellet production and the consumption of raw materials are collected annually from all pellet producers.

Data on the use of wood as energy at heat-only and combined heat and power plants are collected annually from all significant heat-only and CHP plants in industries and energy generation that use solid wood fuels in their generation of energy. In addition, the small-scale burning of wood, i.e. the consumption of fuelwood in small-scale housing, has been identified using a separate sample survey, which has been conducted roughly every ten years. The most recent data about fuelwood consumption is from the heating season of 2016/2017.

**Development:** The compilation of the statistics will be automated and transferred to the SAS environment. The content of the statistics will be analysed and developed as required. The aim is to update the sampling survey on fuelwood consumption in small-scale housing in cooperation with Statistics Finland, as permitted by resources. At the same time, methods will be developed to update data during the years between the sampling surveys.

More information is available on the home page of the statistics on wood consumption.

#### 3.1.7. Silvicultural and forest improvement work (OSF)

The statistics present the annual workload in silviculture and forest improvement (surface areas or kilometres), as well as the corresponding unit costs and total costs. In addition to these data, the statistics include data about annual felling areas by felling method based on notifications of forest use calculated by the Finnish Forest Centre, as well as the Finnish Food Authority's seed and seedling statistics. The Finnish Food Authority's seed and seedling statistics, published in conjunction with these statistics, will be discontinued after the publication of data for 2024. The statistics include annual data by region and forest owner group.

**Datasets:** Luke collects data about silviculture and forest improvement using a survey targeted at forest service companies, the forest industries and the state. Data for the felling area statistics as well as the seed and seedling statistics are obtained as complete data.

**Development:** The data collection and calculation processes will be developed and automated. Opportunities to add stump treatment volumes again to the statistics are being investigated. Adding the percentage of work carried out by forest owners to workloads using calculations will be investigated where possible.

More information is available on the home page of the statistics on silvicultural and forest improvement work.

#### 3.1.8. Foreign trade in roundwood and forest industry products (OSF, ESS)

The statistics on foreign trade in roundwood and forest industry products include data about Finland's exports and imports of roundwood and forest industry products. In addition, the value of Finland's total exports and imports of goods is indicated. Monthly statistics include preliminary data about foreign trade and annual statistics include final confirmed data. The annual statistics present data by country. Country-specific data have been available in the monthly statistics from January 2022. The statistics include data about the quantity, value and unit value of goods.

**Datasets:** Statistical data are compiled on the basis of the International Trade Statistics (Uljas) of Finnish Customs.

The statistics will be discontinued after data for 2024 have been published. The final monthly statistics will be published in March 2025 and the final data for the annual statistics will be updated in September 2025.

More information is available on the home page of the statistics on foreign trade in roundwood and forest industry products.

#### 3.1.9. Stumpage earnings (OSF, ESS)

The statistics present an estimate of the annual gross and net stumpage earnings of forest owners, based on felling volumes and standing sales prices, by region, owner group and assortment. Gross stumpage earnings are calculated in accordance with the forest location.

**Datasets:** Data sources include the following statistics published by Luke:

- Standing sales prices: 'Volumes and prices in industrial roundwood trade' and 'Volumes and prices in energywood trade'
- Felling volumes: 'Industrial roundwood removals by region', 'Energywood removals by region', 'Fuelwood consumption in small-scale housing', and 'Total roundwood removals and drain'
- Investments in wood production: 'Operating profit in non-industrial private forestry' and 'Silvicultural and forest improvement work'.

**Development:** Other statistics are used as data sources. Any development largely takes place based on the development of these other statistics.

More information is available on the home page of the stumpage earnings statistics.

#### 3.1.10. Forestry as an investment (OSF)

The statistics present the investment return index of wood production in non-industrial private forestry by factor and region. It helps to monitor what returns consist of (earnings, expenses, changes in tree volumes, and changes in standing sales prices) and compare returns by region.

**Datasets:** Data sources include statistics published by Luke and the National Forest Inventory (NFI):

- Standing sales prices: 'Volumes and prices in industrial roundwood trade'
- Felling volumes: 'Industrial roundwood removals by region', 'Fuelwood consumption in small-scale housing', and 'Total roundwood removals and drain'
- Investments in wood production: 'Operating profit in non-industrial private forestry'
- Tree stocks: NFI

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in September 2025.

More information is available on the home page of the statistics on forestry as an investment.

#### 3.1.11. Operating profit in non-industrial private forestry (OSF)

The statistics present the operating profit based on earnings and costs of wood production in non-industrial private forestry by deducting wood production costs from earnings. The data are published by region. Some data are also calculated relative to the forest area in wood production.

**Datasets:** Data sources include the following statistics published by Luke, the National Forest Inventory (NFI), and data published by the Finnish Forest Centre about state subsidies granted for wood production in non-industrial private forests:

- Earnings: 'Stumpage earnings'
- Subsidies: 'Use of Kemera/Metka subsidies'
- Investments in wood production: 'Silvicultural and forest improvement work'
- Administrative and other expenditure: Mainly based on estimates and updates made using indices
- Forest areas: NFI

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in September 2025.

More information is available on the home page of the statistics on operating profit in non-industrial private forestry.

#### 3.1.12. Flows of wood material (OSF, ESS)

In the statistics on flows of wood material, use and mass balances are used to represent the supply of wood and forest industry products from different sources, their use in industries and energy generation, and the flow of wood material from raw materials into products in the national economy. In addition, the statistics present data about foreign trade in roundwood and forest industry products in terms of dry-matter tons of wood.

**Datasets:** No primary data are collected for the statistics. Instead, the statistics are produced on the basis of other statistics.

Sources include the statistics on total roundwood removals and drain, the statistics on foreign trade in roundwood and forest industry products, the statistics on wood consumption, Statistics Finland's energy statistics, and the Finnish Forest Industries Federation's statistics on forest industries' production volumes, and the consumption and recovery of paper and board in Finland.

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in September 2025.

More information is available on the home page of the statistics on flows of wood material.

#### 3.1.13. Forest protection (OSF)

The statistics include data about the forest protection situation in Finland. The statistics are updated every three years. The newest statistics will be compiled according to the situation at the beginning of 2025.

**Datasets:** The statistics consist of data about conserved state-owned and privately owned forests. Data are collected from different organisations, with the majority being based on surface

areas obtained from various central government systems. The statistical data cover 1) statutory forest conservation areas, 2) biodiversity conservation sites in commercial forests, and 3) forests supporting the conservation of the nature values of other special areas by region, land and conservation category, and type of area. The surface areas presented cover both the land and water areas.

**Development:** The coverage of the statistics will be improved further especially regarding protected forests owned by forest funds.

More information is available on the home page of the forest protection statistics.

#### 3.1.14. Well-being at work on timber harvesting (experimental statistics)

The wellbeing at work of people working in the wood supply chain was investigated for the first time in the experimental statistical project conducted by Luke in 2019–2020. Wellbeing at work was examined using six separate themes: 1) workload, 2) job satisfaction, 3) ability to work and health, 4) psychological loads, 5) interaction and social relationships, and 6) recovery, lifestyle and support for coping.

**Datasets:** Data were collected using a survey with a total of 1,282 respondents. The target group consisted of persons responsible for the harvesting and transport of wood, and persons creating prerequisites for this work from forests to the gates of production plants. More than one third of the respondents were forest machine operators, while one fifth were both long-distance transporters of wood and salaried employees. Of all respondents, 15 per cent were logging and forest workers.

**Development:** The need to update the data will be re-assessed and the implementation of the statistics will be reconsidered in the near future.

More information is available on the home page of the statistics on well-being at work on timber harvesting.

#### 3.1.15. Data service products related to forest statistics

These data are transmitted to users through Luke's statistics website. These data are not produced by Luke's statistical services, and it is not responsible for their content.

- Finnish Forest Industries Federation's weekly monitoring of wood trade: <u>Home page of weekly monitoring of wood trade</u>
- Forest resources: <u>Home page of forest resource data</u>
- Bioeconomy in figures: Finnish bioeconomy in numbers.

The following data service products were discontinued in 2022.

- Forest biodiversity: Home page of forest biodiversity
- Harvesting and long-distance transportation of roundwood: <u>Home page of harvesting</u> and long-distance transportation of roundwood
- Labour force in the forest sector: <u>Home page of forest sector labour force</u>
- Energy: <u>Home page of energy data</u>
- Forest industry: Home page of forest industry data.

# 4. Fisheries and hunting statistics

#### 4.1.1. Commercial marine fishery (OSF, ESS)

The statistics on commercial marine fishery include data about the number of commercial marine fishers, the volume and value of the catch, and the distribution of the catch. The catch by commercial marine fishers is provided per species, by month, by area and by fishing gear.

**Datasets:** The statistics on commercial marine fishery are based on fishing data submitted by commercial fishers to the central commercial fishery register maintained by the ELY Centre for Southwest Finland or to the Provincial Government of Åland. All commercial fishers are obligated to provide fishing data.

**Development:** The validation of statistical data and the data flows used in statistical production will be developed. The documentation of the statistical process will be specified.

More information is available on the home page of the statistics on commercial marine fishery.

#### 4.1.2. Commercial inland fishery (OSF)

The statistics contain data about the commercial inland fishery catch, the value of the catch and the number of commercial fishers. The amount of the commercial inland fishery catch is presented by fish species, region, month and gear. The value of the catch is presented by fish species and fisher group.

**Datasets:** Commercial inland fishers reported their catches to Luke annually in 2016–2023. From 2024, catch data will be reported to the ELY Centres. Since 2016, the frame population of the statistics has consisted of the fishers in the register of commercial fishers maintained by the ELY Centre for Southwest Finland. Until 2014, the Finnish Game and Fisheries Research Institute collected the data required for the statistics from professional inland fishers by means of a national questionnaire and telephone interviews.

**Development:** Key development proposals presented in the audit of the statistics: the statistical production process will comply with Luke's shared TINTTI model, the OSF guidelines will be completed, and the statistical production process will also be documented in locations other than the SAS data flow. Data are requested from non-respondents using a telephone interview. A method will be implemented to calculate sampling errors in statistical estimates, and any sampling errors will be published.

More information is available on the home page of the statistics on commercial inland fishery.

#### 4.1.3. Recreational fishing (OSF, ESS)

The statistics represent recreational fishing by Finns in Finland. The statistics present the number of recreational fishers and the use of fishing gear by age and gender, as well as catches by gear and fishing area.

**Datasets:** Data are collected using a mailed questionnaire, whose random sample is selected from the Population Information System maintained by the Digital and Population Data Services Agency. Data obtained from the fisheries management fee register maintained by Metsähallitus are also used in sampling. The survey can also be responded to using mobile devices. The statistical unit in the recreational fishing statistics is a household dwelling.

**Development:** Increasing the percentage of respondents who respond via web survey, validation included in the data collection app, investigating the use of Omakala data, improving the coverage of the data content published, transferring data to databases, and developing the data flows used in statistical production. One-time surveys in conjunction with the collection of data in cooperation with the recreational fishing research. Possible harmonisation of the code set used in the statistics together with other fishery statistics.

More information is available on the home page of the recreational fishing statistics.

#### 4.1.4. Aquaculture (OSF, ESS)

The aquaculture statistics present data about the amount and value of food fish, food roe and fry production, as well as the number of operating aquaculture companies and plants by region.

**Datasets:** The population of the statistics consists of enterprises entered in the aquaculture register maintained by the Finnish Food Authority. Data are collected from all fish and crayfish farmers using a mailed questionnaire. Production data concerning Åland are received from the Provincial Government of Åland.

**Development:** Updating the aquaculture register maintained by the Finnish Food Authority is being planned. In the long term, the goal is to update the data collection application. The method used in the compilation of the statistics will be developed, and documentation regarding the compilation of international statistics, for example, will be specified.

More information is available on the home page of the aquaculture statistics.

#### 4.1.5. Fish processing (OSF, ESS)

The fish processing statistics present data about the volumes of raw materials used in fish processing by product and raw material type, regarding both domestic and imported fish, as well as the number of fish processing enterprises. The statistics are compiled every two years.

**Datasets:** The population of the statistics consists of fish processing enterprises obtained from the Business Register of Statistics Finland. The population includes all enterprises engaging in fish processing and wholesale as their main field of business, as well as enterprises in other fields of business that could be assumed, on the basis of their background data, to have also processed fish. Data are collected from these enterprises using a statistical survey.

The statistics have been discontinued. The final publication of the statistics will take place in October 2024.

More information is available on the home page of the fish processing statistics.

#### 4.1.6. Fish catch and production

The statistics include data about Finland's total fish production, including catches of both commercial and recreational fishing, and aquaculture production. Data about the number of fishers and aquaculture employees are included in the statistics. Catches are presented by fish species at sea and in inland waters, and in commercial and recreational fishing since 1980. Aquaculture production is presented at sea and in inland waters.

**Datasets:** The statistics are a summary of four OSF statistics: commercial marine fishery, commercial inland fishery, recreational fishing, and aquaculture.

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in December 2025.

More information is available on the home page of the statistics on fish catch and production.

#### 4.1.7. Producer prices for fish (OSF, ESS)

The statistics present producer prices paid to commercial fishers for fish. The prices are prices paid for fish caught in sea areas. Producer prices per fish species are published by region, processing rate and size category. The published prices are average prices of the year, quarter or month.

**Datasets:** The statistics on producer prices for fish use the prices of first fish purchases collected in the national central control register for commercial fisheries.

**Development:** Whether the validation of data can be discontinued/wholly automated will be assessed. Whether the quarterly statistics can be discontinued will be assessed.

More information is available on the home page of the statistics on producer prices for fish.

#### 4.1.8. Foreign trade in fish (OSF)

The statistics on foreign trade in fish include data about Finland's exports and imports of fish and fish products intended for human consumption and other uses. The statistics present the import and export volumes and values of fish and fish products in foreign trade by product group, type of use and country. Monthly statistics include preliminary data about foreign trade, and annual statistics include final confirmed data.

In the statistics, products are presented within product groups by fish species. Import and export volumes are presented in the form of product weight. Product weight refers to the weight of a fish batch or fish product at the time of imports or exports, excluding the packaging material. The import values are CIF values and export values are FOB values.

**Datasets:** The statistics are based on import and export data collected by Finnish Customs in accordance with EU regulations. Statistical data are compiled on the basis of the International Trade Statistics (Uljas, uljas.tulli.fi) of Finnish Customs.

The statistics will be discontinued after data for 2024 have been published. The final monthly statistics will be published in March 2025 and the final data for the annual statistics will be updated in September 2025.

More information is available on the home page of the statistics on foreign trade in fish.

#### 4.1.9. Profitability of fishery

The statistics on the profitability of fishery include the key financial figures of fishery industry enterprises. The statistics provide an overview of the profitability of enterprises engaged in commercial fishery, aquaculture, fish processing, wholesale and retail in Finland, based on the most recent financial statements.

**Datasets:** Data are obtained from Luke's statistics on production data about fishery and aquaculture enterprises and Statistics Finland's financial statements data about the fishery industry (fishing, aquaculture, fish processing, wholesale and retail). Financial data about the sector and enterprises is mainly based on financial statements data collected by Statistics Finland. In addition, the accounting survey prepared for inland and coastal fishers and trawler operators has been used in the statistics.

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in June 2025.

More information is available on the home page of the statistics on the profitability of fishery.

#### 4.1.10. Fish consumption

The statistics on fish consumption include data about the amount of fish available for human consumption on the domestic market per capita. In the statistics, consumption is presented for domestic fish by species according to origin (professional fishing, recreational fishing, aquaculture) and for imported fish by species.

**Datasets:** Data sources include the statistics published by Luke. The volume of domestic fish supply is calculated as the total amount of the commercial fishery catch landed in Finland, the recreational fishery catch and the production of aquaculture. The species-specific proportion of exported fish, fish used as feed, and fish thrown away is deducted from production. The consumption of imported fish is calculated from the amount of fish imported into Finland. The export volume is deducted from the amount of imported fish.

The statistics will be discontinued after data for 2024 have been published. The final publication of the statistics will take place in September 2025.

More information is available on the home page of the fish consumption statistics.

#### 4.1.11. **Hunting (OSF)**

The hunting statistics include a summary of the hunting bag during the statistical year (calendar year). The statistics present the size of the hunting bag by species, the number of hunters, and the time spent on hunting in days. Data are presented both at a national and regional level. In addition, an estimate of the amount of meat derived from the bag is given.

**Datasets:** Data about small game hunting are collected by means of a sample survey. The sample is selected based on the hunter register maintained by the Finnish Wildlife Agency. Data about bag of species subject to a hunting permit (such as deer, large carnivores, seals, otter) and species subject to the harvest report obligation, as well as estimates of the hunting bag of mouflons, wild boar and rabbits, are obtained from the Finnish Wildlife Agency.

**Development:** Discontinuing the collection of data on paper, updating the data collection app, developing estimation methods, and adjusting any bias resulting from non-respondents.

More information is available on the home page of the hunting statistics.



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