

METSÄ GROUP | Sales* EUR 5.0 billion | Personnel 9,100

METSÄLIITTO COOPERATIVE | Group's parent company | Owned by 104,000 Finnish forest owners



METSÄ FOREST Wood supply and forest services

Sales:

EUR 1.6 billion

Personnel:

850



MFTSÄ WOOD

Wood products

Sales:

EUR 0.5 billion

Personnel: 1,400

METSÄ FIBRE

Pulp and

Sawn Timber

Sales:

EUR 1.9 billion Personnel:

1.200



METSÄ BOARD

Paperboard

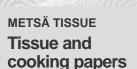
Sales:

EUR 1.8 billion

Personnel:

2.350

Metsä Board is listed on the Nasdaq Helsinki



Sales:

EUR 1.0 billion

Personnel:

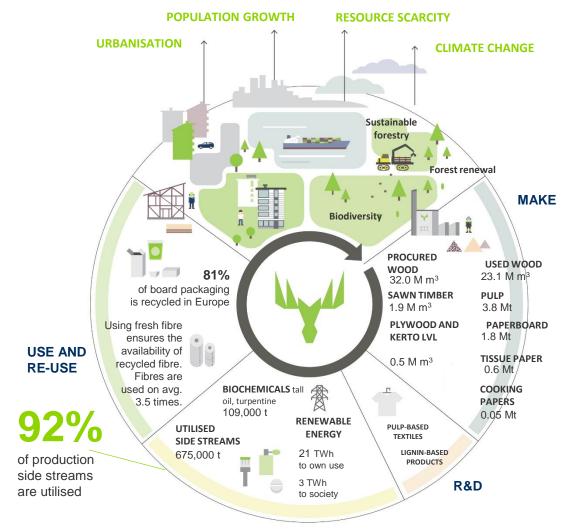
2,800

Renewable energy 24 TWh



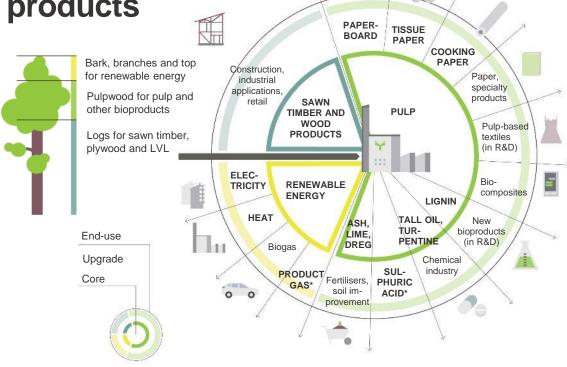
Forerunner in circular bioeconomy

- Metsä Group manufactures products made of renewable wood from Northern forests which replace the use of fossil raw materials
- We aim to utilise the wood as efficiently as possible for the most valuable use
- Our operations are based on circulations and we aim to utilise all our production side streams



Each part of the wood used for the highest value products

- Increasing resource scarcity requires even more efficient use of raw materials
- The idea of circular economy works best in industrial ecosystems consisting of partners manufacturing products for various end-uses



Value to stakeholders

RESOURCES AND COMPETENCES



Secure wood supply

 Wood from 104.000 forest-owner members

Personnel

- 9.126 employees in 26 countries
- Retention rate 97%

Efficient use of resources



- 99.6% surface water no impact on water scarcity
- 72% of the energy used in production was renewable
- 29 production facilities in 7 countries

Steady outlook

- EUR 626 million in investments and R&D 20.11.2018 Metsä Group

STAKEHOLDERS

- Local communities
- Schools and universities
- Cooperative's owner-members
- Other forest owners
- NGOs
- Customers and consumers
- Organisations
- Subcontractors and suppliers

- Corporate networks
- Media
- Authorities, legislators and political decision-makers
- Personnel
- Shareholders
- Investors and analysts
- Research organisations



LOCAL **VALUE**



NATIONAL **VALUE**

The value of exports from Metsä Group's Finnish mills is EUR 2.8 billion, corresponding 5% of Finnish exports

Producing 15% of the renewable energy in Finland

Partnering in circular economy: 92% of production side streams utilised

92% of wood and 85% of other purchases from production countries in Europe

Supporting biodiversity: at least 2 high biodiversity stumps/ hectare left in forests



INTERNATIONAL **VALUE**

Reducing the dependence on fossil resources:

Wood products that store carbon Pulp for recyclable products Paperboards for safe packaging Tissue papers for improving hygiene

Sales EUR 5.0 billion:

EMEA Americas 8% 74%

APAC

18%

EUR 71 million as dividends

93% permanent employees Over 1.000 summer iobs

EUR 621 million in wages, salaries and benefits

Each forest industry job creates three new ones indirectly

EUR 500 million to Finnish forest owners from wood sales

EUR 330 million to harvesting and transportation entrepreneurs in Finland

Capital employed EUR 5.033 million



Metsäliitto Cooperative, Metsä **Group's parent company**

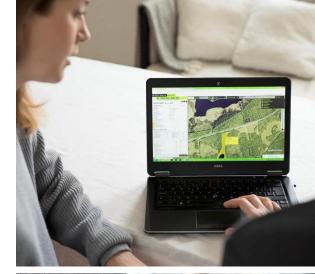
- The Cooperative has around 104,000 Finnish forest owners as its members*
 - Any private person or community owning at least 3 hectares of forest in Finland can join the Cooperative
 - Our owner-members own forests all over Finland
- Owner-members participate in the Cooperative's decision-making.
 - Representative Council (60), Supervisory Board (34), Board of Directors (8), District Committees
 - Elections every four years
- Owner-members have priority in all our timber trades





High-quality wood from Northern forests

- Metsä Group Wood Supply and Forest Services procure all the wood Metsä Group uses
- We serve forest owners all over the country
 - We buy all timber grades
 - In addition to wood trade, we offer services related to forest ownership, forest asset management, forest income investment and intergenerational transfer of forest assets.
 - We are constantly improving our e-services.
- We serve industrial customers. Besides Metsä Group's mills, we supply wood to chosen external, industrial customers
 - We take charge of wood purchasing, harvesting, measuring and transports to Metsä Group's production facilities and other industrial customers





We managed forests sustainably together with forest owners

- Roughly every one in three forest owners in Finland is an owner-member of Metsä Group
- Our owner-members own half of the forest in private ownership* in Finland
- Sustainable forestry is the baseline in operations carried out in family forests
- The biodiversity of commercial forests is looked after in the context of everyday forest work in cooperation with the forest owner
- Every owner-member has a dedicated forest specialist
- Forest industry measures have an impact on forest flora and fauna and they leave a mark; we have to take increasingly good care of our forests
- · We develop sustainable forest management methods on a continuous basis





We employ all nature management methods available

- Digital maps and data about valuable habitats available through the supply chain
- Forest management aim at mixed forests when suitable for the site
- The forests are renewed with domestic tree species suited for the site, which preserves the habitat of the natural species
- Valuable habitats are safeguarded during the fellings
- Rare species' habitats are safeguarded during fellings
- We leave retention trees, on average 11 for every hectare
- We leave buffer zones along waterways
- All felling methods defined in Forest Act available
- Metsä Group has developed a soil preparation method called inverting in which the soil surface is broken only at the planting point





High biodiversity stumps leave more trees with nesting holes in forests

- Metsä Group's thinning and regeneration felling involves leaving two high biodiversity stumps in each hectare of forest
- High biodiversity stumps represent a forest owner's voluntary contribution to nature – in 2017, 70 per cent of forest owners permitted high stumps
- High stumps are made by cutting a trunk at the height of 2– 4 metres. Deciduous trees are favoured when selecting candidates for high stumps.
- This means that Finland gains hundreds of new decaying trees and trees with nesting holes a day, and hundreds of thousands over the course of a few years.
- A high stump made from a deciduous tree which starts decaying in a few years benefits decay fungi, insects and a number of forest-dwelling birds.

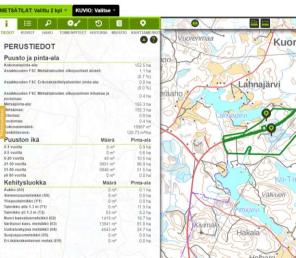




Metsä Group – forerunner in e-services

- Metsä Group's owner-members have access to Metsäverkko web service with which they can manage all issues related to their forest property, including investments in Metsäliitto Cooperative
- E-commerce selling timber to Metsä Group and buying forest services – launched 6/2015 in Metsäverkko
 - Agreements confirmed with online bank user identifiers
 - 25% of roundwood sales, 35 % of silviculture service deals made electronically 2017
 - All documents saved digitally; real-time reporting of forestry actions and related cashflow
 - Metsäverkko received Cogeca's award for Innovative Uses of ICT/Digitalisation in 2017

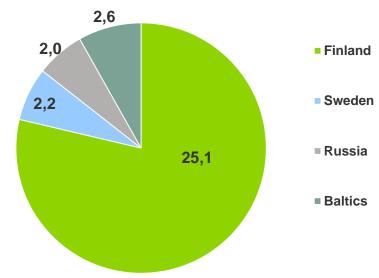




Our owner-members always have priority in timber trade

- We procure app. 32 mill. m³ of timber annually. The majority of it from Finland, from our owner-members.
- We make around 35,000 timber trades every year
- We employ 300 forest specialist and have over 100 offices over the country
- We employ app. 600 persons in Finland as well as 3 500–4 000 entrepreneurs including their employees
- In 2017 we paid EUR 500 million to Finnish forest owners from wood sales and EUR 330 million to harvesting and transportation entrepreneurs in Finland





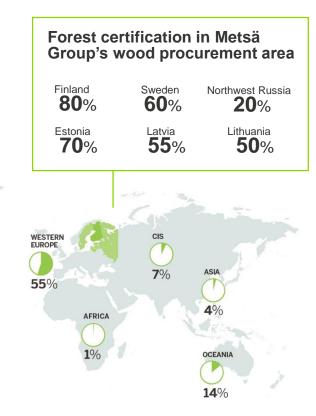


We always know the origin of the wood raw material we use

AMERICA

SOUTH

- We know the origin of the wood all the way to the felling site
- 88 % of the wood used by Metsä Group comes from certified forests even though only 10 % of world's forests are certified
- PEFC forest certification is a free member benefit to our owner members
- We support the increase of FSC certified forest area
- We deliver around 30 million seedlings to forest owners every year



From forest to mill

responsibly, fluently and 100% traceably

Timber sales agreement

Felling and timber transportation

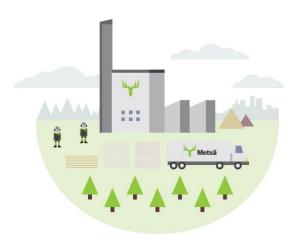
Metsä Group and industrial customers



Contracts define locations, ownership data, approximate volume of timber felled, biodiversity issues, certification data. All felling date online, real time all the time. Each timber trade deal gets a unique code which follows the timber all the way to the mill. Two weeks before felling, a notification of forest use is submitted to Finnish Forest Centre.



Felling locations, maps, estimated felling volumes etc. sent wirelessly to contractors and harvesters. Harvesters and forwards sent online input about felling and forest transportation -> continuous feedback to wood supply planning. Timber truck pickup data relies on real time, online.



Timber trucks forward load data to mills which confirm data upon arrival and report back to wood supply planning.

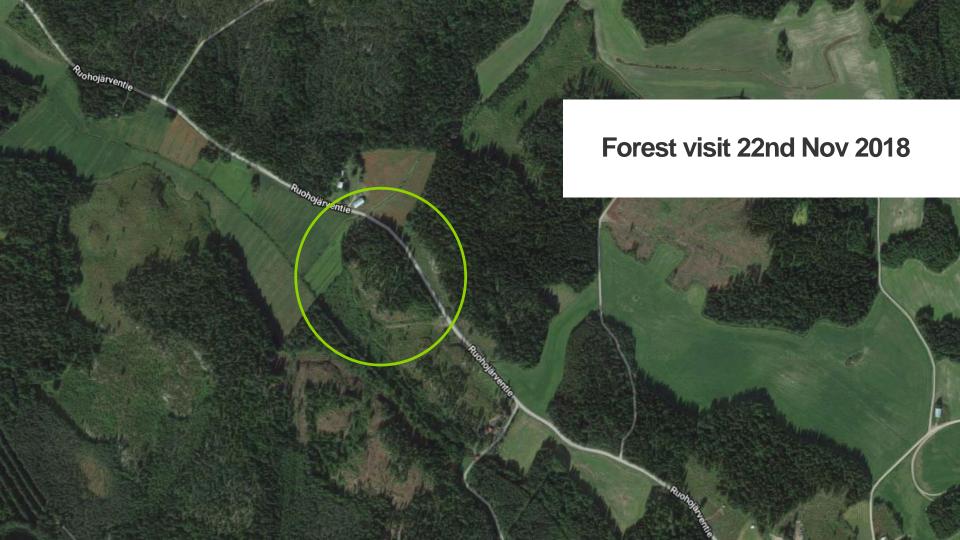


We use every felled tree as efficiently as possible

A typical example of a mature mixed stand in Southern Finland:

- Stout spruce logs to Metsä Wood Kerto Mill in Lohja
- Spruce logs To Metsä Fibre Sawmill in Renko
- Spruce pulp wood to Sappi Paper Mill in Kirkniemi
- Pine logs to Metsä Fibre Sawmill in Kyrö
- Pine pulp wood to Metsä Fibre Pulp Mill in Rauma
- Birch logs to external industrial customer
- Birch pulp wood to Metsä Fibre Äänekoski Pulp Mill
- Aspen pulp wood to Metsä Fibre Aänekoski Pulp Mill
- Energy wood to external industrial customer in vicinity





Thinning improves growing

- The forest site visited on 22nd November 2018 is owned by a Metsä Group owner-member. PEFC certified
- The dominating tree species is Norway spruce (*Picea*) abies), a native tree species. Also silver birch (Betula pendula), another native tree species present
- Fellings method used is thinning and. In thinning smaller and /or damaged trees are removed so remaining trees have room to grow stouter
- Thinnings yield mainly pulpwood, also some saw logs. Several delivery destinations wood
 - Spruce logs to an external customer
 - Spruce pulp wood to Sappi Paper Mill in Kirkniemi
 - Pine pulp wood to Metsä Fibre Joutseno Pulp Mill in
 - Birch pulp wood to Metsä Group Äänekoski Bioproduct mill



Metsä Group:

Safety requirements for forest site visit

- Keep at least 90 m distance to the operating harvester and 20 m distance to the forwarder and timber truck
 - If anyone gets closer, we stop the machines
- Always wear a safety vest or other highly visible clothing and a helmet when visiting an area where forest work is being carried out
- Before entering the site, your Metsä Group host contacts harvesting and forwarder operators to stop the machines
- Make sure the operators notice you when you get to the site before you approach it
- Always approach the machines from the felled site as the visibility is better





Make the most of Metsä

