



Metsä Board ESG Presentation

July 2021

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 - Combating climate change
 - Save resources
 - Safe and sustainable products
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Our mission

Packaging solutions
that respect nature

Our vision

Preferred supplier of
innovative and
sustainable fibre-based
packaging solutions,
creating value for
customers globally

Our values

Responsible profitability
Reliability
Cooperation
Renewal

Metsä Board benefits from **Metsä Group's value chain**

- High availability of Northern wood
- Good control of wood raw materials from forests to pulp and board production
- Consistent quality of fibres that are tailor-made for the end products

METSÄ GROUP

METSÄLIITTO COOPERATIVE,

Group's parent company owned by 100,000 Finnish forest-owners

METSÄ FOREST

WOOD SUPPLY AND
FOREST SERVICES

Holding

Metsäliitto Cooperative 100%

METSÄ WOOD

WOOD PRODUCTS

Holding

Metsäliitto Cooperative 100%

METSÄ FIBRE

PULP AND
SAWN TIMBER

Holding

Metsäliitto Cooperative 50.1%
Metsä Board 24.9%
Itochu Corporation 25.0%

METSÄ BOARD

PAPERBOARD

Holding

Metsäliitto Cooperative 48%
share of votes 67%

METSÄ TISSUE

TISSUE AND
GREASEPROOF PAPERS

Holding

Metsäliitto Cooperative 100%

METSÄ SPRING INNOVATION COMPANY

Sustainability targets for 2030

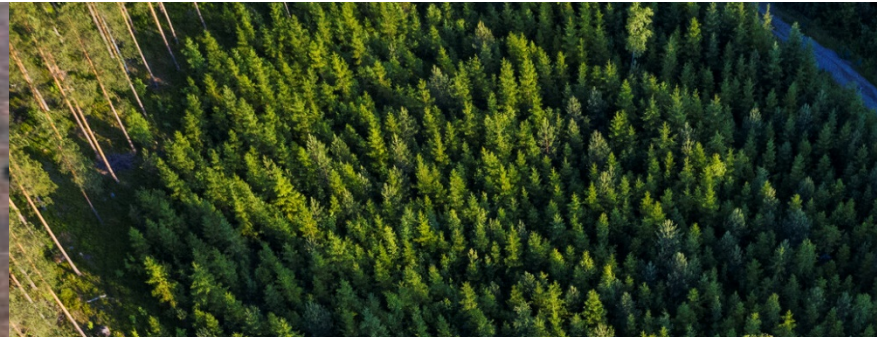
- Our sustainability themes and targets are aligned with reaching the Sustainable Development Goals (SDGs) set by the United Nations.
- We focus especially on seven goals to which we contribute the most through our operations.



Our approach to sustainability



**Combat
climate change**



**Save
resources**



**Safe and sustainable
choices**

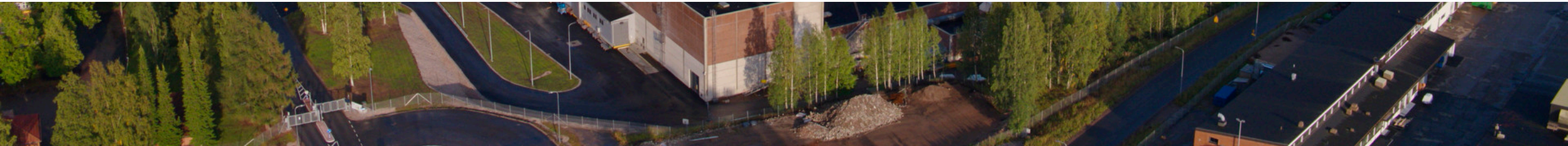


Combat climate change



CDP
DISCLOSURE INSIGHT ACTION
A LIST
2020
CLIMATE

83% of Metsä Board's total energy consumption was **fossil free in 2020**
We have **reduced our CO₂ emissions by **52%** since 2009**



Metsä Board's industry-leading target

**ZERO FOSSIL
CO₂ EMISSIONS**

Fossil free production and raw materials by the end of 2030



**BUSINESS
AMBITION FOR 1.5°C**  

Metsä Board's greenhouse gas emission reduction targets meet the most ambitious goals of the Paris Agreement limiting global warming to 1.5 °C.

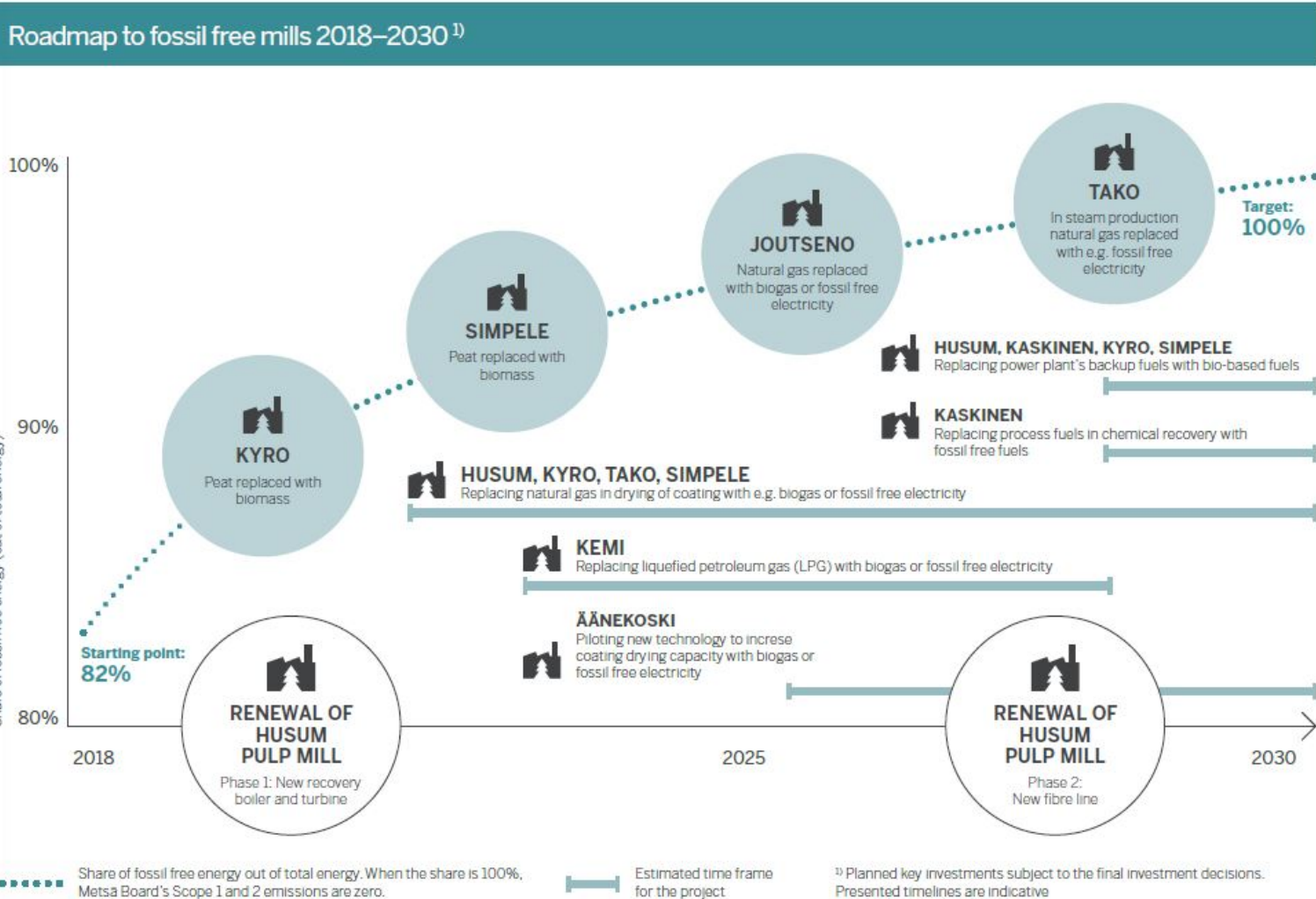


SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



Roadmap to fossil free mills 2018–2030



All mills fossil free by 2030

Forests are a carbon sink

- Growing trees bind more carbon and help mitigate climate change
- Good forest management plays a key role for maintaining forests as carbon sinks
- It is important to get forests growing again as soon as possible after harvesting
- For every harvested tree new seedlings are planted



270 million trees
planted in a decade by
Metsä Group and forest
owners

Finland - **Reforestation** instead of deforestation

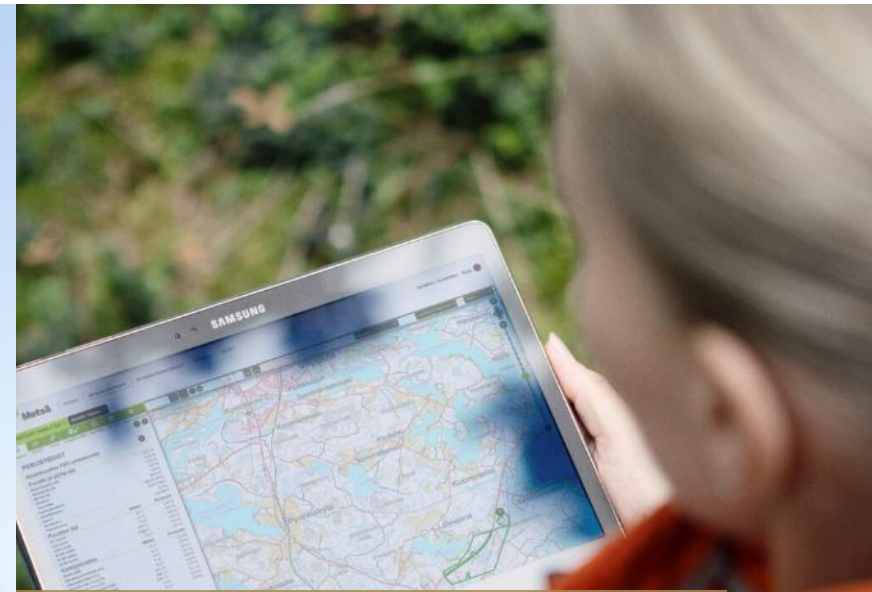
For every harvested tree we plant four new seedlings



75% of Finland's land area is covered by forests



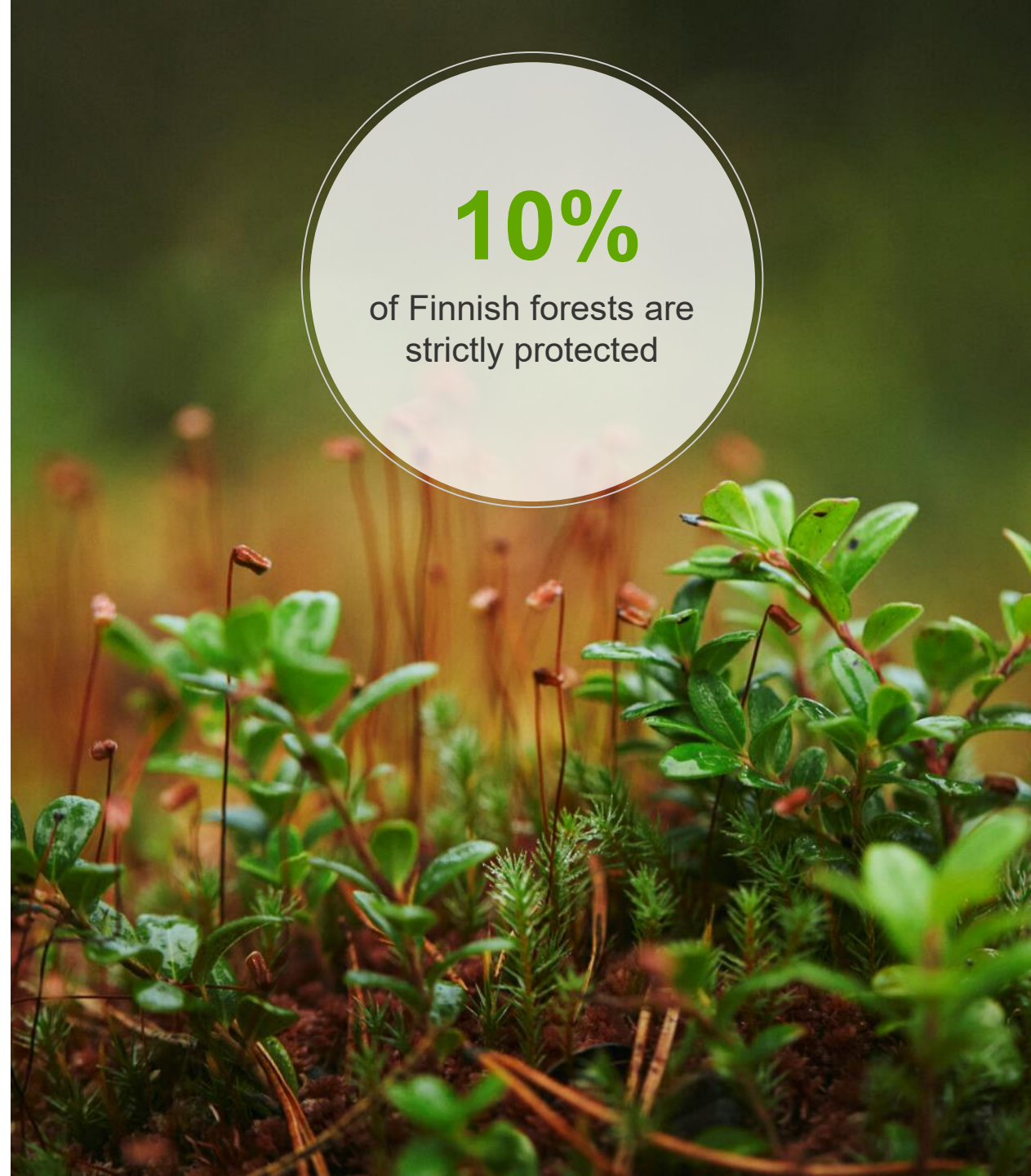
In 1886, Finland enacted the first forest act in the world



Finland is world leading in forest inventory and forest digitalisation data

Protecting biodiversity

- Forests have an important role in providing habitats (living environments) to diverse animal species
- Taking care of biodiversity is part of forest management, i.e. retention trees, biodiversity stumps, buffer zones and preservation of standing and fallen decayed wood
- There are actions required by law, by forest certifications schemes as well as voluntary actions
- Finland has the highest share of protected forests in Europe



10%

of Finnish forests are
strictly protected



All wood we use comes from **sustainably managed forests
– our paperboards are available with PEFC™ or FSC® certification**

PEFC™/02-31-92, FSC®-C001580



10%

of all the forests **in the world** are certified

80%

of the wood used for
Metsä Board's
paperboards were
certified in 2020

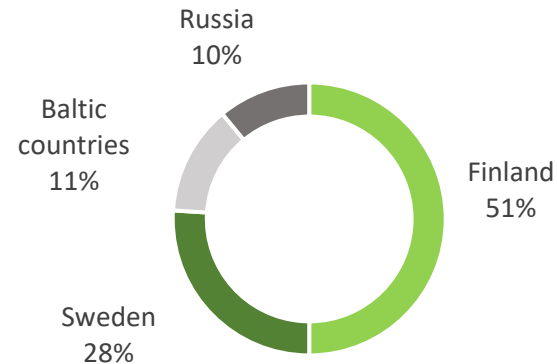
>90%

Metsä Board's target of
the share of certified
wood by 2030

Wood is Metsä Board's main raw material

- Wood represents roughly 27% of Metsä Board's total costs (including the wood cost of pulp purchased from Metsä Fibre)
- Sourcing function is centralized in Metsä Forest
- Majority of wood sourced in Finland comes from the members of Metsäliitto Cooperative
- In 2020 Metsä Board sourced 8.2 million m³ wood
 - includes the wood bought to Metsä Board pulp/BCTMP mills (5.3 Mm³) and the wood used in pulp bought from Metsä Fibre (2.9 Mm³)

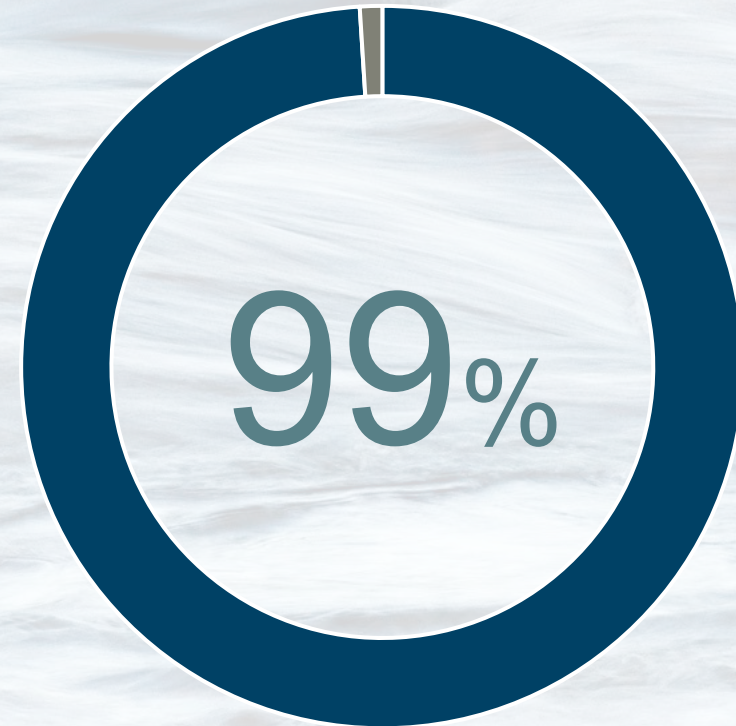
Metsä Board's wood sourcing areas in 2020



Save resources

99% of the water we use is returned back to the nature

- Metsä Board operations are located in areas with abundant water resources
 - We do not operate in high water stress areas
- Our operations do not prevent or weaken any other parties' access to water, for example agriculture
- We only use surface water
- All process waters are carefully purified before released back to nature
- Efficient use of water helps reduce energy use and, in turn, costs and CO₂ emissions



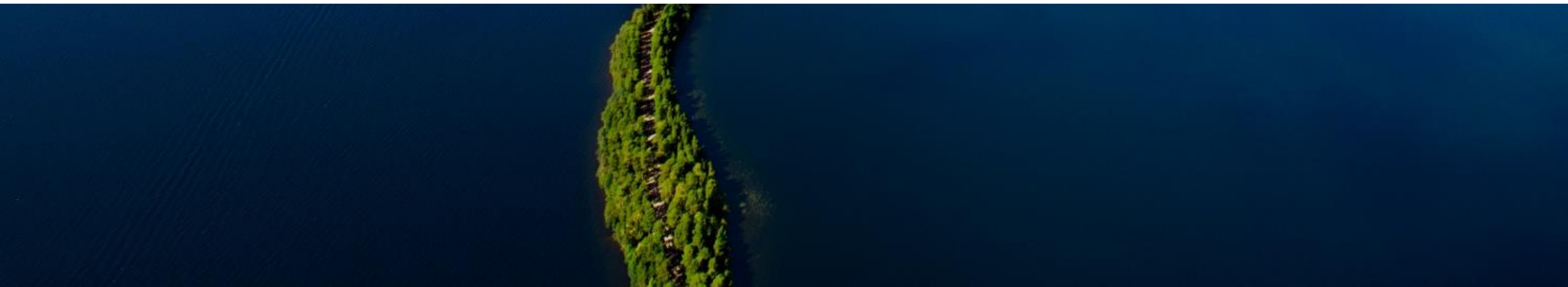


DISCLOSURE INSIGHT ACTION

A LIST
2020

WATER

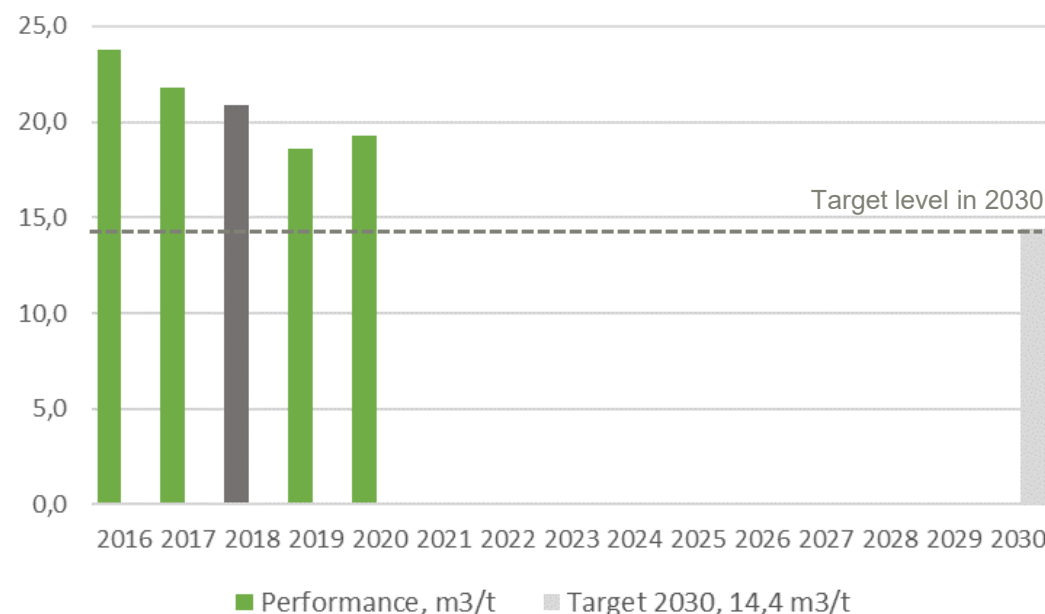
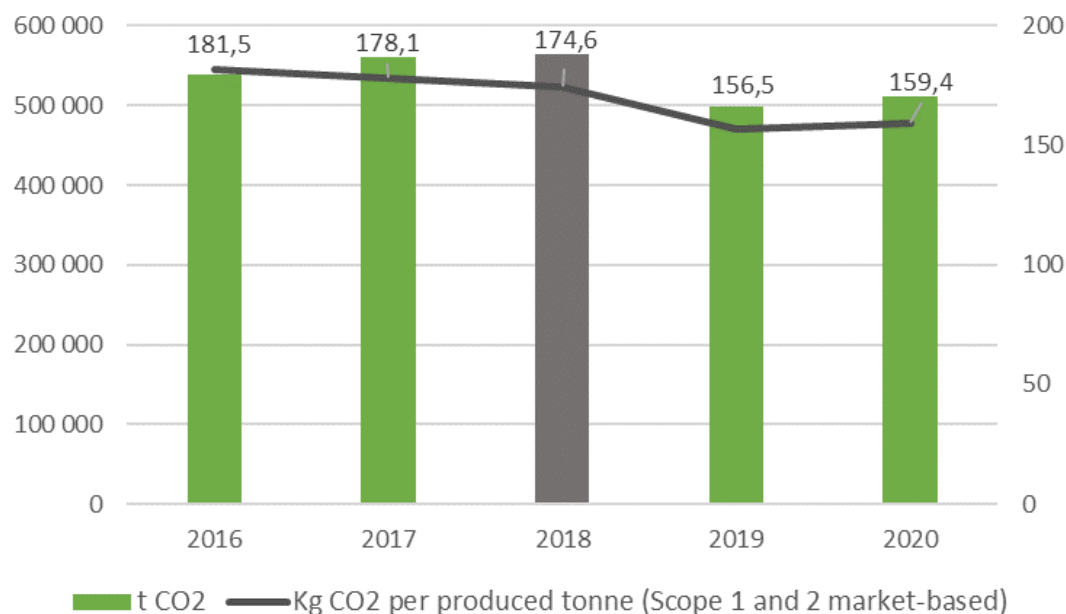
**We have already reduced our water use by 26% since 2010.
Our new target is to reduce it by 30% in 2018–2030.**



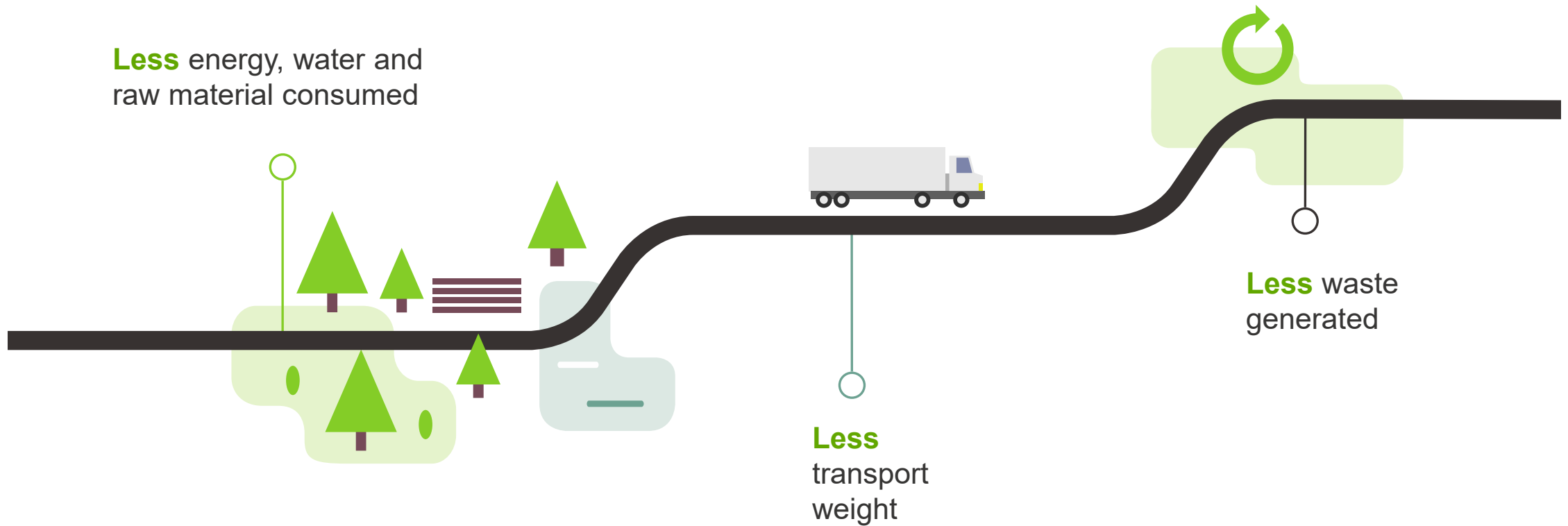
We exceeded our previous reduction targets and have set new targets for 2018-2030

CO₂ emissions per product tonne (kg/t)
(Scope 1 and 2 market-based) **Target -100%**

Process water use per product tonne (m³/t)
Target -30%



Lightweight paperboards help reduce environmental footprint across the value chain



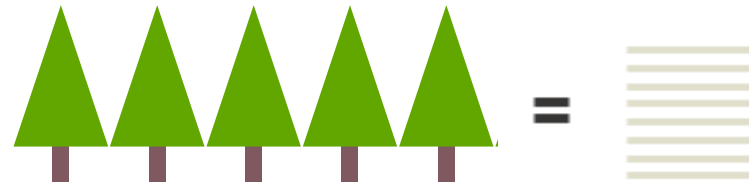
Production of folding boxboard needs less wood and leave more trees standing

Metsä Board folding boxboard
(70% BCTMP, 30% chemical pulp)



3.4 m³ of wood per tonne of pulp

Solid bleached board
(100% chemical pulp)



5 m³ of wood per tonne of pulp



Consumers daily use approximately 160 million packages made of Metsä Board's folding boxboard.

By reducing paperboard weight by 1%, material savings equivalent to 1.6 million packages per day can be achieved.



Safe and sustainable choices

Our paperboards contribute to circular bioeconomy

- Packaging is needed to protect the product and to reduce wastage
- Packaging accounts for only few percent of the total environmental impact of a food product's entire life cycle
- Paperboard is widely collected for recycling and thus returned to the recycling loop
- Fresh fibres are needed to keep the recycling loop ongoing



Three principles of the Circular Economy, source Ellen Mc Arthur Foundation

Fresh and recycled fibres are equally good in terms of the circular economy

Recycling rate of paperboard and paper packaging is already high

83%

of paper and board packaging is collected for recycling in Europe*

100%

recovery of wood fibres to 100 % **is not possible** because part of the fibre is lost during a cycle, or is contaminated

Fresh fibre is needed in the recycling loop to maintain quality and strength, and to keep the loop ongoing

Two major factors influencing CO₂ of packaging

1

Fossil or non-fossil-based energy

Nordic fresh fibre paperboard production uses mainly renewable energy

In Central and Southern Europe, the main energy sources are still fossil-based

2

Efficient material use, light-weighting

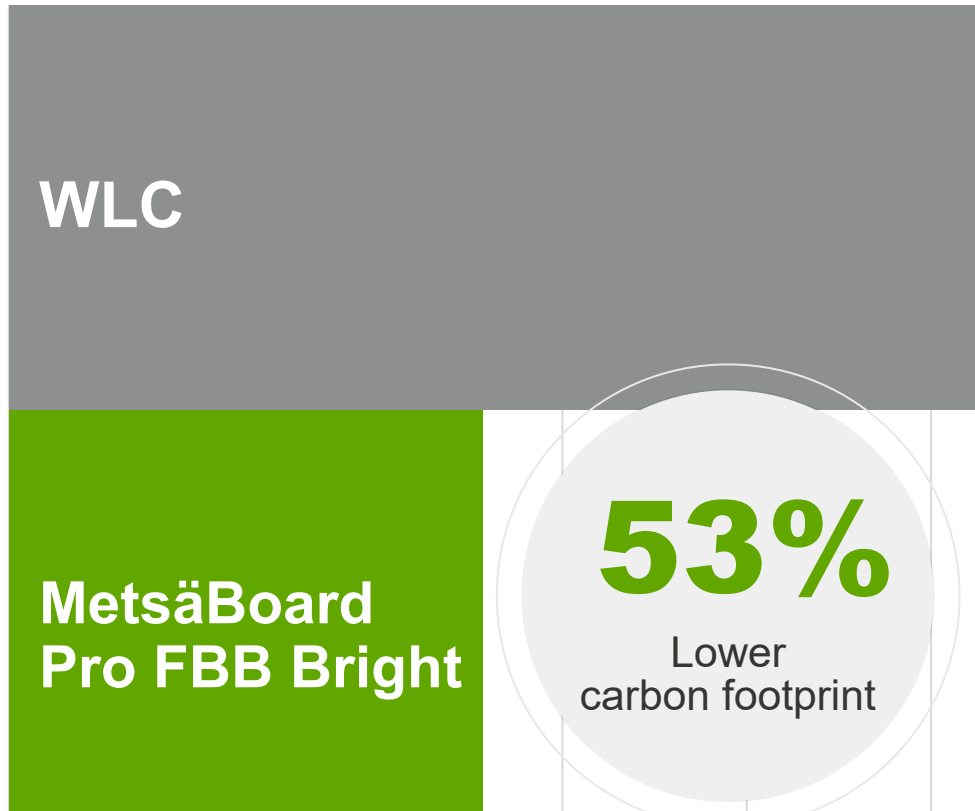
Using less material to produce a required type of packaging

Less weight to be transported throughout the supply chain, with lower transportation emissions

Less waste after the product use

Lighter **MetsäBoard Pro FBB Bright** reduces carbon footprint by 53%

Carbon Footprint *
kg CO₂ eq./200 000 cartons



53%
Lower
carbon footprint

Thanks to the strength and bulk of fresh fibre boards, lighter basis weights can be used.



GaBi is a Life Cycle Assessment (LCA) modelling and reporting software. It contains databases of various industrial processes such as material and energy production and transports. GaBi LCA follows the standard ISO 14040 and ISO14044.

Safety – consumers and legislators react to health risks

Legislation and various country-specific recommendations increasingly **limit the use of recycled fibres** in food packaging

Consumers today are **more aware of chemicals** contained in recycled fibres and their health effects



Recycling is of utmost importance and recycled fibres are excellent raw materials – but not for packing food. **Fresh fibres** are the **safest choice**.

Developing
solutions

Examples of innovation areas

Identifying new possibilities for packaging with technology developers



Metsä Board's Excellence Centre combines packaging design and R&D to boost the development of paperboard and packaging solutions of the future.



Wood-based 3D fibre products to be developed by Metsä Spring and Valmet



Creating new barrier solutions to reduce plastic



Improving recyclability

Continuing development of lightweight materials

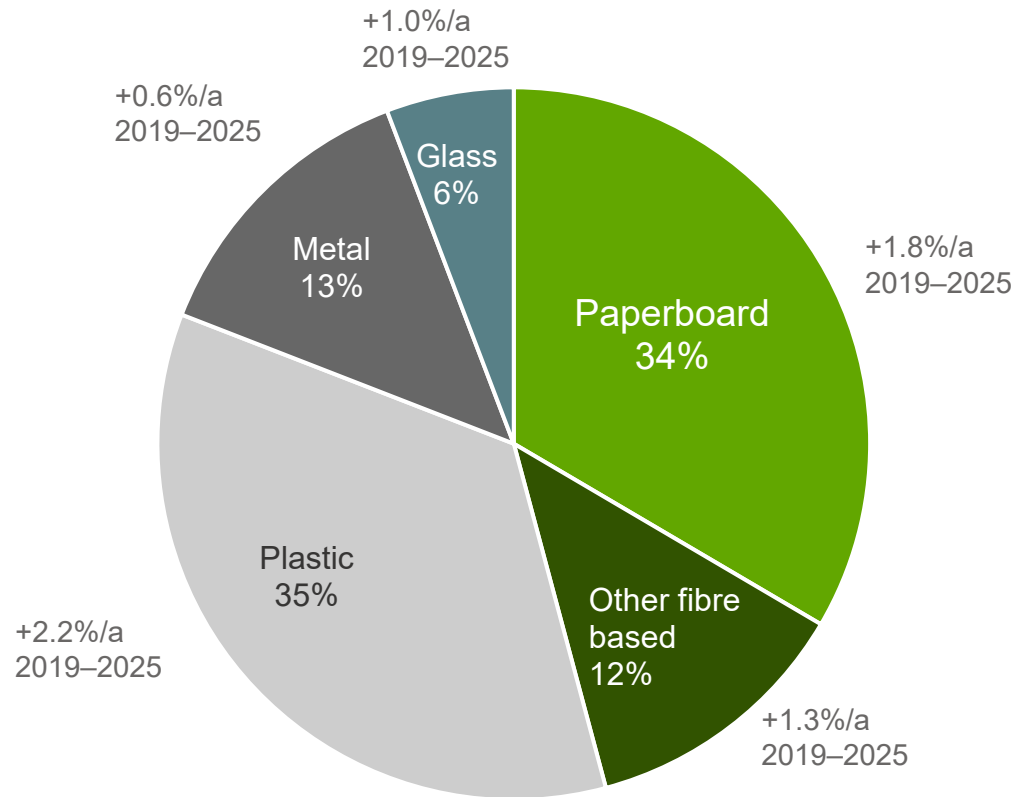


Paperboard as an alternative to plastics

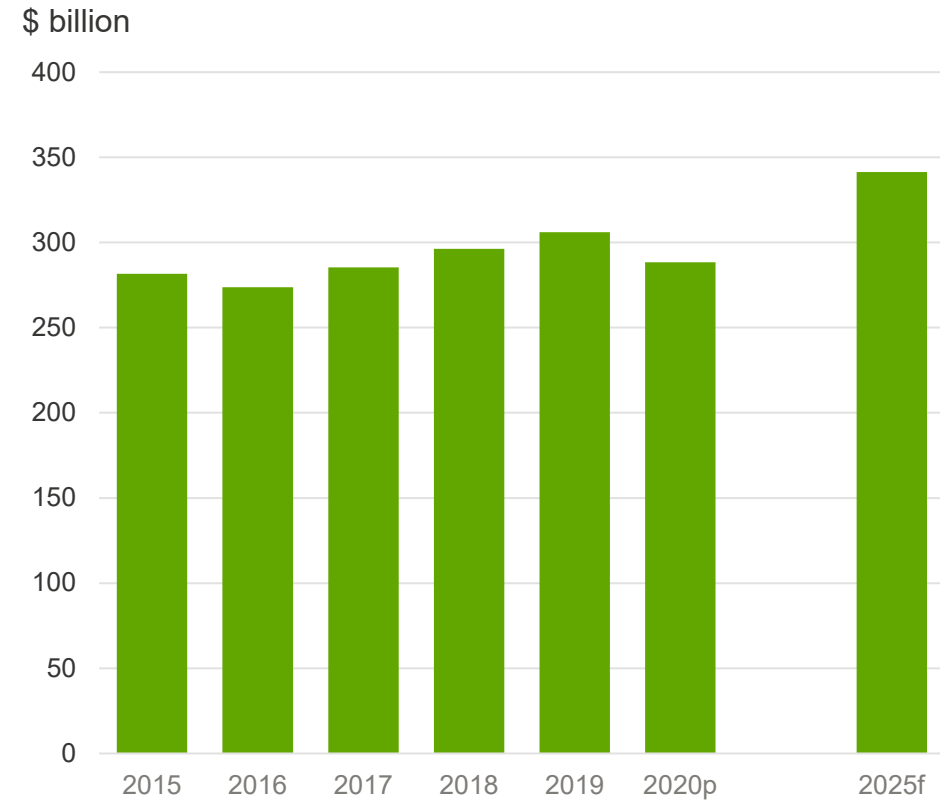


Paperboard packaging grows faster than the total packaging market

The global packaging market size is \$915 billion
estimated annual growth in 2019–2025 is 1.7%



Estimated annual growth for paperboard in
2019–2025 is +1.8%



Source: Smithers Information Ltd

Fresh fibre paperboard is an alternative to plastics

- Paper/cardboard is the preferred packaging material by **consumers**
- Several **brand owners** have committed to get rid of unnecessary plastic and to have 100% reusable, recyclable and compostable (plastic) packaging by 2025

Reduce



Recycle



Compost



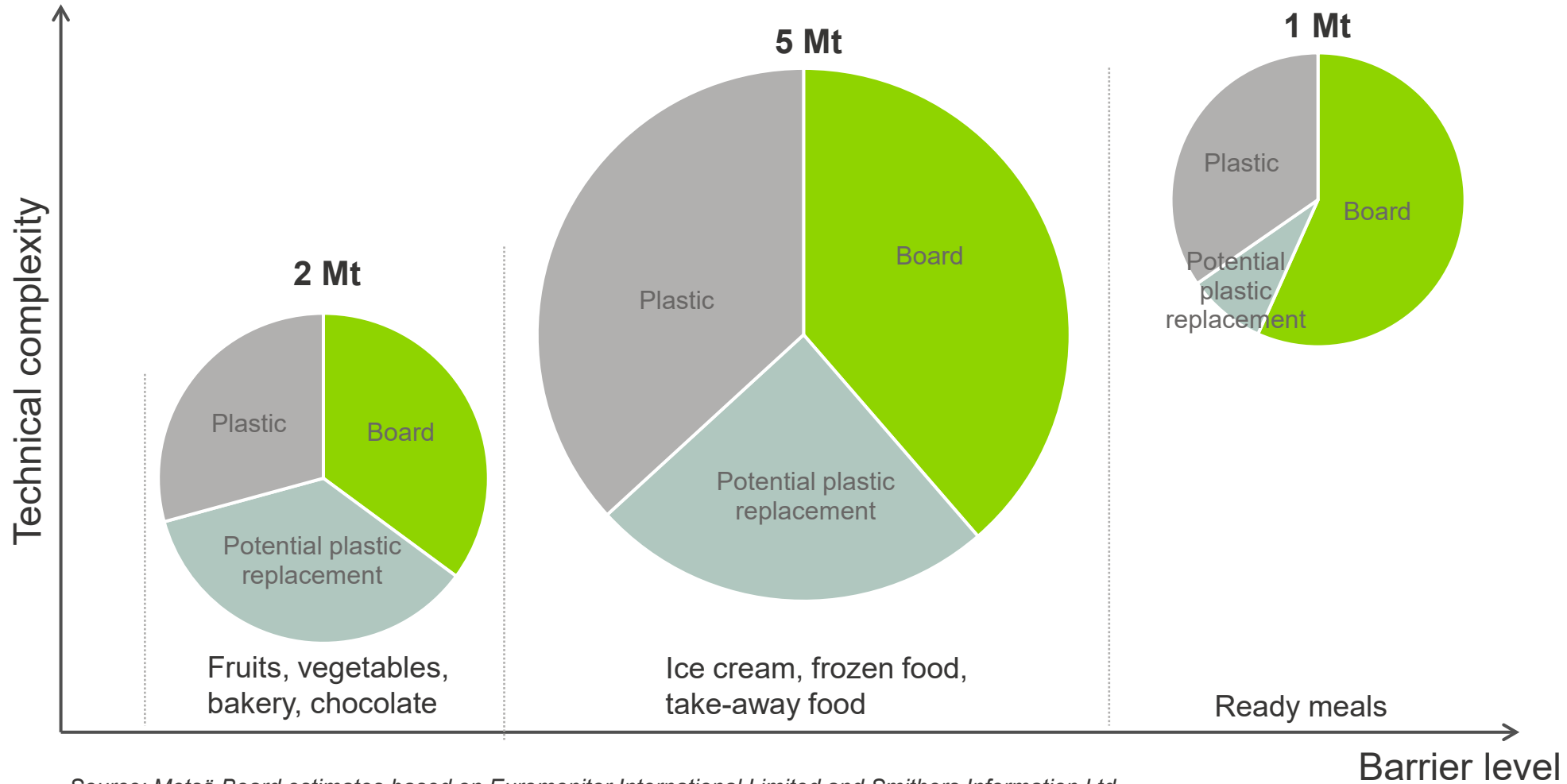
Metsä Board has developed a paperboard with dispersion barrier coating

- Medium barrier against grease and moisture
- Lightweight, recyclable, compostable and biodegradable
- Suitable for direct food contact globally
- End-uses: Food service, fresh, dry and frozen food
- Recyclable in paper and paperboard recycling streams
- Helps reduce the use of plastics



Plastic replacement potential roughly 2 million tonnes

Cartonboard and rigid plastic packaging market size in selected food categories



Source: Metsä Board estimates based on Euromonitor International Limited and Smithers Information Ltd

Sustainable business operations

We are committed to the UN Global Compact

HUMAN RIGHTS

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

LABOUR

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labour;

Principle 5: the effective abolition of child labour; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

WE SUPPORT



ENVIRONMENT

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

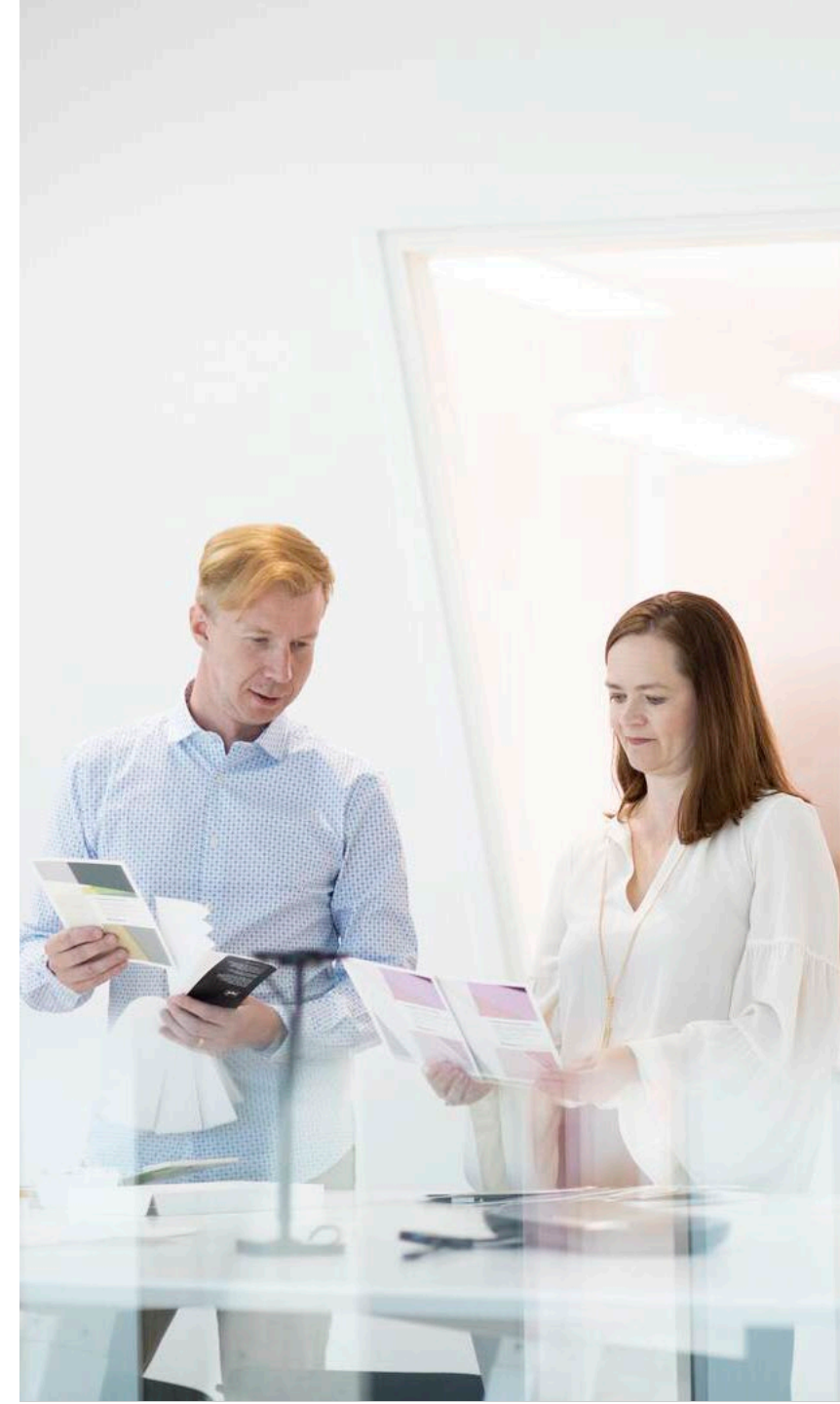
Doing the right thing guides our work

- We require our personnel to comply with applicable legislation, and to act honestly and make ethically sound decisions
- 99% of our personnel have completed the training on the Code of Conduct
- The result of the first Ethics Barometer, aimed at the entire personnel, was 85% in 2020 with the goal being 100%
- The barometer measures how our people perceive ethics at work and helps us identify ethics-related risks



Equality targets were launched in 2020

- At least 25% of Metsä Group's executive positions (Vice President or higher) are held by women by 2025
 - In 2020, the actual in Metsä Board was 19% and
 - the share of women within all employees was 21%
- There are no unjustifiable pay gaps between women and men
- Metsä Group develops equality through training programmes targeted at all employees

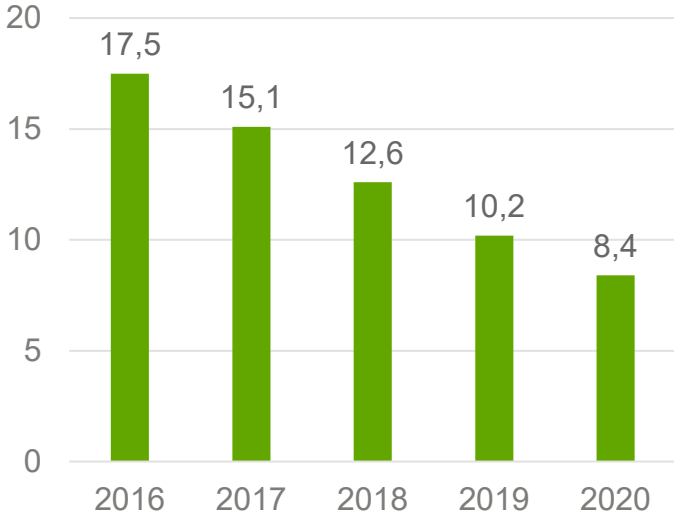


Safety continues to be our priority

TARGET:
Zero accidents

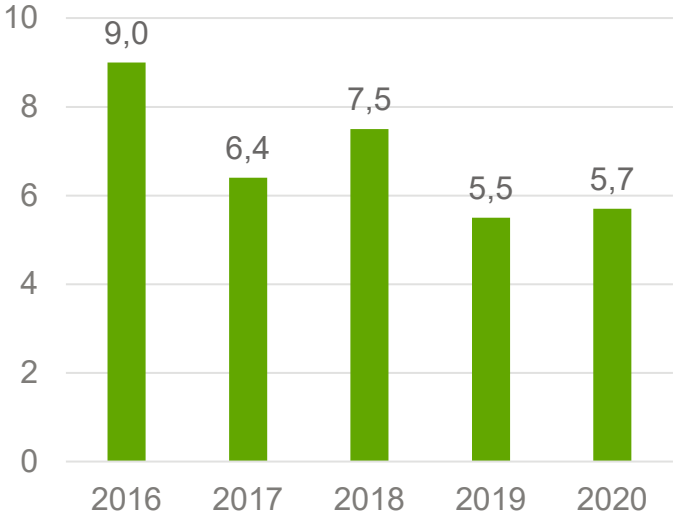
TRIF

total recordable injury frequency per million hours worked



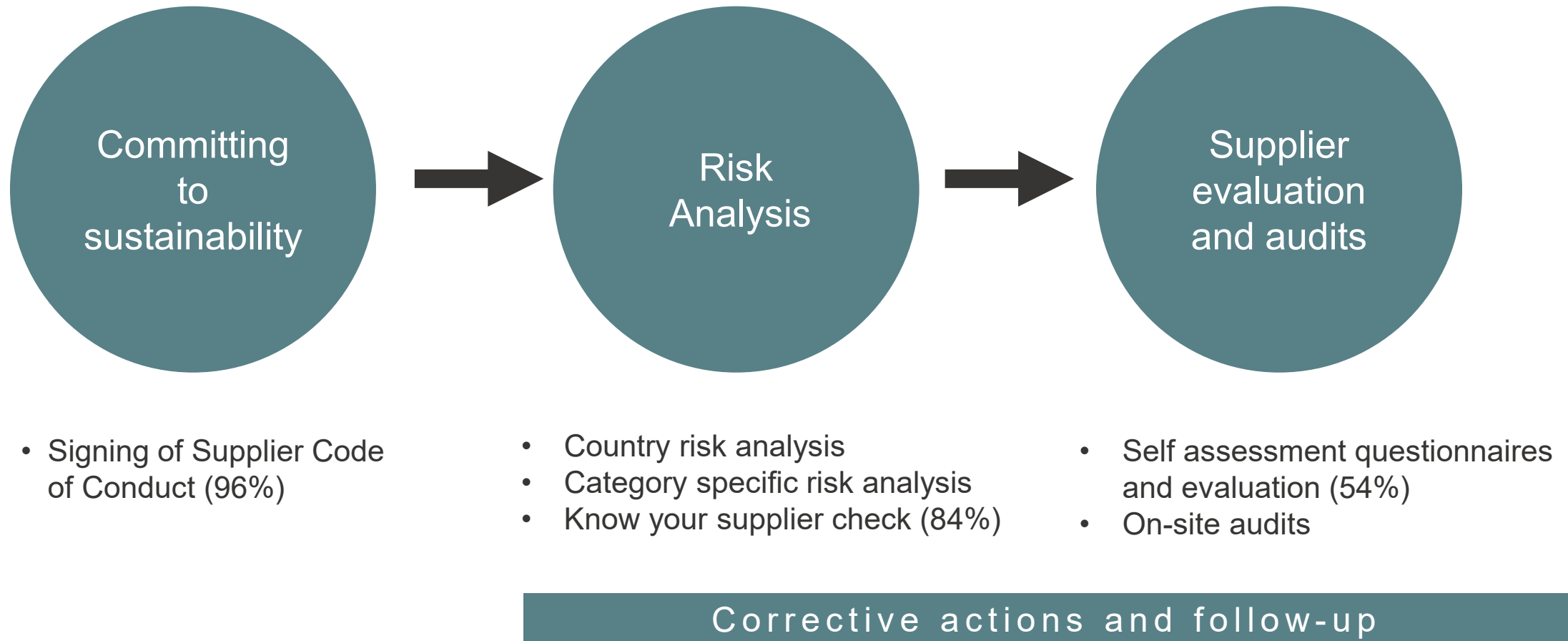
LTA1

lost-time accident frequency per million hours worked



Tools for ensuring the sustainability of our suppliers

Our target: 100% sustainable suppliers



Our approach to sustainability

Combat climate change

Clear action plan takes us towards fossil free production

Sustainable forest management maintains forests as carbon sinks and preserves biodiversity

Save resources

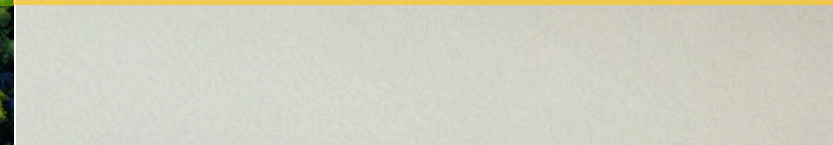
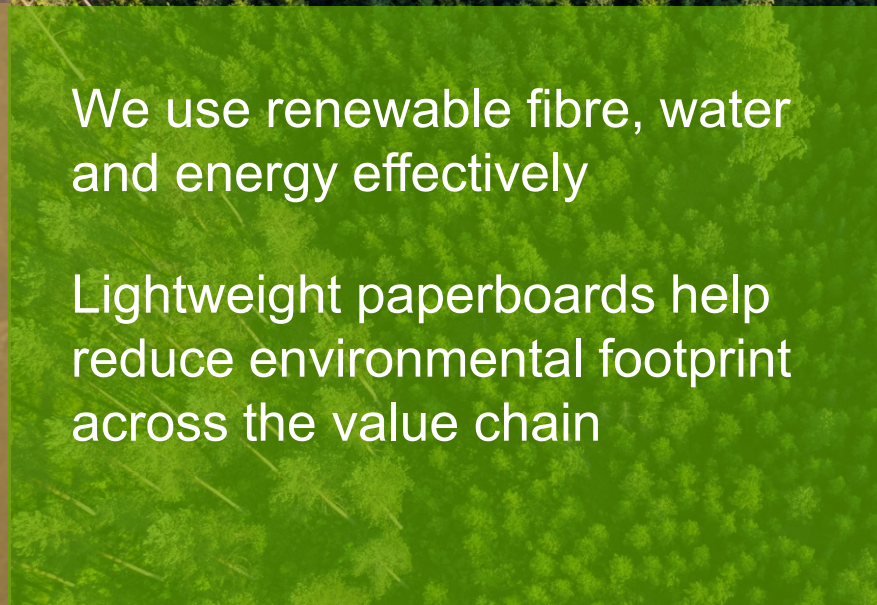
We use renewable fibre, water and energy effectively

Lightweight paperboards help reduce environmental footprint across the value chain

Safe and sustainable choices

Fresh fibre paperboards support circular economy

They are pure, have a low carbon footprint and offer an alternative to plastics



Appendix

Key sustainability figures

Updated quarterly in Metsä Board's Interim reports

	2021 Q2	2020 Q2	2021 Q1–Q2	2020 Q1–Q2	2020 Q1–Q4	Target 2030
Total Recordable Incident Frequency TRIF ¹⁾	11.1	8.6	11.5	7.6	8.4	0
Lost-time accidents frequency LTA1F ¹⁾	8.4	4.8	8.6	5.1	5.7	0
Share of certified wood fibre, %	82%	78%	83%	79%	80%	>90%
Energy efficiency improvement ²⁾	+2.1%	+1.6%	-	-	+2.1%	+10%
Reducing use of process water ²⁾	-12.8%	-8.3%	-	-	-7.7%	-30%

1) per million hours worked

2) change from base year 2018, per tonne produced, rolling 12 months

Source: Metsä Board's January–June 2021 Half-year report

83% of our total energy used is fossil free

Used energy

- Target of 100% fossil free mills by 2030 (scope 1 and 2)
 - Husum pulp mill renewal will be a big contributor
 - Replacing peat with biomass and natural gas with biogas/fossil free electricity in our Finnish mills
 - Energy efficiency improvement target of >10% in 2018–2030

Sourced electricity

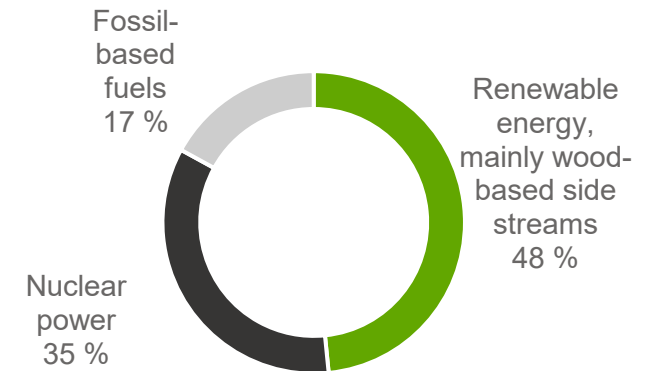
- Metsä Board's self-sufficiency in electricity is 58%
- Self-sufficiency includes own generation and electricity purchased through PVO holding or from Metsä Fibre
- After OL3¹⁾ starts up, Metsä Board is nearly self-sufficient in electricity in Finland
- Self-sufficiency in Husum integrate increases from 40% to 80% after the first phase of renewal

1) Olkiluoto Nuclear Power Plant

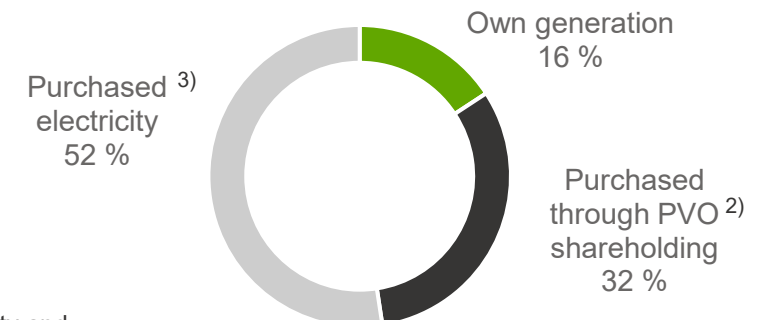
2) Metsä Board's shareholding in PVO (a non-listed public limited liability company, supplying electricity and heat for its shareholders at cost price) is 3.2%,

3) The 52% share of purchased energy comprises of ~11% from Metsä Fibre and ~42% other purchased energy

Total energy used in 2020
(total 11.8 TWh as primary energy)



Electricity sourced in 2020
(total 2.4 TWh)



Climate change creates risks

According to TCFD*	Risk	Impacts	Metsä Board's response
<p>Transition risks arising from the transition into a low-carbon economy</p>	<ul style="list-style-type: none"> • Increased regulation • Requirements for new technology • Market and reputation risk 	<p>EU regulation may steer the future use of forests</p> <p>Energy regulation Emissions allowances Carbon pricing</p> <p>The supply and demand of products in a low-carbon economy may differ from what it is currently</p>	<p>Metsä Board sources wood from sustainably managed forests, where annual growth clearly exceeds the removal. For every harvested tree new seedlings are planted</p> <p>A transition to the use of 100% fossil free energy in production, replacing fossil oil -based raw materials and increasing the efficiency of energy and water use</p> <p>Developing new products that comply with the circular economy and have a lower carbon footprint</p>
<p>Physical risks such as changes in temperatures and precipitation</p>	<ul style="list-style-type: none"> • Global warming • Extreme weather phenomena 	<p>Weakened availability of wood:</p> <ul style="list-style-type: none"> • mild winters complicate harvesting • increase of insects • damage caused by storms <p>Reduced availability of the process water needed by mills resulting to production breaks</p>	<p>Metsä Board has high availability of Northern wood through its unique value chain and owner base</p> <p>Sustainable forest management support the growth of forests</p> <p>Resource efficiency in the use of wood, water and energy</p> <p>All Metsä Board's mills are located in Finland or Sweden with ample water resources</p>

*) The Task force on Climate-related Financial Disclosures

Sustainability targets for 2030 and performance

Target	Target 2030	2020	2019	2018
WE BRING THE FOREST TO YOU				
Share certified wood fibre, %	>90%	80%	76%	79%
WE OFFER SUSTAINABLE CHOICES				
Share of fossil free raw materials and packaging materials, % of dry tonnes	100%	99.3 %	99.4 %	99.4 %
Share of traceable raw materials, % of total purchasing (in euros), %	100%	97%	93%	-
Commitment to Supplier Code of Conduct, % of total purchasing (in euros), %	100%	96%	95%	94%
Know your supplier check completed, % of total purchasing (in euros)	100%	84%	77%	-
Sustainability evaluation completed, % of total purchasing (in euros)	100%	54%	49%	41%

Sustainability targets for 2030 and performance

Target	Target 2030	2020	2019	2018
WE WORK FOR A BETTER CLIMATE AND ENVIRONMENT				
Share of fossil free energy (0 t CO2 Scope 1 and 2), %	100%	83%	83%	82%
Share of fossil-free energy, own generation (0 t CO2 Scope 1), %	100%	83%	82%	82%
Share of fossil-free energy, purchased (0 t CO2 Scope 2), %	100%	83%	85%	81%
Energy efficiency improvement, change from the 2018 level, %	>+10%	+2.1%	-0.7%	-
Process water use per produced tonne, change from the 2018 level, %	-30%	-7.7%	-11%	-
Utilisation of side streams, %	100%	99.3 %	99.4 %	99.4 %
WE CREATE WELL-BEING				
Ethics barometer	100%	85%	-	-
Total Recordable Injury Frequency (TRIF) per million hours worked	0	8.4	10.2	12.6

External recognition and commitments



Metsä Board is on the **CDP Climate A** and **Water A** Lists for the fifth year in 2020. In **Forest Programme** Metsä Board has the Leadership level **A-**. Metsä Board is also recognised as a **Supplier Engagement Leader** in 2020.



In 2020, Metsä Board received a rating of **AAA** (on a scale of AAA-CCC) in the **MSCI ESG Ratings** assessment.

[Link to MSCI Terms and Conditions](#)



Metsä Board scored '**Platinum**' in **EcoVadis** CSR ranking in 2021 and is included in the **top 1%** of companies assessed in the manufacture of corrugated paper and paperboard and of containers of paper and paperboard.



In **ISS ESG Corporate Rating** Metsä Board has a '**Prime**' status. Metsä Board has also received an **ISS QualityScore** rating of **"1"** in **ISS ESG's Environmental category**.



Metsä Board as a part of Metsä Group is committed to the **UN Global Compact** corporate responsibility initiative and its principles in the areas of human rights, labour, environment and anti-corruption. Metsä Board also supports the UN's Sustainable Development Goals, the **SDGs**.



In May 2021, Metsä Board received an overall ESG Risk Rating score of 15.9 and is considered by **Sustainalytics** to be at **low risk** of experiencing material financial impacts from ESG factors.



Metsä Board's ESG performance was rated **"Advanced"** in **Vigeo Eiris** ESG assessment in November 2020.



Metsä Board's GHG emission reduction targets are approved by the **Science Based Targets** initiative.



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