



Metsähallitus plays a key role in Finland's transition to a carbon-neutral society

Metsähallitus' mission, "Fostering natural values and taking care of our shared wealth responsibly across generations," lays a strong foundation for sustained climate work.

In our strategy, we recognise climate change together with biodiversity loss as the greatest global risks facing humankind. In our capacity as the steward, user and protector of state-owned land and water areas, we play an essential part in resolving these risks.

Climate work is a key part of our activities – In our responsibility policy, we commit to addressing climate impacts and climate change adaptation in everything we do.

Our societal impact targets

We wish to foster a future where:



Finland will achieve its ambitious climate targets and become carbon neutral by 2035.



well-being is built sustainably on green growth.

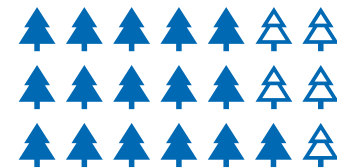
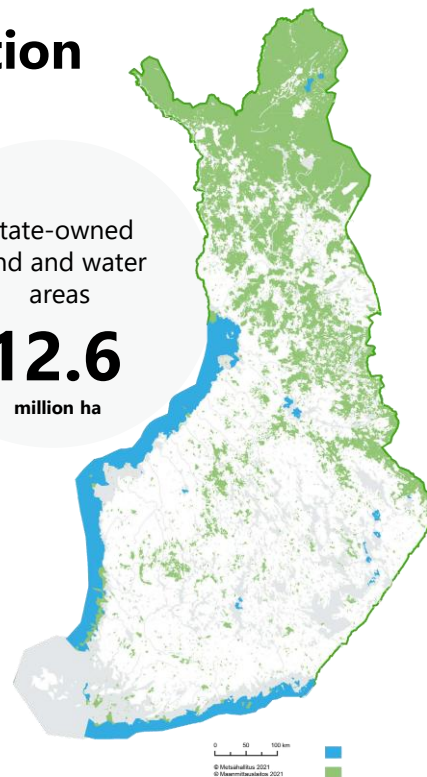
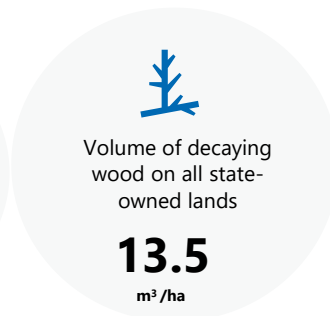
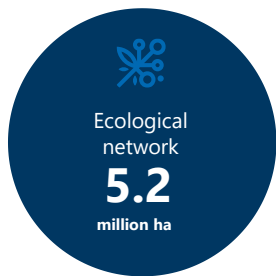
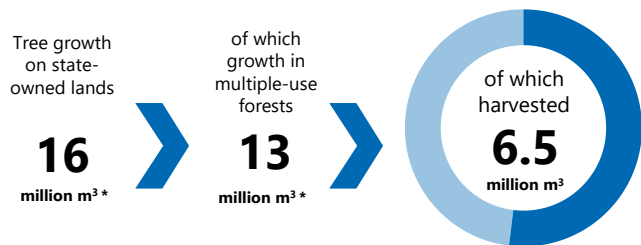


nature will be healthy and biodiversity loss will have been halted.



The world's happiest people will continue to lead their lives in Finland, enjoying nature and its well-being.

Areas managed by Metsähallitus are important for climate change mitigation and adaptation



▲ Carbon storage of trees in Finnish forests 893 million tonnes C **

△ Carbon storage of trees in state-owned forests 201 million tonnes C **



*) Natural Resources Institute Finland, NFI 13 (2019–2023) **) Based on Natural Resources Institute Finland's biomass statistics, NFI 13 (2019–2023)

We promote the green transition and climate change adaptation through our value chains



Wood material

Products made from wood harvested on state-owned land replace those made from non-renewable raw materials. Especially long-life products also serve as carbon storages.



Renewable energy

Renewable energy production on state-owned lands promotes the electrification of society and the energy transition.



Minerals

Mines located on state lands produce minerals that enable society's green transition.



Finnish fish

Fish farming and commercial fishing in waters managed by Metsähallitus offer a better alternative to imported fish in terms of their climate impacts.



Tourism services

By developing tourism services in state-owned hiking areas and creating preconditions for nature, fishing and hunting tourism, domestic tourism can be promoted and tourists' stays extended, which supports sustainable tourism.

What does the Climate Programme aim for?



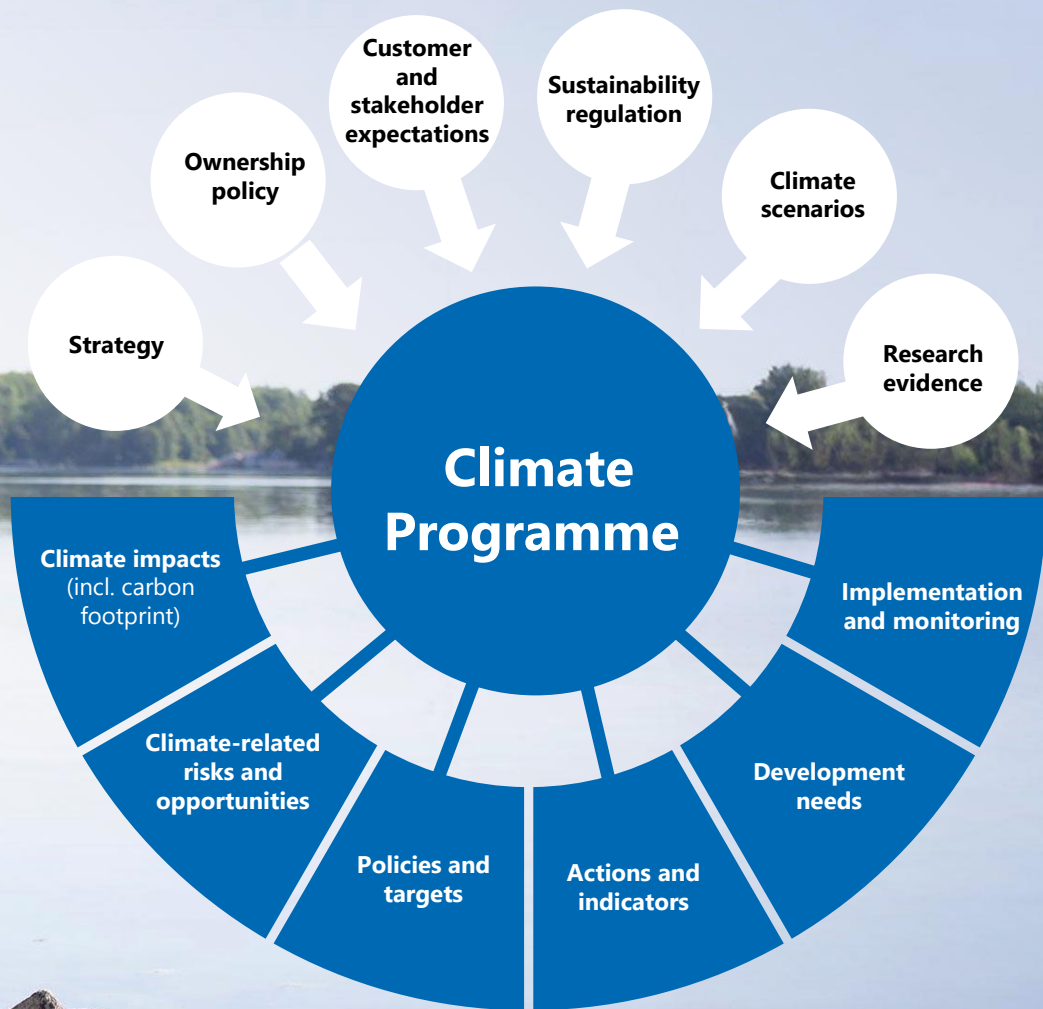
Securing the **preconditions for Metsähallitus' operations, implementation of the new strategy and ownership policy as well as risk management** in changing climate conditions.


Tapping the **latest knowledge** of the impacts of climate change, the opportunities it creates, and its mitigation and adaptation methods.

Bringing together Metsähallitus' **climate targets and actions** and agreeing on **monitoring their implementation**.

Responding to the **expectations of customers and the value chain** as well as the new obligations created by **sustainability regulation**.

Identifying links to **fostering biodiversity** more clearly.





The targets and actions of the Climate Programme are linked to Metsähallitus' key climate impacts, risks and opportunities

Enhancing the positive climate impacts of Metsähallitus' activities, exerting influence in order to strengthen positive climate impacts in value chains.

Seizing the climate opportunities associated with Metsähallitus' operations.

The Climate Programme aims for

Reducing the negative climate impacts of Metsähallitus' activities, exerting influence in order to reduce negative climate impacts in value chains.

Managing the climate risks to which Metsähallitus' operations are exposed.

Metsähallitus' Climate Programme 2025–2030

Climate change mitigation

1. Enhancing positive climate impacts

State-owned lands will be managed and used ensuring that they will be growing carbon sinks and carbon storages.

We will exploit the renewable energy potential of state-owned areas.

2. Reducing negative climate impacts

We will reduce our carbon footprint by 20% by 2030 compared to 2024.

Climate change adaptation

3. Promoting nature's adaptation to a changing climate

We will restore and manage habitats, protect and develop ecological networks, carry out species conservation measures and combat invasive alien species.

4. Preparing for a changing climate in our activities

We will draw on research evidence, good practices, practical experiments and monitoring data to develop the activities.

Targets

1. Enhancing positive climate impacts

The **carbon sink of multiple-use forests** will grow by at least 10% by 2035*.

The **carbon storage of trees** on state-owned lands will grow by 10% by 2030*.

We will exploit the **renewable energy potential** of state-owned areas. Offshore wind power projects amounting to 6,500 MW in total will be actively developed between 2024 and 2028 as indicated by the market situation, and renewable energy projects with an approximate capacity of 1,200 MW will be launched in land areas by 2028.

*reference point 12th
National Forest Inventory

We will increase the carbon sinks and storages of state-owned forests through a large set of measures

State-owned lands will be managed and used ensuring that they will be growing carbon sinks and carbon storages.

- › Suitable forest management method for the site
- › Fast regeneration chain
- › Fertilisation
- › Selectively bred seed and sapling material
- › Seedling stand management
- › Use of geospatial data
- › Scaling the amount of fellings
- › Managing the emissions from peatland forests
- › Levelling out the age group distribution of forests
- › Establishing seed orchards
- › Protection of primary and old-growth forests
- › Saving decayed wood
- › New uses of former peat extraction sites
- › Wind power construction guideline
- › Monitoring carbon storage impacts of land use change

Targets

2. Reducing negative climate impacts (GHG emissions -20%)

We will require our **suppliers and partners** to take action that promotes climate change mitigation and adaptation.

Negative climate impacts associated with the management and use of **protected and hiking areas** will be reduced.

Climate change mitigation will be addressed more intensively as part of our **daily work**.

Climate sustainability of Metsähallitus' **procurements** will improve.

Relative emissions from **the harvesting and transport chain in forestry**, forest management and road maintenance will decrease by 20% by 2030.*

Our operations will be based on **research evidence**, and the personnel's **competence** and their **opportunities to influence** activities that promote climate change mitigation and adaptation will be improved.

Our carbon footprint from **travel** will decrease by 20% by 2030. *

The carbon footprint of **premises and properties** use will decrease by 20% by 2030. *

*reference year 2024

We will reduce greenhouse gas emissions from our operations and influence emissions in our value chain

We will reduce our carbon footprint by 20% by 2030 compared to 2024.

Examples of our new emissions reduction measures:

- › Preparation of a joint responsibility criteria for procurements
- › Expanding the use of climate-related procurement criteria in equipment purchases.
- › Expanding the piloting of electric or hydrogen-fuelled fleet.
- › Replacing the use of urea in stump treatment with a lower-emission alternative.
- › Introducing new solutions in the management, user guidance and maintenance of protected areas.
- › Guiding the personnel to replace flights with lower-emission modes of transport.
- › Giving up properties not needed for the core task.
- › Favouring recycled items in furniture procurements.

Targets

3. Promoting nature's adaptation to a changing climate

Restoration and nature management measures

whose targeting and completion are justified from climate perspectives in both protected areas and multiple-use forests will promote the climate change adaptation of nature.

Active measures will help **species** adapt to a changing climate.

Local nature's adaptation to changing conditions will be taken into consideration in the planning of zoning sites.

New sources of funding and business opportunities

will be seized to foster biodiversity.

We will promote nature's adaptation to a changing climate by active measures

We will restore and manage habitats, protect and develop ecological networks, carry out species conservation measures and combat invasive alien species.

We will:

- carry out restoration and nature management work, ensuring that they are targeted sensibly.
- develop catchment-level planning and implementation.
- strive to control invasive alien species.
- support species in adaptation.
- produce nature information to support decision-making.
- pilot a nature credit market.

Targets

4. Preparing for a changing climate in our activities

The regional impacts and needs for measures arising from a changing climate will be identified and addressed in **Natural Resource Plans** together with stakeholders.

Adaptation in the management and use of protected areas to changing conditions and requirements will be improved.

The risks of extreme weather phenomena will have been addressed on **zoning sites**.

The **operating conditions of forestry** and the sustainability of activities in a changing operating environment will be ensured.

We will develop our activities to improve preparedness for a changing climate

We will prepare for a changing climate in our activities by drawing on research evidence and monitoring data, good practices and the possibilities brought about by digitalisation to develop our activities.

Examples of preparedness measures:

- › In natural resource planning, we will account for climate change in policy decisions together with stakeholders. In the Sámi Homeland, the Akwé: Kon guidelines will be used.
- › Adaptation measures in the management plans for national parks and other protected areas.
- › Reducing the risk of forest damage in forestry and choosing forest management methods that promote mixed-tree forests. Developing forest road maintenance and harvesting on peatlands as well as exploring the opportunities associated with climate change.
- › Drawing up preparedness plan for essential climate risks faced by zoning sites.

We will continue our efforts to improve the knowledge base of carbon action

In the context of drawing up the Climate Programme, we have identified a number of development areas for improving the knowledge base of climate work and responding to sustainability regulation. We will tackle these aspects during the Climate Programme action period.

As knowledge builds up and development measures progress, the Climate Programme and its targets can also be reviewed and supplemented in the middle of its term if necessary.

Identified development areas:

- › Expanding emission calculations and improving the knowledge base
- › Identifying resources needed for climate actions
- › Resilience analysis concerning the Strategy's ability to respond to climate change
- › Transition plan to achieve climate neutrality

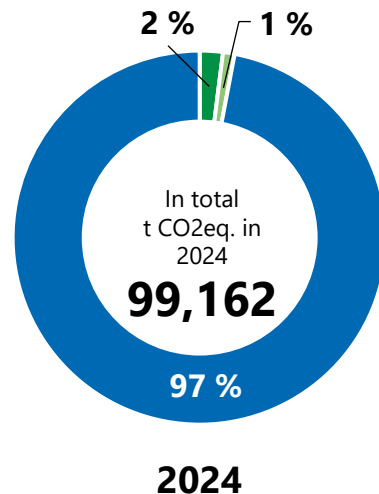
A low-angle, upward-looking photograph of a forest canopy against a clear blue sky. The tree trunks and branches are silhouetted against the sky, with some green foliage visible at the top of the frame. The perspective creates a sense of height and looking up into the trees.

Metsähallitus' climate impacts

Carbon footprint 2024

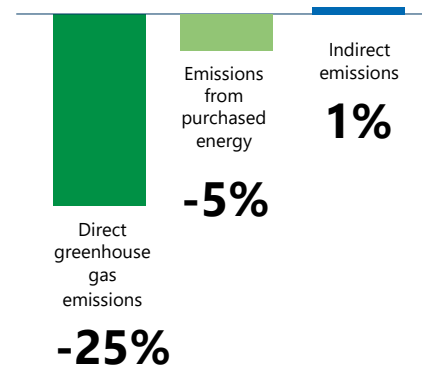
Metsähallitus' annual greenhouse gas emissions have been estimated to correspond to the average carbon footprint* of around 10,000 Finns.

*) The average carbon footprint of a Finn is 9,610 kg CO₂eq. per year. Source: [Sitra 2023](#)



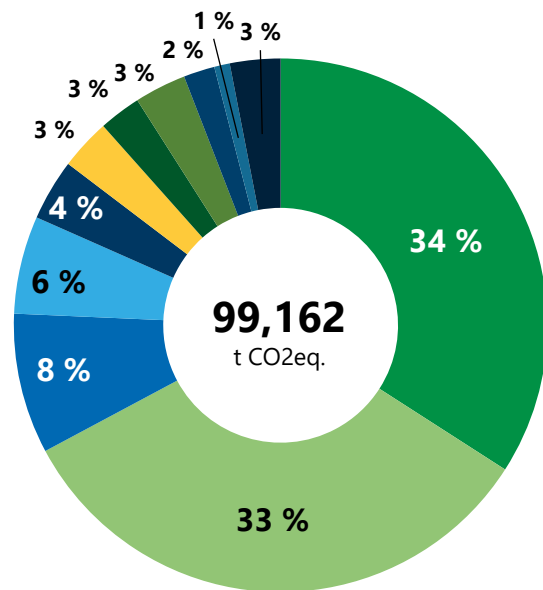
- Direct GHG emissions 2%
- Emissions from purchased energy 1%
- Indirect emissions 97%

Change 2023–2024



Carbon footprint by activity 2024

Timber harvesting and transport as well as other operations such as forest management, construction, area maintenance and road projects, account for the largest part of Metsähallitus' carbon footprint.



- Timber transport 34%
- Timber harvesting 33%
- Forest management 9%
- Construction and area maintenance 6%
- Road projects 4%
- Premises and properties 3%
- Machinery, equipment and vehicles 3%
- ICT and digital devices and services 3%
- Travel 2%
- Goods and supplies 1%
- Others 3%

Metsähallitus' key climate impacts

+ Forest management and use that strengthen the carbon sink

+ Enabling renewable energy

+ Fostering of biodiversity promotes adaptation

+ Substitution of products made from non-renewable raw materials

+ Promoting the electrification of society and energy transition

+ Possibilities of biogenic carbon capture and utilisation

Upstream value chain



— The greatest share (97%) of Metsähallitus' carbon footprint (approx. 0.1 Mt CO₂eq.) consists of indirect emissions.

— Main CO₂eq. sources: timber harvesting (approx. 35%), timber transport (approx. 34%) and forest management (approx. 9%).

Metsähallitus' activities



— Soil emissions (and the carbon sink effect of trees) from forestry operations

— Metsähallitus' direct CO₂eq. emissions are minor (approx. 2% of the carbon footprint)

— Economic use has affected forest diversity which weakens adaptation.

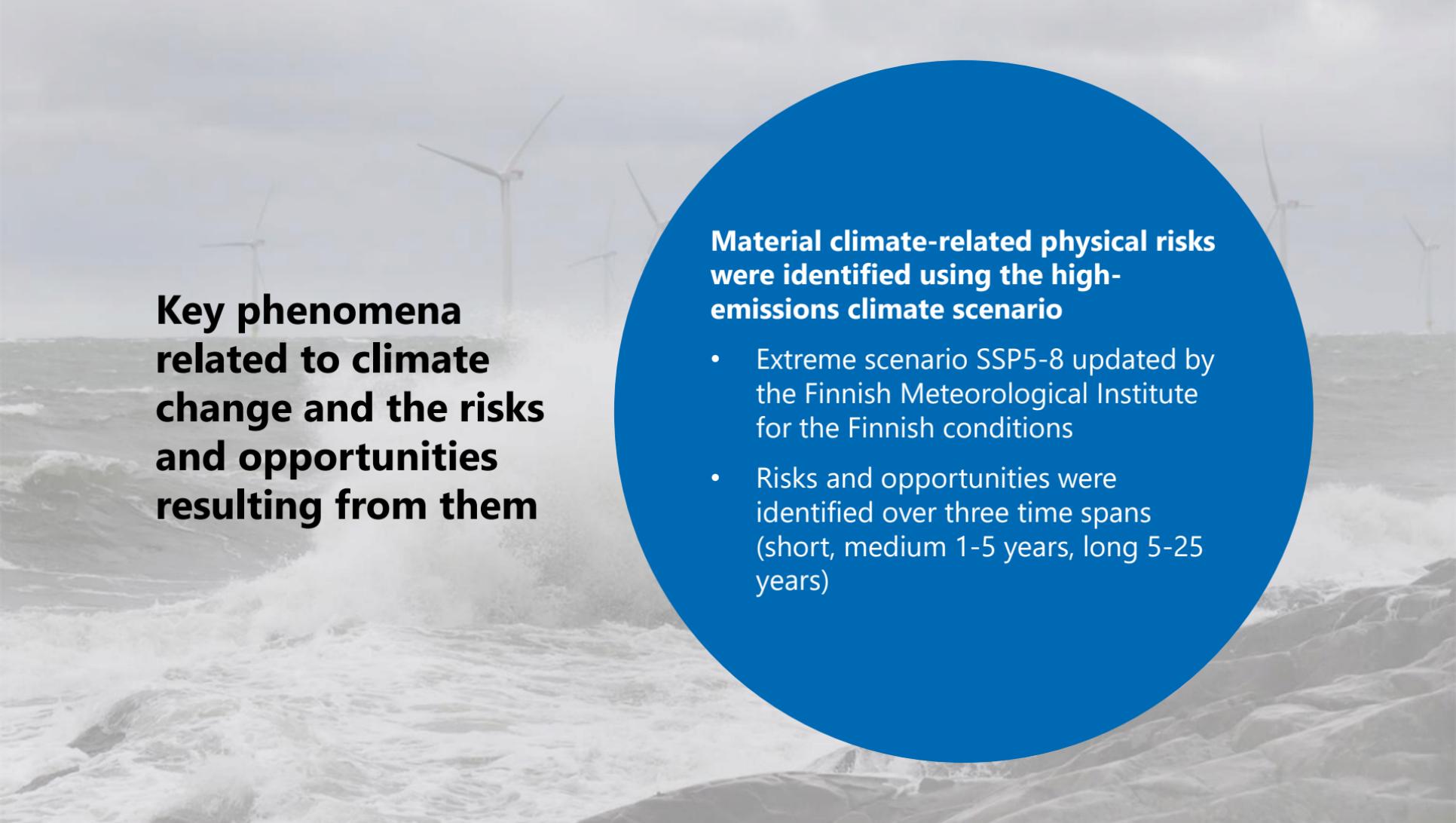
Downstream value chain



— CO₂eq. emissions from the wood processing chain, projects on state-owned lands and other activities (incl. renewable energy, mines, soil extraction, peat production, the Defence Forces) as well as recreational use and tourism.



Metsähallitus' material climate risks and opportunities



**Key phenomena
related to climate
change and the risks
and opportunities
resulting from them**

**Material climate-related physical risks
were identified using the high-
emissions climate scenario**

- Extreme scenario SSP5-8 updated by the Finnish Meteorological Institute for the Finnish conditions
- Risks and opportunities were identified over three time spans (short, medium 1-5 years, long 5-25 years)

Key phenomena associated with climate change

**Increasing
temperatures**

**Increased
precipitation**

**Low-
pressure
storms and
thunderstor
ms**

**More
frequent
winter
floods**

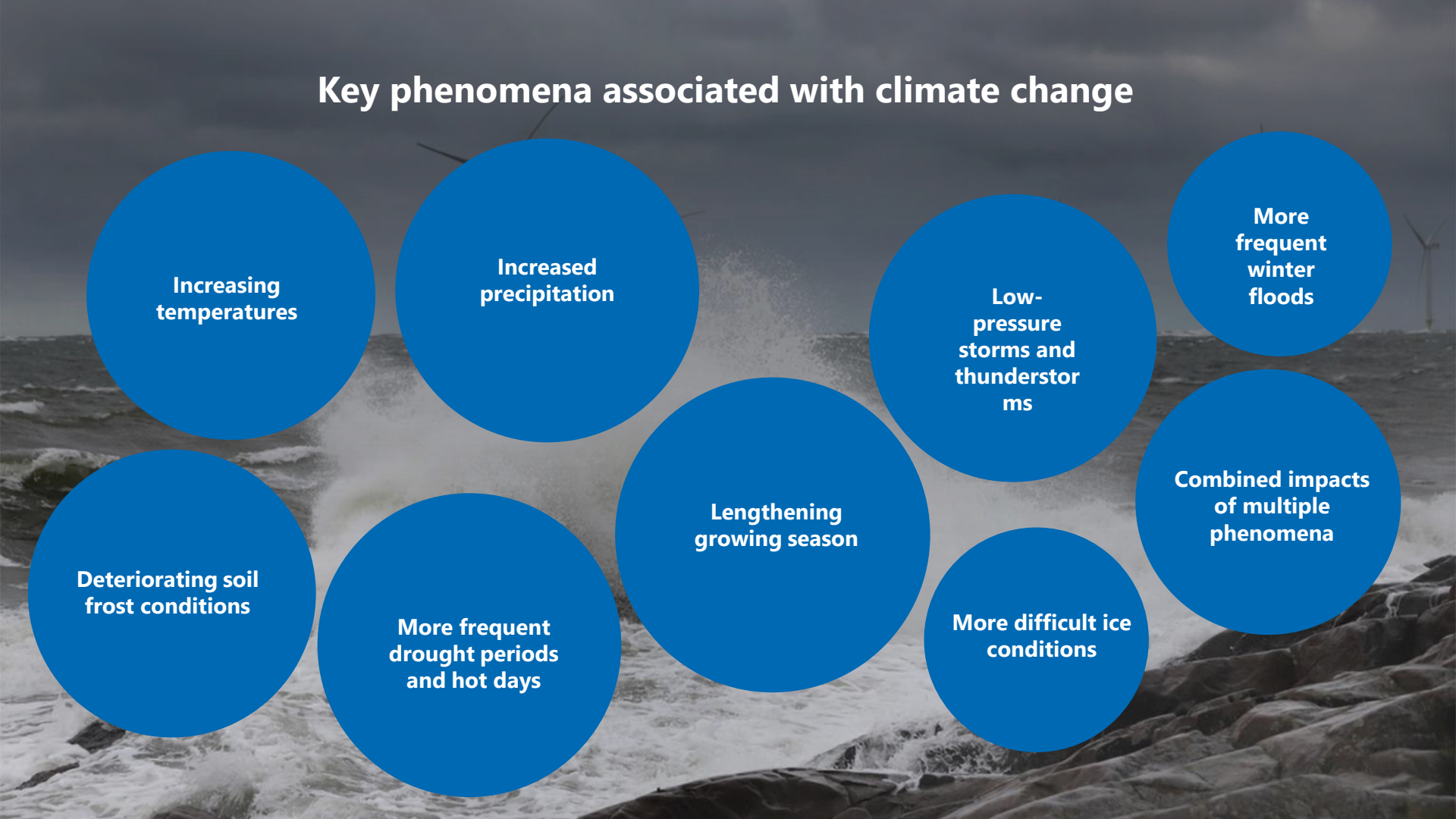
**Lengthening
growing season**

**Combined impacts
of multiple
phenomena**

**Deteriorating soil
frost conditions**

**More frequent
drought periods
and hot days**

**More difficult ice
conditions**



Risks and opportunities brought about by climate change

Increasing temperatures

Habitat degradation, loss of species, invasive species

Thinner snow cover and more frequent freezing and thawing cycles of soil surface

Increased precipitation

Increased runoff and impacts of forestry on waters

Damage caused by heavy snow load on trees (and the consequences of the damage, including diseases and pests)

Low-pressure storms and thunderstorms

Storm damage (and its consequences, including diseases and pests)

Damage to the energy production chain

More frequent winter floods

Increased runoff, erosion, and impacts on water bodies

Combined impacts of multiple phenomena

Increased biodiversity values in areas due to natural disasters

More difficult ice conditions

Difficulties in maintaining and servicing hiking areas

Lengthening growing season

Spread of new plant diseases and pests to Finland and new vegetation zones

Risk of frost damage as spring comes earlier

Accelerated tree growth

More frequent drought periods and hot days

Exposure to forest damage, premature tree deaths

Slower tree growth, damage to saplings

Increased forest fire risk

Deteriorating soil frost conditions

Impact of lack of soil frost on forestry and hiking trail maintenance

Increased wind and storm damage

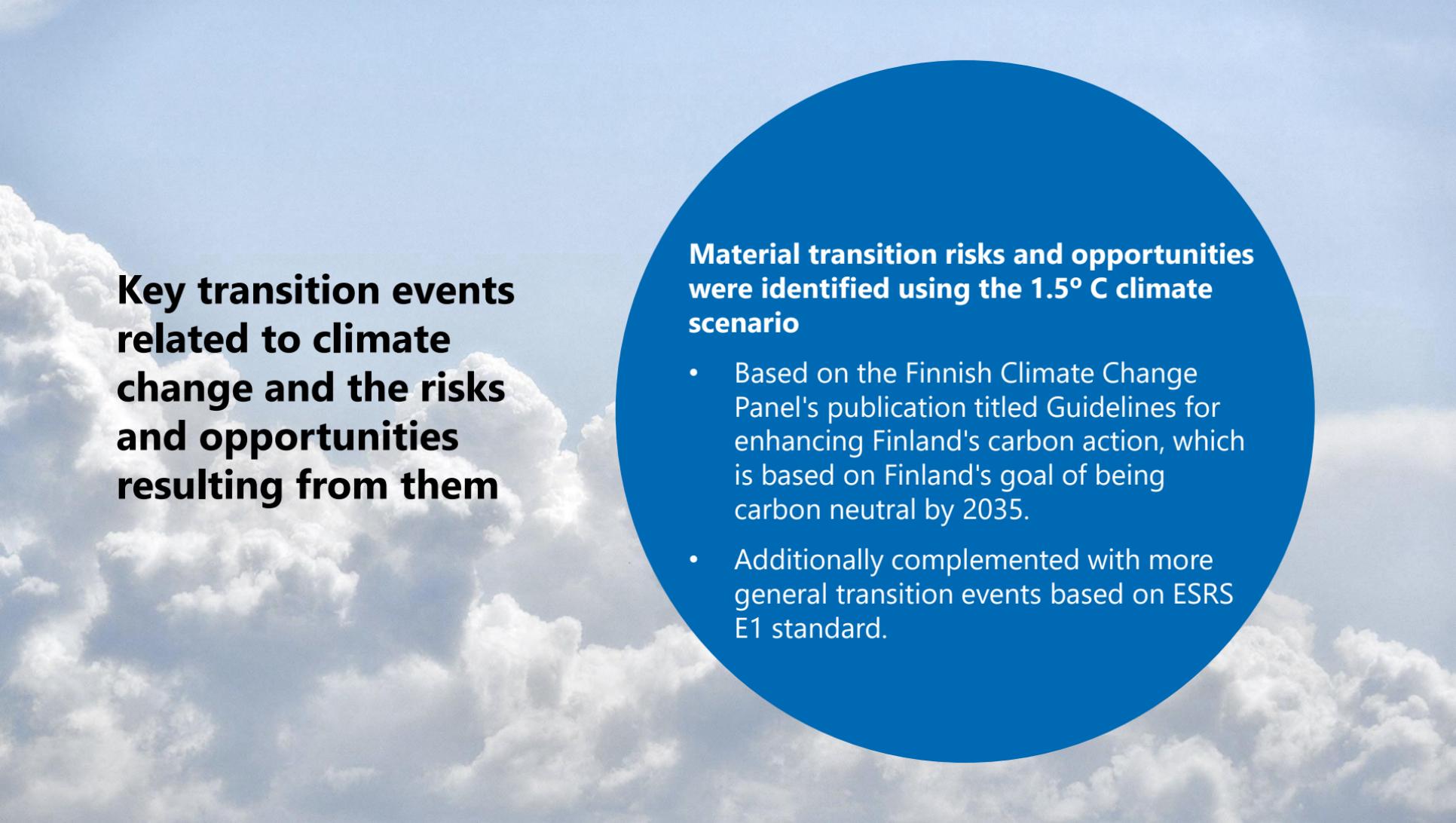
Risks

- Need for resources for fostering biodiversity, water protection and hiking area maintenance will increase.
- Financial losses associated with timber production will increase.
- Logistics costs in forestry will increase.
- Revenue from leases and trail agreements will decrease.
- Need for resources for managing land use agreements and rent payments as well as for other contract management will increase.
- Need for guidance and advice will increase.

Material (financial) climate risks and opportunities for Metsähallitus

Opportunities

- + Economic opportunities associated with timber production will increase as the thermal growing season becomes longer.
- + Natural damage will reduce restoration needs and create new business opportunities (incl. nature credit markets).



**Key transition events
related to climate
change and the risks
and opportunities
resulting from them**

**Material transition risks and opportunities
were identified using the 1.5° C climate
scenario**

- Based on the Finnish Climate Change Panel's publication titled Guidelines for enhancing Finland's carbon action, which is based on Finland's goal of being carbon neutral by 2035.
- Additionally complemented with more general transition events based on ESRS E1 standard.

Key transition events associated with climate change

**Eliminating GHG
emissions from
heating**

**Reinforcing of
the net sink**

**Fostering
biodiversity**

**Increasing
zero-emission
energy in
transport**

**Failed investments
in new
technologies**

**Promoting fossil-
free electricity
production**

**Uncertain market
signals**

**Promoting the
hydrogen
economy**

**Raising
greenhouse gas
emission prices**

**Replacing products
or services with
lower-emission
options**

Risks

- Renewable energy projects will incur additional costs from climate change adaptation.
- Measures promoting zero-emission energy will increase fuel costs.
- Methods of strengthening the net sink (incl. continuous cover forestry, longer rotation times, directing the supply and demand of timber) are associated with uncertainties.
- Rapid imposition of more stringent environmental requirements will reduce the supply and increase costs in procurements.
- Growth expectations set for renewable energy will not be realised, reducing sales and rental income.

Material (financial) climate transition risks and opportunities for Metsähallitus

Opportunities

- + Demand for renewable energy projects will increase, and they will also make progress in Eastern Finland.
- + Biogenic carbon capture will improve the acceptability of timber use.
- + Methods used to strengthen the net sink will increase tree growth and adaptability (incl. fertilisation and regeneration with selectively bred material).
- + The nature credit market will create more business opportunities and possibilities to reallocate budget funds.



Implementation and monitoring of the Climate Programme

Implementation and monitoring of the Climate Programme

An implementation plan will be drawn up to support Climate Programme implementation.

- › More detailed schedules and responsibilities for the actions
- › Indicators for and monitoring of implementation

- › We will keep up with and support the latest climate research and be ready to apply research evidence by updating our guidelines and objectives.
- › Climate change mitigation and adaptation will be addressed across the board, for example in instructions and guides, including Metsähallitus Environmental Guide for Water Management (2025) and the Biodiversity Programme (2025).
- › The progress of the Climate Programme will be monitored as part of annual reporting.