

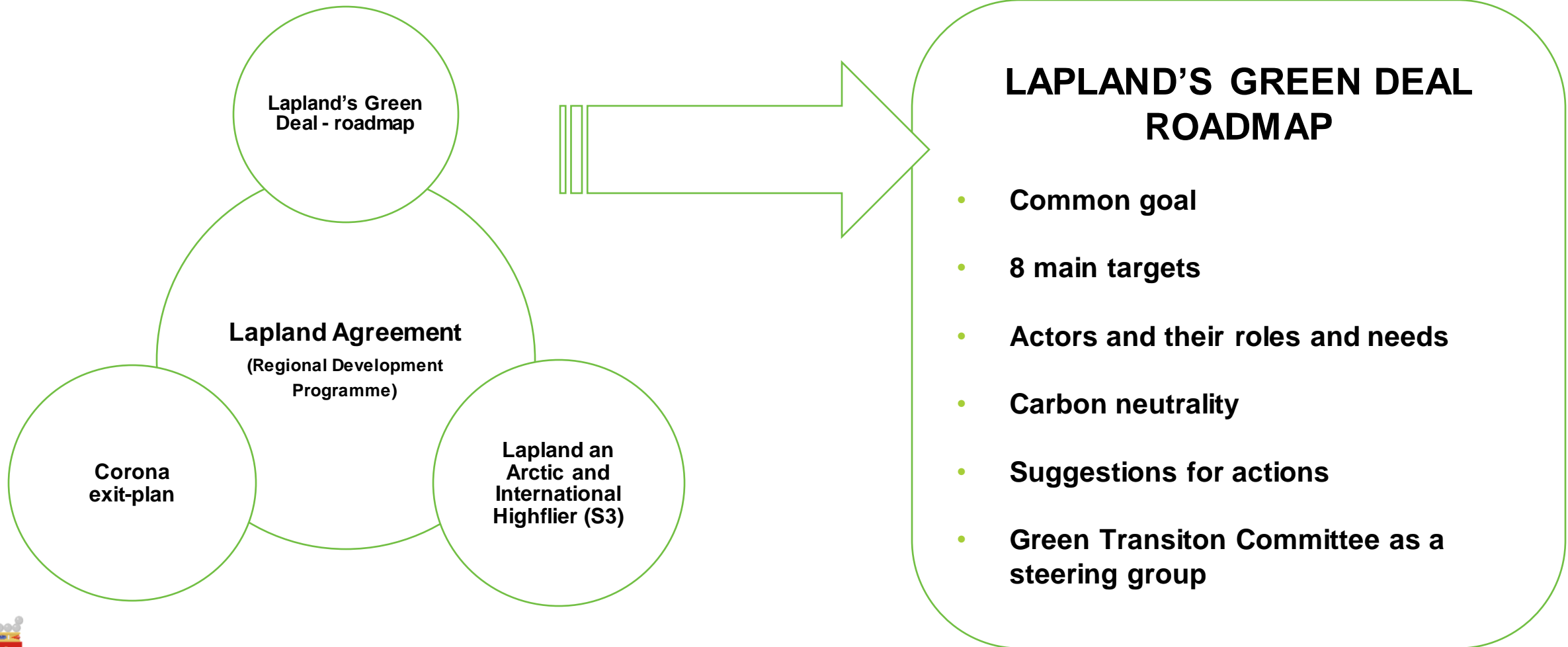
Different needs, same forests – how to use forests in a sustainable way

Some thoughts about use of forests
and sustainability 😊



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Green Deal in Lapland's regional development



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Target sets

Lapland pursues a carbon neutrality

Strengthening environmental protection and biodiversity

Sustainable tourism as a competitive force

Arctic food production promotes sustainability

Low-emission traffic supports the accessibility of Lapland

The use of forests is climate-wise and sustainable

Circular economy creates new

The energy revolution is progressing in Lapland



The **Green Transition** Committee of Lapland

- Founded by the Provincial Cooperation Group
- Consists of experts and stakeholders
- Coordinates, steers and monitors the implementation of green transition



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Rich in Nature



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Above Ordinary



Photo: Lapin materiaalipankki | Anna Muotka

Forest use needs

Before industrialization

Protection
Residence
Food: gathering and hunting
Firewood
Construction material
Reindeer herding

Industrial age

Pulp and paper industry; pulp, cardboard, paper
Wood products industry: lumber, plywood
Heating
Recreation: travel, camping, exercise, hunting, picking berries
Reindeer herding

New needs

New value-added products, e.g., textiles, pharmaceuticals, raw material for batteries, biochar
Biodiversity maintenance
Carbon bonding
Other ecosystem services, e.g., water and humidity control, air quality
Land use needs of the green transition



Forest industry in Lapland

Forestry is Lapland's second-largest industrial sector.

The output of Lapland's forest sector was around 1.4 billion euros.

The majority of the turnover came from the pulp and paper industry.

The forest sector employed almost 3,400 people in Lapland (2018)



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Other uses of forests in Lapland, (economic)

Tourism industry: turnover 3000 ME, employed 6450 (2021)

Reindeer farming: 3239 reindeer owners, slaughter income 16 ME, other 17 ME

Natural products sector: 55 companies, turnover 27 ME

Game economy: meat sales 6-10 million, impact on the regional economy 11 ME,

Private forestry: 48,000 private owners, the revenue to forest owners 76 ME



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Other needs

- **Ecosystem services**

- Production services: food and water, pharmaceuticals, (building materials)
- Maintenance services: photosynthesis, nutrient cycling, soil formation
- Regulatory services: climate regulation, water purification, air purification
- Cultural services: aesthetics, recreation, inspiration

→ Life maintenance

- **Carbon sinks and stores**
- **Biodiversity**



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Carbon sinks and stores

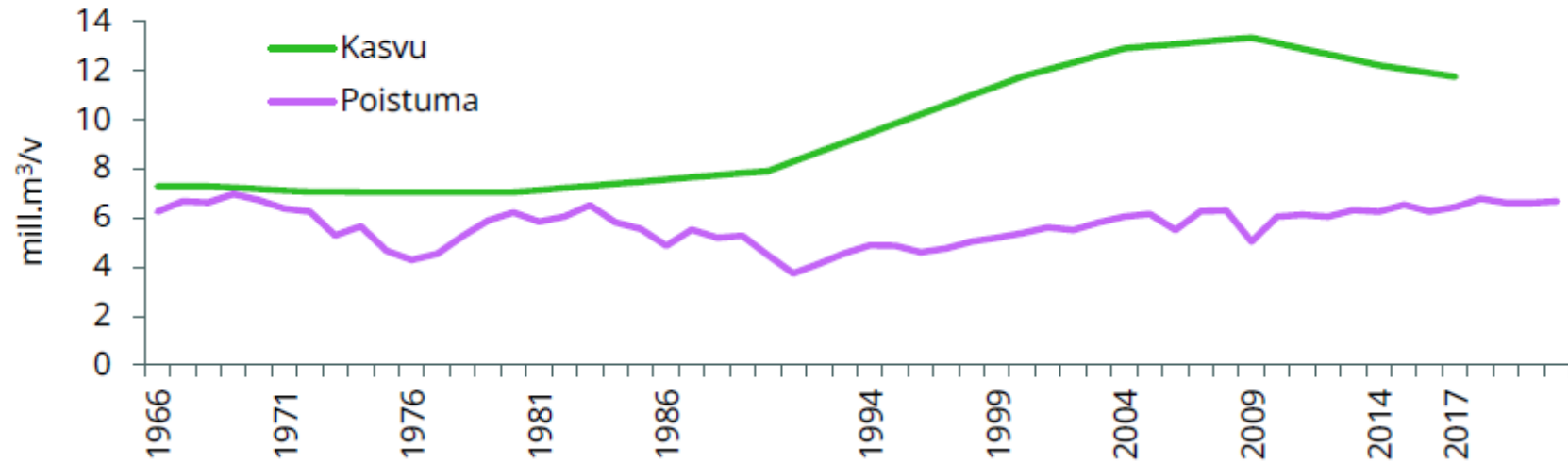
- About a third of human-caused CO₂ emissions are bound in forests.
- The forest is a carbon sink if the amount of carbon bound to the forest increases, → the carbon stock increases. After final felling, the forest is a source of emissions.
- A massive amount of carbon is bound in the living and dead biomass of old natural forests. The old forest also binds carbon.
- The growth of Finland's forests has decreased. This will also be reflected in the carbon calculations of Lapland's forests.
- Carbon sinks and carbon stores can be strengthened by afforestation, preventing deforestation, increasing the growth of trees, reducing greenhouse gas emissions from the soil, and allocating the use of wood to long-lived wood products
- The forests of Lapland are currently Finland's most significant carbon sink.



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The growth and the removal of forest in Lapland



Kuva 1. Puuston vuotuinen kasvu ja poistuma (milj. kuutiometriä vuodessa) Lapissa 1960-luvulta vuoteen 2017. Luke seuraa metsävarojen, monimuotoisuuden ja hiilivarastojen kehitystä vuosittain valtakunnallisessa metsien inventoinnissa (Luke/VMI).¹

In Lapland's forests, the growth of forests has far exceeded the removal.



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Lapland's forests are significant carbon sinks

in 2020, Finnish forests tied up more than half (27.8 million tons) of Finland's calculated emissions.

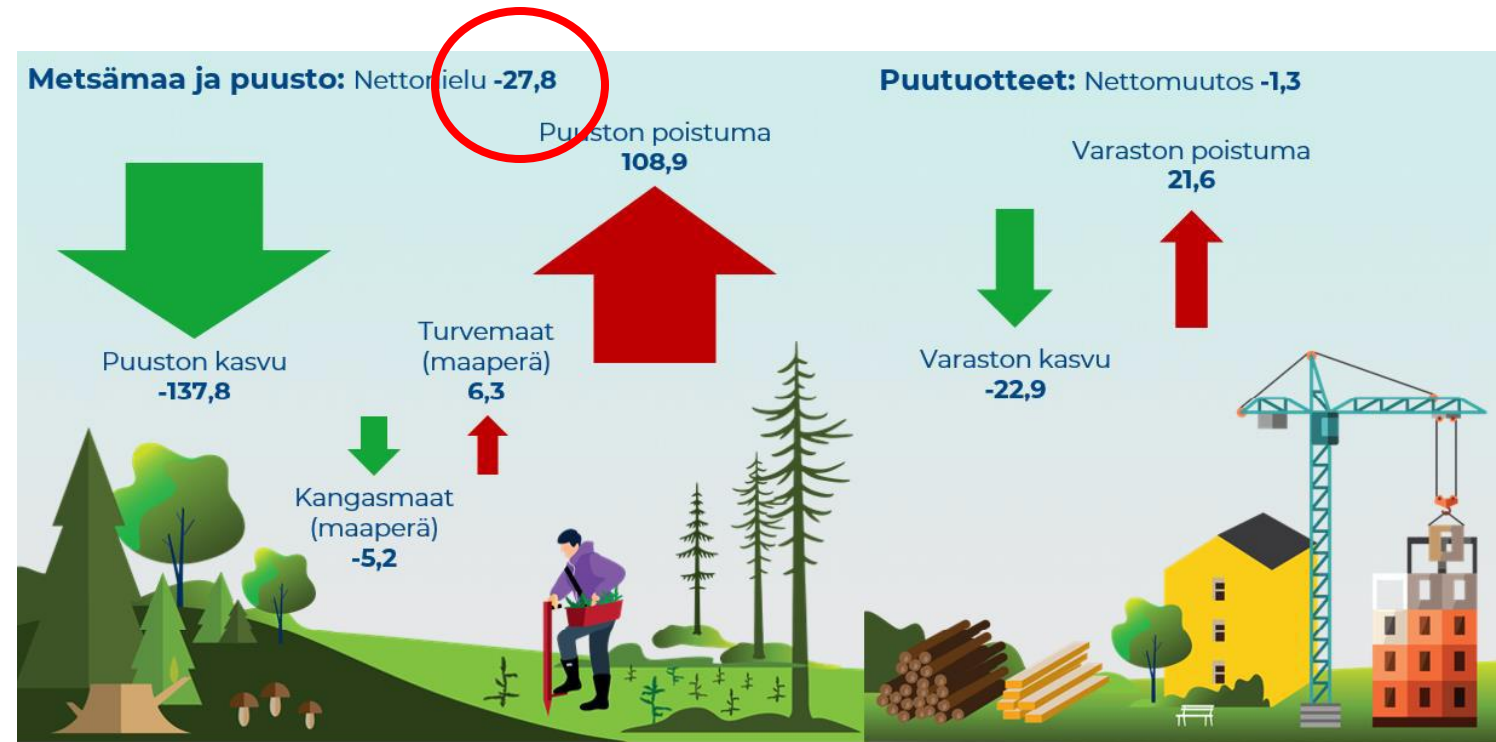
The forests of Lapland are a significant carbon sink at the Finnish level.

They bound 8 million tons, almost 30 % of the carbon sinks of Finnish forests. (2020)



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Net sink of Finnish forest



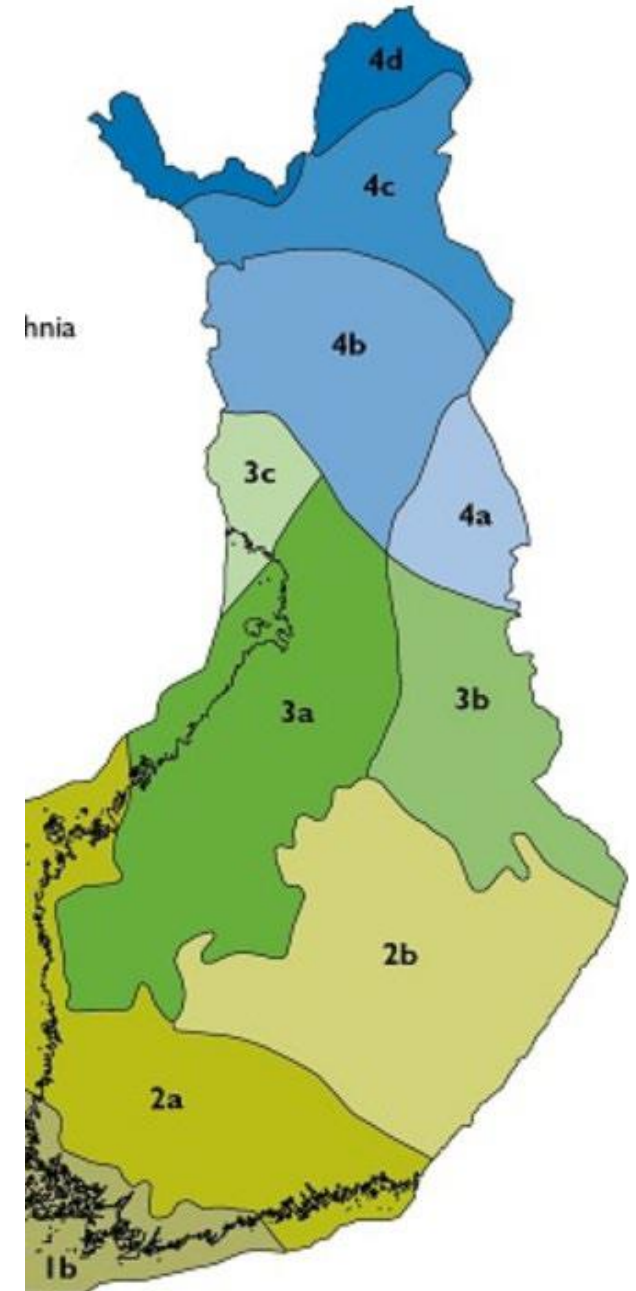
Biodiversity

- Forests are the most important habitat for endangered species in Finland
- The biggest reasons for the decline in forest biodiversity are the reduction of decaying wood, forest management measures, changes in tree species ratios, and the reduction of old forests and tall trees



Biodiversity of Laplands' forests

- Northern Finland has 14 endangered forest habitat types, 56% of all assessed habitat types. (76.5% In all of Finland).
- There are 236 regionally endangered forest species in Lapland (409 in Finland).
- Rotten wood in northern Finland has decreased in protected areas and forestry lands, while it has increased in the rest of the country.
- However, The level of diversity in Lapland's forests is higher than in the rest of the country



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Nature conservation in Lapland

There are more than 9 million hectares of forestry land in Lapland, → 98% of the land area including protected areas.

28% of the entire forest area of Lapland (forest and forest land) has been protected → the most in all of Finland

A total of 98% of Lapland's protected forests are located on State lands (METSÄHALLITUS)

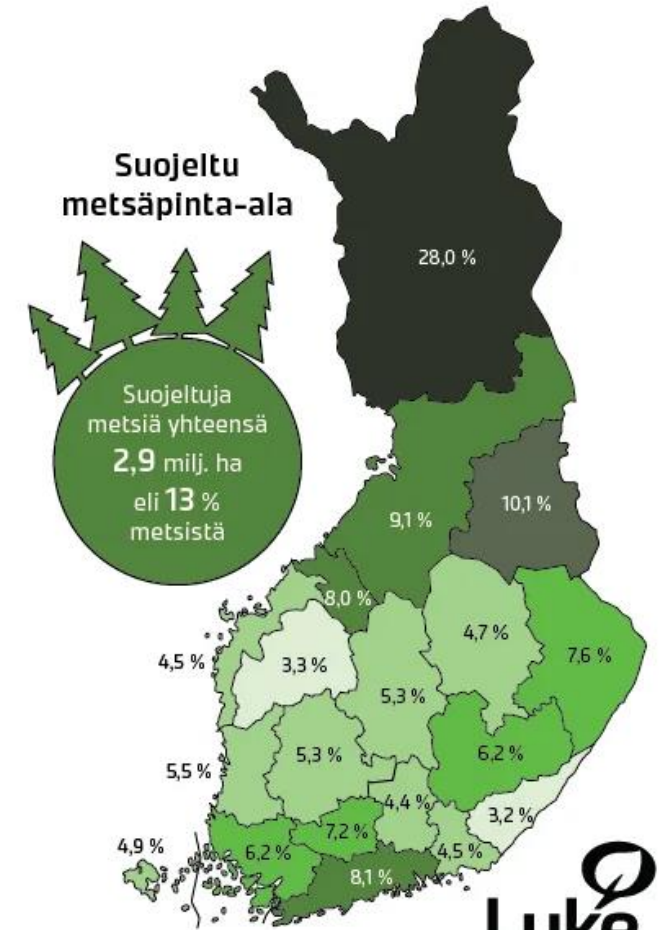
Legally protected forests: 1,620,300 hectares

Protected areas for economic forest diversity: 217,700 hectares

Forests that support the protection of nature values: 305,600 hectares



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Sisältää suojelualueuokat 1A, 1B, 1C, 2A ja 2B



The great dilemma of the green transition

A green transition is essential.

The green transition requires giving up fossil energy.

This requires natural resources; wood, mines, wind power, and space.

The use of natural resources always has an impact on ecosystems.



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ILMASTOTOIMET
PUNTARISSA

<https://sites.utu.fi/factor/kansalaiskeskustelut/metsaraati/>



”Forest council ” of Lapland citizens

How to use Laplands’ forests as a sustainable and fair way?



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Citizens' council -Deliberative mini-publics



- Deliberative mini-publics are a form of citizen participation and deliberative democracy.
- The aim is to bring together a diverse group of people who seek to establish common solutions to a specific question on the decision-making agenda through discussion
- It can help meet some of the challenges faced by the political system.
- One purpose is to include those groups whose voices are not heard through traditional participation channels.
- A representative group of citizens is selected for the discussion by random sampling.
- Citizen discussions offer balanced information and perspectives for decision-making on controversial issues.
- They can help decision-makers and voters make carefully weighed and informed decisions from different perspectives. In decision-making, citizen discussions often play an advisory role

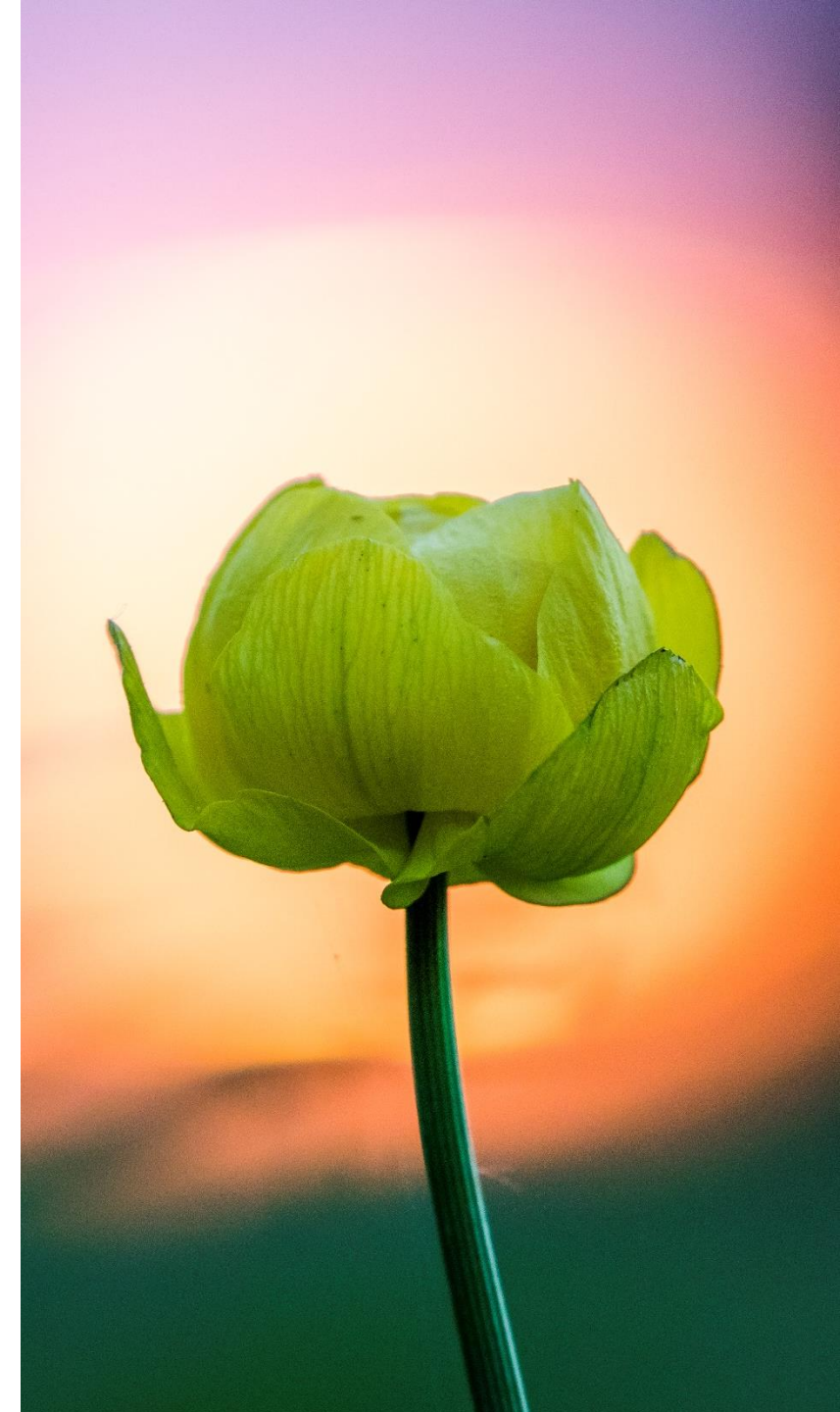


”Forest council” of Lapland citizens

- Climate change has created the need to consider the use of forests in Finland and Lapland.
- The Regional Council of Lapland wanted to find out the residents' views of Lapland, and for this purpose, it convened a citizens' council with researchers.
- The task of the Citizens' Forest Council was to produce recommendations for the Green transition committee on what kind of use of forests would be fair and sustainable.
- The Citizens' Council was related to the green transition program. One of the points of it is the sustainable and climate-wise use of forests.



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"Forest council" of Lapland citizens

- 6,000 randomly selected residents of the Lapland were invited to the citizens' council and survey.
- 240 of those who received the invitation signed up as volunteers, and 33 participants were randomly selected from them, so that the group represented the population of the Lapland region in various ways
 - →age, gender, educational background and home municipality
- They met on two weekends and also received information between meetings.
- The FACTOR project researchers from the Natural Resources Center, the University of Turku and the Finnish Environment Agency were responsible for the recruitment and practical implementation of the council.
- The convenor was the Regional Council of Lapland.



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The task of the "Citizens' forest council"

- The task of the Forest Council of Lapland was to draw up recommendations on what fair and climate change-friendly forest use looks like in Lapland. The councils' recommendations are not binding, but the goal was to bring a balanced citizen's perspective into the discussion on the use of forests.
- The citizens' forest council's recommendations are processed by the Green transition committee. The committee's work is based on the Lapland Green Deal road map.



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Recommendations of the Lapland's citizens' forest council

- The different needs and uses of forests should be better coordinated
- ecological values, carbon sinks, and storage should be considered.
- Logging in forests that are too young should be stopped
- an annual maximum limit should be set for logging.
- more dialogue between different parties about the use of forests
- Decisions should be based on the best available information
- more information about Lapland's forests, their importance, and the effect of different use and management methods.
- The skills and motivation of forest owners and forest operators for sustainable forest management must be increased.
- Voluntary compensation is one way to get money to strengthen carbon sinks and biodiversity.



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The processing of the results

- A publication event was organized for the citizens' forest council's results, where members of the council presented the results, and the participants could ask questions.
- The green transition committee has processed the citizen forest council's recommendations. A webinar will be held on the green transition committee's response to the forest council's recommendations.



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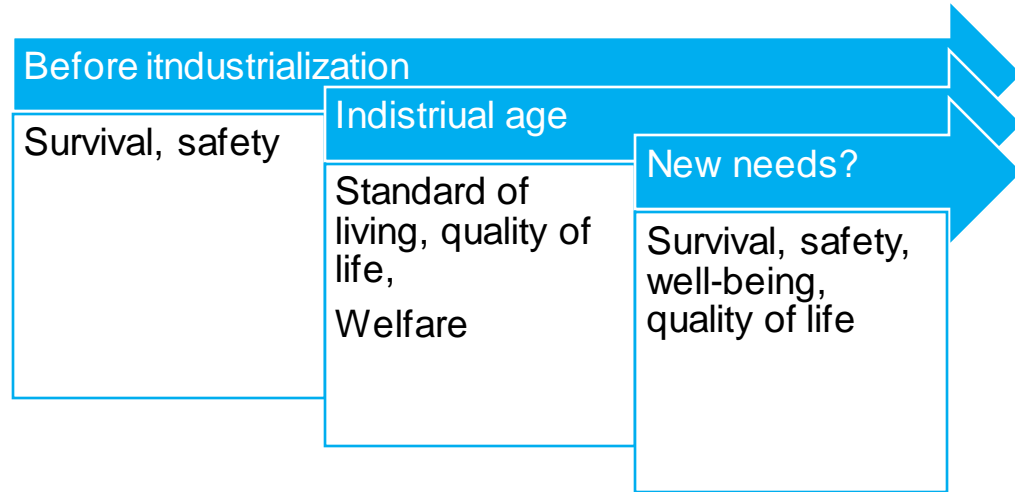


Answer for the citizens' forest council's recommendations

- The green transition committee will assemble a working group and organize a brainstorming session with the tourism cluster to develop compensations based on forests as a pilot in Lapland.
- We take the citizens' forest council 's recommendations into preparing Lapland's forest program and state forest use plans.
- The Green transition committee establishes a working group to prepare a review of the situation of Lapland's forests and to communicate about it. The Regional Council of Lapland coordinates the work.
- The committee undertakes to promote forms of forest management and use that support carbon bounding, biodiversity, and the multiple uses of forests, the growth of added value produced by forests, the knowledge, skills, and motivation of forest owners and forest operators for sustainable forestry, as well as the production and utilization of information in decision-making.



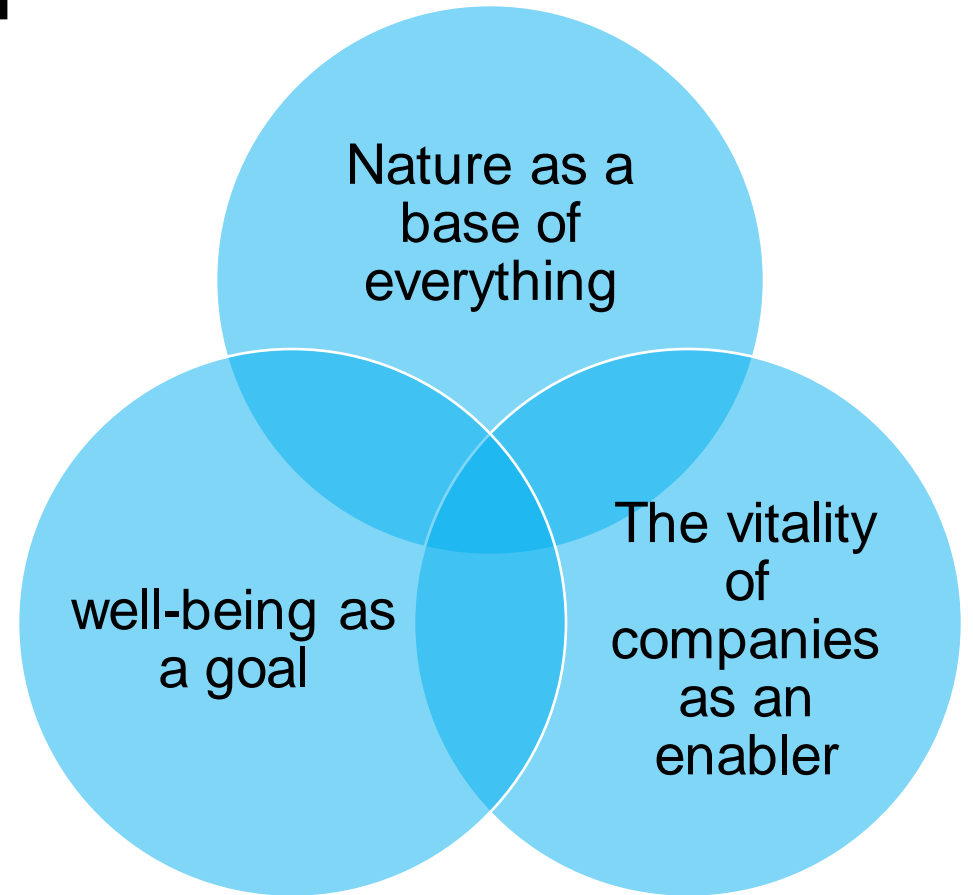
The ultimate purpose of using forests



The ultimate need has not changed – surviving and well-being

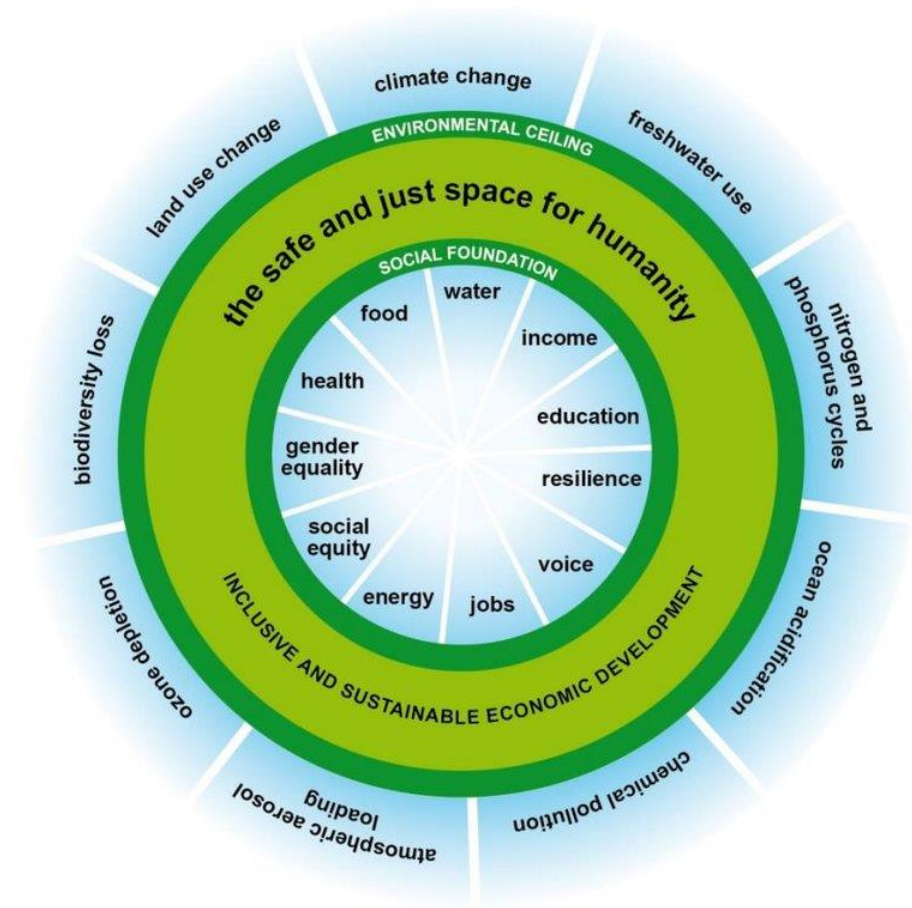
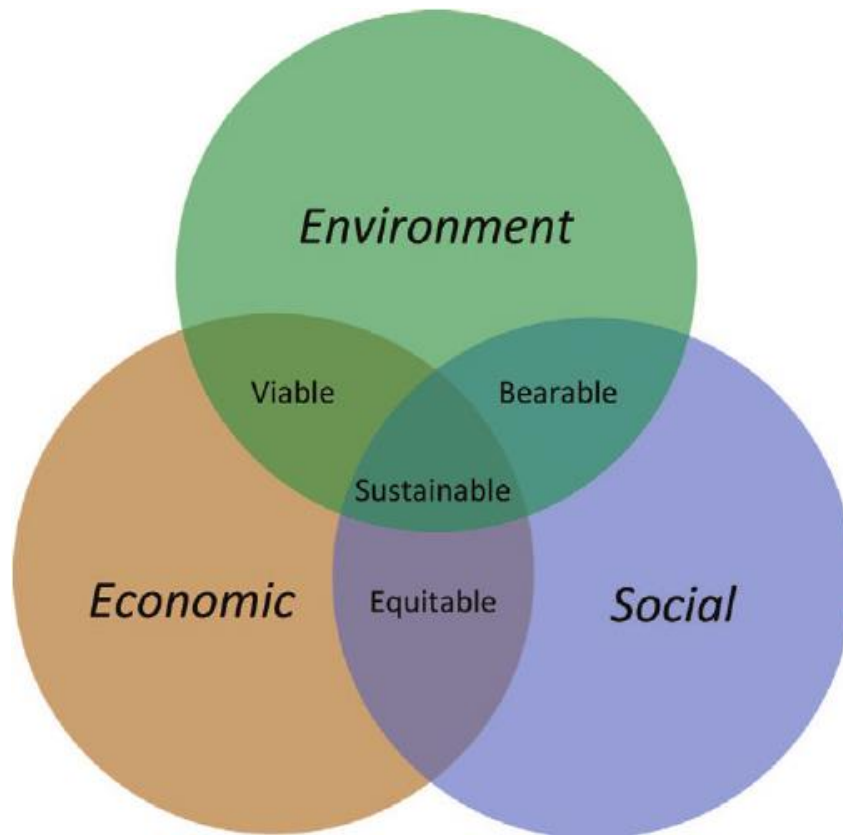
New needs are not new.

They are essential for all life



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About sustainability



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Paradigm shift

Paradigm shift from the current sectorial approach where social, economic, and ecological development are seen as separate parts



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”An integrated system that includes human societies and ecosystems. The functions of such a system arise from the interactions and interdependence of the social and ecological subsystems. That system’s structure is characterized by reciprocal feedback”



Eronen 2023

Reindeer herding

Forestry

Fresh Water

Fishing

Natural Resource Extraction

Tourism & Recreation

Biophysical system

Social system

Ecosystem services

Choice

Economy

Knowledge

reflection on sustainable development and forests

Local nature and global climate set limits within which forests can be utilized as a safeguard and enhancer of human well-being

How can we get the best benefit from our forests for the well-being of the people of Lapland?

- how to use raw materials the most eco-efficiently?
- Path dependence: Infrastructure and know-how placed in forests
- Global justice between regions and people groups, and generations

What kind of infrastructure, know-how, and structures do we need in the eco-efficient use of the forests of the future?

- We are now making decisions that will affect the next hundred years.



Some solutions

Information about forests, their importance, and the possibilities, benefits and effects of different use and management methods.

Voluntary protection - Metso and Helmi – programs

Market-based compensations: carbon compensation and ecological compensation

Forest nature management in commercial forests and continuous cultivation methods

Increase the added value of forests: less forest but the same profit



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Systemic change

Reducing consumption, circular economy

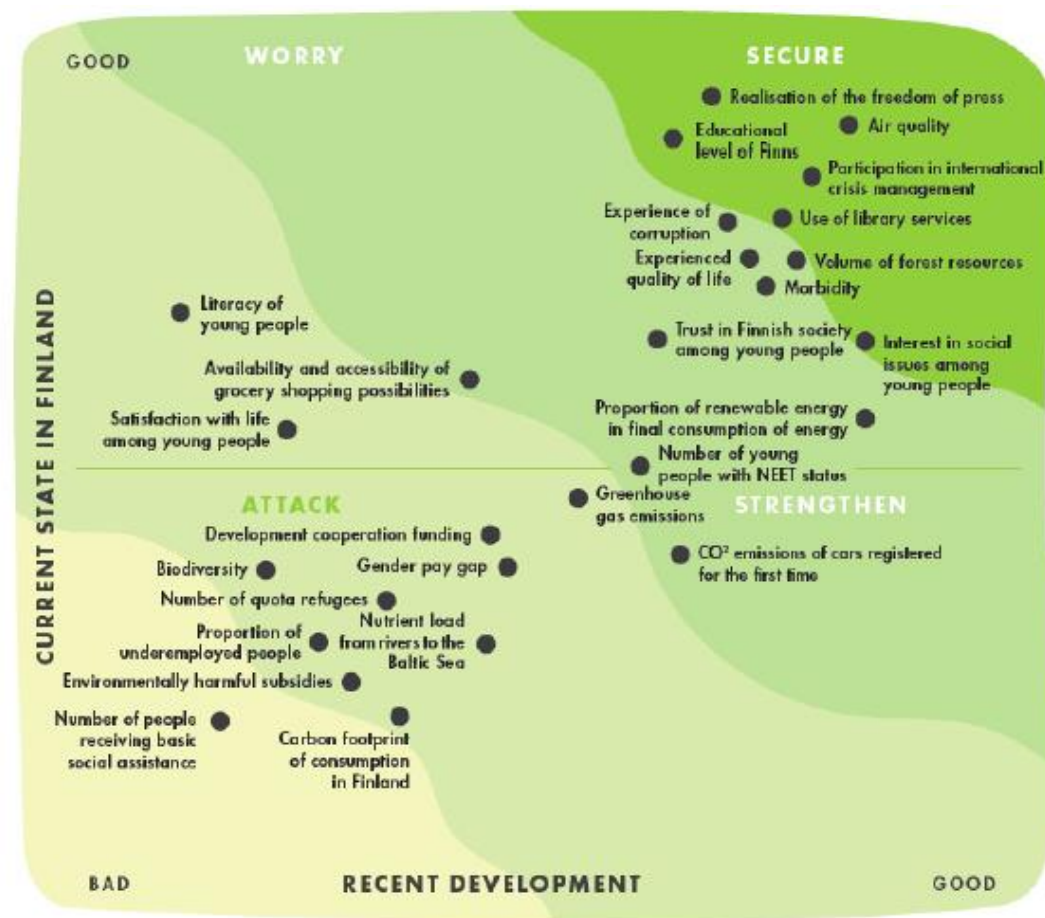
Including exploitation of nature and damage caused to nature in the price of products

questioning the ideal of constant growth

Seeing forests as part of an eco-social system that provides well-being



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Thank you!

Hanna-Leena Pesonen
Sustainable development specialist



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