

Session SBI59 (2023)

Session starts: 01-09-2023 00:00:00 [GMT+1]

Session ends: 30-11-2023 23:30:00 [GMT+1]



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A compilation of questions to - and answers by - Finland [exported on 02-12-2023] by the UNFCCC secretariat

Question by Canada at Friday, 29 September 2023

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 30 September

Title: How is atmospheric measurement data considered in your GHG inventory?

Improved measurement technologies in recent years have resulted in the advancement of emissions data derived from atmospheric measurements which can be compared to emissions/removals data reported to the UNFCCC. Could you please share information about how atmospheric measurement data are considered in the development of your GHG inventory, including any plans to incorporate such measurements into inventory methodologies?

Answer by Finland, Wednesday, 01 November 2023

Currently, we do not use estimates or data from the atmospheric observations in our inventory. However, we have had some tentative cooperation with research groups and projects so that in future there might be some possibilities to compare the atmospheric observation estimates to the inventory estimates despite the challenges related to the resolution of the atmospheric observations and challenges in land-use/land-cover classification and in allocation between sources or pools, for instance.

Question by United States of America at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Ministerial Working Groups

The technical review report notes that ministerial working groups, which are responsible for preparing and updating the national strategies on energy and climate policy, include representatives of all political parties. Has this inclusive approach helped to promote acceptance of climate policies in Finland, and are there any lessons that could benefit other Parties?

Answer by Finland, Wednesday, 01 November 2023

Finland's climate policy is defined in Government policies and programmes, and since 2003, ministerial working groups have steered strategic work. Ministerial working groups consists of a group of the ministers of the current Government and may be set up to address a specific

issue or set of related issues. The ministerial working groups and their tasks and members are decided in connection with the government formation talks, but they can also be agreed on later in the government term. All parties, that are part of the Government, are represented in each ministerial working group. However, not all parliamentary parties are represented in ministerial working groups. A parliamentary party is a party registered in the party register that has a member of parliament in the Finnish parliament. Typically, three to five parties are represented in the government. As a result, the general feature of policy-making has been to mediate different views together.

Ministerial working Groups of the current prime minister Orpo's Government consist of 7 different working groups in specific issues. The ministerial working group on clean energy, the environment and security of supply will guide and direct the implementation of the Government Programme with regard to climate, environmental and nature policy, clean energy and the energy transition, and permit procedures for projects. In addition, the ministerial working group will guide and direct the implementation of the Government Programme with regard to food and forest policy.

Question by United States of America at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Emission Reduction Policies

Could you discuss how impactful, if at all, Finland's "One Degree Down" campaign is in lowering emissions? Additionally, could you outline some best practices that could be replicated by other parties?

Answer by Finland, Wednesday, 01 November 2023

The energy saving campaign "Down a degree" was an information campaign implemented in the heating season 2022-23. Finnish households, companies, municipalities and organisations were encouraged to change their energy use behaviour in order to prevent possible energy crisis with adequacy challenges in power supply and excessively high energy bills. The campaign and its impact have been assessed and reported in June 2023 in the publication *Astetta alemmas –energiänsäästökampanjan loppuraportti* (in Finnish) [https://www.motiva.fi/files/21629/Astetta_alemmas_-energiensaastokampanjan_loppuraportti.pdf](https://www.motiva.fi/files/21629/Astetta_alemmas_-_energiensaastokampanjan_loppuraportti.pdf).

According to the report, on average 87% of the people did some energy saving measures

during the campaign. Most popular measures were to use electric appliances more sparingly, to lower the indoor temperature and shorten the shower time. Households and the service sector managed in total to save more electricity than the industry. The savings were substantial. In December 2022 for example, the weather-corrected electricity consumption was 10% less than the year before. The impact on other energy usage than electricity has not been monitored even though the campaign certainly also reduced at least the use of district heat. It is estimated that the indoor temperature was lowered with 1 degree in at least 20% of the buildings.

The assessment report does not estimate how much the campaign reduced GHG emissions. However, the report concludes that biggest savings took place in hours when the electricity price was high or it was cold and little wind, i.e. when the marginal electricity in Europe was generated by combustion of fossil fuels (natural gas and hard coal). Altogether 4.1 TWh electricity was saved during the winter months, which gives roughly 1-2 million tonnes CO₂ emissions reduction depending on the marginal electricity sources each moment. As Finland is part of the common European electricity market, it requires detailed modelling to conclude how much of the GHG emissions reduction can be allocated to Finland versus the neighbouring countries.

We think the campaign can be replicated in any country. Following success factors have been identified:

1. The state administration led the campaign. Close cooperation of ministries and authorities. One common message.
2. The nationwide campaign was led professionally, making good use of the know-how and network of the already existing energy advice activity on local, regional and national level. Campaign messages were pre-tested on target audience.
3. Wide-ranging involvement of companies, organisations, municipalities etc. who signed up as campaign partners and listed their energy-saving methods on the campaign website. The large involvement increased hugely the publicity of the campaign at minimum cost for the government.
4. All possible channels for spreading information were used and the campaign was visible everywhere in the society: on buses, bus stops, the metro, shopping centres, social media, TV, radio, newspapers, magazines, hotels, shops etc.

Question by Japan at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Future projections on carbon capture

According to p81 of the BR5, carbon capture such as CCS, CCUS, and BECCS are excluded from the WM projection due to the difficulty to estimate the timing of their introduction. Does Finland have any plans to study the timing of introduction and projected reductions from carbon capture in the future? How much emission reduction potential is assumed in the future roughly?

Answer by Finland, Wednesday, 01 November 2023

The government published a report in March 2023 on the subject, namely *Carbon dioxide use and removal: Prospects and policies* <http://urn.fi/URN:ISBN:978-952-383-197-1>. The report gives an overview of the market status, policies and main technologies in the field of carbon capture, utilisation and storage (CCUS) and carbon dioxide removal (CDR), especially from the perspective of Finland.

The report concludes that in terms of current industrial activities, the fossil and biogenic CO₂ emissions (41.4 Mt CO₂ in 2020) from large point sources such as power and heat production plants and other industrial facilities equal to approximately 80% of Finland's greenhouse gas emissions LULUCF sector excluded. Of the point source emissions, some 14 Mt fossil CO₂ and 10 Mt biogenic CO₂ is emitted from facilities on the coastline, from where CO₂ could be transported cost efficiently by ships to storage sites already in the medium-term. The potential for CCUS products is limited by the market volume of the products: for instance, about 0.6 Mt of plastics, about 1.5 Mt of cement and 8–10 Mt of sand and gravel for concrete is used annually in Finland. The industrial point sources of biogenic CO₂ in Finland provide an interesting opportunity for large-scale CDR and has significant potential to reduce the GHG emissions and contribute to Finland's carbon neutrality target. Strengths, weaknesses, opportunities and threats of the key carbon dioxide removal options for Finland are identified and presented in the report.

Question by Japan at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Assumptions on biofuels and EVs in future projections for the transport sector

The projections by energy source for the transportation sector shown in Table 5.22 on p.102 of the BR5 shows that biofuels will double from 2015 level, peak in 2025 and 2030, and will

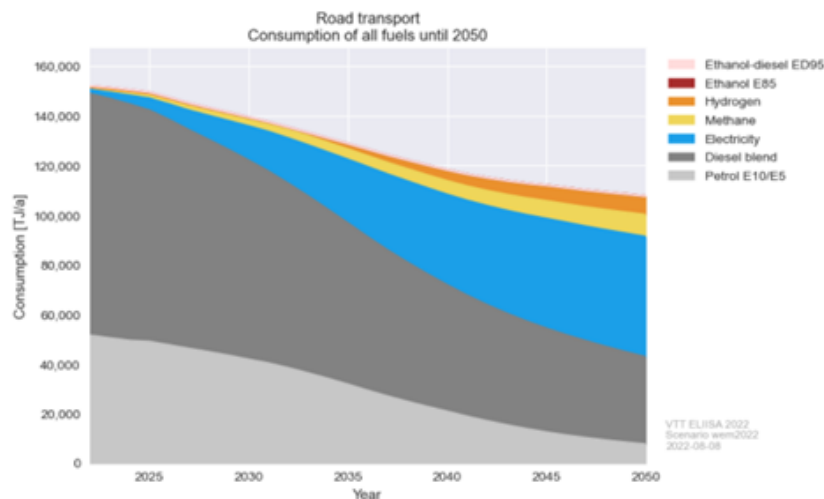
decline after 2030. On the other hand, electricity is consistently growing, and it is assumed that internal combustion vehicles will be replaced by EVs in the long term. Regarding the diffusion of biofuel, it is necessary to promote policies and investments with an eye to the future decrease in consumption due to the shift to EVs. How is the diffusion measures designed taking into account that? What is the expected EV penetration rate in the future?

Answer by Finland, Wednesday, 01 November 2023

In WM projection, it is expected that around 60 percent of first registrations of passenger cars will be fully electric vehicles in 2030 and already almost 90 percent in 2040.

Taking into account that the vehicle fleet renewal in Finland is relatively slow, the diffusion of biofuel is a key emission reduction measure in the short term. Also, it is unlikely that all heavy-duty vehicles in Finland could be replaced by EVs even in the long run. In order to make combustion engine vehicles emission-free, biofuels are needed (please see the attached graph of Finnish road transport fuel consumption in WM projection). Biofuels and other sustainable alternative fuels will be also needed for other transport modes besides road transport.

Figure to Question on biofuels and EVs in future transport projections: Finnish road transport fuel consumption in WM projection (diesel blend, methane and petrol include renewable



components)

Attachment: SBI59_MA_Questions_to_Finland_Biofuels_EVs_in_projections.pdf

Question by Japan at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Outlook for offshore wind power

Table 5.20 on p101 of the BR5 shows that wind power is expected to grow significantly in the future. With regard to wind power projections, could Finland let us know the breakdown between onshore and offshore wind power? Also, what assumptions have been made in setting the future installed capacity of offshore wind?

Answer by Finland, Wednesday, 01 November 2023

The wind power potential in Finland is large both onshore and offshore. Onshore wind power has become feasible without subsidies whereas offshore wind power is not yet feasible on market terms. Finland is sparsely populated and has wide, relatively shallow water areas suitable for offshore wind power. On the other hand, winter conditions are harsh which increases the costs, the sea freezes causing extra load on structures and limiting access to offshore sites. So far, we have one demonstration offshore wind power plant with a capacity of 42 MW.

The projections in BR5 are based on energy market modelling which includes a lot of parameters and assumptions. A variety of power generation technologies is modelled - for wind power a division into onshore, nearshore, offshore and arctic technology is used. The projections include, however, considerable uncertainties and therefore it is too early to present electricity supply projections separately for the different wind power technologies.

Finland has set non-binding targets for offshore wind power (1 GW in 2030, 5 GW in 2040 and 12 GW in 2050). These targets will be re-evaluated as the Government has decided to set an ambitious target for offshore wind power in 2035. Finland promotes offshore wind power only as market-based activity and it is expected that at the latest in the 2030s, offshore wind power will become economically feasible in Finland. In territorial waters exclusivity has been granted to four sites that are under development and 4-5 sites will be auctioned during the years 2023-2024. Project development is active also in the exclusive economic zone.

Question by Japan at Friday, 29 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Assumptions of Covid-19 impact in future projections

According to p77 of the BR5, it is noted that the impact of the Covid-19 pandemic and its assumed effects have been considered in the modeling for the projection. How exactly is this considered? In addition, p83 of the BR5 mentions the increase in remote work due to Covid-19 pandemic is included in the WM projection. How exactly is this taken into account?

[Answer by Finland](#), Wednesday, 01 November 2023

The Covid-19 pandemic and its assumed effects have been considered in the modelling in following ways:

- The pandemic and its effects on the economy was considered when projecting the economic development in the country. Economic growth was estimated to recover during 2021, but to remain modest at first thereafter. During the 2020s, the world economy was expected to recover, which will also begin to have an impact in Finland.
- The pandemic affected the transport sector by immediately reducing the passenger traffic. The direct effect was a lower passenger mileage in 2020-2022 particularly in road transport and aviation. This was included in the modelling.
- The slowdown in demand for public transport caused by the Covid-19 pandemic was reflected in a significant decrease in the kilometrage of bus transport in 2021. It was therefore assumed in WM projection that the annual kilometrage of buses would remain at a lower level for a longer period of time, returning to previously estimated kilometrage towards 2030.
- The longer-term effect of the pandemic in aviation and for international bunkers was roughly estimated as described in BR5, page 84.
- During the pandemic in 2020, the number of remote workers more than doubled from pre-Covid numbers. The increase in remote work facilitates work and leisure coordination and mainly reduces emissions from road transport, as it may reduce vehicle kilometres and the annual CO₂ emissions from passenger car traffic.
- As regards to remote work, in the WM projection, the passenger car kilometrage will decrease around 830 million kilometres per year by 2030, which equals roughly 2 percent of total projected passenger car kilometrage in 2030 and by 2045 around 1,307 million kilometres per year compared to the situation without the increase in remote work. It is to be noted, that since then, the kilometrage projection has been updated to be more moderate. The emission reduction estimations are described in BR5, page 83. Remote work can increase leisure travel in which case the decrease of kilometrage may be reduced or completely reversed. More long-term research is needed.

[Question by New Zealand](#) at Friday, 29 September 2023

[Category](#): Progress towards the achievement of its quantified economy-wide emission reduction target

[Type](#): Before 30 September

Title: Mitigation efforts in the international shipping sector

Finland's national action plan looks to address GHG emissions from international shipping through energy efficiency measures as well as alternative fuel and propulsion technologies for maritime transport. New Zealand is interested in the progress of these measures and their success in reaching the country's overall emissions targets. Also, to what extent do these measures increase supply chain resilience?

Answer by Finland, Wednesday, 01 November 2023

In 2021, the Government of Finland drafted a roadmap for fossil-free transport. As part of this work, the Government made a resolution on reducing greenhouse gas emissions from maritime and inland waterway transport (link: <https://julkaisut.valtioneuvosto.fi/handle/10024/163137>). In accordance with IMO MEPC resolution 367(79) adopted on 16 December 2022, the Finnish Government's resolution was submitted to the IMO Secretariat as Finland's National Action Plan (NAP) to address GHG emissions from ships.

Finland's NAP addresses the possibilities of both exerting influence at the international level and taking national measures. The drafting of the NAP was underpinned by the work on the Finnish roadmap for fossil-free transport, in which the methods for reducing emissions from maritime and inland waterway transport and their impacts were assessed extensively for the first time in Finland. The implementation of the roadmap's measures is monitored regularly.

Supply chain resilience is taken into account in implementing the measures, as maritime transport is vital for Finland: approx. 90% of Finnish exports and 80% of imports of goods are carried by sea. A country located a long distance away from the main European markets and across a sea that freezes in winter may incur significant additional costs from reducing shipping emissions. Consequently, the challenge lies in finding an effective balance between measures that reduce emissions from ships on the one hand, and their economic impacts on the industry and economy on the other.

The measures outlined in Finland's NAP are implemented within the limits of the government budget and the existing appropriations. Decisions on additional appropriations or other measures affecting the government budget will be made separately within the central government spending limits and in the annual budgets.

Progress made in implementing the NAP is monitored at regular intervals in the steering group for maritime policy appointed by the Prime Minister's Office and in the Ministry of Transport and Communications. Figures produced by the MEERI calculation system, the results of the MERIMA model (<https://tieto.traficom.fi/en/statistics/greenhouse-gas-emissions->

and-alternative-power-sources-maritime-transport)), and the Finnish Meteorological Institute's annual calculations of emissions from vessel traffic in the Baltic Sea, are used as indicators of the effectiveness and impacts of measures. The indicators are currently under development in cooperation between VTT Technical Research Centre of Finland, the Finnish Meteorological Institute and the transport and communications administration.

To mention some concrete examples of successfully executed national measures:

- Undyed biofuel oils were included within the scope of the tax-free supply of marine fuels in 2022, thus eliminating the need for a refund procedure to implement the tax exemption of these fuels,
- The Government continued granting discretionary government transfers in 2022 for shipbuilding innovations that reduce greenhouse gas emissions from ships, and
- In the Baltic region and Nordic cooperation, Finland has actively participated in projects aimed at reducing shipping emissions and developing the distribution infrastructure for new fuels for shipping.

[Question by](#) New Zealand at Friday, 29 September 2023

[Category:](#) All emissions and removals related to its quantified economy-wide emission reduction target

[Type:](#) Before 30 September

[Title:](#) Carbon removals in the land use, land use change and forestry sector

New Zealand commends Finland for keeping its land use, land-use change, and forestry sector (LULUCF) a net sink for the past 30 years. We are interested to know what current policies Finland has in place to maintain this status, and whether Finland has any plans to increase the LULUCF sector's capacity as a net sink?

[Answer by](#) Finland, Wednesday, 01 November 2023

The main policies impacting the LULUCF sector are Climate Plan for the Land Use Sector (adopted in 2022) and National Forest Strategy (renewed in 2022).

The purpose of the Climate Plan for the Land Use Sector is to promote the reduction of emissions from land use, forestry and agriculture, strengthening of removals by carbon sinks and adaptation to climate change, in accordance with the Sustainable Development Goals. The annual net impact that the additional measures in the land use sector aim for is at least

three million tonnes carbon dioxide equivalent by 2035.

The National Forest Strategy 2035 takes into account the principle of comprehensive sustainable development and the important role of forests in climate change mitigation and adaptation. The objectives of forest use have been reconciled in the National Forest Strategy 2035. Active forest management and use will maintain the forests' health and ability to grow, which is a basic requisite for their capacity to sequester carbon.

[Question by](#) Australia at Thursday, 28 September 2023

[Category:](#) Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

[Type:](#) Before 30 September

[Title:](#) Submitted Question #2

We understand Finland taxes passenger vehicles based on, among other factors, the CO₂ emissions performance of the vehicle, with this tax being 0 for vehicles powered entirely by electricity or hydrogen (p.46, BR5). **Is Finland able to comment on any analysis which has estimated the impact of this tax on vehicle choice?**

[Answer by](#) Finland, Wednesday, 01 November 2023

The question about taxation is a complicated issue and several different taxes are applied in Finland. First, consumer has to pay (1) a car tax, when buying a new car. On Electronic Vehicles (EVs) it is 0 % from the beginning of 2022.

In addition, consumer has to pay (2) an annual vehicle tax which is based on CO₂ emissions. The annual vehicle tax applies also to EVs, even though they are zero-emission vehicles. The second part of the annual vehicle tax is based on driving power which means the type of fuel the car uses.

Finally, consumer has to pay (3) a fuel tax when fueling or charging the vehicle. Methane and electricity are also taxed, but their taxation is lighter than on other transport fuels. The lighter taxation is partly offset by a tax on driving power which is included in the annual vehicle tax.

Analyses have not been able to clearly distinguish the impact of car tax on vehicle choice

from other factors. However, according to the Ministry of Finance's report in 2021 (<http://urn.fi/URN:ISBN:978-952-367-521-6>, in Finnish with an English summary), the fuel tax urges consumers to drive less and to buy more fuel-efficient cars. Therefore, it can be assessed that the fuel tax is more efficient policy instrument than the car tax which is paid only once. In addition, the fuel tax is targeted effectively on those consumers who drive the most. Also, the CO₂ emissions performance standards for new passenger cars and new light commercial vehicles affect the supply side of the vehicle market and therefore consumer choices.

According to the Programme of Prime Minister Petteri Orpo's Government (20 June 2023), the Government will launch a comprehensive reform of transport financing and taxation, which will be implemented jointly by the Ministry of Transport and Communications and the Ministry of Finance.

Question by Australia at Thursday, 28 September 2023

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Submitted Question.

We understand Finland has a waste tax to discourage the disposal of goods in landfill which could otherwise, technically and environmentally, be recovered (BR5, p.67). **Is Finland able to comment on how effective this measure has been at stimulating the entry and growth of companies in Finland's recycling sector?**

Answer by Finland, Wednesday, 01 November 2023

Waste taxation aims to increase the recovery of waste and reduce landfilling. This has happened, and the number of landfills and the amount of waste disposed of at landfills have decreased over the years. The recovery and recycling of waste have increased and the number of companies in the recycling sector has also increased over the years. However, no specific analysis has been carried out on the impact of the waste tax on the growth and on the amount of recycling companies. However, the waste tax has guided waste away from landfills, so it can be assumed that it has had an impact on increasing recycling together with other policy instruments.

Question by United Kingdom of Great Britain and Northern Ireland at Friday, 22 September 2023

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Question to Finland on its engagement with private sector

Thank you, Finland, for the opportunity to comment on your 5th Biennial Report and 8th National Communication. We note private sector support is integral to your reductions in process-related emissions, carbon sinks in the land use, land-use change, and forestry (LULUCF) sector. How are you engaging with the private sector to achieve this?

Answer by Finland, Wednesday, 01 November 2023

We have since long a good cooperation between the private sector and the government. An example is the coordinated preparation of sectoral low-carbon roadmaps described in BR5 Section 4.2.1. There is an increased climate awareness within the manufacturing industry and the companies are actively investigating ways to reduce their GHG emissions. The sectoral low-carbon roadmaps were used as a direct input for the Government's climate and energy strategy, and many other government plans related to energy and climate policy. Another success is the voluntary energy efficiency agreements and energy audits that have been in place since the 1990s. The energy efficiency agreements cover more than 60% of Finland's total energy use. More than 700 companies with their thousands of sites and over 130 municipalities and joint municipalities have committed to the energy efficiency objectives set in these agreements.

The manufacturing industry is motivated to reduce their process and energy emissions by domestic policy measures, such as investment grants for low-emission technology and reduced electricity tax for industrial electricity use (promotes electrification of processes). These domestic measures complement the EU Emission Trading System, which is the main driver for the low-carbon development.

Summary report of sectoral low-carbon road maps: <http://urn.fi/URN:ISBN:978-952-327-796-0>

Low-carbon roadmaps website: <https://www.climate2035.fi/>

Energy efficiency agreements: <http://www.energiatehokkuussopimukset.fi/en/>

Regarding the LULUCF sector, interaction with various stakeholders and actors played a key role in the preparation of the Climate Plan for the Land Use Sector. The feedback received from the interactive events was utilised in the specification of the measures, in prioritisation, definition of information requirements, and impact assessment.

The feasibility and acceptability of measures in the plan were discussed in interactive events. In autumn 2021, the interactive events were targeted at regional actors, and a broad range of potential measures were discussed in the events. In the events arranged in early 2022, the discussion was based on measures that had been tentatively prioritised, and the aim was to gain feedback on how interesting the measures were, about the effectiveness of the planned policy instruments, and any bottlenecks involved. Young people and landowners were the specific target group of the interactive events. During autumn 2021 and spring 2022, a total of 12 interaction events were organised.

The purpose of the interactive events was to gain an understanding of the feasibility of the measures, the practical viewpoints for their implementation and the acceptability of the measures for the actors concerned, and landowners. The aim was not to find a shared view, but to introduce various viewpoints to the preparation process. The interest and acceptability of various climate action measures have also been analysed in studies. At the events, the aim was to identify potential new climate measures and to collect information and viewpoints from the regional starting points of climate action.

After the draft Climate Plan for the Land Use Sector was finalised, it was circulated for comments between 14 April–18 May 2022 in the Lausuntopalvelu.fi online service. A total of 108 comments were provided by key ministries, trade and professional organisations, interest groups, research institutions, government agencies and institutions, companies, environmental organisations and a few private individuals.

Preparation of the National Forest Strategy included a similar interactive process. The National Forest Strategy 2035 is a coordinating strategy for the whole sector that brings together humans, the environment and the economy. The strategy takes into account the principle of comprehensive sustainable development and the important role of forests in climate change mitigation and adaptation. The different objectives of forest use have been reconciled in the National Forest Strategy 2035.

Government Report on the Climate Plan for the Land Use Sector:
<https://julkaisut.valtioneuvosto.fi/handle/10024/164927>

National Forest Strategy 2035: <https://mmm.fi/en/nfs2035>

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