

Emissions by carbon-neutral municipalities down by almost 20 per cent in six years

May 14 2014



Sixteen municipalities involved in the Towards Carbon-Neutral Municipalities (Canemu, HINKU in Finnish) project reduced their greenhouse gas emissions by an average of 19% between 2007 and 2012. The greatest emissions reduction was made by Hanko (-34%) and Ii (-31%), which has invested heavily in emission-free wind power production. Lohja (-28%), Raasepori (-23%) and Padasjoki (-22%) did well too, cutting their emissions by more than 20%.

The greatest emissions reductions among the municipalities were made in the energy sector. Emission reductions related to electricity reduced by an average of 27%, those associated with fossil fuels by 24% and those of the traffic sector by 11%. Agricultural emissions caused by farming and animal husbandry decreased by an average of 6%. Waste management emissions from landfill sites and waste water management plants fell by an average of 19%.

The key reason for emission reduction was the shift among municipalities from fossil fuels to wood-based energy sources and ground heat. Improved results were also due to an increase in district heating and an improvement in the energy-efficiency of real estate, as well as better [waste management](#). The solutions applied were also cost-effective and created new jobs locally. Municipalities and local businesses and residents have all carried out measures to reduce emissions.

Environmental work supports the economy

"This is a significant result. The Canemu project shows that climate change mitigation can be accelerated through the deployment of small-scale resources, which also supports the local economy. Carbon-neutral municipalities have the target of an 80% reduction in emissions by 2030. This will be challenging but not impossible to achieve, as long as we understand that climate change mitigation measures represent an opportunity rather than a threat," says Professor Jyri Seppälä of the Finnish Environment Institute, who is in charge of the Canemu project at the national level.

According to Mr Seppälä, when monitoring emission trends, we must not forget the national big picture. While some of results in the municipalities reflect the nationwide situation, there are also clear deviations.

"Consumption of light fuel oil in Finland fell by an average of 13% between 2007 and 2012. The corresponding figure was 22% for carbon-neutral municipalities. Measures to reduce carbon emissions in Ii have lowered energy costs during the last few years by what already equates to an 0.25% cut in local taxes. Better energy efficiency in real estate has already saved the municipality an annual EUR 240,000 and there are also signs of other benefits. For example, unemployment in Uusikaupunki fell from 10.2% to 8.9% between 2007 and 2012," says Pasi Tainio, head of the Canemu team at the Finnish Environment Institute.

Emission reductions through daily choices

Energy production and industrial plants of EU's emissions trading scheme (ETS) have been excluded from the project. Their emissions are determined at national level under the ETS. If these plants were included, the reduction in most carbon-neutral municipalities would be much higher than now reported.

"Municipalities should not engage in emissions trading by means of industrial plants, but instead focus on everyday issues, such as traffic, agriculture, waste management and the heating of buildings – the kinds of [emissions](#) that municipalities can help to reduce on a more direct and efficient basis," says Olli-Pekka Pietiläinen, Senior Researcher at the Finnish Environment Institute. Canemu as an example to the world. Calculations are based on a recommendation by the Association of Finnish Local and Regional Authorities, with minor adjustments. In the near future, the project will also involve the improvement of emission calculations, through the inclusion of socio-economic indicators. These will assist in tracing the effects of environmental efforts on the economy and employment situation of each municipality involved.

A total of 16 municipalities in Finland are striving to become carbon-

neutral. The first network of carbon-neutral municipalities included Uusikaupunki, Mynämäki, Padasjoki, Kuhmoinen and Parikkala. Asikkala, Hanko, Ii, Laitila, Lohja, Masku, Raasepori, Rauma, Rautjärvi and Siuntio became involved at the second stage. The latest municipality to join was Lappeenranta in March 2014. Almost 300,000 people live in these municipalities. Many municipalities are considering joining the network.

"Even on a global scale, this project is made significant by the fact that more and larger municipalities are coming on board. This could represent a wonderful opportunity for Finland to profile itself around the world as an expert in cleantech. Climate friendly solutions are in huge demand globally," says Mr Seppälä.

More information: The report, "Greenhouse gas emissions and emissions resulting from light fuel oil," is available online:

www.syke.fi/download/noname/

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Provided by Finnish Environment Institute

Citation: Emissions by carbon-neutral municipalities down by almost 20 per cent in six years (2014, May 14) retrieved 27 April 2024 from <https://phys.org/news/2014-05-emissions-carbon-neutral-municipalities-cent-years.html>

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