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The publications of the project "Account of impacts of air pollutants and possibilities to improve air quality in Päijät-Häme during the years 2000-2002":

Final project report:

- Air quality and emissions in the air during the years 2000-2003; Heinola, Lahti, Nastola

Other publications:

- The concentrations of outdoor volatile organic compounds in Lahti and Heinola
- Air quality in Lahti in 2003
- Air quality in Heinola in 2003
- Air quality in Lahti in 2002
- Air quality in Heinola in 2002
- Springtime dust in Nastola in 2002
- Air quality in Lahti in 2001
- Air quality in Lahti in 2000

AIR QUALITY AND EMISSIONS IN THE AIR DURING THE YEARS 2000-2003; HEINOLA, LAHTI, NASTOLA

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Printed matter
441 042

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THE RESULTS OF THE PROJECT

During the project "Account of impacts of air pollutants and possibilities to improve air quality in Päijät-Häme during the years 2000-2002" the monitoring of air quality and consciousness of factors affecting the air quality has improved in the areas of the project.

The information regarding air quality can be used to support communal decision-making particularly in zoning, as well as in planning energy and traffic solutions.

The air quality monitoring expanded in Lahti; a new measurement station was constructed in Laune to measure the thoracic particles and nitrogen oxides.

Continuous air quality monitoring was started in Heinola in 2002.

In Nastola, thoracic particles and total suspended particulate matter was measured periodically in the spring of 2002.

The concentrations of outdoor volatile organic compounds were monitored both in Lahti and in Heinola starting from the year 2002.

The size distribution of poly-aromatic hydrocarbons and particles was measured in Lahden Kauppatori (Market square) in the years 2002-2003.

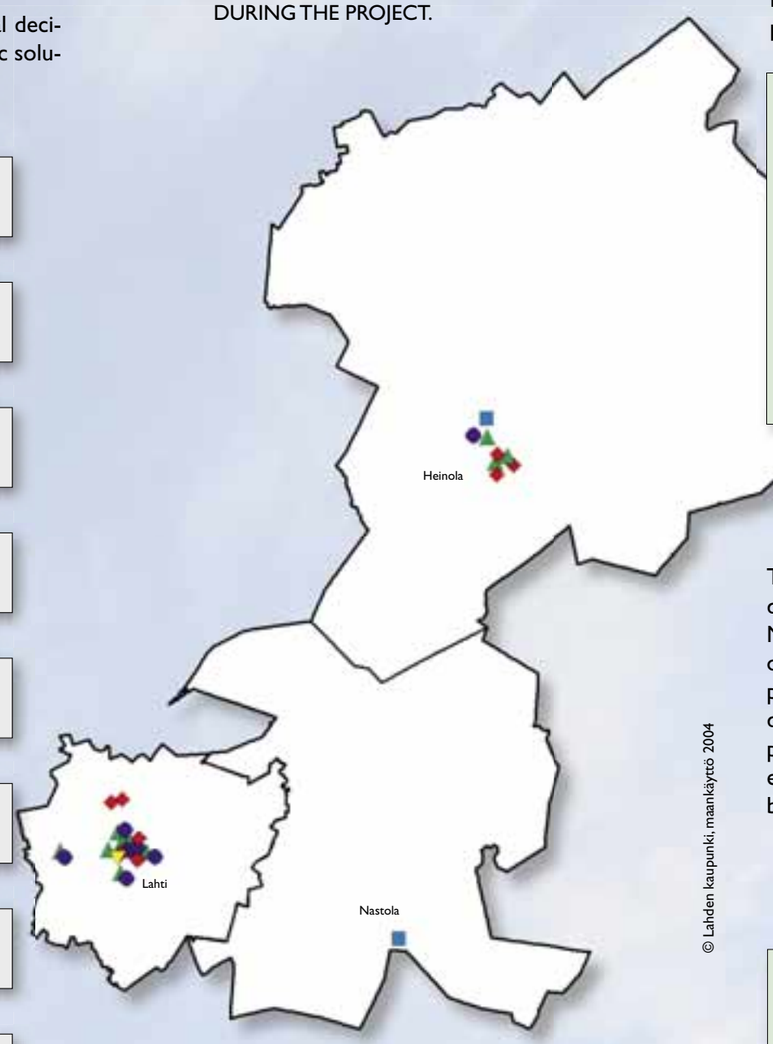
The communication of real-time air quality information became possible with the new air quality monitoring system.

The emission information and energy balance was calculated for the project areas for years 2000 and 2001 and for Lahti, also for years 2002 and 2003.

An emission prediction of greenhouse gases was made for the city of Lahti until the year 2015.

Together with the industry causing emissions in Lahti and Heinola area, objectives were set to reduce emissions

THE AIR QUALITY MEASUREMENT SITES IN LAHTI, HEINOLA AND NASTOLA DURING THE PROJECT.



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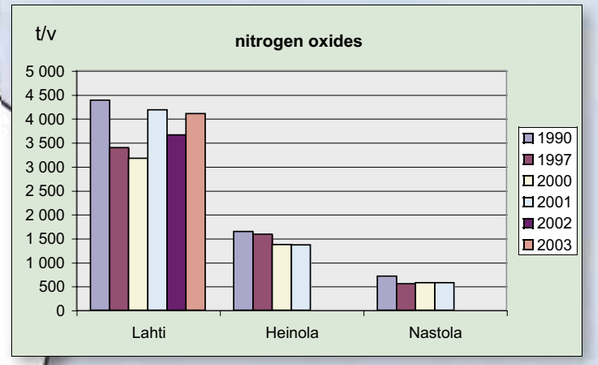
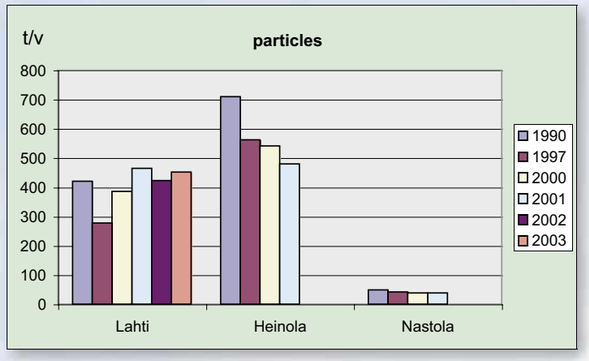
EMISSIONS IN THE AIR

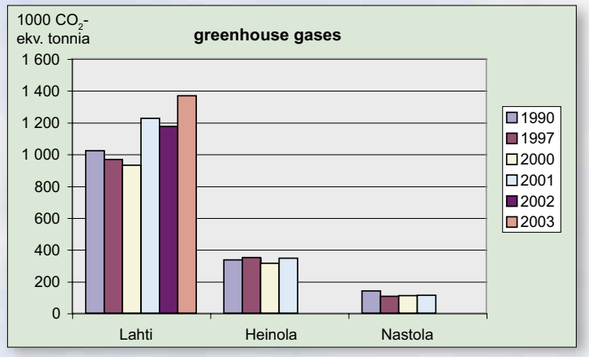
During the project, the estimated impurities were sulphur dioxide, nitrogen oxides, particles, carbon monoxide, volatile organic compounds and from the greenhouse gases carbon dioxide, methane and nitrous oxide. The emissions were calculated earlier in the years 1990 and 1997. Now emissions were calculated for the project areas for the years 2000 and 2001 and for Lahti also for years 2002 and 2003. The sources of the air emissions are industry, energy production, traffic, waste disposal and farming.



The significant emission sources for nitrogen oxides are energy production, industry and traffic. In Lahti, the amount of nitrogen oxide emissions varies yearly due to the amount of energy production. The nitrogen emissions in Heinola have diminished and the emissions in Nastola have remained nearly on the same level during the years of comparison.



The particle emissions have gone down in Heinola, but in Lahti and Nastola they have remained nearly on the level of year 1990. The large particle emissions in Heinola are due to industry. In Lahti most of the particle emissions are caused by energy production and in Nastola by road traffic.



The greenhouse gas emissions include combined emissions of carbon dioxide, methane and nitrous oxide. The increase in the amount of greenhouse gas emissions in Lahti is due to an increase in energy production. The emissions of Heinola do not show much change. In Nastola, the reduction of the total amount of greenhouse gas emissions is particularly due to the reduction of methane emissions.