**NAME OF CASE**

**LIPASTO Traffic Emissions Database**

**Key Words:**

Emissions, database, implementation of low emissions technologies, service quality and sustainability agreements/certification, environmental standards and policy, interoperability and standardization: vehicles, equipment, loading units, infrastructure

**Case logo or picture**

![LIPASTO Traffic Emissions Database Logo](image)

**Description**

The LIPASTO unit emission database by VTT is an extensive collection of energy consumption and emission factors (per tonne-kilometre or passenger-kilometre) for road, rail, waterborne and air transport, along with working machines and off-road vehicles. Both passenger and freight transport are covered and the database is freely accessible on the internet in Finnish and in English. The factors primarily address the Finnish transport system, but most of them are applicable in the European or even the global context.

**Benefits**

- Impartial data for emission calculations
- Free access to data
- Full comparability of transport modes
- Unified calculation principles

**Starting point/objectives/motivation:**

There was demand for impartial traffic emissions database.

The purpose of LIPASTO is to offer traffic emissions data for experts e.g. for emissions comparisons of different freight modes. In addition to accessible data, LIPASTO unifies calculation principles.

The LIPASTO bilingual (Finnish and English) website attempts to meet the need for a public data source. Unit emission data is needed for example in calculation of emissions of a single vehicle or vehicle fleet or total emissions from the transport of products of a production plant.

Besides the unit emission database, the annual inventory of transport emissions in Finland is maintained in the LIPASTO system.

**Success factors**

- There is a strong need for impartial emissions data
- Energy consumption and emission data for all modes is maintained in one central database
- This is the best and only public freely available database
- Easy web-based interface
- Takes account International standards

**Supported strategic targets**

- For public actors: Competitive logistics and transport system and acceptance and influence
- For private actors: Increased quality and image
- For both: Limited climate change and reduced emissions
Emission compounds in the database are
• carbon monoxide (CO)
• hydrocarbons (HC)
• nitrogen oxides (NOx)
• particles (PM)
• methane (CH4)
• nitrous oxide (N2O)
• sulphur dioxide (SO2)
• carbon dioxide (CO2)
• carbon dioxide equivalent (CO2eq.)

Kari Mäkelä, Senior Research Scientist
VTT Technical Research Centre of Finland
kari.makela(at)vtt.fi

Heidi Auvinen, Research Scientist
VTT Technical Research Centre of Finland
heidi.auvinen(at)vtt.fi

http://lipasto.vtt.fi (30.4.2013)

Emissions are expressed in the following forms
• per vehicle kilometre
• per transport unit kilometre
• per net-tonne kilometre
• per power use
• per consumed fuel unit

The practice of LI-PASTO is transferable almost everywhere. Legislation and regulation don’t have to be considered.

Transport modes involved:
• Road/truck
• Road/delivery van
• Road/motorcycles, scooters, etc
• Heavy rail
• Light rail
• Inland waterway vessels
• Deep sea vessels
• Air freight/cargo planes

Main actor of the case is VTT Technical Research Centre of Finland

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