

Emissions of air pollutants by inland navigation

Dimension - Environment

Associated Key Factor:

Attitudes and implementation of principles relating to sustainable development

Data Source:

Co-operative Program on Long Range Transboundary Air Pollution

<http://webdab.emep.int/>

<http://www.emep.int>

General Availability:

Reporting unit: Gigagrams

Reporting level: national or 50km x 50km grid

Reporting period: annually

Data available from 1980 to 2000

The indicator:

Freighters are not a major source of air pollution, nor is air pollution one of the major environmental consequences of shipping. Nevertheless, almost all commercial freighters are powered by combustion engines, so they do emit air pollutants. These occur under two distinct sets of circumstances; while underway and while docked (for light, heat, ventilation, etc.). For ocean-going vessels, emissions while in port are of greater concern than those while underway, because they are more likely to affect adjacent populations; at sea, of course, there is no adjacent population (OECD 1997).

How is it measured?

All published statistics of air pollutants are based on complex estimation and modelling procedures and are subject to several sources of error. The calculations are typically based on activity or fuel consumption data multiplied by an emission factor. (for details see Europe's Environment Statistical compendium; Eurostat 1995)

What are the disadvantages of the Indicator?

Several sets of emission factors are available per tonne-kilometre of freight carried for marine vessels. The sources do not specify whether these factors apply to inland or ocean shipping, or a combination of the two. Air pollutants depend a lot on the type of operation of the ship.

What is the policy relevance of the indicator?

So far, emissions from ships are only regulated in the MARPOL-Treaty (1973).

The Indicator is relevant for the following pathways of the FORESIGHT FOR TRANSPORT exercise:

	Transport Impact	External Determining Variable	Intermediate Variable	Contextual Information
A reorientation of European transport policy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Increase of trade and infrastructure needs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Growth of transport demand	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>