

**Summary:**

# **The costs to society of health- environmental- and safety problems in Norwegian firms**

This report contains an estimate of the costs to society of problems related to occupational health, environmental pollution and occupational accidents in Norwegian firms. The types of problems that are included in the cost estimates are:

- New cases of occupational disease.
- Emissions of nitrogenoxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon dioxide (CO<sub>2</sub>) and volatile organic compounds (VOC).
- Occupational accidents.

The cost estimates are incomplete. Relevant problems that could not be included in the cost estimation, because there was not sufficient information available about them, include:

- Occupational health problems in a wide sense of the term (the official concept of occupational disease in Norway is restricted to a small set of diseases).
- Emissions of other air pollutants, like carbonmonoxide (CO) or ozone (O<sub>3</sub>).
- Pollution of soil and water.
- Noise emissions.

The costs to society of the problems that could be included was estimated to 26.9 billion NOK (3.55 billion US Dollars). The largest costs were attributable to air pollution (15.2 billion NOK). Accidents were second largest (10.4 billion NOK) and occupational disease smallest (1.4 billion NOK).

The costs were estimated for 30 different sectors. Sectors having large costs included oil and gas production, transport, chemical industry and building and construction. The costs constitute about 2.8% of the gross national product of Norway. About 38% of the costs were estimated to be internalized by the firms.