

A. ATMOSPHERE/AIR POLLUTION

Government focal point(s): Zsuzsanna Bibók
Responding ministry/office(s): Ministry of Environment and Water

DECISION-MAKING: STRATEGIES, POLICIES, PROGRAMMES AND PLANS, LEGISLATION, POLICY INSTRUMENTS AND THE REGULATORY FRAMEWORK; INVOLVEMENT OF MAJOR GROUPS

In Hungary *the state of the environment concerning air pollution and air quality* may be characterised by the following facts: as emissions of sulphur dioxide and lead were significantly reduced in the last decade, air quality improved in respect to these pollutants. Particulate matter emissions and, thus, concentration show only small changes. One of our main concern is traffic generated nitrogen oxides emissions. In general, nitrogen oxides emissions were reduced in downtown areas. However, in the vicinity of heavy traffic during peak hours NO_x concentrations are high.

Concentration of pollutants does not exceed the annual limit values. Exceedances of short term health related limit values of nitrogen oxides and PM may occur in some places rather in the city centres next to the busy roads and traffic conjunctions. At some monitoring stations the concentration exceeds the alert threshold for NO₂ for shorter period. The concentration of small particles is rather high, the exceedances of daily limit value can be detected in more cases. However, the introduction of smog alarm has not been necessary till now.

The background annual averages of *ozone concentration* reflect a slight increasing trend. In the hottest period of summer the concentration of ozone raises up to limit value. Alert threshold of ozone might be exceeded at some monitoring sites.

Our *national strategy* on air pollution abatement has three pillars

- reducing air pollution in the regions where exceedances of limit values may occur mainly in the cities with heavy traffic, and in the industrialised areas by the establishment of action plans for short and medium term,
- maintaining the ambient air quality of the relatively clean regions and
- fulfilling of the obligations due to the international protocols i.e. Convention of Long Range Transboundary Air Pollution and its protocols, Montreal Protocol.

The existing *network of air quality monitoring* in Hungary is based on 59 measuring sites installed at 24 locations all over the country. The monitoring network is capable of the continuous on-line measurement of SO₂, NO/NO_x, CO, VOC, O₃, benzene and PM₁₀. In 5 densely populated cities monitoring stations operate as a local network and in further 13 city centres monitoring stations were established as individual measuring points. Smog alert systems have been operating in six big cities.

The data of the whole network is collected and processed by the National Air Quality Data Centre. The Data Centre has responsibility to ensure data availability for public via internet. The local public information systems on air quality data are operated by the Environmental Inspectorates.

55 monitoring stations on the settlements are operated by the regional Environmental Inspectorates and 4 background stations operated by the National Meteorological Service. Since the 1970's manual air quality measuring network with sampling points for SO₂, NO₂ and dust deposition has been operated at nearly 100 locations. The evaluated and assessed data produced by the measuring networks have been regularly published in annual publications.

The uniform system of quality assurance/quality control (QA/QC) for the national air quality measuring networks was established in 2001 at the National Reference Centre.

The Hungarian legislation on air is in fully compliance with the EU requirements the control of air pollutants and the management of air quality is likely the same as the EU's practice.

Zones and agglomerations were selected in 2003 based on air quality data over a five years period between 1998 and 2002. 10 zones and one agglomeration of Budapest including the capital and surroundings settlements were designated. In 2005 a modification was ordered for designation of ozone zone.

For zones in which the level of one or more pollutants is higher than the limit values plus margin of tolerance the competent regional Environmental Inspectorates coordinated the preparation of local action planes for attaining the relevant limit values. The Inspectorates are managing implementation of action plans and they control the improvement of air quality.

National emission ceilings for 2010 have been set for sulphur dioxide, oxides of nitrogen, ammonia and VOCs. The Hungarian National Emission Reduction Plan to attain the ceilings was prepared in 2004 and it is available for the public. Measures to achieve national emission ceilings by 2010 comprise those ones affecting the sectors of industry, transport, agriculture. The implementation of investments needed to reduce of emissions is going on.

- In some big cities there is a potential to exceed the concentration of air pollutants the alarm thresholds. In six Hungarian cities the smog alarm system has been introduced in such cases when the alert thresholds are exceeded. The public authorities have responsibility to manage these episodes.
- Hungary has transposed the EU legislation on quality requirements of fuel. The improving of quality of fuel is in parallel with the legal obligations.
- Marketing of leaded petrol for use in road transport has been prohibited in Hungary as of 1 April 1999.
- The strategy of environment friendly transportation is under approval. This strategy includes all measures needed to promote cleaner transport.
- The local authorities have obligation to prepare plans to protect the environment of settlements. The protection of clean air and improvement of air pollution is crucial part of these plans which includes i.e. transportation measures.
- The background measuring data shows the significant shares of long range transmission of pollutants. The main concerns for Hungary was published by EMEP/MSC-W in 2004.

- Programs designed to reduce ozone-depleting substances and promote alternatives under the Montreal Protocol.

The consumption of ODSs is controlled by the Regulation 2037/2000/EC of the European Parliament and of the Council that is more ambitious than the Montreal Protocol. The consumption of ODSs in Hungary has dropped considerably. While the annual use of ODSs was about 8000 t in 1986, in 2004 it was only 154 t. (On the other hand the consumption of HFCs are increasing.)

Two actions aiming at the further reduction in ODSs should be mentioned.

1. Halon-bank

The government financed the creation of a national halon-bank, which is collecting the non-critical halon decommissioned, and participating in its destruction.

2. Methyl bromide phase out project

GEF finances the total phase out of methyl bromide use in some CEIT countries. Some rotating-spade injection equipment will be procured and the farmers will be trained how to use the alternative methods in soil fumigation.

Emission of greenhouse gases and climate change

Hungary considers climate change one of the basic global environmental challenges due to the increasing antropogenous emission of greenhouse gases. A special *thematic action plan* was adopted within the framework of the second National Environmental Programme (NEP-2) on the general tasks to cope with this problem and control the emissions. Concerning international cooperation, Hungary became a Party to the UNFCCC and the Kyoto Protocol and makes all necessary actions to meet the obligations. Our NC-s (see the web-side : http://unfccc.int/national_reports/annex_i_natcom/submitted_natcom/items/1395.php) were duly submitted and provide a detailed insight

As the figures of *Chart1* shows emissions from Energy, Agriculture, Industry and Solvents sectors have decreased. There is some increase in the Waste sector. In the Land Use Change and Forestry sectors sinks (therefore it is a negative figure!) show a fluctuating but steady increase. Examining the trend of gases it is clear that the amount of emitted CO₂, CH₄ and N₂O is decreasing, specifically that of CO₂, however, in recent years the latter has shown certain fluctuations. *See chart 1.*

Hungary cooperates with EU Member states within the ECCP, to apply various common policies and legal instruments. One of the most significant actions is the introduction of the EU Emmission Trading System (ETS).

CAPACITY-BUILDING, INFORMATION, RESEARCH AND DEVELOPMENT

Data of air pollution of different industries are available in the database of EPER (European Pollutant Emission Register) via internet. Air quality data and some general information on health effects of different air pollutants are available in the homepage of the Ministry for Environment and Water as well.

Air dispersion modelling is carried out by the Hungarian Meteorological Service (HMS). AERMOD is a dispersion model developed for regulatory purposes. The Annual review of activity of the HMS issued in 2004 offers more information of air quality modelling field.

The assessment of *the potential implications of the climate change* is also an important task. There is an ongoing research programme on these impacts and on the potential adaptation and response policies to these impacts.

FINANCING

COOPERATION

Hungary is party to the Convention on Long-Range Transboundary Air Pollution and its protocols and the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol Furthermore, Hungary is a Party to the UN Framework Convention on Climate Change, acceded to the Kyoto Protocol and takes part various multilateral cooperative programmes on climate change.