



národní  
úložiště  
šedé  
literatury

### **Stav a vývoj**

CENIA, česká informační agentura životního prostředí  
2008

Dostupný z <http://www.nusl.cz/ntk/nusl-295560>

Dílo je chráněno podle autorského zákona č. 121/2000 Sb.

Licence Creative Commons Uveďte původ 4.0

Tento dokument byl stažen z Národního úložiště šedé literatury (NUŠL).

Datum stažení: 10.04.2024

Další dokumenty můžete najít prostřednictvím vyhledávacího rozhraní [nusl.cz](http://nusl.cz).



A bar chart comparing three categories of waste management data from 2002 to 2007. The y-axis represents the volume in thousand tonnes, ranging from 0 to 40,000. The x-axis lists the years. For each year, there are three bars: a blue bar for Total production, a red bar for Hazardous waste, and a yellow bar for Municipal waste. Total production is consistently the highest, followed by Municipal waste, and then Hazardous waste.

Year	Total production (thousand tonnes)	Hazardous waste (thousand tonnes)	Municipal waste (thousand tonnes)
2002	37,000	2,000	4,000
2003	35,000	2,000	4,000
2004	38,000	2,000	4,000
2005	29,000	2,000	4,000
2006	27,000	2,000	4,000
2007	30,000	3,000	6,000

## A stylized illustration of a suburban neighborhood. In the foreground, two people are walking on a path. To their right is a small house with a chimney. Further right is a larger house with a gabled roof. A car is parked in front of it. A tall evergreen tree stands to the left of the larger house. In the background, there are more houses, a power line tower, and several birds flying in the sky. The illustration is in a simple, graphic style with a limited color palette.

*Printed on chlorine-free paper.*

## THE ENVIRONMENT OF THE CZECH REPUBLIC

Ministry of the Environment  
of the Czech RepublicSTATE ENVIRONMENTAL  
FUND OF THE  
CZECH REPUBLIC



### AIR AND CLIMATE CHANGE

Between 1990 and 2006, and especially during the 1990s, emissions from basic pollutants into air substantially dropped in the Czech Republic. Today, these emissions are slightly increasing. This is particularly true for emissions from local furnaces and mobile sources (mainly transportation). Air quality has been worsened over the long term due to dust particles, nitrogen oxides, tropospheric ozone and polycyclic aromatic hydrocarbons. Taking into account the increasing volume of road transportation and difficult regulation of small stationary emission sources, these substances form a dangerously growing pollution component both in larger agglomerations and in smaller settlements where solid fuels are used. Transportation also largely accounts for above-limit concentrations of ozone that are harmful to human health and eco-systems.

#### The field of the 36th highest 24-hour PM<sub>10</sub> concentration, 2007

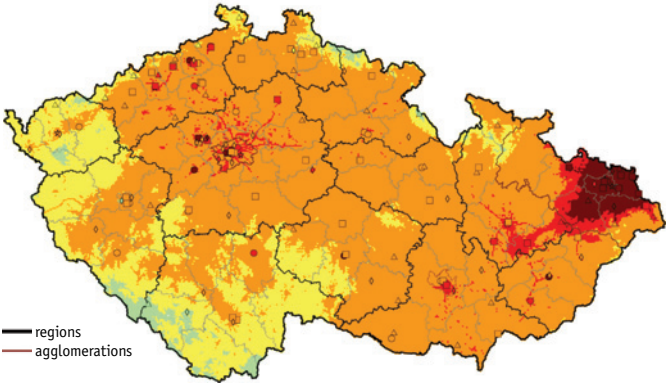
Source: Czech Hydrometeorological Institute

#### Classification of stations

- Background urban
- ◆ Background suburban areas
- ▲ Rural
- Transportation
- ★ Industrial

#### Concentrations [ $\mu\text{g}\cdot\text{m}^{-3}$ ]

- ≤ 20  $\mu\text{g}\cdot\text{m}^{-3}$  (≤ LAT) – 2.3% of the territory
- 20–30  $\mu\text{g}\cdot\text{m}^{-3}$  (LAT–UAT) – 20.9% of the territory
- 30–50  $\mu\text{g}\cdot\text{m}^{-3}$  (UAT–LV) – 70.5% of the territory
- 50–60  $\mu\text{g}\cdot\text{m}^{-3}$  (LV–60  $\mu\text{g}\cdot\text{m}^{-3}$ ) – 4.0% of the territory
- > 60  $\mu\text{g}\cdot\text{m}^{-3}$  – 2.3% of the territory

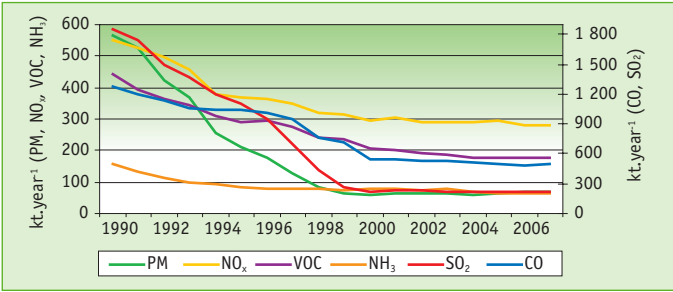


LAT – the lower assessment threshold – if the pollutant's concentration is below this level, it does not have to be measured; either modelling or an expert assessment is sufficient.  
UAT – the upper assessment threshold – if the pollutant's concentration is above this level, measuring is obligatory.  
If the concentration ranges between the UAT and the LAT, the above methods can be combined.  
LV – limit value

Specific greenhouse gas emissions are also high. In spite of their significant decrease (by almost 24%) since 1990 and the fact that the Czech Republic will comply with its Kyoto Protocol commitments, the current emission level per capita is approximately 40% higher than the EU average. Greenhouse gas emissions from road transportation have been growing at the fastest rate. A lot of emissions are also caused by the continuing large share of energy intensive production, the composition of primary energy sources (PES) with a predominance of solid fuels (used both for electricity generation and in home furnaces). The renewable energy sources share in primary energy sources (approximately 6%) and gross electricity generation (approximately 4%) is still low, despite a major increase in the installed capacity of wind and solar power plants.

#### The development of selected pollutant emissions in the Czech Republic [kt·year<sup>-1</sup>], 1990–2007

Source: Czech Hydrometeorological Institute

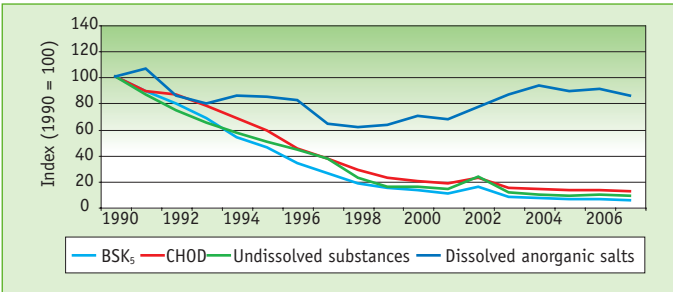


### WATER AND WATER MANAGEMENT

A significant finding is the improvement of surface water quality, largely due to the substantial decrease in pollution discharged from industrial and municipal sources. The decrease in pollution was to a large extent caused by both industry restructuring in the early 1990s and legislative changes, including fines for discharging pollution. Another major influence is the development and modernisation of sewage systems and waste water treatment plants supported from the state budget and EU funds. Today, 96% of all sewage water connected to sewer systems is treated. 80% of the population is connected to sewer systems. Water supplies in the Czech Republic are sufficient and water loss in the pipe network has been decreasing, but remains relatively significant. The amount of produced drinking water and the amount of waste water discharged into the sewage system network continues to drop.

#### The development of discharged pollution expressed as a 1990 index in the Czech Republic, 1990–2007

Source: T. G. Masaryk Water Research Institute



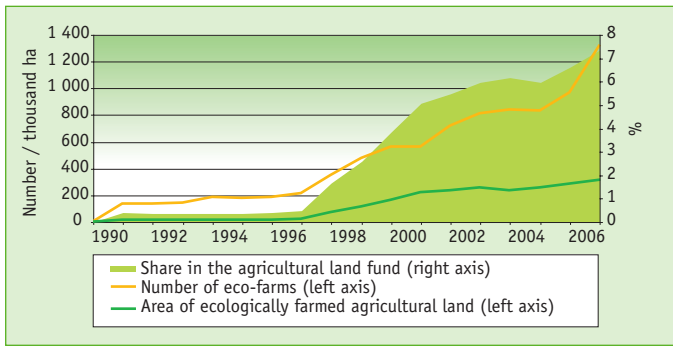
Similarly to other places in Europe, still water eutrophication remains a problem. This is caused by an increased presence of nutrients in water that promote the growth of green algae and anabaena in the summer. These are harmful to human health.

### SOIL AND FORESTS

From the environmental point of view, soil has been exposed to the long-term effects of chemicals. Agriculture is a significant source of extraneous chemical substances that enter into the soil and water. Soil continues to be burdened by the application of mineral and limy fertilisers and plant protection preparations that accounted for the record agricultural production between 2004 and 2007. On the other hand, the development of ecological agriculture is continuing, and both the area of ecologically farmed land and the number of eco-farms are increasing.

#### The development of ecological agriculture in the Czech Republic, 1990–2007

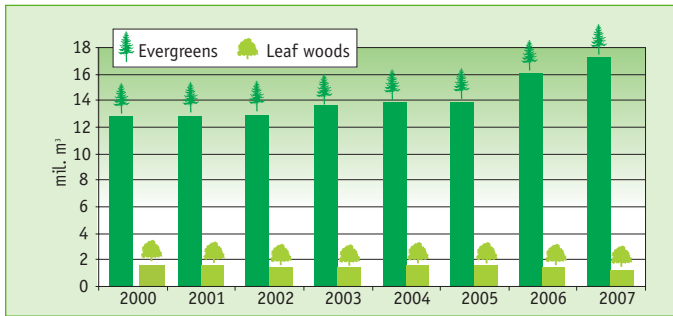
Source: Ministry of Agriculture



The existing intensive farming and unsuitable landscape utilisation caused a lot of environmental damage and negatively influenced the biodiversity and aesthetic value of the landscape. A positive trend in landscape utilisation is the increasing share of permanent grass stands and forests at the expense of arable land. Due to increased demand, natural disasters and forest pests, the volume of raw wood logging has been increasing, while the total area of forest stands, despite a slight increase in the total forest land, has been decreasing.

#### The development of wood logging in the Czech Republic [millions of m<sup>3</sup>], 2000–2007

Source: Czech Statistical Office



On the other hand, the area of certified forests according to the sustainable management system has been increasing. In 2007, it totalled 70% of the total forested area. The percentage of deciduous trees within the species composition of forests has also been growing.

However, the current state of the species composition and the health of forests in the Czech Republic are far from optimal. The main reason is the prevailing spruce and pine monoculture stands that were exposed to high pollutant emissions from industry and the energy sector in the past. Currently, forests are negatively impacted, especially by air pollution (tropospheric ozone and other substances), insect and in many other places by large numbers of cloven-hoofed game. The health condition of Czech forests according to the defoliation rate is still among the worst in Europe.