

CONCLUSIONS OF THE ANALYTIC PART

- The **priority** pollutants are:
 - ◆ **Primary PM₁₀ and PM_{2.5} particulate matter (with special emphasis on "black carbon particles")**
 - ◆ **Benzo(a)pyren**
 - ◆ **Ammonia**
 - ◆ **Volatile organic compounds**
 - ◆ **Nitrogen oxides**

The reason is the failure to meet the limit values for PM₁₀, PM_{2.5}, benzo(a)pyrene and tropospheric ozone, which exposes a significant proportion of the population to a health risk and threatens ecosystems and vegetation. Another reason is that the 2030 model calculations identified a high risk of failure to meet the set emission reduction commitment for ammonia, VOCs, NO_x.

In terms of economic sectors, the most significant ones include "Local household heating" with regard to its share in the total national emissions of priority pollutants (VOCs, primary PM₁₀ and PM_{2.5} and benzo(a)pyrene) and to its high usable potential to reduce emissions. In the case of tropospheric ozone, the most important sector in terms of emissions of its precursors is transport. In the case of ammonia and precursors of tropospheric ozone, it is "Transport" and "Agriculture".

Geographically, the most important regions in which air quality standards for PM₁₀ and PM_{2.5}, and benzo(a)pyrene are repeatedly exceeded and the population is highly exposed are in particular the **agglomeration Ostrava/ Karviná/ Frýdek-Místek, as well as the Prague agglomeration, Brno agglomeration, the Northwest zone (Ústí nad Labem Region), the Central Bohemia zone (Kladno area) and the Central Moravia zone. In the case of tropospheric ozone, the priority areas are in particular the background, mainly rural locations.** The air quality in the agglomeration Ostrava/ Karviná/ Frýdek-Místek is significantly influenced by the transport of pollutants from the Republic of Poland, which is especially notable in poor dispersion conditions¹.

The decline in emissions of primary PM₁₀ and PM_{2.5} particulate matter in the period 2005-2016 has not manifested significantly in the reduction of the pollution load. Air pollution concentrations are strongly influenced by meteorological factors and long-range transport of pollution (including secondary aerosols). The amount of emissions produced currently does not provide a sufficient margin to meet the limit values, especially during adverse weather conditions.

The transport sector has significant potential to reduce emissions in particular through a natural renewal of the fleet. For that reason, it is necessary in this sector to focus on **the fastest possible fleet renewal as anticipated**, which in the Czech Republic lags behind the EU average, on **support for vehicles with alternative drivetrains** and **on shifting a part of the transport performance from road to rail.**

¹ See <http://www.air-silesia.eu/cz/a762/Dom.html>

The household heating sector has significant potential for reducing emissions after 2022, mainly in the **higher utilization of non-combustion heat sources and district heating systems** at the expense of combusting solid fuels (especially coal), and also in the modernization and **replacement of local heaters** with low-emission or emission-free heat sources.

The agriculture sector has the greatest potential in **the storage and application of manure and mineral fertilizers** and in the area of livestock farming where **lower-emission farming methods and technologies to reduce emissions** can be used.

Considerable potential exists **also in the public energy sector**, especially in **non-combustion energy sources**.