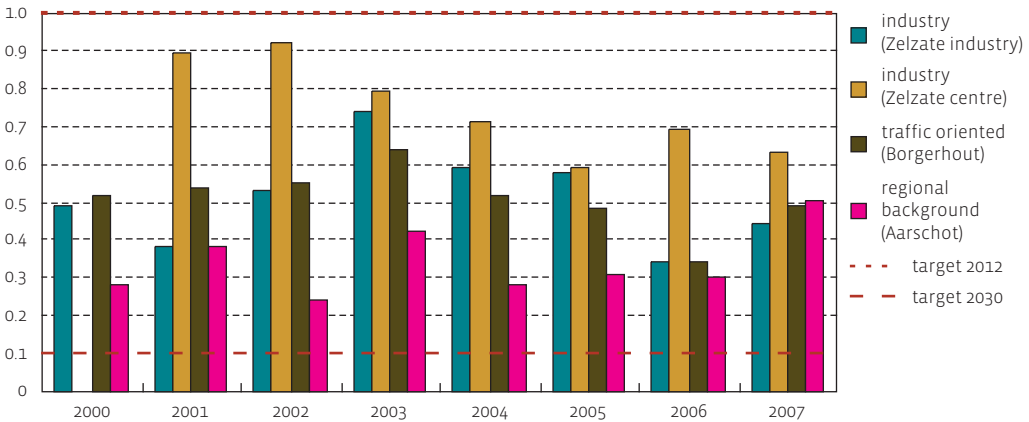




B(a)P concentration (ng/m³)



Source: VMM

Continuous attention needed for public health

VMM has measured the PAH (polyaromatic hydrocarbons) in ambient air since 1995, from 2000 this is measured with a high volume sampler (the values consequently cannot be compared with values from before 2000). Only a limited number of measurement locations are systematically sampled. B(a)P (benzo(a)pyrene) is one of the best known PAHs because of its carcinogenic properties and is considered to be an indicator for the PAHs.

The fourth daughter directive (2004/107/EC) on air quality uses a target value of 1.0 ng B(a)P/m³ in PM₁₀ particles as an annual average to be reached in 2012. The World Health Organization indicates in its Air Quality Guidelines a cancer risk of 1 in 100 000 exposed people for a lifelong exposure to 0.1 ng B(a)P/m³ in the air (which can be adopted as the target for 2030).

The target for 2012 of 1 ng B(a)P/m³ will be reached everywhere. Compared with the target for 2030, exceedances will be observed. The average concentrations have always fluctuated in recent years between 0.3 and 0.6 ng B(a)P/m³.

In recent years more and more attention has been paid to ‘secondary’ pollutants such as nitro-PAHs. The concentration of this is a factor 10 to 20 lower than that of PAHs but the toxicity of nitro-PAHs is a factor 100 higher. The contribution of nitro-PAHs to the health risk therefore deserves the same attention.

In the winter higher concentrations are measured than in the summer as a result of the contribution of building heating and the weaker distribution of the air pollution by the more stable air. Increasing traffic and the increasing share of diesel also make a continuously growing contribution.