

WHO Conference

Role of Regional Public Health Authority (RPHA) in the air protection

MUDr. Šebáková & team

Ostrava, 13.6.2017



Krajská hygienická stanice Moravskoslezského kraje se sídlem v Ostravě
Na Bělidle 7, 702 00 Ostrava, podatelna@khsova.cz, www.khsova.cz

Air protection activities

- History (Project Silesia, monitoring, ...)
- Sources - emission, imission, pollutants
- Cross-border cooperation
- Present projects of RPHA
- Cooperation in region

History

- Project Slezsko (Silesia), Bilthoven - since 1991
- Special monitoring of Ostrava-Karviná area
- Estimation of the impact concentration PM10 on mortality and morbidity in population of Ostrava
- Evaluation of PM10 pollution level in the air in relation to population of Ostrava from 2001 to 2010
- Initiation in order to deal with issue of benzene in Ostrava

Poster

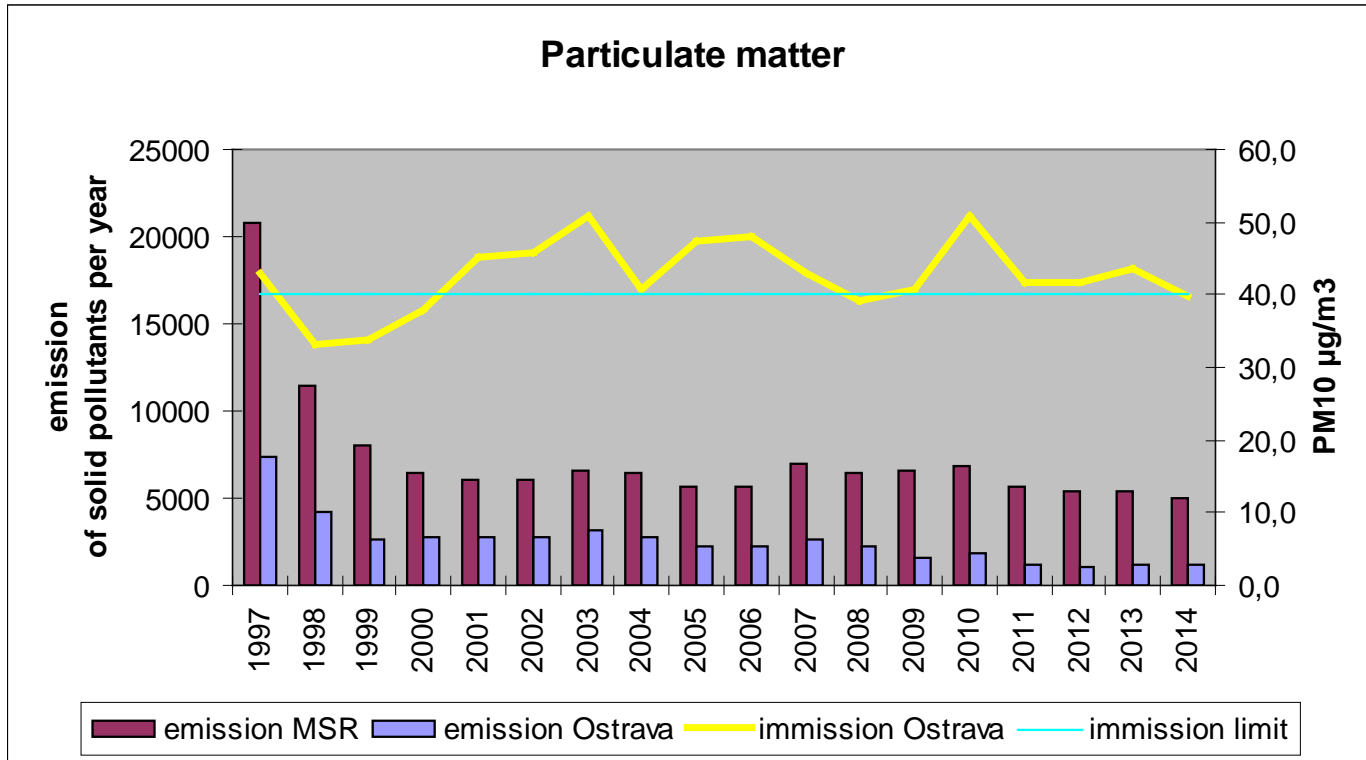
Air pollution sources

- Industry
- Transport
- Local furnaces (individual housing)
- Particles from Poland
- Specific local sources
 - Old ecological burden (Ostramo lagoons)
 - Dumps, Burning tailings (heavy industry waste)

Air monitoring

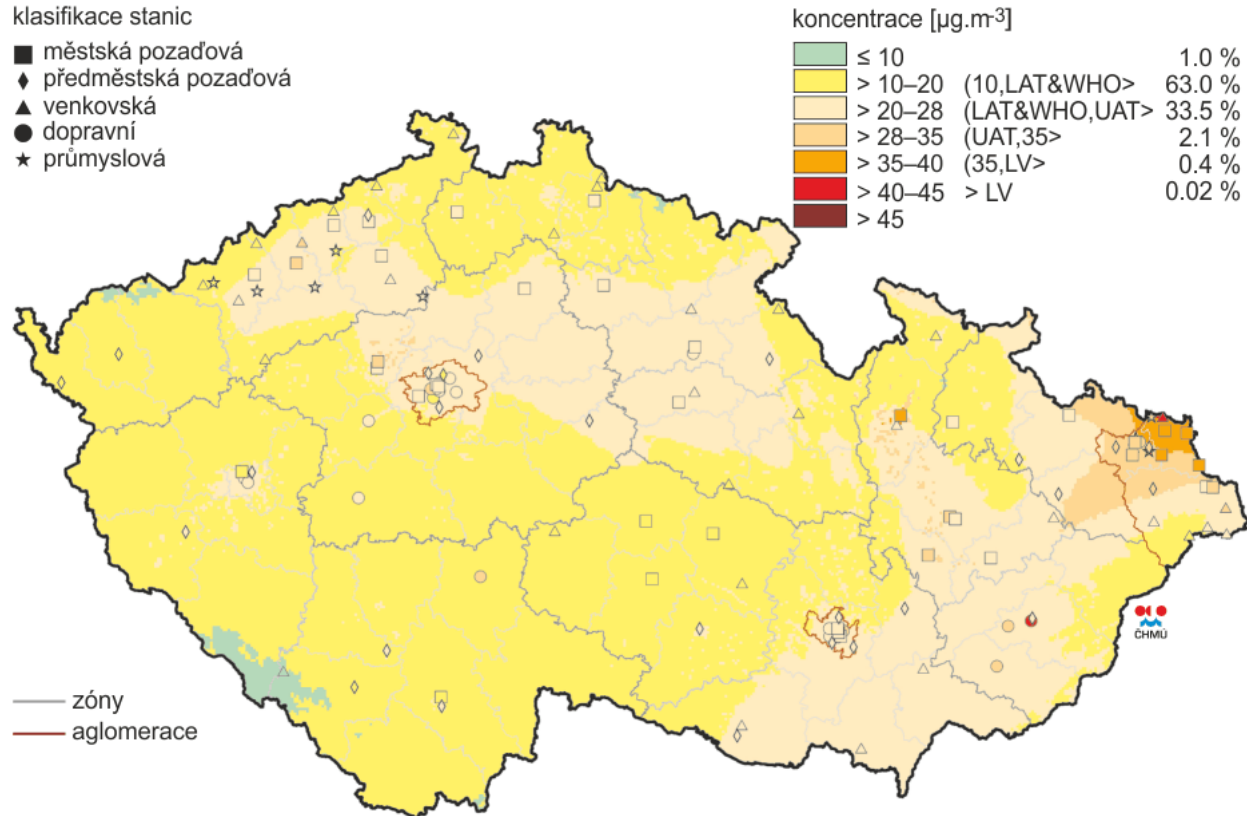
- Basic monitored pollutants:
 - dust particles (PM_{10} , $PM_{2,5}$, PM_1), SO_2 , NO_2 , CO, O_3
 - health-significant - metals (As, Pb, Cr, Cd, Ni), organic substances (benzene, PAHs/BaP)
- Monitoring networks - Czech Hydrometeorological Institute (CHMI), Public Health Institute (PHI)
 - daily limit PM_{10} $50 \mu\text{g}/\text{m}^3$
 - annual limit PM_{10} $40 \mu\text{g}/\text{m}^3$
 - ***concentration recommended by WHO***
 $10-20 \mu\text{g}/\text{m}^3$
 - annual limit BaP $1 \text{ ng}/\text{m}^3$

Solid pollutants emission



Poster

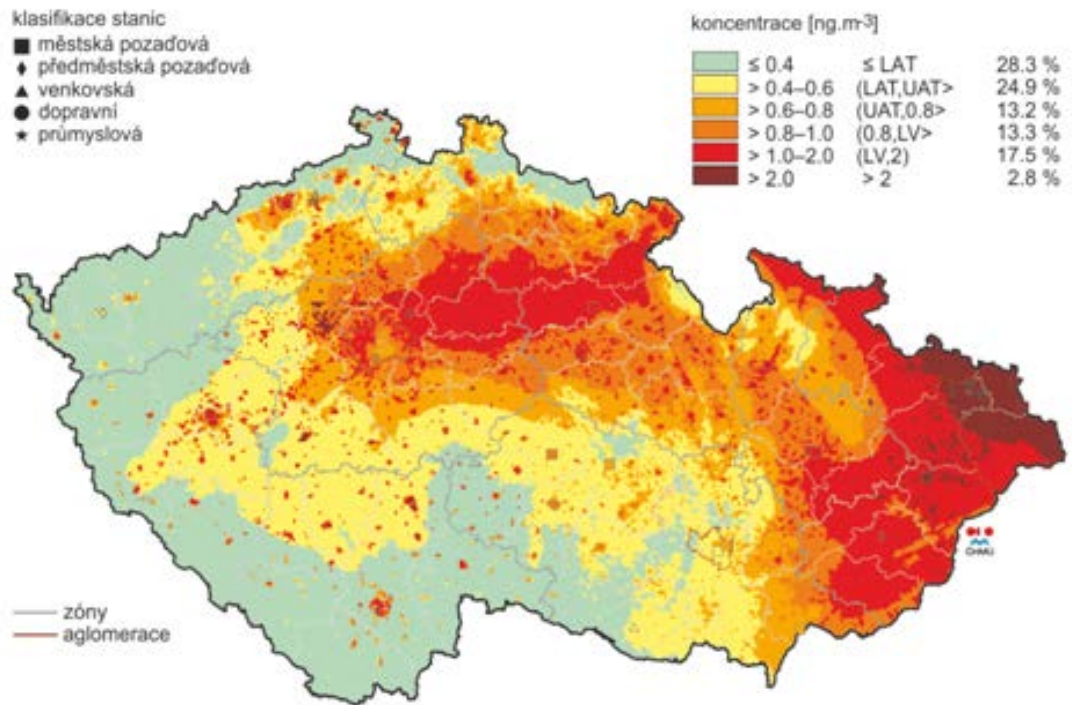
Annual average concentration PM₁₀ 2015



Obr. IV.1.2 Pole roční průměrné koncentrace PM₁₀, 2015

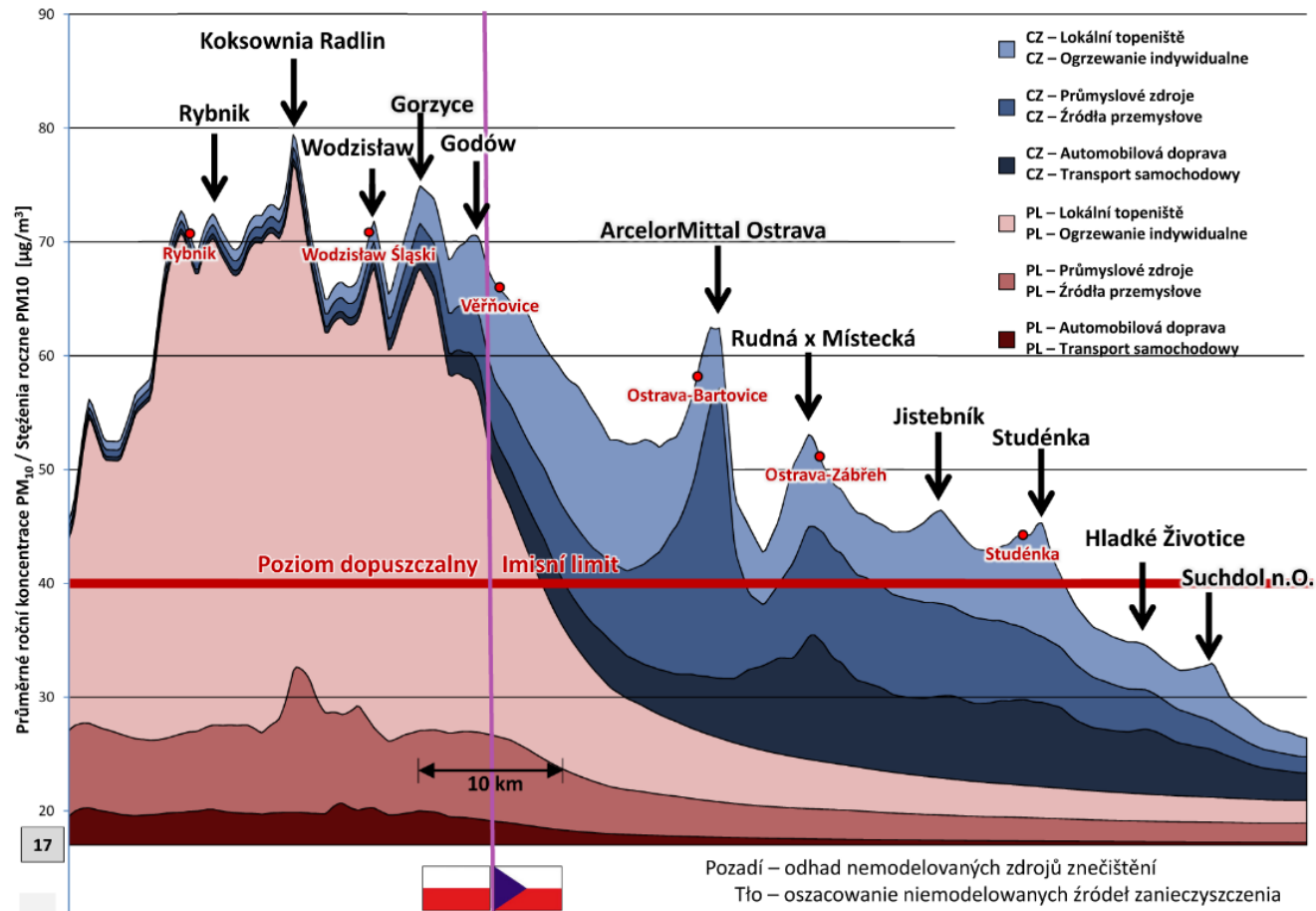
Poster

PAHs in the air



Obr. IV.2.1 Pole roční průměrné koncentrace benzo[a]pyrenu, 2015

Cross-border influence



Source: www.air-silesia.eu

WWW.KHSOVA.CZ

Currently

- Strategic Environmental Assessment (SEA) - programs for emission reducing, air quality improvement, cross-border cooperation with Poland and Slovakia
- Environmental Impact Assessment (EIA) - steelworks modernization, ecologization of the heating plant, Ostramo lagoons rehabilitation, Regional integrated waste center/incinerator
- Integrated Pollution Prevention and Control (IPPC) - possibility of supervision from the point of view of the public health protection during the service
- Assessing the projects of old ecological burden rehabilitation
- National monitoring „Health status monitoring in relation to the environment“ (NIPH, PHI)

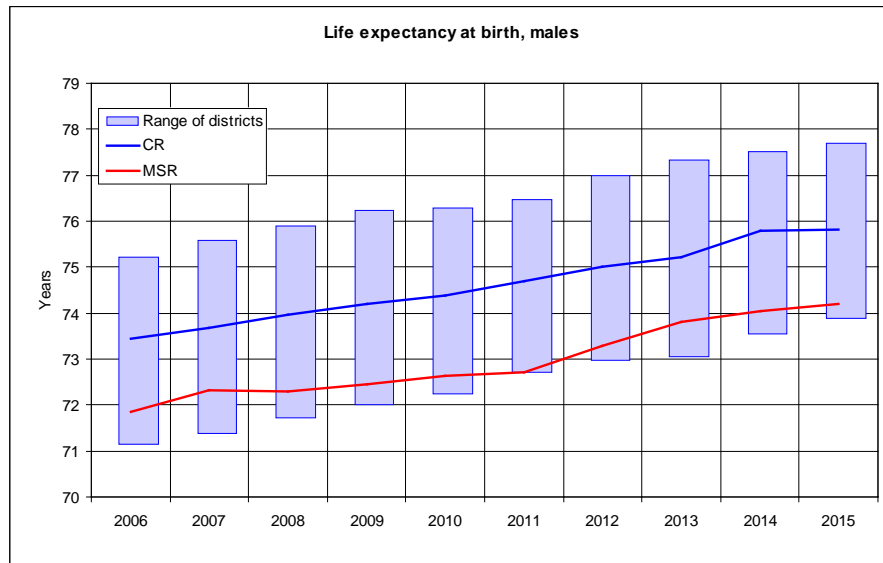
Cooperation

- Regional Authorities, City of Ostrava - projects support
- Municipalities, region - participation in environmental committees, regular meetings
- The Czech Environmental Inspectorate (CEI) - combined supervision, information exchange
- The National Institute of Public Health (NIPH), Public Health Institute (PHI) - projects participation (Air Silesia, Air quality information system, monitoring)

Measures

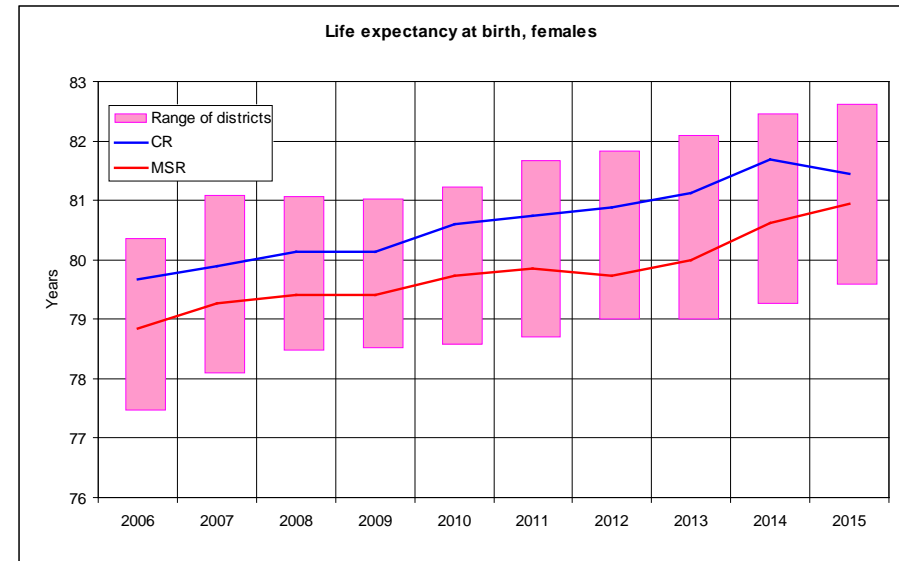
- Parking lots outside the built-up area
- Transport terminals outside the city
- Reduction of average emissions
- Gas transport
- Disposal of environmental burdens
- Technology improvement
- Accepting authorising of action plans for air protection
- Boiler subsidies

Life expectancy at birth



Male

Female



Poster

Conclusion

- Health status of a person is affected by many factors:
 - Living and working conditions (in M-S region there is high proportion of heavy industry - Coal mines, Iron works, Coking Plants)
 - Social-economic factors, psycho-social stress and lifestyle
 - Genetic disposition and health care



**Thank you
for your attention.**