



HELCOM Stakeholder Conference 2025
A 'one Baltic' approach towards a sea
unaffected by hazardous substances
31 March 2025

EMISSIONS IN KRAKOW, POLAND

Grzegorz Grzybczyk

Department of Environment, Climate and Air

Municipality of Krakow



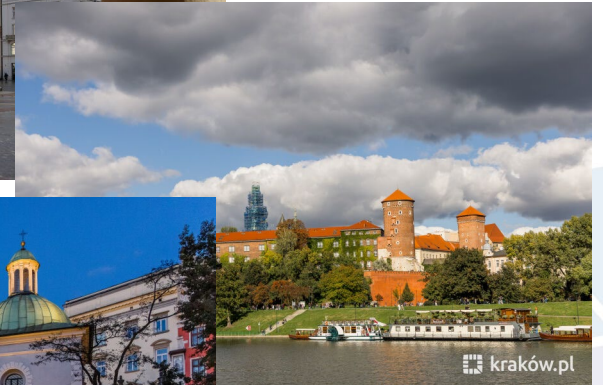
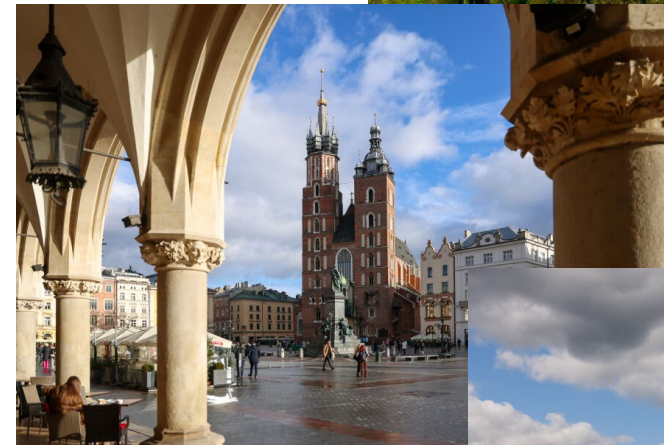
HSC
2025

HELCOM Stakeholder Conference 2025
A 'one Baltic' approach towards a sea
unaffected by hazardous substances
31 March 2025

A few facts about Krakow

Second-largest city in Poland with a rich historical heritage

- Population: approximately 800,000
- Annual population growth rate: ~0.3%
- One of the largest academic centers in Poland, with numerous universities and a high level of education among residents.



A city close to nature, with well-developed urban infrastructure

- Historical capital of Poland and part of the Kraków metropolitan area
- Numerous city parks and green areas, including Błonia and Wolski Forest
- Area: 327 km², with 6 rivers, including the Vistula, and 3 landscape parks.

A center of innovation and business development in Poland

- Headquarters of many international companies, including those from the IT and finance sectors
- One of the most important business outsourcing (BPO/SSC) hubs in Central and Eastern Europe
- A dynamically growing startup market, especially in the new technologies sector.



HELCOM Stakeholder Conference 2025
A 'one Baltic' approach towards a sea
unaffected by hazardous substances
31 March 2025

What is currently happening in municipalities to minimise the release and impact of airborne pollution from hazardous substances?



As a dynamically developing city, Krakow demonstrates that it is possible to harmoniously combine intensive development with respect for historical heritage. The city's programmes aimed at combating smog, segregating waste or developing green spaces are a step towards more sustainable development.

Mission of 100 climate-neutral and smart cities by 2030

Krakow has been participating in the EU initiative "European mission of 100 climate-neutral and smart cities by 2030" since 2022. Its aim is to support a group of European cities in a systemic transformation towards climate neutrality and transform them into centres of innovation.



HSC
2025

Good practices

HELCOM Stakeholder Conference 2025
A 'one Baltic' approach towards a sea
unaffected by hazardous substances
31 March 2025



Air protection programme for the Małopolskie Voivodeship

Territorial scope: regional.

Significance: The Air Protection Programme for the Małopolskie Voivodeship aims to achieve the permissible levels of pollutants in the air, set by Polish and EU legislation, as soon as possible. The programme sets out the most effective measures to achieve the permissible levels of PM10, PM2.5, NO2 and benzo(a)pyrene in the air no later than by 2026.



HELCOM Stakeholder Conference 2025

A 'one Baltic' approach towards a sea
unaffected by hazardous substances

31 March 2025



Anti-smog resolution has been adopted for Krakow. As of 1 September 2019, the use of solid fuels is banned in the City of Kraków. As part of the subsidies provided by the Municipality of Krakow, more than **45,000** solid fuel fireplaces were eliminated, almost **2,000** renewable energy source installations were installed, and the total funds disbursed for this purpose amounted to almost EUR 85 million.

Now (as February 2025) we have 80 solid fuel firepaces in Krakow.

Achievement of today's air quality status was achieved as a result of the City's consistent policy pursued in accordance with remedial programmes such as the Air Protection Programmes developed under the Air Quality Management System. Success would not have been possible without the participation of social organisations and the huge involvement of the city's residents in the process of replacing furnaces. Today, almost all buildings in Kraków are heated in an environmentally friendly manner.



HELCOM Stakeholder Conference 2025

A 'one Baltic' approach towards a sea
unaffected by hazardous substances

31 March 2025



It is also the first regulation of its kind in Poland, setting an example for other cities in the country that face similar smog problems. The anti-smog resolution for Krakow is an inspiration for other local governments, indicating the possibility of effectively combating air pollution through the introduction of appropriate regulations.

These regulations have helped to significantly reduce air pollution, which has been one of the one of the main problems of the City of Krakow. The differences in measurements over the last few years for annual average concentrations are as follows:

• Type of contamination	2018	2023
• PM10	43 µg/m ³	23 µg/m ³
• PM2.5	31 µg/m ³	15 µg/m ³
• NO ₂	32 µg/m ³	24 µg/m ³



HELCOM Stakeholder Conference 2025
A 'one Baltic' approach towards a sea
unaffected by hazardous substances
31 March 2025



Implementation of **Climate City Contract for Krakow:**

- Further improvement, also on reducing Krakow airborne emissions of hazardous substances
- The objective adopted in the Climate Contract for Krakow is to reduce greenhouse gas emissions by 80% by 2030 compared to 2018. A large part of the emission reduction (4,473 thousand tCO₂ e) will result from actions implemented after 2018 or planned in strategic documents of the city and the Polish government. The contract includes a detailed description of an additional 58 actions that should be taken to achieve additional emission reductions of 1 614 thousand tCO₂ e (carbon dioxide equivalent). The cost of these measures was estimated at EUR 7,1 billion.



HELCOM Stakeholder Conference 2025

A 'one Baltic' approach towards a sea
unaffected by hazardous substances

31 March 2025



However, the calculations of the Economic Model indicate that the total financial, direct and indirect benefits (reduced energy expenditure, health care, additional jobs, etc.) outweigh the costs of the transformation. Emission reductions will overwhelmingly result from the implementation of national strategies, implemented by private actors: energy companies, businesses and building owners and managers.

Eight key actions on the road to climate neutrality:

- decarbonisation of the district heating system,
- the development of citizen energy communities,
- renovation of municipal public buildings,
- modernisation of road and square lighting,
- construction of the metro and development of rail transport,
- renovation of residential buildings and development sites,
- increasing resilience to the effects of climate change,
- Involving citizens, entrepreneurs in city management



THANK YOU FOR YOUR ATTENTION