

# Air Quality and Health

## Air pollution is now the largest environmental health risk to the pan-European population

Air pollution is a local, pan-European and hemispheric issue. Air pollutants released in one country may be transported in the atmosphere, contributing to or resulting in poor air quality elsewhere.

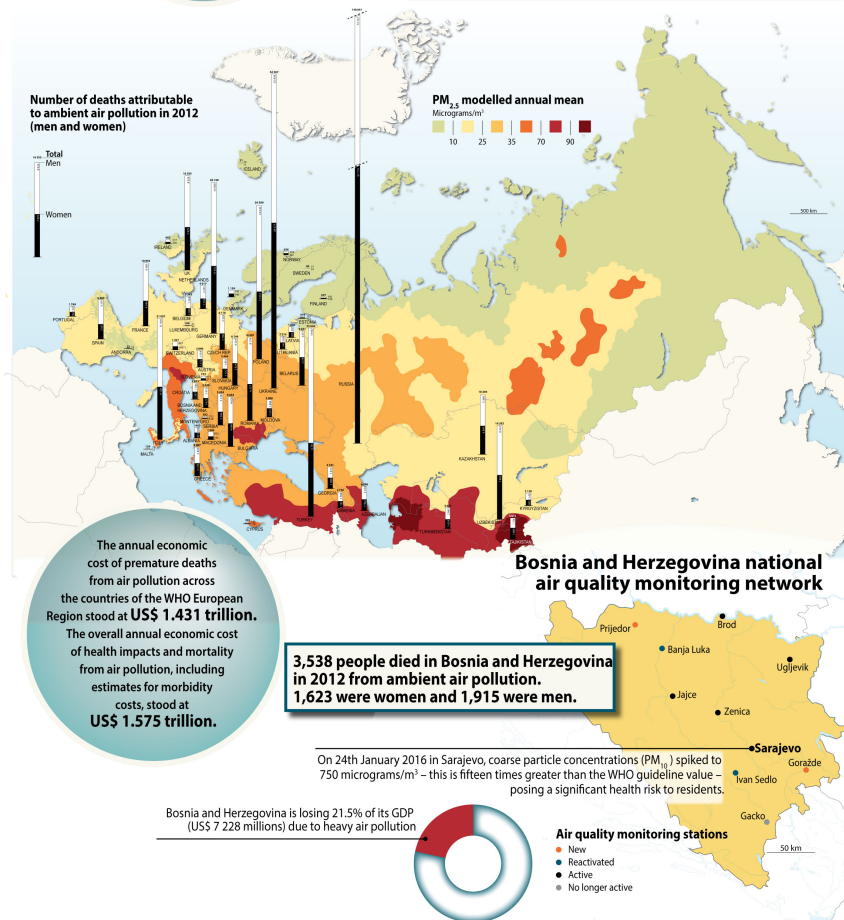
Particulate matter, nitrogen dioxide and ground-level ozone, are now generally recognised as the three pollutants that most significantly affect human health.

Sources of special concern: Motorized road transport, household fuel combustion, agriculture and industrial coal burning

Ozone pollution is associated with about 21 000 premature deaths per year in the pan-European region

Some 40 million people in the 115 largest cities in the European Union (EU) are exposed to air exceeding WHO air quality guideline values for at least one pollutant.

Children living near roads with heavy-duty vehicle traffic have twice the risk of respiratory problems as those living near less congested streets.



### What can be done?

**FOR INDUSTRY:** clean technologies that reduce industrial smokestack emissions; improved management of urban and agricultural waste, including capture of methane gas emitted from waste sites as an alternative to incineration (for use as biogas).

**FOR TRANSPORT:** shifting to clean modes of power generation; prioritizing rapid urban transit, walking and cycling networks in cities as well as rail interurban freight and passenger travel; shifting to cleaner heavy duty diesel vehicles and low-emissions vehicles and fuels, including fuels with reduced sulfur content.

**FOR URBAN PLANNING:** improving the energy efficiency of buildings and making cities more compact, and thus energy efficient.

**FOR POWER GENERATION:** increased use of low-emissions fuels and renewable combustion-free power sources (solar, wind or hydropower); co-generation of heat and power; and distributed energy generation (mini-grids and rooftop solar power generation).

**FOR MUNICIPAL AND AGRICULTURAL WASTE MANAGEMENT:** strategies for waste reduction, waste separation, recycling and reuse or waste reprocessing; as well as improved methods of biological waste management such as anaerobic waste digestion to produce biogas, are feasible, low cost alternatives to the open incineration of solid waste. Where incineration is unavoidable, then combustion technologies with strict emission controls are critical.

**The Batumi Action for Cleaner Air** was endorsed in June 2016 by the Ministers of Environment from the pan-European region, presenting a number of actions for fighting air pollution and improving air quality across the region through: establishing systematic, comparable and transparent monitoring activities and emissions inventories; establishing national action programmes that reduce air pollution; improving public awareness; building capacity and providing technical support; and policy.

Sources of information: UN Environment, World Health Organization, The Organisation for Economic co-operation and Development, United Nations Economic Commission for Europe, European Environment Agency.