

Poor air quality adversely affects human health, the environment, and the climate. In Europe, emissions of many air pollutants have decreased substantially over the past decades, resulting in improved air quality across the region. However, air pollutant concentrations are still too high, and air quality problems persist. A significant proportion of Europe's population live in areas, especially cities, where exceedances of air quality standards occur: ozone, nitrogen dioxide and particulate matter (PM) pollution pose serious health risks.

The main policy instruments on air pollution within the EU include the Ambient Air Quality Directive (adopted as 2008/50/EC) which, together with the fourth daughter Directive (2004/107/EC) provides the current framework for the control of ambient concentrations of air pollution in the EU. National Emission Ceilings (NEC) Directive establishes national emission reduction commitments for 2020 and 2030 for five air pollutants. In addition, there is source-specific legislation addressing industrial emissions, road and off-road vehicle emissions, fuel quality standards etc. Emissions are also addressed internationally under the 1979 Convention on Long-range Transboundary Air Pollution.

European legislation on air quality is built on certain principles. The first of these is that the Member States divide their territory into a number of zones and agglomerations. In these zones and agglomerations, the Member States should undertake assessments of air pollution levels using measurements, modelling and other empirical techniques – and report air quality data to the European Commission accordingly. Where levels are elevated above limit or target values, Member States should prepare an air quality plan or programme to address the sources responsible and so ensure compliance with the limit value. In addition, information on air quality should be disseminated to the public.

In Serbia, in 2018¹

electricity and heat production are responsible for

91% of sulphur dioxide (SO₂) emissions.

Most of the emissions of particulate matter PM₁₀ (57%) and PM_{2.5} (75%) originated from heating plant of less than 50 MW and households.

The largest emissions of nitrogen oxides (NO_x) come from thermal power plants, the mineral and chemical industries.



Air sector legislation is largely aligned with EU requirements. Nevertheless, additional actions are needed, and full transposition will be achieved by 2021.

Air Quality (AQ) monitoring is in place. State funded national AQ monitoring network consists of Automatic AQ system, operated by SEPA and sub network of urban stations in towns of Serbia on 36 measurement sites, where measurements of different pollutants are operated by 17 Public Health Institutes and Institute for Mining and Metallurgy Bor. The local network of measurement stations and/or sites consist of additional measurement stations and/or sites for air quality monitoring at the level of autonomous province and local self-government units and it is funded from the budget of the autonomous province or the local self-government units.

¹ Presented data for 2018 in Serbia are from Serbian Environmental Protection Agency's Annual report on air quality. The report includes relevant data from national and local air quality monitoring networks.

Serbia has identified 3 zones and 8 agglomerations.

Air quality categories, as assessed by existing monitoring system, are presented in the table below.

		AIR QUALITY CATEGORY								
		2010	2011	2012	2013	2014	2015	2016	2017	2018
ZONES	SERBIA	II	I	I	I	I	I	I	I	I
	VOJVODINA	II	I	I	I	I	I	I	I	I
AGGLOMERATIONS	BEOGRAD	III -PM ₁₀	III -PM ₁₀ , NO ₂	III -PM ₁₀ , NO ₂	III -PM ₁₀ , NO ₂	II	III -PM ₁₀	III -PM ₁₀ , NO ₂	III -PM ₁₀ , NO ₂	III -PM ₁₀ , NO _{2.5}
	NOVI SAD	III -NO ₂	III -NO ₂	I	I	I	II	I	I	I
	NIŠ	III -PM ₁₀	III -PM ₁₀	II	I	I		I	III -PM _{2.5}	I - no data for PM ₁₀
	BOR	III -SO ₂	III -SO ₂	III -SO ₂	III -SO ₂	III -SO ₂	III -SO ₂	I	I	I
	UŽICE		II	II	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀
	KOSJERĆ		III -PM ₁₀	III -PM ₁₀	II	I				III -PM ₁₀ , NO _{2.5}
	SMEDEREVO		III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀				III -PM ₁₀ , NO _{2.5}
	PANČEVO		III -PM ₁₀	III -PM ₁₀	I	I	III -PM ₁₀	I	III -PM ₁₀ , NO _{2.5}	III -PM ₁₀
Valjevo - zone Serbia				III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀
Kraljevo - zone Serbia									III -PM _{2.5}	III -PM ₁₀ , NO _{2.5}
Kragujevac - zone Serbia						II	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀	III -PM ₁₀
Sremska Mitrovica - zone Vojvodina						II	III -PM ₁₀	III -PM ₁₀	I	III -PM ₁₀
Subotica - zone Vojvodina								III -PM ₁₀ , NO _{2.5}	III -PM ₁₀ , NO _{2.5}	III -PM ₁₀ , NO _{2.5}

- category I - clean or slightly polluted air (air quality parameters are below established limit values),
- category II - moderately polluted air (some parameters exceed limit values, but are below tolerant values),
- category III - over polluted air, due to concentrations that exceeded limit value or tolerant value (tolerant values are exceeded for indicated parameters).

In order to improve air quality in agglomerations where limit or tolerant values have been exceeded, air quality plans were developed and approved by Ministry for agglomeration Bor (2013), for agglomeration Belgrade (2016), for agglomeration Pančevo (2017), for Smederevo and Novi Sad agglomerations (2018). Short-term action plan for agglomeration Užice (2016) which stipulates the measures that will lead to reduction and control of emission of particulate matter (PM₁₀), while Air Quality Plan is in procedure of getting approval according to the Law.

Plans – strategic documents to be developed

Despite achievements improving air quality in Serbia, still much remains to be done. The Air Protection Program will be developed until 2021 within IPA project and will define air quality goals and measures to achieve them, will provide basis for further development and adoption of lower-level documents and continuation of directives implementation.

Serbia is also developing Directive Specific Implementation Plans for Air Framework, National Emissions Ceilings, Sulphur Content, Fuels Quality, VOC Petrol Stages I and II directives, which will further guide implementation of EU requirements in order to ensure clean air and healthy environment.

Air pollution knows no borders and we need to tackle the challenge of improving air quality together. Implementation of the EU air protection requirements provide a basis for common action. This is the most efficient way to ensure healthy environment for people of Serbia and other countries.