AIR QUALITY

envap
Serbia and Sweden for Chapter 27

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 five air pollutants for 2020 and 2030. 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.

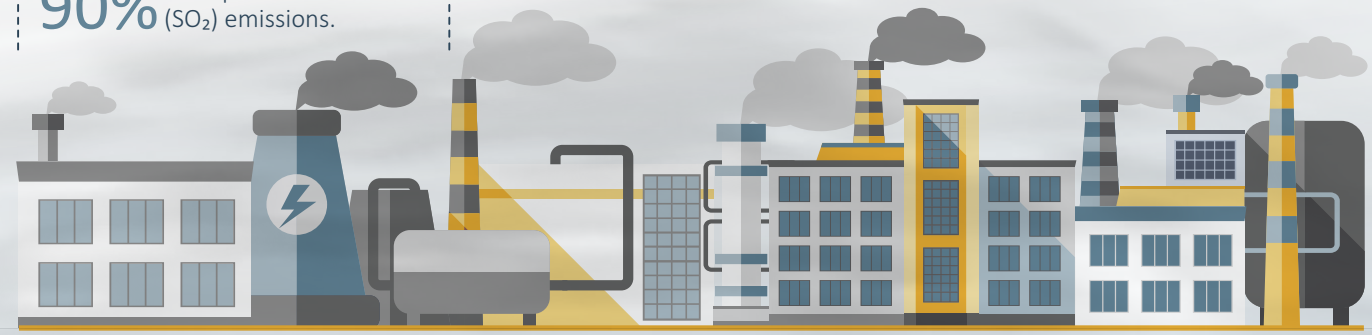
European legislation on air quality is built on certain principles. The first of these is that the Member States divide their territory into several zones and agglomerations. In these zones and agglomerations, the Member States should undertake assessments of air pollution levels using measurements, 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 for pollution and to ensure compliance with the limit value. In addition, information on air quality should be disseminated to the public.

In Serbia, in 2019[1]

electricity and heat production are responsible for **90%** of sulphur dioxide (SO_2) emissions.

Most of the emissions of particulate matter PM_{10} (57%) and $PM_{2.5}$ (77%) originated from heating plants producing less than 50 MW and from households.

The largest emissions of nitrogen oxides (NOx) come from thermal power plants, road traffic, 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 the end of 2021.

Air Quality (AQ) monitoring is in place. State funded national AQ monitoring network consists of Automatic AQ system, operated by SEPA and a subnetwork 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 2019 in Serbia are taken from Serbian Environmental Protection Agency's Annual report on air quality. The report includes relevant data from national and local air quality monitoring networks.

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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									
		Source: Serbian Environmental Protection Agency									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ZONES	SERBIA	II	I	I	I	I	I	I	I	I	I
	VOJVODINA	II	I	I	I	I	I	I	I	I	I
AGGLOMERATIONS	BELGRADE	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}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$
	NOVI SAD	III -NO_2	III -NO_2	I	I	I	II	I	I	I	III -PM_{10}
	NIŠ	III -PM_{10}	III -PM_{10}	II	I	I		I	III -$PM_{2.5}$	III - no enough data for PM_{10}	III -PM_{10}, $PM_{2.5}$
	BOR	III -SO_2	III -SO_2	III -SO_2	III -SO_2	III -SO_2	III -SO_2	I	I	I	III -SO_2
	UŽICE		II	II	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}
	KOSJERIĆ		III -PM_{10}	III -PM_{10}	II	I				III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$
	SMEDEREVO		III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}				III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$
	PANČEVO		III -PM_{10}	III -PM_{10}	I	I	III -PM_{10}	I	III -PM_{10}, $PM_{2.5}$	III -PM_{10}	III - $PM_{2.5}$
Valjevo - zone Serbia				III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}, $PM_{2.5}$
Kraljevo - zone Serbia									III -$PM_{2.5}$	III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$
Požarevac - zone Serbia											III -PM_{10}
Zaječar - zone Serbia											III -PM_{10}
Kragujevac - zone Serbia						II	III -PM_{10}	III -PM_{10}	III -PM_{10}	III -PM_{10}	I
Sremska Mitrovica - zone Vojvodina						II	III -PM_{10}	III -PM_{10}	I	III -PM_{10}	I - no enough data for PM_{10}
Subotica - zone Vojvodina								III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$	III -PM_{10}, $PM_{2.5}$
Beočin - zone Vojvodina											III - $PM_{2.5}$

category I - clean or slightly polluted air (air quality parameters are bellow established limit values),
category II - moderately polluted air (some parameters exceed limit values, but are bellow 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 the Ministry of Environmental Protection, for agglomeration Bor (2013), for agglomeration Belgrade (2016), for agglomeration Pančevo (2017), for agglomeration Smederevo and for agglomeration Novi Sad (2018), and for agglomeration Užice (2020). Short-term action plans were developed and approved by the Ministry, for agglomeration Užice (2016) and for city Sombor in zone Vojvodina (2020).

Plans – strategic documents to be developed

Despite achievements improving air quality in Serbia much remains to be done. The draft Air Protection Program will be developed during 2021 by an IPA project and will define air quality goals with measures to achieve them. It will provide the basis for further development and the adoption of lower-level documents and a 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 the implementation of the EU requirements in order to ensure clean air and a healthy environment.

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

Republic of Serbia
Ministry of Environmental Protection

Шведска
Sverige