

The First National Strategy for Air Quality, i.e. National Air Protection Programme with the related Action Plan, is under preparation.

This programme is based on three pillars:

- reduction of pollutant emissions (Maximal National Emissions – the NEC Directive);
- improvement of air quality (without exceeding the limit values);
- reducing the impact of air pollution on human health.

The Air Protection Programme defines air quality goals and measures for the achievement thereof. It is the basis for further development and adoption of regulations in the area of air protection.

The IPA Project “EU for Better Environment” also supports Serbia in developing Directive Specific Implementation Plans on air quality, maximal national emissions, sulphur content, fuel quality and volatile organic compounds in petrol (Phases I and II for storage and transport of petrol), which will guide further implementation of the EU requirements, with the aim of ensuring clean air and healthy environment.

Air pollution knows no borders. The challenge of improving the air quality must be tackled together, by all of us. Implementation of the EU regulation on air quality provides the basis for joint action. This is the most efficient way to ensure healthy environment in Serbia and in the region, since combating air pollution generates most efficient results through cooperation, primarily at the local and regional levels, then at the global one as well.

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All activities of the project EU FOR BETTER ENVIRONMENT can be found and followed at www.euzatebe.rs platform, where you can also find detailed information about documents under preparation, visibility events and all other environmental-related events supported by the project in cooperation with line ministries and EU Info Centre.

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The EU supports Serbia to achieve its own goals with regard to environmental protection and raise them gradually to EU-level standards. In the last 12 years, Serbia received over 8 billion EUR in financial assistance from the EU’s budget only, including 3.3 billion EUR in non-refundable grants, making the EU by far the biggest donor in Serbia. The EU has thus far invested over 600 million EUR in this sector in Serbia.



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Source:

Ministry of Environmental Protection of the Republic of Serbia,
Environmental Protection Agency
World Wildlife Fund (WWF Serbia)
World Health Organisation
European Environmental Agency
EU Delegation to Serbia – Public data from 2019
National Geographic



This Project is funded by the European Union



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**EU FOR
BETTER
ENVIRONMENT**



Clean air is a prerequisite for human health and well-being. Air pollution is primarily a result of ever-growing technical and technological development, especially the development of industry and energy. Air pollution affects the population in big cities and industrial centres the most. In Europe, more than two-third of citizens live in cities constantly exposed to pollution, which often exceed the limits recommended by laws, but also the limits recommended by institutions such as the World Health Organisation.

What is the situation in Serbia? How to combat air pollution, what is the data like, how can the situation be improved and what are Serbia and the EU doing together regarding this matter?

WHAT CAUSES THE AIR POLLUTION?

When we say the air is polluted, that means that it contains concentrations of solid particles and gases that have harmful effects for human health and environment as whole. We smell that and, unfortunately, quite commonly see with naked eye when the air is filled with high concentrations of harmful gases and dust of unpleasant odour with adverse effect.

Air pollutants can be numerous. Harmful substances that have the greatest impact on human health and environment are monitored through the national air monitoring programme, established in compliance with the transposed EU regulations. This in particular refers to particulate matters (PM₁₀ and PM_{2.5}¹), nitrogen-dioxide (NO₂), ground-level ozone (O₃)², sulphur-dioxide (SO₂) and carbon monoxide (CO).

The air quality monitoring system in the Republic of Serbia indicates that concentration of pollutants in the air quite often exceeds the limit values set for air quality.

MAIN SOURCES OF AIR POLLUTION IN SERBIA include **energy sector** (thermal power plants, power plants, heating plants, residential and individual household heating), **transport** (obsolete vehicle fleet – average vehicle age in Serbia is 17 years), **waste disposal sites and industrial activities** (oil refineries, chemical industry, mining and metallurgy, and construction sector). The Annual Report of the Republic of Serbia on Air Quality stated over polluted air (air of 3rd category) in 2019 in the agglomerations of Belgrade, Niš,

Smederevo, Kosjerić, Pančevo, Novi Sad, Užice and Bor.³ In addition, during 2019, over polluted air was recorded in the cities of Valjevo, Kraljevo, Subotica, Požarevac, Zaječar and municipality Beočin.

What has exactly happened and what is happening when we have such data, especially in autumn and winter periods? At the beginning of heating season and start of small heating plants and individual combustion plants, as well as due to stable atmospheric conditions, air pollution had greatly increased in several cities in the last months of 2019, and in January 2020. Suspended particles such as PM₁₀ (50µg/m³) exceeded daily values in a lot of measuring sites but mostly in Belgrade, Valjevo, Smederevo and Užice throughout the year 2019.

The highest daily concentrations of PM₁₀ in 2019 were measured in Zaječar, 515 µg/m³ and Kraljevo 347 µg/m³.⁴

HEALTH IMPACTS – WHAT ARE THE CONSEQUENCES?

Several thousands of people in the Republic of Serbia suffer from premature death due to the exposure to air pollution, as indicated by calculations of the international organizations⁵.

Air pollution affects human health in a number of ways, both in short and long run. **Exposure to polluted air is related to the increased mortality and morbidity rates, especially to cardiovascular and respiratory illnesses.**

Air pollution is also an issue of social inequality and social justice: vulnerable population – such as children, senior and household members with lower income and limited access to health protection – are more susceptible to adverse effects.

It is estimated that around 2.5 million citizens (i.e. one-third of the population of Serbia) live in areas where air pollution levels exceed limit values defined by the national and EU regulations.

³ The air was excessively polluted in all listed agglomerations due to high concentrations of PM₁₀ and/or PM_{2.5}, with the exception of Bor, which was classified into cities in highest pollution category due to excessive concentration of sulphur-dioxide (SO₂).

⁴ Environmental Protection Agency, Annual Report of the Republic of Serbia on Air Quality, 2019

⁵ Estimates vary depending on the methodology used: WHO estimates can be consulted on https://serbia.un.org/sites/default/files/2019-10/Health-impact-pollution-Serbia_0.pdf while the figures from the European Environmental Agency are accessible on <https://www.eea.europa.eu/publications/air-quality-in-europe-2020-report>

According to some estimates, air pollution costs Serbia 1.68 billion EUR in 2016.⁶

WHAT CAN WE DO AND HOW CAN WE REDUCE POLLUTION?

Solutions:

- **in energy generation sector** – increasing the application of the best available techniques for reducing emissions, as well as the use of low-emission fuels and renewable combustion-free power sources, such as solar, wind and hydropower; co-generation of heat and power; increased distribution of energy generation (e.g. through mini-grids and rooftop solar power generation);
- **in energy sector** – ensuring access to affordable clean energy for heating in households; developing the appliances compliant with the latest eco-design requirements;
- **in industry** – using the best available techniques and promoting innovations;
- **in transport** – switching to clean modes of power generation; prioritising public transport in urban areas, walking and cycling networks and interurban rail travel; and switching to cleaner heavy-duty diesel vehicles and low-emission vehicles and fuels;
- **in urban planning sector** – improving the energy efficiency of buildings; making cities energy efficient; carefully planning institutions such as schools, pre-schools and hospitals;
- **in municipal and agricultural waste management** – introducing strategies for waste reduction, separation, recycling and reuse; improving methods of biological waste management; in case of incineration – application of best available technologies and filters, with strict control of emissions of harmful gases;
- **in agriculture** – applying best practices to minimise emissions from the use of chemical and organic fertilisers and from cattle and other animals rearing.

IN WHAT WAY DOES THE EU HELP SERBIA?

The European Union is the largest partner of Serbia in environmental protection. More than 600 million⁷ EUR have been donated or invested over the past 20 years by the European Union and the Republic of Serbia for better environmental protection.

⁶ European Commission, Status of air pollutants and GHGs in the Western Balkans, 2020 (https://publications.jrc.ec.europa.eu/repository/bitstream/JRC118679/air_qualityghg_western_balkans_online.pdf)

⁷ The EU has invested EUR 404 million, and Serbia EUR 196 million, detailed information: https://ec.europa.eu/neighbourhood-enlargement/instruments/funding-by-country/serbia_en

¹ Particulate matters diameter of which is less than 10, i.e., 2.5 microns

² Secondary pollutant generated in photochemical reaction between the nitrogen oxides (NOx) and volatile organic compounds (VOCs) in presence of sunlight.