

02. AIR QUALITY

OVERVIEW

The public air protection policy aims to reduce the threats to human health and the environment.

In the second half of 2018 and at the beginning of 2019, there was a significant increase in media attention regarding air quality issue. The links between air pollution and the quality of public health were highlighted through the promotion of World Health Organization reports and numerous examples from cities across Serbia. Despite its insufficient and declining resources, the Environmental Protection Agency has made some progress in monitoring and reporting on air quality.

Air quality data has been improved, but it remains scarce and insufficient for good air quality assessment, far below those standards prescribed by the law, both in scope and quality. Although there is scope for further improvement in comprehensibility, there has been an improvement in the presentation of **data that could be used in order to improve awareness of the importance of air quality or reduce the negative consequences of exposure to poor air quality**. Legal instruments such as air quality categorization are being used in a better way, but are limited by the low availability of measurement. In the observed period, communication between the institutions responsible for monitoring the air quality and the institutions responsible for the categorization of air quality, i.e. between the local and central level, has been improved. Air in the city of Kraljevo is of very poor quality, according to local measurements, and it has finally been categorized as **polluted** in the annual report of the Environmental Protection Agency; which represents a certain progress.

There are no law-stipulated instruments in the public policy domain, such as the Air Protection Strategy, or they are adopted with a small amount of data and limited implementation capabilities such as air quality plans or short-term action plans. In October 2018, the Ministry of Environmental Protection established a working group for the reduction of air pollution. According to the available information, the tasks of the working group are limited to activities whose bearers are certainly already clearly defined by law.⁴⁴ In November 2018, the selection of the implementation partner for the implementation of the IPA project was completed, within which it is planned to draft the Air Protection Strategy.⁴⁵

The provisions on limit values for the emission of pollutants, although harmonized with EU standards, have either not been respected or it is impossible to find out whether they are being respected. Emission measurement did not comply with legal regulations, although positive developments in this direction were recorded.

44 <http://www.ekologija.gov.rs/ministarstvo-zastite-zivotne-sredine-formiralo-radnu-grupu-za-smanjenje-aerzagadjenja/?lang=lat>

45 http://www.cfcu.gov.rs/dokumenti/sr/384_852350_can.pdf

Standards, best available techniques and other air pollution prevention tools are not applied sufficiently as air quality improvement tools.

Operators responsible for the largest emissions are still not punished for breaking the law, while the number of household polluters is an issue too large to be resolved within the existing institutional framework.

Now it seems even more clear that without the strong political will, significantly changed mandates of the competent institutions and coordination of institutions, it will not be possible to determine the current health and environmental impact of air quality and improve it. In the observed period, air quality has been ranked as a top priority by the relevant ministry, judging by the media.

In 2018, the European Parliament’s report pointed to the seriousness of the problem of air quality in the Republic of Serbia.⁴⁶ The situation is similar to the report of the European Commission.⁴⁷

LEGISLATIVE FRAMEWORK

Table 1 Elements of the legal framework for air quality management in the Republic of Serbia

Law on Air Protection (“Official Gazette of the Republic of Serbia”, No.36/2009 and 10/2013)
Regulation on determining the Air Quality Control Programme within the State Network (“Official Gazette of the Republic of Serbia”, No. 58 of August 5, 2011)
Regulation on Monitoring Condition and Air Quality Requirements (“Official Gazette of the Republic of Serbia”, No. 11 of March 5, 2010, 75 of October 20, 2010, 63 of July 19, 2013)
Regulation on Determining Zones and Agglomerations (“Official Gazette of the Republic of Serbia”, No. 58 of August 5, 2011, No. 98 of October 12, 2012)
Regulation on the Methodology for the Development of Air Pollutant Emissions and Projections Inventory (“Official Gazette of the Republic of Serbia”, No. 3 of January 15, 2016)
Regulation on Measurements of Air Pollutant Emissions from Stationary Sources of Pollution (“Official Gazette of the Republic of Serbia”, No. 5/2016)
Regulation on Determining the List of Air Quality Categories by Zones and Agglomerations in the Territory of the Republic of Serbia for 2016 (“Official Gazette of the Republic of Serbia”, No. 18 of March 9, 2018)
Regulation on Limit Values of Air Pollutant from Combustion Installations (“Official Gazette of the Republic of Serbia”, No. 6 of January 28, 2016)

46 http://www.europarl.europa.eu/doceo/document/A-8-2018-0331_EN.html#title1

47 http://www.mei.gov.rs/upload/documents/eu_dokumenta/godisnjij_izvestaji_ek_o_napretku/ec_progress_report_18.pdf

Regulation on Limit Values of Air Pollutant Emissions from Stationary Pollution Sources, except from Combustion Installations (“Official Gazette of the Republic of Serbia”, No. 111 of December 29, 2015)
Rulebook on the Conditions for Issuing Air Quality Measurement Permits and Emission Measurement Permits from Stationary Sources of Pollution (“Official Gazette of the Republic of Serbia” No. 01/12)
Rulebook on the Content of the Air Quality Plans (“Official Gazette of the Republic of Serbia”, No. 21 of April 6, 2010)
Rulebook on the Content of Short-Term Action Plans (“Official Gazette of the Republic of Serbia”, No. 65 of September 14, 2010)
Rulebook on the Methods for Exchanging Information Concerning Measuring Points Within the State and Local Networks, on Measuring Techniques, and on the Methods of Exchanging Data Obtained by the Air Quality Monitoring in the State and Local Networks (“Official Gazette of the Republic of Serbia”, no.84 of November 12, 2010)
Law on Fees for the Use of Public Goods (“Official Gazette of the Republic of Serbia”, no. 95 of December 8 2018)

The main change to the period which is analyzed for this report is the adoption of the Law on Fees for the Use of Public Goods.⁴⁸

A strategic impact assessment for the National Plan for the Reduction from Old Large Combustion Plants that has been applied since January the 1st, 2018 entered the public debate phase on December the 25th, 2018; almost 12 months after the implementation of the plan began.⁴⁹ In this way, it is not only impossible to achieve any of the public benefits to which the strategic assessment instrument should serve, but the legal framework in that area is also being reduced to nonsense.

Bearing in mind the objectives of public air quality policy (public health protection and environmental protection) and the causes of air pollution in the Republic of Serbia (large and small fires and traffic), the existing legislative framework needs to be supplemented by binding regulations that will regulate the efficiency and emissions of solid fuels combustion plants. This can be done on the basis of the new Eco-Design Directive 2009/125/EC. Bearing in mind the frequency of using inefficient stoves and solid fuel stoves in households, it is necessary to critically consider not only the deadlines for transposing this directive, but also the permitted emission limit values.

48 It is interesting that with this law it is predicted the possibility of paying compensation for emissions in the air which are higher than the one which are allowed with Decree on Limit Values of Emissions of Pollutants (article 120)

49 <http://www.ekologija.gov.rs/poziv-za-ucesce-u-javnoj-raspravi-o-strateskoj-proceni-uticaja-za-nacionalni-plan-za-smanjeje-emisija-nerp/>

THE IMPLEMENTATION OF LEGISLATION

The adoption and implementation of public policy that will enable the reduction of threats to human health and the environment requires a comprehensive and complex change; more in the institutional and practical-political sense rather than in the sense of the law. **Without strong political will, vertical and horizontal policy coordination, participation of the general and professional public and the adoption of a comprehensive development policy, it will not be possible to significantly improve the air quality in the Republic of Serbia and protect the human right to health and the healthy environment.** In circumstances where the issues of securing the electricity supply, the fight against poverty, the functioning of the district heating system and the mobility of citizens are posed as issues that are opposed to air quality policy, a high-quality public policy in this area cannot arise. Therefore, the inadequate state of implementation of air quality regulations is not surprising.

Availability and quality of data. The reliability and availability of stations for measuring the air quality in the national network has been steadily decreasing since the beginning of their work. During 2011, of all installed SO₂, NO₂, CO, PM₁₀ and O₃ analyzers, 94% had an availability of valid hourly values greater than 90%. In the following years, such a degree of measurement realization was not achieved. In 2012 it was 68%; in 2013 it was 72%; in 2014 it was 30%; in 2015 it was 25%; in 2016 it was 23% and in 2017 it declined to 22%.⁵⁰ On the basis of media inscriptions, it can be concluded that in the observed period there were activities to increase the scope of measurements in the national network.⁵¹ The data from the measuring stations from the monitoring system of the Belgrade Public Health Institute have not been available for a long time on the Agency's website.⁵² In October 2018, the procedure for public procurement of equipment for the national network of automatic stations for air quality monitoring was underway, which, unfortunately, was suspended on January the 26th, 2019 without a selection of bidders.^{53 54}

Data exchange. There has been some improvement in the representation of data from local networks in national reports. The Rulebook on the Manner of Exchanging Information on Measuring Points in the State and Local Network, Measurement Techniques, as well as on the Manner of Data Exchange Obtained by Monitoring the Quality of Air in the State Network and Local Networks⁵⁵, prescribes the correct way of sharing this information.

Local networks - presentation and interpretation of air quality data. An analysis of publicly available air quality monitoring reports at the local level shows that the con-

50 The Annual Report on the state of air quality in the Republic of Serbia in 2017. Environmental Protection Agency, 2018.

51 <http://www.podunavlje.info/dir/2018/12/20/postavljena-merna-stanica-za-kvalitet-vazduha-na-carini/>

52 With the explanation: "DUE TO THE WORKS ON THE IMPROVEMENT OF THE CENTRAL ACQUISITION SYSTEM OF BELGRADE, THE INFORMATION FROM THIS NETWORK OF AUTOMATIC STATIONS IS NOT AVAILABLE"

53 <http://www.sepa.gov.rs/download/IJZ/nabavkeponovom/2018/KD7-2018.pdf>

54 http://sepa.gov.rs/download/IJZ/nabavkeponovom/2019/OdlukaObustava_JNOP_7_2018.pdf

55 "Official Gazette of the Republic of Serbia", No. 84/10

centration of PM₁₀⁵⁶ is most often followed up within 56 days which is in accordance with the law. The legal framework stipulates that the value of 90.4 percentile (which should be less than 50 µg/m³) is used for the assessment of air quality. In some reports, this requirement is not complied with, which affects the estimated air quality. Moreover, in some cases, there is an incorrect interpretation of the tolerance values of the concentrations of certain pollutants, with the reduced tolerance (for PM₁₀ and PM_{2.5}) not being taken into account.

Air quality requirements. The legal framework in terms of air quality requirements is to a large extent harmonized with the EU legal framework. However, it is difficult to actually assess air quality in a situation where the availability of data is questionable. According to the available data in the agglomerations of Belgrade and Užice in 2016, the year's air belonged to the third category. In the agglomerations of Smederevo and Kosjeric, in 2017, due to the lack of data, the category of air quality could not be determined. On the territory of the cities of Valjevo and Kragujevac, as well as in Subotica over the course of 2017, the air belonged to the third category - excessively polluted air.

Air Protection Strategy. The Republic of Serbia does not implement regulations that regulate air quality policy. The deadline for adopting the most important air quality policy document - the Air Protection Strategy expired in February 2015 (this deadline has expired even according to the old law in 2011). Activities on the preparation of this document have not yet begun, but a consultant for the implementation of the IPA project has been selected through which the development of this document will be supported.

Air quality plans. The preparation of air quality plans stipulates the legal framework in situations where air quality in the zone or agglomeration belongs to category III, i.e. when air pollution exceeds the effects of taken measures, i.e. when the environmental capacity is endangered or there is constant air pollution in a certain area. It is clear that reliable data on air quality is crucial for launching air quality mechanisms. Local governments do not have enough capacity to prepare and implement these plans in a quality manner. Responsible institutions at the national level recognize this problem, but do not have the capacity to independently influence the improvement of the situation. According to the available data in the city of Užice, a draft of the Air Quality Plan was prepared in the observed period.⁵⁷

National Emission Reduction Plan. The Republic of Serbia prepared the NERP and forwarded it to the Energy Community Secretariat in Vienna. This plan prescribes the maximum annual emission levels of SO₂, NO_x and PM particles for plants covered by this plan. A strategic assessment of the impact of the National Emission Reduction Plan concerning old large combustion plants that has been applied since January the 1st, 2018 entered the public debate phase on December the 25th, 2018; almost 12 months after the implementation of the plan began. The maximum annual SO₂ emissions for 2018 for the power plants covered by the plan range from 6% to 27% of

56 PM₁₀ are suspended particles with a diameter of 10 micrometers or less.

57 <https://uzice.rs/saopstenje-zelenog-saveta-povodom-problema-zagadjenja-vazduha-u-gradu-uzicu/>

the plant's 2016 emissions⁵⁸. In other words, it is necessary to reduce SO₂ emissions between 4 and more than 16 times, so that the emission levels would be within the permitted limits. This reduction will certainly not be possible within a short period of time. As already mentioned, this plan did not include all power plants that needed to be included in the plan. It remains to be seen how the implementation of this plan will be monitored and how it will be reported.

Emission limits values, their monitoring and inventory generation. According to the data of the "Electric Power Industry of Serbia" (EPS), in 2017 this operator improved the tracking of its emissions and expanded continuous measurement of emissions at its plants⁵⁹. All the plants greatly exceeded SO₂ emission limit values. According to the same data, individual measurements are the source of information for some plants, although this is contrary to the law.

Presentation of information. The reports of the Environmental Protection Agency do not contain sufficiently visible information on the number of stations that were not operational during the reporting period. This is especially noticeable in monthly reports where such information is not present at all. Nevertheless, based on existing measurements, air quality assessments are made. Reports from local institutions are neither readily available to citizens, nor comprehensible, although there are many other different examples, of which Kraljevo stands out.⁶⁰

BATs, BREFs, standards and inspections. Continuous postponement of the implementation of the Law on Integrated Prevention and Control of the Environmental Pollution⁶¹ makes it impossible to use powerful tools to prevent air pollution. In such a situation, the only way to influence large pollutants is to measure their emissions. As stated, there are also some challenges in that area. On the other hand, devices used to burn solid fuels in households which are smaller but more numerous pollutants, do not have to comply with any standard in terms of efficiency or emission of pollutants and can be unconditionally sold on the domestic market. In this way, the pollution from such devices is practically completely uncontrolled, although the use of these devices according to the reports of the Environmental Protection Agency is the most important cause of pollution emitting PM₁₀ particles in Serbia.⁶² Emissions from traffic are also caused by a large number of non-standard vehicles.

Environmental Inspection Department is another tool that is available to improve air quality. However, the inspection cannot replace huge deficiencies in the strategic, legal and institutional framework. In addition, the inspection department is poorly equipped with techniques and people; with an unfavorable age structure of employees. Old inspection reports also point to the fact that the penalties imposed on

58 National Emission Reduction Plan, Report on the state of environment in PC Elektroprivreda Srbije for 2016.

59 *ibid*

60 <http://www.zjkv.org.rs/images/kvalitet/decembar-2018.pdf>

61 "Official Gazette of the Republic of Serbia", No.135/2004 and 25/2015

62 The Annual report on the state of air quality in the Republic of Serbia in 2016, Environmental Protection Agency, 2017.

polluters are often below the statutory minimum, while the work report for 2017 was not able to be found on the website.⁶³

FINANCING^{64, 65}

The funds allocated to air quality monitoring for 2019 are lower than those foreseen for 2017 and 2018 and amounting to RSD 76,406.000, compared to RSD 79,646.000 allocated for the previous years. It is not possible to determine as to how the funds for air quality monitoring were allocated in 2018.

No information is available on whether part of the funds foreseen for the functioning of the Green Fund for 2018 was spent for air quality improvement activities.

The budget for 2019 envisages the amount of RSD 455,344.000 for emergency measures in extraordinary circumstances of environmental pollution and other intervention measures. It is possible that part of these resources will be defined for measures to prevent air pollution. It is necessary to provide an informed comparative analysis, based on the source of emissions and available technologies and the various measures to prevent pollution if they are to be used for this purpose.

Improvements in air quality can only be achieved by adhering to standards related to emissions of pollutants. Attempts to otherwise improve air quality and reduce the risk to human health cannot produce a result. It is important to be informed about the marginal benefits to which the available pollution reduction measures can contribute, as well as about their mutual comparison before any spending of public funds for this purpose.

RECOMMENDATIONS

Legislative framework

- Start the process of adopting the Air Quality Strategy urgently.
- Start the process of establishing binding standards for low-power combustion appliances used in households (stoves and solid fuel stoves) in accordance with the Ecodesign Directive 2009/125/EC. Bearing in mind the frequent usage of inefficient stoves and solid fuel ovens in households, it is necessary to consider the expired transposition deadlines for this directive.
- Supplement the existing legislative framework with binding regulations that will regulate the efficiency and emissions of solid fuel combustion appliances.

63 Report available at: http://www.eko.minpolj.gov.rs/wp-content/uploads/izvestaji/Godisnji_izveštaj_2016.pdf

64 All data on funds for 2019 are taken from the RS Budget Law for 2019 <http://www.mfin.gov.rs/UserFiles/File/zakoni/2018/Zakon%20o%20budzetu%20za%202019%20godinu.pdf>

65 All data on funds for 2019 are taken from the RS Budget Law for 2019 <http://www.mfin.gov.rs/UserFiles/File/zakoni/2017/Zakon%20o%20budzetu%202018.pdf>

Implementation of legislation

As already mentioned, the implementation of regulations in this area depends in the first place on the readiness and capabilities of the operators to harmonize their business operations with legal norms and the ability of institutions to implement regulations.

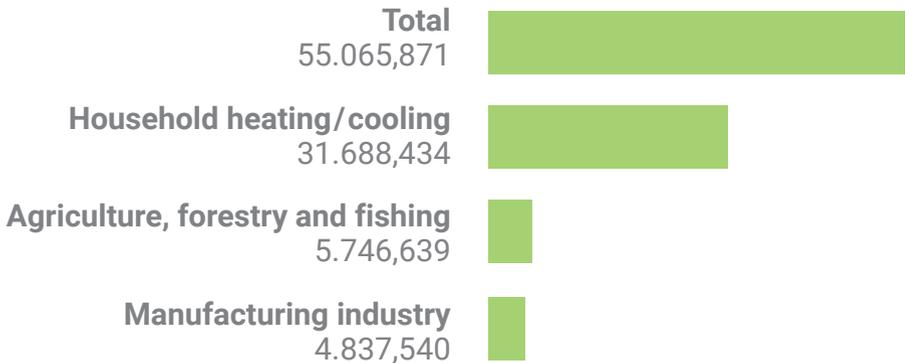
- It is necessary to ensure that the competent institutions enforce regulations related to legal deadlines for the establishment of public policies concerning air quality, regulations related to measuring air quality, exchange of air quality information and obligations under international agreements.
- Monthly information on detected overtime and daytime limit values (LV) must include information on analyzers that did not work in that month.
- The responsible stakeholders for air quality monitoring should ensure that the measuring system is well maintained and that data is made available to the public. Financing for smooth quality operation of air quality monitoring networks should also be secured; especially for urban agglomerations like Belgrade.
- Inter-sectorial cooperation needs to be improved in order to enable the full implementation of existing national regulations.
- Local governments/cities should improve the quality and visibility, as well as ensure the public easy access to air quality data, which is provided from local monitoring networks.

Financing

- Provide funding for the uninterrupted operation of the inspectorate.

AIR QUALITY

Total emissions of **PM₁₀** and three major categories of **PM₁₀** sources (Mg)



Total emissions of **PM_{2,5}** and three major categories of **PM₁₀** sources (Mg)

