Air quality

Overview

In January 2020 The Republic of Serbia adopted the National Emission Reduction Plan (NERP), pertaining to emissions from large combustion plants, two years late and after the initiation of a dispute settlement procedure against the Republic of Serbia by the Energy Community. The delay in adopting the NERP, the method of adoption, and modifications made to the Plan prior to its adoption do not indicate a change for the better, but rather further delays. The Air Protection Strategy, the state-level umbrella document for this policy area, has not yet been adopted.

According to the Serbian Environmental Protection Agency (SEPA), approximately 2.5 million people, or one-third of the Serbian population, have been exposed to excessively polluted air. However, this data should be taken with caution, as the availability of valid hourly data provided by the state air quality monitoring network in 2019 was insufficient (only 48% of monitoring stations provided valid data). Most cities and municipalities with excessively polluted air are also affected by particulate pollution, particularly excessive concentrations of PM_{10} and $PM_{2.5}$ particles, which primarily originate from solid fuels combustion used to heat homes and in small heating plants. Additionally, in 2019, high concentrations of sulphur dioxide (SO_2) of industrial origin were recorded in the city of Bor.

In the period covered by this report, the status of air quality caused a strong reaction from institutions, citizens, civil society organizations and the media. First, the Protector of Citizens initiated a formal investigation into the activities of the Ministry of Environmental Protection and six local self-governments, regarding the implementation of measures for the reduction of air pollution. The Ministry of Environmental Protection also initiated a formal investigation into the activities of the local self-governments, with regard to the adoption and implementation of the air quality plans. In addition, the Ministry also initiated a procedure against *Serbia Zijin Bor Copper*. In January 2020, when air

pollution was severe, the Serbian Government established the Working Group for the Systematic Solution of Air Protection Issues. The Working Group has so far failed to draft measures to address the most significant contributors to air pollution in the Republic of Serbia (individual households and small heating plants) and has instead focused on the transport sector.

It is estimated that eliminating air pollution in Serbia would require large investment, with the Fiscal Council assessing that necessary investment could vary between €1.5 and €2.4 billion.

Strategic and legislative framework

The most significant development in the reporting period regarding the strategic and legislative framework for air quality was the official adoption of the NERP, which pertains to emissions from large combustion plants. Competent institutions and bodies emphasized that the adoption of the NERP was a priority measure aimed at reducing air pollution. However, the NERP was adopted more than two years late. As a signatory of the Treaty establishing the Energy Community, the Republic of Serbia was obliged to ensure the harmonization of emission limit values included in the Large Combustion Plants Directive[55] as of the 1st of January 2018. The Republic of Serbia chose to adopt the NERP as the method for harmonizing national legislation with this Directive and as a means of meeting this obligation, but did not do so in due time.

According to data submitted to SEPA by the Electric Power Industry of Serbia (EPS), emissions from thermal power plants owned by EPS have greatly exceeded the emission limit values stipulated by the NERP. For this reason, in January 2020, the Energy Community Secretariat initiated a dispute settlement procedure against Serbia.[56] Several points in the draft of the NERP initially submitted to the Energy Community were amended in the version that was later adopted by the Serbian Government on the 30th of January 2020. The delay in adopting the NERP, the manner in which it was adopted, and the modifications made to the text indicate that further delays to the implementation of the regulation is likely, rather than compliance with the defined emissions of pollutants.[57]

55 Directive 2001/80/EC of the European Parliament and of the Council of 23rd October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants, available at: https://www.energy-community.org/dam/jcr:5e192ac5-b370-48b3-9eaa-d5bf3f93349f/Directive_2001_80_ENV.pdf

56 https://energy-community.org/legal/cases/2020/case0120RS.html

57 RERI: How does the late adoption of NERP (or the failure to adopt it) impact the air pollution? Available at: https://www.reri.org.rs/kako-zakasnelo-neusvajanje-nerp-a-utice-na-zagadenje-vazduha/

A key document that has not yet been adopted is the Air Protection Strategy. The Law on Air Protection defines the Strategy as "the cornerstone document for the adoption of air quality plans, short-term action plans and programmes for the reduction of emissions of pollutants into the air, which need to comply with it".[58] The original deadline for the adoption of the Strategy, two years after the adoption of the Law, has long expired.

EU Directive 2008/50/EC on ambient air quality and cleaner air for Europe has been partially transposed into national legislation through the Law on Air Protection, the Regulation on Monitoring Conditions and Air Quality Requirements[59], the Rulebook on the Content of Air Quality Plans,[60] and the Rulebook on the Content of Short-term Action Plans[61]. Directive 2004/107/EC (the "Fourth Daughter Directive") has also been partially transposed into national legislation through the Law on Air Protection and the Regulation on Monitoring Conditions and Air Quality Requirements.

The continuation of the drafting and adoption of the remaining air quality plans is planned for the period 2018 and 2021. According to the National Programme for the Adoption of the *Acquis* (NPAA), the adoption of the Regulation on Amendments to the Regulation on Monitoring Conditions and Air Quality Requirements was planned for the fourth quarter of 2019. Drafting of the Implementation Plan for Directive 2008/50/EC on ambient air quality and cleaner air for Europe and the Fourth Daughter Directive was planned for the period between 2018 and 2020, but this has not yet happened.

58 Law on Air Protection ("Official Gazette of the Republic of Serbia", Nos. 36/2009 and 10/2013), Article 27

59 "Official Gazette of the Republic of Serbia", Nos. 11/2010, 75/2010, and 63/2013

60 "Official Gazette of the Republic of Serbia", No. 21 of April 6 2010

61 "Official Gazette of the Republic of Serbia", No. 65 of 14 September 2010

The implementation of regulations

Air quality status

According to the Annual Air Quality Report in Serbia, produced by SEPA, in 2018 air was over-polluted in the agglomerations of Belgrade, Pančevo, Užice, Smederevo and Kosjerić, as well as the cities of Valjevo, Kragujevac, Subotica, Kraljevo and Sremska Mitrovica, due to the exceedance of the limit and tolerance values of suspended PM_{10} and $PM_{2.5}$ particles. The annual limit value for suspended PM_{10} particles (40μg/m^3) was exceeded at all measuring stations in the country that measure PM_{10} particles. Daily limit values of 50 μg/m^3 were exceeded at all measuring stations during 2018, ranging from one day at the Kamenički Vis station, to 170 days at the Valjevo station.[62] In addition to Valjevo, excessive pollution, exceedance of the 24-hour limit value of PM_{10} particle concentration was recorded on more than one hundred days in the cities and agglomerations of Užice, Smederevo, Kraljevo, Beograd (Novi Beograd), Sremska Mitrovica and Kragujevac. According to the regulations, the 24-hour limit value for PM_{10} particle concentration must not be exceeded for more than 35 days in each calendar year.[63] T he limit and tolerance values for $PM_{2.5}$ particles were also exceeded, according to measurements recorded by SEPA's network of automatic measuring stations and indicative measuring. The annual tolerance value for $PM_{2.5}$ particles (25 μg/m^3) was exceeded at five measuring stations in the national network: Kraljevo (with the highest value of 39.0 μg/m^3), Smederevo – Centar, Beograd – Stari Grad, Kosjerić and Subotica. According to indicative measuring, the annual tolerance value of $PM_{2.5}$ particles was exceeded at four locations (Čačak, Niš, Subotica, Kragujevac), where

62 Environmental Protection Agency (2019): Annual Report on Air Quality Status in the Republic of Serbia 2018, page 9, available at: http://www.sepa.gov.rs/download/izv/Vazduh2018_final.pdf

63 Regulation on monitoring conditions and air quality requirements ("Official Gazette of the Republic of Serbia", Nos. 11/2010, 75/2010, and 63/2013).

measuring indicated that only one-fourth of recorded values were below the tolerance values.[64]

To make the overview of the air pollution in Serbia complete, at least two more cities should be mentioned in this evaluation. The quality of air in Niš has been rated as excellent; however, this rating was the due to insufficient measuring of the concentration of pollutants. The City of Bor is one of numerous cities in Serbia facing serious challenges regarding particulate pollution, with very high concentrations of sulphur dioxide, most likely of industrial origin, recorded in 2019. The annual, daily and hourly limit values for sulphur dioxide are strictly defined. These limit values are exceeded throughout most of the year in Bor, indicating that the air is an immediate and direct hazard to residents' health.

Preliminary, unverified data collated from monthly reports on air quality status for 2019, published by SEPA, indicate that in 2019 air has also been excessively polluted in numerous other Serbian cities. 11 measuring stations in the state network recorded numerous occasions when the 24-hour limit values for PM_{10} particles were exceeded for more than 35 days during a calendar year, as permitted by regulations. Limit values for PM_{10} particles were exceeded at: Novi Sad – Rumenačka; Beočin – Centar; Beograd – Stari Grad, Beograd – Novi Beograd, and Beograd-Mostar; Smederevo – Centar; Bor – *Gradski park*; Kosjerić; Niš – OŠ *Sveti Sava* and Niš – IZJZ. The highest number of days of excessive air pollution was recorded in Valjevo (146 days).

The air was particularly polluted in January 2020. Data from the SEPA network shows that excessive pollution for more than 20 days was recorded at as many as 12 stations in January 2020 alone. The highest number of days of excessive pollution was recorded in Valjevo (28 days), as well as in Kosjerić, Pančevo – Vojilovica and Niš – IZJZ (26 days). The highest concentration of PM_{10} particles was recorded in Smederevo, with 567 $\mu g/m^3$, ten times higher than the permitted value.[65]

64 Environmental Protection Agency (2019): Annual Report on the Air Quality Status in the Republic of Serbia 2018, page 32.

65 Monthly reports on air quality are available on the web site of the Environmental Protection Agency at the following link: http://www.sepa.gov.rs/index.php?menu=2019&id=208&akcija=showAll. The SEPA has made great progress in terms of this data, as it made all the monthly data available on the same page. It used to be possible to only download data for the previous month.

According to the National Register of Pollution Sources, presented in the Annual Air Quality Report, the main source of PM_{10} and $PM_{2.5}$ particle pollution is the "Other stationary combustion", which includes individual household furnaces and heating plants with a power output lower than 50 MW.[66] These sources account for over 57% of the excessive pollution from PM_{10} particles and 75% of the excessive pollution from $PM_{2.5}$ particles.

Air quality monitoring

When rating air quality, SEPA relies on data obtained through fixed measuring, using automatic reference methods as well as the gravimetric method. When preparing the Annual Report, SEPA also used data recorded by the Belgrade Public Health Institute (from measuring stations in the state network), Provincial Secretariat for Urban Planning, Construction and Environmental Protection of Vojvodina, the City of Pančevo, and data from the local public health institutes of Sremska Mitrovica, Kraljevo and Užice.[67] The quality of monitoring improved in 2018 compared to 2017, due to a significant increase in the availability of valid hourly values obtained by the state network for air quality monitoring, from 22% valid hourly values in 2017, to 48% valid hourly values in 2018. This means that less than half of the stations has achieved required minimal data availability of 90%[68], which clearly shows that the quality of monitoring in the state network of automatic measuring stations needs to be significantly improved.

During 2019 and 2020, the state network for air quality monitoring was expanded, with new stations in Belgrade (Vračar), Vršac, Paraćin, Novi Pazar, Radinac, Zaječar and Valjevo. From almost the outset of monitoring, the measuring station at Novi Pazar has recorded high concentrations of PM_{10} and $PM_{2.5}$ particles, with air quality in Novi Pazar categorized as "polluted" or "excessively polluted" during most of the period so far monitored. In February 2020, excessive pollution from PM_{10} particles was recorded on 19 days.

66 Environmental Protection Agency (2019): Annual Report on Air Quality Status in the Republic of Serbia 2018, page 17.

67 Environmental Protection Agency (2019): Annual Report on Air Quality Status in the Republic of Serbia 2018, page 14.

68 Regulation on monitoring conditions and air quality requirements, ("Official Gazette of the Republic of Serbia", Nos. 11/2010, 75/2010, and 63/2013).

An automatic detector of concentrations of PM_{10} and $PM_{2.5}$ particles was installed in Vračar, in Belgrade, in January 2020, enabling a realistic insight into the air quality status in this area of the city. This measuring station, which had mostly recorded excellent air quality in the previous period, recorded high concentrations of suspended PM_{10} and $PM_{2.5}$ particles in February and March 2020, with a total of 15 days of excessive pollution.

The Radinac measuring station, which is of great significance due to its location near to the Železara steel mill in Smederevo, is still not releasing real-time pollution data. Only one report with measuring results from the Radinac measuring station has been published to date, which indicated excessive pollution during 10 to 15 days at the end of December 2019 and the beginning of January 2020, and concentrations of PM_{10} particles four to five times higher than permitted.[69]

Institutional oversight

Excessive air pollution in Serbia led to an intervention by the Protector of Citizens. Due to the Ministry of Environmental Protection and other competent authorities' failure to implement specific measures to improve air quality, the Protector of Citizens initiated formal investigation into work of the Ministry of Environmental Protection. The Protector of Citizens inquired about several issues, including the lack of proposals or implementation of specific measures for the reduction of air pollution despite negative air quality ratings in 2018, information about the analysis of the basic main causes of high-level pollution, forecasting and proposal of urgent short-term and long-term measures aimed at reducing pollution, as well as informing the public.[70] The Protector of Citizens also initiated investigations into the work of six local self-governments: Belgrade, Pančevo, Niš, Užice, Kragujevac and Kosjerić.[71]

The Ministry of Environmental Protection has noted on several occasions that it has warned local self-governments regarding their legal obligation to draft long-term air quality plans and has requested reports on the fulfilment of this

69 http://www.sepa.gov.rs/download/akcidenti/vazduh/smederevo_radinac_2020.pdf

70 https://www.ombudsman.rs/index.php/2011-12-25-10-17-15/2011-12-26-10-05-05/6437-z-sh-i-ni-gr-d-n-r-zi-dg-v-r-n-dl-znih-p-v-d-pr-rn-g-z-g-d-nj-v-zduh

71 https://www.ombudsman.rs/index.php/2011-12-25-10-17-15/2011-12-26-10-05-05/6440-z-sh-i-ni-gr-d-n-p-r-nu-p-s-up-n-r-l-r-d-zb-g-pr-rn-z-g-d-n-s-i-v-zduh-u-sh-s-l-lnih-s-upr-v

obligation. Although adoption of air quality plans is mandatory only for those local self-governments in which air has been rated as excessively polluted, the Ministry has contacted all 145 local self-governments to request that they to submit information about these plans; by January 2020, 66 local self-governments had submitted reports. Of these 66, 29 local self-governments stated that in 2020 they would perform monitoring, 16 stated they would plan policy measures and activities, and 21 local self-governments stated that they were not performing air quality monitoring and were not planning to draft plans. The Ministry also stated that within its authority, it had also begun to inspect large greenhouse gas emitters. In 2018, the Environmental Inspection Department of the Ministry of Environmental Protection carried out 83 inspections of large greenhouse gas emitters and filed one misdemeanour complaint and 13 complaints due to economic offences, while in 2019 the Inspection performed 94 inspections regarding air quality, filing one misdemeanour complaint and 12 complaints due to economic offences.[72]

Civil society organizations, the media and citizens have also played a significant role. Through undertaking joint activities, these stakeholders have made air quality a priority topic among the public in periods when excessive pollution has been recorded. The response of the national leadership to this issue has been significant, particularly the formation of the Working Group for Air Protection in Serbia in January 2020. Further, the reaction of citizens and civil society organizations, and their appeals to the relevant institutions, has led to action concerning air pollution in Bor, with the initiation of a procedure against *Serbia Zijin Bor Copper*.

Establishing the Working Group for the Systematic Solution of Air Protection Issues and the stipulated measures

On January 17th 2020, the Serbian Government established the Working Group for the Systematic Solution of Air Protection Issues, including representatives of relevant institutions (Government, line Ministry, SEPA, and the *Milan Jovanović Batut* Institute for Public Health, among others.) chaired by the Prime Minister.

72 https://www.ekologija.gov.rs/s-a-o-p-s-t-e-nj-e/?lang=lat

The Working Group has so far held two sessions. To date, the Working Groups has not offered appropriate solutions for the issue of air pollution, as the emergency measures it has proposed primarily concern the adoption of the NERP, the implementation of which had already been delayed for two years, as well as measures that do not pertain to the sector that prevailingly contributes to air pollution in Serbia. The Working Group began its work by issuing a statement stating that there was no reason for concern due the present status of air pollution in Serbia, thus diminishing the significance of the issue and the alarming data on the negative effect of polluted air on public health.[73]

To date, the Working Group has proposed a set of measures that, considering the most recent official data, will not contribute to reducing pollution in the Republic of Serbia appropriately, as they do not address the sector of small heating plants and individual household furnaces, but rather primarily focus on traffic. Among the priority measures set out by the Working Group are the following: subsidies for the purchase of electric and hybrid vehicles; construction of acoustic moss walls (in Novi Beograd); installation of fast chargers for electric vehicles at key locations in road corridors; and afforestation.[74] A disproportionately large amount of the Working Groups' attention has been paid to the City of Belgrade, with measures aimed at improving city traffic and public transport. Although traffic clearly impacts on air pollution, official SEPA data indicates that the share of pollution from traffic is proportionally small. Other local self-governments facing excessively polluted air have not been specifically referenced in the Working Group's statements. The Working Group has failed to develop specific measures related to small heating plants and individual households, which most contribute to excessive air pollution, according to the official data.

One of the first measures proposed by the Working Group has been to subsidize the purchase of electric vehicles. This recommendation was implemented by the Serbian Government on the 12th of March 2020, through the adoption of Regulation on the

73 The latest WHO analysis points to the high rate of premature deaths due to air pollution in Serbia: more than 3,500 premature deaths per year estimated to be caused by increased concentration of $PM_{2.5}$ particles, as well as the risk of over 150,000 years of life lost (YLL) in the next ten years, more at: http://www.euro.who.int/__data/assets/pdf_file/0020/412742/Health-impact-pollution-Serbia.pdf?ua=1

74 Statements about the Working Group meetings are available at the following links: https://www.srbija.gov.rs/vest/439158/dogovoreni-hitni-koraci-za-smanjenje-zagadjenja-vazduha-u-srbiji.php https://www.srbija.gov.rs/vest/445212/u-planu-niz-konkretnih-mera-za-cistiji-vazduh-u-srbiji.php

Conditions and the Manner of Implementation of Subsidies for the Purchase of New Electric Vehicles, as well as Combined Internal Combustion and Electric Vehicles (Hybrid)[75] and the allocation of up to RSD 120 million of subsidies for this purpose. Given that traffic accounts for 6% of total emissions of PM_{10} and $PM_{2.5}$ particles, increased concentrations of which are a cause of air pollution in Serbia, it can be concluded that the adopted Regulation does not represent an appropriate solution for the issue of air pollution, and that the allocated funds for subsidies in this field will make a disproportionally small contribution to air quality improvement in Serbia.[76]

Air pollution in Bor

The issue of air pollution represents a special challenge for the City of Bor. The situation in Bor differs from that in other cities that are facing excessively polluted air, because the pollution is caused by excessive sulphur dioxide (SO_2) concentrations of industrial origin. According to the Annual Air Quality Report in the Republic of Serbia 2018, published by SEPA at the end of August 2019, the air in Bor was in the first category, i.e. clean and slightly polluted. The Report states that no average values of SO_2 have been recorded in Serbia above the limit value (50 µg/m^3) in the previous year. However, information from the local monitoring network indicates a different situation. The report drafted by the Mining and Metallurgy Institute Bor[77] indicates that the average annual value of SO_2 concentration was 70 µg/m^3, significantly above the limit value of 50 µg/m^3.

In addition to the daily limit value of 150 µg/m^3, sulphur dioxide has a defined hourly limit value of 350 µg/m^3, as well as defined concentrations that are harmful to human health and concentrations about which the public must be informed[78] (three consecutive hours with SO_2 concentrations higher than 500 µg/m^3). It is important to note that the daily limit values must not be exceeded more than three times during a calendar year, and hourly limit values must not be exceeded for more than 24 hours in total in the period of one year.

75 Available at: https://www.srbija.gov.rs/prikaz/450546

76 This comment pertains to the period after the reporting period (March 2020) and it was added because of the importance (i.e. topicality) of the events for the period covered by the report.

77 Mining and Metallurgy Institute of Bor (2019): Report, No. 24538-19, Air quality testing in Bor (local monitoring network) (Annual Report 2018), page 39, available at: http://bor.rs/wp-content/uploads/2019/02/Godisnji-izvestaj-za-2018.pdf

78 Regulation on monitoring conditions and air quality requirements, Appendix XIV, Section A.

According to the monthly air quality reports available on the SEPA website, in 2019, at three measuring stations in Bor SO_2 concentrations exceeded the hourly limit values 407 times, and daily limit values were exceeded 59 times. In the period covered by this report, the month with the highest level of pollution was December 2019. A significant increase in pollution has been recorded since the beginning of September 2019, after which the residents of Bor have been exposed to concentrations of SO_2 that are harmful to human health on several occasions. SO_2 concentrations have exceeded the limit values many times, with values ranging from two to ten times higher than permitted levels recorded.[79]

Due to differences in air quality ratings in local and national documents, as well as the frequent exposure of the population in Bor to sulphur dioxide concentrations that are harmful to human health, Coalition 27 wrote to the Ministry of Environmental Protection, the City of Bor Administration, the EU Delegation, and *Serbia Zijin Bor Copper*, whose industrial processes are linked to the increased air pollution in Bor, and issued a press release on October 21st 2019, requesting that these stakeholders address the issue. *Serbia Zijin Bor Copper* was invited to publish monthly and annual reports on emissions into the air and the monitoring that they have performed.[80] Following a rapid response to this request, in which *Serbia Zijin Bor Copper* stated that the company would submit the information within a reasonable timeframe, representatives of the company had not done so at the time of writing of this report.

The Ministry of Environmental Protection has initiated a procedure against *Serbia Zijin Bor Copper* in response to the excessive discharge of hazardous substances into the air in November 2019 and January 2020. Since the privatization of the company in November 2018, inspections have recorded infractions of legal standards on at least five occasions. Excessive discharges of sulphur dioxide into the air, above the limit values, have been recorded on several occasions, and in August 2019 *Serbia Zijin Bor Copper* was found not to have a wet dust removal system for the transport of mine tailings from the Bor mine, which endangers human health and the environment.[81]

79 Monthly reports on air quality are available on the web site of the Environmental Protection Agency at the following link: http://www.sepa.gov.rs/index.php?menu=2019&id=208&akcija=showAll

80 http://www.bos.rs/ekz/vesti/134/2019/10/21/saopstenje-koalicije-27_-zabrinjavajuci-kvalitet-vazduha-u-boru.html

81 https://www.cins.rs/zidin-na-sudu-zbog-zagadenja-u-boru/

Financing

The Fiscal Council's strategic recommendations for the budget and fiscal policy, as well as its analysis of investment in environmental protection, state that required investment in air protection range from €1.5 billion[82] to as much as €2.4 billion.[83]

In order to resolve the issue of air pollution in Serbia, a more efficient state air quality management system is required. This includes reliable air quality monitoring, stipulating clear obligations for polluters and building strong institutions to ensure those obligations are met. The cost of developing this system is estimated at €50-100 million. Slight changes in the way funds are allocated for air quality monitoring in 2019 and 2020 are evident. In 2019, a specific budget line allocated RSD 76,406,000 for air quality monitoring[84]. In 2020, air quality monitoring was merged with water and soil quality monitoring, with a total of RSD 119,573,000[85] allocated for these purposes. It is therefore not possible to determine the exact amount allocated for air quality monitoring in 2020 based on publicly available documents.

In accordance with EU requirements, Electric Power Industry of Serbia, which is the largest polluter in the Republic of Serbia, will need to invest approximately €650 million in air protection measures by 2027.[86] The largest portion of these funds should be invested in measures to reduce air pollution from thermal

82 Fiscal Council (2019): Strategic recommendations for the budget and the fiscal policy in 2020, available at: http://fiskalnisavet.rs/doc/eng/Summary-Strategic_recommendations_for_the_budget_and_fiscal_policy_in_2020.pdf

83 Fiscal Council (2018): Investments in Environmental Protection: A Social and Fiscal Priority, available at: http://www.fiskalnisavet.rs/doc/eng/FC%20-%20Investments%20in%20environmental%20protection.pdf

84 National Assembly of the Republic of Serbia, the Republic of Serbia Budget Law for 2019, available at: http://www.parlament.gov.rs/upload/archive/files/cir/pdf/zakoni/2018/budzet%202019.pdf

85 National Assembly of the Republic of Serbia, the Republic of Serbia Budget Law for 2020, available at: http://www.parlament.gov.rs/upload/archive/files/cir/pdf/zakoni/2019/BUDZET%202020.pdf

86 Fiscal Council (2018): Investments in Environmental Protection: A Social and Fiscal Priority, available at: http://www.fiskalnisavet.rs/doc/eng/FC%20-%20Investments%20in%20environmental%20protection.pdf

power plants. Current financial damage to the region caused by these thermal power plants is estimated at between €600 million and €1.8 billion per year.[87]

Significant investment in the modernization of district heating systems is required. It is estimated that about €550 million needs to be invested by 2030. A number of projects, at various stages of implementation, with a total value of about €220 million, are on-going. The implementation of the plan for the improvement of district heating systems requires more than double the current level of annual investment of about €20 million per year.[88]

In accordance with the "polluter pays" principle, the private sector is also expected to make necessary investments in order to harmonize pollutant emissions with EU requirements. Given that some of the largest polluters in Serbia are state-owned enterprises, the state must take a leading role in resolving this issue.

87 Health and Environment Alliance (HEAL) (2016): Health Impacts of Coal-Fired Power Stations in the Western Balkans, March 2016.

88 Energy Development Strategy of the Republic of Serbia 2025 with the projections by 2030.

Recommendations

Strategic and legislative framework

1. Enable the participation of the interested public in the process of developing the Air Quality Strategy.

2. Start the process of establishing binding standards for low-power combustion appliances used in households (stoves and solid fuel stoves) in accordance with the Eco-design Directive (2009/125/EC). Given the widespread use of inefficient stoves and solid fuel ovens in households, it is necessary to consider the accelerated transposition of deadlines for this Directive.

3. Supplement the existing legislative framework with binding regulations that will regulate the efficiency and emissions of solid fuel combustion appliances.

The implementation of regulations

4. Ensure that competent institutions enforce regulations related to legal deadlines for the creation of public policies concerning air quality, regulations related to air quality monitoring, the exchange of air quality information, and obligations under international agreements.

5. Monthly information about the detected exceedance of hourly and daily limit values (LV) must include information about which monitoring stations were/were not operating during that month.

6. Stakeholders responsible for air quality monitoring should ensure that the measuring system is well-maintained and that data is made available. Financing for the smooth operation of air quality monitoring networks should also be secured, especially for urban agglomerations such as Belgrade.

7. Improve intersectoral cooperation in order to enable the full implementation of the national regulations that are already in place.

8. Local governments/cities should improve the quality and visibility of air quality data, as well as ensure easy public access to air quality data provided by the local monitoring networks.

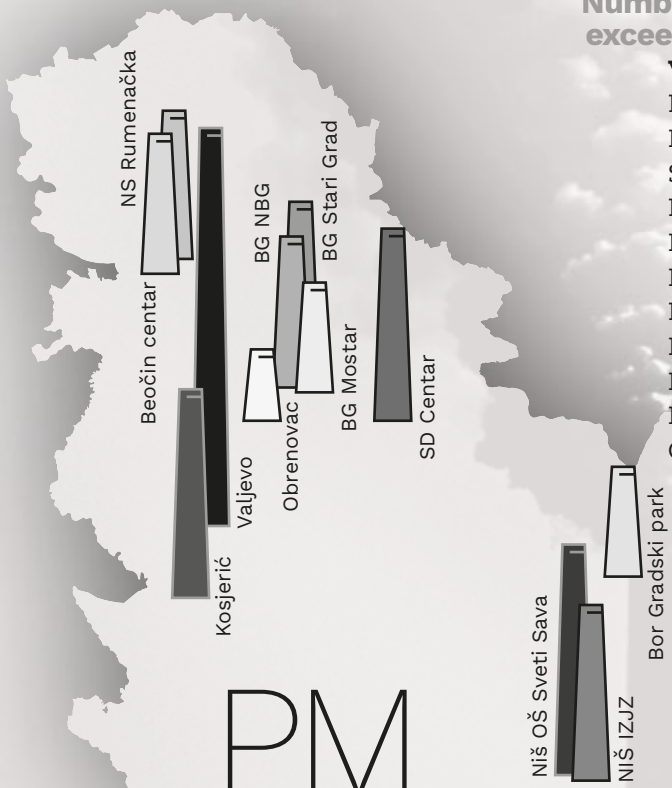
Financing

9. Secure financing for the unobstructed work of inspectorates for environmental protection.

AIR QUALITY

EXCEEDED DAILY LIMIT VALUES

of concentration of PM_{10} particles **during 2019**



Number of days with exceeded limit value

Valjevo	**145**
Niš OŠ Sveti Sava	84
Kosjerić	76
SD Centar	70
Niš IZJZ	64
BG Stari Grad	63
BG NBG	55
NS Rumenačka	54
Beočin centar	51
Bor Gradski park	40
BG Mostar	40
Obrenovac	26

SERBIA

* Daily limit value for PM_{10} concentration particles is 50 μg/m³
The daily limit value must not be exceeded more than 35 times in one calendar year

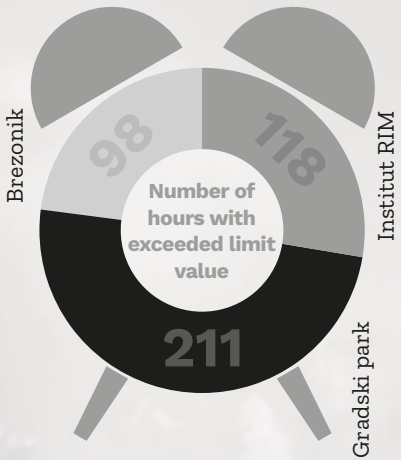
EXCEEDED DAILY AND HOURLY LIMIT VALUES

of SO_2 concentration **during 2019**

2019

Number of days with exceeded limit value

Brezonik	8
Gradski park	40
Institut RIM	12



SO_2

BOR

* Hourly limit value for SO_2 concentration is 350 μg/m³
The hourly limit value must not be exceeded more than 24 times in one calendar year
Daily limit value for SO_2 concentration is 125 μg/m³
The daily limit value must not be exceeded more than three times in one calendar year

KOALICIJA 27