

Industrial Pollution and Risk Management

Overview

Pollution originating from industrial plants in Serbia represents one of the key environmental and public health concerns, particularly in the local communities where these facilities are located. It is also an important indicator of the ability of state and local authorities to ensure the rule of law and a sustainable model of economic development. Industrial emissions severely impact the quality of air, water, and soil, as well as waste management practices, resulting in environmental degradation and, consequently, posing risks to public health.

This report covers industrial pollution from three sectors: the metal processing and production industry, within which 22 operators are required to obtain an integrated permit; the mineral industry with integrated permits necessary for 25 operators; and the chemical industry, where 11 operators are required to hold integrated permits.

The most important piece of legislation governing industrial emissions, aimed at achieving alignment with EU regulations, namely the Industrial Emissions Directive (IED Directive),[178] is the Law on Integrated Prevention and Control of the Environment Pollution,[179] along with its accompanying by-laws. To ensure further alignment with this Directive, the drafting of a new law was initiated in early 2025; the process began with the publication of the Starting Points of the Draft Law on Integrated Prevention and Control of the Environment Pollution,[180] and was followed by a public consultation on the Draft[181] itself in early 2026. The adoption of the new Law on IPPC is scheduled for the third quarter of 2026. According to information in the Starting Points, a total of 57

178 Industrial Emissions Directive 2010/75/EU.

179 Law on Integrated Prevention and Control of the Environment Pollution, Official Gazette of RS, no. 135/2024, 25/2015 and 109/2021.

180 Starting Points of the Draft Law on Integrated Prevention and Control of the Environment Pollution, https://www.ekologija.gov.rs/saopstenja/najave/obavestenje-o-pocetku-izrade-nacrta-zakona-o-integrisanom-sprecavanju-i-kontroli-zagadjivanja-zivotne-sredine

181 Draft Law on Integrated Prevention and Control of the Environment Pollution, https://www.ekologija.gov.rs/informacije-od-javnog-znacaja/javne-rasprave/javni-poziv-za-ucesce-u-javnoj-raspravi-o-nacrtu-zakona-o-integrisanom-sprecavanju-i-kontroli-zagadjivanja-zivotne-sredine (accessed on June 5, 2026).

integrated permits have been issued since the current Law came into force. This accounts for 36% of all operators in the metal processing and production industry, 52% in the mineral industry, and 45% in the chemical industry.

For the prevention and control of industrial environmental pollution, it is of extreme importance that Best Available Techniques (BAT) are consistently and transparently applied in facilities, that relevant state authorities and local self-government units perform their functions appropriately, and that inspection supervision and the roles of judicial authorities are carried out responsibly.

Strategic and Legislative Framework

Implementation of Regulations

Novelties in the Draft Law

During the preparation of the new Law on Integrated Prevention and Control of the Environment Pollution, the Ministry of Environmental Protection was obliged to carry out an ex-ante regulatory impact analysis, publish the results on its webpage, and hold consultations,[182] which it failed to do.

The public consultation on the Draft Law was held between March 13 and April 15, 2026. In the course of its preparation, the non-governmental sector produced and publicly released two extensive analyses: the Analysis of the Starting Points of the Draft Law[183] and the analysis of the Draft Law.[184] The Report on the Public Consultation[185] has also been released, indicating that a total of 130 comments, remarks and proposals were received during the consultation, submitted by 21 participants, including individuals, organizations,

182 Law on the Planning System, Official Gazette of RS, no. 30/2018.

183 Analysis of the Starting Points of the Draft Law on IPPC, https://reri.org.rs/wp-content/uploads/2025/12/Analiza-Polaznih-osnova-Nacrta-Zakona-o-integrisanom-sprecavanju-i-kontroli-zagadjivanja.pdf (accessed on June 7, 2026).

184 Analysis of the Draft Law on IPPC, Industrial Pollution Control in Serbia, Regulatory Challenges and analysis of the Draft Law on Integrated Prevention and Control of the Environment Pollution https://core-psd.org/application/files/1517/7564/0945/Analiza_Nacrta_IPPC.pdf (accessed on June 7, 2026).

185 Report on the Public Consultation regarding Draft Law on IPPC, https://www.ekologija.gov.rs/sites/default/files/inline-files/Izvestaj_IPPC_JR.pdf (accessed on June 7, 2026).

and institutions. Only a small number of the proposals were accepted (16 in full and eight partially).

Among other things, the proposals made by civil society organizations to include public health institutions in the decision-making process regarding the issuance and revision of integrated permits were not accepted, nor was the proposal to regulate public-participation mechanisms for monitoring the implementation of issued permits.

The objective of the new law is more effective prevention, reduction, and control of environmental pollution through an enhanced integrated approach and alignment with Directive 2010/75/EU.

The new provision envisages that industrial plants can only operate on the basis of an issued integrated permit. It obliges operators to obtain the permit in a timely manner, within the timeframe to be provided for in a by-law.

The Draft Law stipulates that the BAT conclusions constitute the core document for issuing an integrated permit. The Ministry is required to monitor their adoption and ensure that this data is accessible to the public via the official website.

The novelties also concern the mandatory documentation to be submitted with the application for the issuance of an integrated permit. The current law requires operators to submit a project design, while the Draft of the new law also mandates the submission of an exploitation permit, a water permit, and a waste management permit. Provision is also made for the submission of a baseline report, serving as a basis for monitoring the outcomes of the integrated permit's application. For SEVESO plants – those where a hazardous SEVESO substance is present or may be present in quantities equal to or exceeding the prescribed thresholds – the Draft requires proof of compliance with regulations governing the control of major accident hazards involving dangerous substances. For facilities identified in accordance with regulations on disaster risk reduction and emergency management, approval of the accident prevention and response plan is required.

Furthermore, the operator is also required to submit an annual emission monitoring report to the relevant authority for comparison with the BAT-associated emission levels, as well as the data needed to verify compliance with prescribed limit values. The relevant authority is obliged to prescribe additional measures in the integrated permit if compliance with environmental protection standards cannot be achieved by applying the BAT.

An unfavorable provision of the Draft Law is the option for the relevant authority to stipulate less stringent measures, accompanied by an explanation, in special cases lacking clear definition. Furthermore, the Draft also mandates an inspection control at least once a year, which contradicts the already established practice of conducting inspection supervision multiple times a year (up to four times), depending on the level of risk the industrial facility poses to the environment.

Implementation of Best Available Techniques

Industrial plants subject to the integrated permitting regime represent the largest individual sources of pollutant emissions into air, water, and soil. Consequently, the European Union has developed a regulatory framework based on integrated permits and the implementation of Best Available Techniques (BAT) as a central instrument for the prevention and reduction of industrial pollution.
The 2024 Rulebook on the Content and Appearance of the Integrated Permit introduced an obligation requiring that, in addition to the assessment of the application of best available techniques (BAT), the integrated permit must also include the conclusion of the assessment, thereby ensuring compliance with the best available techniques.

Best Available Techniques Reference Documents (BREFs) are the outcome of the Seville Process[186] – a collaborative effort involving all stakeholders in establishing environmental standards within the European Union. The European Bureau for Research on Industrial Transformation and Emissions (formerly

186 https://bureau-industrial-transformation.jrc.ec.europa.eu/about/sevilla_process (accessed on June 2, 2026).

known as the European IPPC Bureau) has led this process for the last 20 years from the Joint Research Center (JRC) in Seville. This is a process that enables consensus-building for sectors with the highest environmental impact. The decisions are made based on scientific and techno-economic information and data, with the participation of all relevant stakeholders, which contributes to the effective implementation of the Industrial Emissions Directive. While most BREF documents target specific technologies and activities – known as "sectoral BREFs" - a range of "horizontal BREFs" covers cross-cutting issues, such as energy efficiency, industrial cooling systems, storage emissions, waste management, and monitoring.

Best Available Techniques (BAT) conclusions serve as the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU. Their application requires the relevant authorities to set emission limit values that ensure that, under normal operating conditions, emissions do not exceed the BAT-associated emission levels specified in the Conclusions. These conclusions are meant to facilitate and drive the transition toward a zero-pollution, climate-neutral, and resource-efficient industry.

The BAT-AEL (Best Available Technique-Associated Emission Level) is a concept employed within environmental regulations, notably in the European Union, to determine the emission levels achievable by installations through the implementation of best available techniques. These levels are usually linked to specific industrial activities and serve as benchmarks for environmental permitting, with both upper and lower emission levels defined for each BAT-AEL.

The Regulation on the Criteria for Determining the Best Available Techniques for the Application of Quality Standards and for Determining Emission Limit Values in the Integrated Permit,[187] lays down the criteria for their determination, namely: the technical characteristics of the plant, its geographical location, local environmental conditions on the specific site, the cost-benefit balance of applying such techniques, the precautionary principle, and other special requirements. If their application does not ensure the prescribed environmental standards, the permit will specify additional measures in accordance

187 Official Gazette of RS, no. 84/2005.

with pollution reduction programs for the given area. The Regulation also contains a list of substances with set emission limit values. The permit can also prescribe stricter emission limit values than those required by special regulations, as well as mandate measures for achieving them.

All integrated permits set emission limit values in accordance with BAT-AEL values or higher, whereas lower emission limits are never specified. Integrated permits issued by the Ministry of Environmental Protection fail to evaluate the cumulative impact of all sources of environmental pollution and do not impose conditions more stringent than those provided for by law or regulations.

In the process of issuing an integrated permit, the relevant authorities must apply the Reference Document on Economics and Cross-Media Effects (ECM BREF),[188] developed primarily to facilitate the identification of best available techniques under Directive 96/61/EC concerning integrated pollution prevention and control. This BREF is based on an assessment of the likely costs and benefits of implementing measures, with a view to achieving the goals of environmental protection as a whole, in order to avoid creating a new, more serious environmental problem while addressing an existing one. The fundamental principle dictates that permit conditions must be based on the best available techniques, while taking into account the technical characteristics of the specific plant, its geographical location, and local environmental conditions.

The Starting Points of the Draft Law on Integrated Prevention and Control of the Environment Pollution, dated February 2025, recorded 57 issued integrated permits.[189]

The fundamental problems in the integrated permit issuance procedure include lengthy duration of the procedure itself, incomplete technical documentation at the time of submission of the application, failure to obtain the necessary approvals that must be attached to the application, poor knowledge of the Best Available Techniques (BAT) reference documents, inadequate capacities

188 https://bureau-industrial-transformation.jrc.ec.europa.eu/reference/economics-and-cross-media-effects (accessed on June 2, 2026).

189 Ministry of Environmental Protection, Starting Points of the Draft Law on Integrated Prevention and Control of the Environment Pollution, February 2025.

of local self-government units to issue decisions, insufficient public disclosure regarding submitted applications, lack of interest and low public engagement, untimely updates to the register of plants required to obtain a permit, and the absence of a centralized register of issued permits at both national and local levels.

Between May 1, 2025, and May 31, 2026, the Ministry of Environmental Protection issued one decision on the revision of an integrated permit in the mineral industry sector (cement production[190]), one decision on the issuance of an integrated permit for the same sector[191] (roof tile production) and one decision on the issuance of an integrated permit in the paper industry.[192]

The company Moravacem d.o.o. Popovac submitted a request for the revision of its integrated permit in August 2024,[193] and the decision on that request was issued on March 20, 2026 – meaning the procedure took nearly a year and a half. This is not an isolated case, as other requests are also taking an unreasonably long time to be processed. The reason for submitting the request was an "increase in the quantities of alternative raw materials, specifically fly ash, in the cement production process in accordance with the sales plan and product portfolio changes".[194] While the request specified that the best available techniques for cement were applied, it failed to specify that techniques from the horizontal BREF – which relate to energy efficiency, industrial cooling systems, storage emissions, waste management, and monitoring – would likewise be applied. Despite these shortcomings, the Ministry issued a revision decision without prescribing the conditions for the application of the best available techniques from the horizontal BREF.

190 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/izdate-dozvole/resenje-o-izdavanju-revizije-integrisane-dozvole-regbr19-za-operatera-moravacem-doo-popovac (accessed on June 2, 2026).

191 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/izdate-dozvole/resenje-o-izdavanju-integrisane-dozvole-za-operatera-igm-mladost-doo-za-rad-celokupnog-postrojenja-i-obavljanje-aktivnosti-proizvodnje-crepa (accessed on June 2, 2026).

192 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/izdate-dozvole/resenje-o-izdavanju-integrisane-dozvole-za-operatera-fabrika-kartona-umka-doo (accessed on June 2, 2026).

193 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/zahtevi/moravacem-doo-popovac-zahtev-za-reviziju-integrisane-dozvole

194 REQUEST FOR THE REVISION OF THE INTEGRATED PERMIT FOR THE OPERATION OF THE FACILITY Moravacem d.o.o. Popovac AND THE PERFORMANCE OF CEMENT PRODUCTION ACTIVITIES in Popovac, AT THE LOCATION OF cadastral plots no.: 2226/1, 2539/2, 280/2, 2530/11, 260/4, 260/5, 259/1, 269/5, 279, 277/1, 278/2, 277/2, 278/3, 274/2, 275/2, 274/3 i 265/1, Cadastral Municipality of Popovac and 4501/2, 4599/3, 4598/4, 4598/5, 6673, 4600/3, 4600/4, 4600/5, 4600/7, 4598/6, 4598/3, 4598/8, 4599/2, 4599/4, 4501/1, 4500, 4499, 4523, 4602/2, 4602/3, all in the cadastral municipality of Buljane, municipality of Paraćin, page 4.

In mid-November 2025, HBIS Group Serbia Iron & Steel d.o.o. Šabac Branch submitted a request for the extension of its integrated permit.[195] To date, a decision on the extension or expiry of the permit has not yet been issued.

Under the Law on Integrated Prevention and Control of the Environment Pollution,[196] issued permits must be reviewed at least twice during their validity period, and the relevant authority has the right to initiate a revision procedure ex officio under specific circumstances. In current practice, no issued permits have been reviewed during their validity period, nor has the relevant authority initiated any ex officio revisions.

According to the register of issued permits in the Autonomous Province and LSGs, no permits have been issued for the metal production and processing, mineral, and chemical industry sectors.[197]

Between May 1, 2025, and May 31, 2026, one request for the extension of the integrated permit validity period was submitted to the Ministry of Environmental Protection for the metallurgy sector (ferrous metallurgy).

Inspection Supervision

The Ministry of Environmental Protection is responsible for supervisory duties in this field.[198] Within the Ministry, the Department for Pollution from Industrial Facilities has been established, consisting of two divisions: the Division for Pollution from Facilities with an Integrated Permit and the Division for Industrial Pollution Protection.

195 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/zahtevi/obavestenje-o-podnetom-zahtevu-za-produzenje-vazenja-integrisane-dozvole-reg-br-3-za-operatera-hbis-group-serbia-iron-steel-doo-ogranak-sabac

196 Law on Integrated Prevention and Control of the Environment Pollution, Article 18, Official Gazette of RS, no. 135/2004, no. 25/2015, no. 109/2021.

197 https://www.ekologija.gov.rs/obavestenja/integrisane-dozvole/registar-izdatih-dozvola/registar-izdatih-dozvola (accessed on June 2, 2026).

198 https://www.ekologija.gov.rs/inspekcija

Checklists[199] have been developed as a tool for successful inspection supervision:

- for risk assessment of facilities and activities subject to integrated permit requirements;
- emissions calculator for facilities and activities subject to integrated permit requirements;
- for risk assessment of facilities and activities not subject to integrated permit requirements.

Priorities have been set for the control of major polluters, specifically IPPC installations, whereby monitored entities have been categorized into four hazard levels: critical, high, medium, and low risk. The frequency of regular inspections in 2025 is contingent upon the risk level: critical risk (four times a year), high risk (three times a year), medium risk (two times a year) and low risk (once a year).

In 2025, a total of 638 inspections of economic operators were carried out, those being: 268 regular inspections, 137 extraordinary inspections, 43 extraordinary fact-establishing inspections, five extraordinary confirmative inspections, two complementary inspections, 149 follow-up inspections, 25 mixed inspections, and nine inspections with the aim of taking urgent measures.[200] Republic environmental protection inspectors from the Division for Pollution from Industrial Facilities and the Division for Control of SEVESO Plants filed 546 reports with judicial authorities for violations of environmental protection regulations. During the same period, only 27 sentences were delivered.

The number of sentences accounts for less than 5% of the total number of reports submitted, which indicates a very low success rate in misdemeanor proceedings in the field of environmental protection.

199 https://www.ekologija.gov.rs/dozvole-obrasci/kontrolne-liste/zastita-zivotne-sredine-u-industrijskim-objektima (accessed on June 4, 2026).

200 Ministry of Environmental Protection, Environmental Supervision and Preventive Action Department, 2025 Report on the Work of Environmental Protection Inspectorate, https://www.ekologija.gov.rs/sites/default/files/inline-files/Godisnji%20Izvestaj%20o%20radu%20Inspekcije%20za%20zzs%20za%202025.pdf (accessed on June 6, 2026).

Table 1. Overview of judicial authority proceedings[201]

Department	Misdemeanor reports	Reports for economic offenses	Reports for criminal offenses	Sentences
Department for Pollution from Industrial Facilities	365	13	–	16
Department for Control of SEVESO Plants, Chemicals and Biocides	155	12	1	11

It is obvious that judicial proceedings are excessively prolonged and that the courts delay delivering sentences, which significantly contributes to industrial operators failing to comply with their obligations under environmental protection laws.

Report of the State Audit Institution

In late February 2026, the State Audit Institution released a Report on Monitoring and Determining the Effects of the Performance Audit – Industrial Wastewater Management.[202] The scope of the audit focused on the implementation of recommendations contained in the Performance Audit Report – Industrial Wastewater Management [203] from 2022, covering the work of the Ministry of Agriculture, Forestry and Water Management, the Ministry of Environmental Protection, the Water Directorate, and the Environmental Protection Agency.

Significant progress was noted in the establishment of a reporting system on testing of technological wastewater: for the 2020 reporting year (tests from 2019), 69 reports on technological wastewater from industrial plants

201 Ministry of Environmental Protection, Environmental Supervision and Preventive Action Department, 2025 Report on the Work of the Environmental Protection Inspection, https://www.ekologija.gov.rs/sites/default/files/inline-files/Godisnji%20Izvestaj%20o%20radu%20Inspekcije%20za%20zzs%20za%202025.pdf (accessed on June 6, 2026).

202 Report on Monitoring and Determining the Effects of the Performance Audit – Industrial Wastewater Management, https://www.dri.rs/storage/newaudits/Izvestaj%20o%20pracenju%20i%20utvrdjivanju%20efekata%20revizije%20svrsishodnosti%20poslovanja%20-%20Upravljanje%20biomasom%20kao%20OIE.pdf

203 Performance Audit Report – Industrial Wastewater Management, https://dri.rs/storage/newaudits/2022-4-SV%20Upravljanje%20industrijskim%20otpadnim%20vodam%D0%B0.pdf

were submitted; for the 2024 reporting year (tests from 2023), reports were collected from 169 entities, and for the 2025 reporting year (tests from 2024), reports were submitted by 289 entities. Submission of the 2025 test report[204] is still underway.

Table 2. The number of submitted reports on technological wastewater monitoring

Year	2019	2024	2025
Number of submitted reports	69	169	289

The Republic Environmental Protection Inspectorate, as part of the Environmental Supervision and Preventive Action Department of the Ministry of Environmental Protection, did not carry out any inspections related to direct water pollution in the period from 2021 to 2025. However, following a request from the Environmental Protection Agency dated December 11, 2025, 27 extraordinary inspections were initiated in January 2026. These targeted entities identified by the Agency as payers of direct water pollution fees, which had failed to submit their 2024 annual reports. According to the Ministry's data from February 23, 2026, inspections were carried out at 12 out of 27 entities. In respect of those 12 cases, the provided documentation (official note, record/minutes) indicates that the entities, in the course of the inspection procedure, submitted to the Agency their 2024 annual water pollution report, i.e., a statement confirming that they engaged in no water-polluting activities during that year.

The Republic Water Directorate has submitted data on inspections of entities that discharge wastewater without an obtained water permit. During the 2022–2025 period, a total of 892 inspections and 142 control inspections were carried out, 62 reports were filed, which ultimately resulted in the issuance of 226 water permits after the inspection.

204 Report on Monitoring and Determining the Effects of the Performance Audit – Industrial Wastewater Management, https://www.dri.rs/storage/newaudits/Izvestaj%20o%20pracenju%20i%20utvrdjivanju%20efekata%20revizije%20svrsishodnosti%20poslovanja%20-%20Upravljanje%20biomasom%20kao%20OIE.pdf, p. 7.

The State Audit Institution has issued the following recommendations[205] to the relevant line institutions:

1. To the Ministry of Environmental Protection:

- to regulate the method and deadlines for submitting wastewater quality measurements reports;
- to adopt a by-law, in accordance with the Law on Charges for the Use of Public Goods, which prescribes the content of the annual report that payers of direct water pollution fees submit to the Agency, as well as the appearance of the form and the method of its submission;
- to prescribe the procedure to be followed by the employees of the Environmental Protection Agency and the Ministry of Environmental Protection when handling incomplete or inaccurate declarations filed by legal entities subject to paying direct and indirect water pollution fees, as well as the procedure to be followed in cases where these payers have failed to submit the declarations on the basis of which the water pollution fee is calculated, in accordance with the Law on Charges for the Use of Public Goods;
- to plan and carry out inspections of economic operators that did not submit data or that submitted incorrect data on direct water pollution.

2. To the Ministry of Agriculture, Water Management and Forestry – Republic Water Directorate:

- to undertake activities in order to adopt the Water Management Plan and the Plan for Water Protection against Pollution;
- to undertake activities to establish a Water Council in accordance with the Water Law;
- to undertake activities to establish and manage a unified water information system of the Republic of Serbia, for the purpose of monitoring and improving the water regime, planning the development of water systems, and water management;

205 Report on Monitoring and Determining the Effects of the Performance Audit – Industrial Wastewater Management, https://www.dri.rs/storage/newaudits/Izvestaj%20o%20pracenju%20i%20utvrdjivanju%20efekata%20revizije%20svrsishodnosti%20poslovanja%20-%20Upravljanje%20biomasom%20kao%20OIE.pdf, pp. 23–32.

- to ensure, through the work of the water inspectorate, that economic operators that discharge wastewater obtain a water permit from the relevant authority.

3. To the Environmental Protection Agency:

- to establish and apply written procedures to control the submission and accuracy of data entered into the National Register of Pollution Sources, which refer to indirect and direct water pollution.

Implementation of the Measures Provided for in the Air Protection Program

The Air Protection Program in the Republic of Serbia for the period from 2022 to 2030 with an Action Plan[206] sets a specific objective: reducing emissions of pollutants and heavy metals into the air from industrial processes and product use, through alignment with BAT-AEL values. The implementation measures include:

- Implementing Chapter II of the EU Industrial Emissions Directive in industrial processes,[207] taking into account the mean values of the upper and lower BAT-AEL ranges, i.e., the lower levels for copper and sulfuric acid production in Bor:

This measure implies the implementation of Directive 2010/75/EU on industrial emissions, especially Chapter II, for large industrial plants. The directive requires an integrated approach to regulating certain industrial activities: emissions to air, water (including discharge into sewers) and soil, as well as their overall impact on the environment, must be considered together. The conditions of the permit, based on the best available techniques, must ensure a high degree of protection of the environment as a whole.

206 Air Protection Program in the Republic of Serbia for the period from 2022 to 2030 with an Action Plan, Official Gazette of RS, no. 14/2022 (accessed on June 6, 2026).

207 DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions (integrated pollution prevention and control), https://eur-lex.europa.eu/legal-content/HR/TXT/PDF/?uri=CELEX:32010L0075 (accessed on June 8, 2026).

Chapter II of the Industrial Emissions Directive requires compliance with BAT-AEL values, established by the conclusions on the best available techniques applied in the EU. When issuing an integrated permit, the conditions include prescribed emission limit values to ensure that emissions from the plant remain within those limits. This measure implies that the emission limit values, prescribed for large industrial plants and processes, allow for compliance with the average values between the upper and lower BAT-AEL levels. The exact deviation from the mean value must be assessed at the individual plant level, taking into account its contribution to air quality (including primary and secondary emissions), as well as exceedances of specific air pollutants in in zones and urban areas. In terms of implementation dynamics, the majority of industrial plants are expected to be compliant with the mean BAT-AEL values as of 2025, with the exception of those requesting transitional periods for implementation until 2030. This measure should achieve the following emission reductions: sulfur dioxide by 31.9%, nitrogen oxides by 15.4%, volatile organic compounds by 0.6%, suspended particulate matter PM10 by 3.6%, PM2.5 by 2.6%, and ammonia by 0.1%[208].

- Prescribing stricter emission limit values for facilities in Bor:

This measure is being considered because the mean BAT-AEL values are not sufficient to ensure compliance with the limit values for sulfur dioxide and heavy metals for prescribed air quality in Bor. In order to achieve this, it is necessary to further lower the limit values for sulfur dioxide and particulate matter by applying lower BAT-AEL values for copper smelters (50 mg/Nm3 in the range of 50 to 500 mg/Nm3), for sulfuric acid production facilities (100 mg/Nm3 in the range of 30 to 680 mg/Nm3),[209] as well as by applying lower values for particulate matter. The Action Plan for the implementation of the Air Protection Program stipulated that the emission limit values of sulfur dioxide and particulate matter from metallurgical and chemical plants in Bor were to be reached by 2024.

208 Ibid, page 51, Table 7.2.

209 Best Available Techniques Reference Document (BREF) for Large Volume Inorganic Chemicals, Summary, https://eippcb.jrc.ec.europa.eu/reference/large-volume-inorganic chemicals-ammonia-acids-and-fertilisers (accessed on June 8, 2026).

- Implementing Chapter V of the Industrial Emissions Directive (Annex VII for volatile organic compounds) or Chapter II for plants where solvent consumption exceeds 200 t per year or 150 kg per hour[210]

This measure is contained in the implementation of Directive 2010/75/EU on industrial emissions, and, in particular, its Chapter V on the use of solvents in certain activities. Chapter II of the Industrial Emissions Directive requires compliance with BAT-AEL values. These emission levels are determined by a series of best available technique conclusions applied in the EU. When an integrated permit is issued to a facility, the conditions include prescribed emission limit values to ensure that emissions from the facility remain within BAT-AELs. The implementation of the prescribed measures should have been ensured by 2025.

The implementation of the measures will require an additional EUR 195.6 million by 2030. Of this amount, EUR 125.4 million is needed to comply with volatile organic compound limits from the use of solvents in certain plants while implementing Chapter II of the EU Directive on industrial emissions in industrial processes, taking into account the mean of the upper and lower BAT-AELs. Achieving lower levels in the facilities for the production of copper and sulfuric acid in Bor will require EUR 70.2 million of cumulative investments in the 2022-2030 period.[211]

From the available reports on the implementation of the Air Protection Program[212] it is not possible to reliably determine the extent to which measures aimed at reducing emissions from the metallurgical and chemical complex in Bor were implemented. Although the Program established specific indicators for sulfur dioxide emissions from copper and sulfuric acid production, as well as for particulate matter emissions, the Ministry's 2023 and 2024 reports do not state

210 Ibid.

211 Ibid.

212 Reports on the Implementation of the Air Protection Program in the Republic of Serbia for the period from 2022 to 2030, available at https://www.ekologija.gov.rs/sites/default/files/2025-09/%D0%98%D0%B7%D0%B2%D0%B5%D1%88%D1%82%D0%B0%D1%98%20%D0%BE%20%D1%81%D0%BF%D1%80%D0%BE%D0%B2%D0%BE%D1%92%D0%B5%D1%9A%D1%83%20%D0%9F%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%B0%20%D0%B7%D0%B0%D1%88%D1%82%D0%B8%D1%82%D0%B5%20%D0%B2%D0%B0%D0%B7%D0%B4%D1%83%D1%85%D0%B0%20%D1%83%20%D0%A0%D0%B5%D0%BF%D1%83%D0%B1%D0%BB%D0%B8%D1%86%D0%B8%20%D0%A1%D1%80%D0%B1%D0%B8%D1%98%D0%B8_1.pdf, Air Protection Program in the Republic of Serbia for the period from 2022 to 2030 with an Action Plan – Ministry of Environmental Protection, available at https://www.ekologija.gov.rs/dokument/zakoni-0-2/ (accessed on August 20, 2026).

the achieved values for these indicators, nor do they provide information on specific technical interventions at the plants. This practically made it impossible to monitor the implementation of one of the key measures of the Program for an area that has been exposed to heavy industrial pollution for years.

Local air quality monitoring data in Bor for 2025[213] show an improvement in terms of sulfur dioxide, whose concentrations did not exceed the prescribed daily and annual limit values. These results, however, cannot replace the data on emissions from the industrial plants themselves or confirm that the BAT-AEL values foreseen by the Program have been reached. At the same time, exceedances of daily PM10 values and elevated concentrations of arsenic and cadmium indicate that the problem of industrial pollution in Bor has not been solved.

The progress in the implementation of this measure can therefore be assessed as neither transparent nor documented. The Ministry of Environmental Protection is expected to publish the achieved values of all indicators in subsequent reports, data on the implemented technical measures in the metallurgical and chemical complex, as well as a clear assessment of their compliance with BAT-AEL requirements. In the absence of such data, it is not possible to determine whether the Program is indeed being implemented in accordance with the planned deadlines and objectives, nor whether the recorded improvements in air quality are the result of the systemic application of measures rather than other factors.

Financing

Financing in the field of Industrial Pollution and Risk Management is covered in more detail in the chapter Financing in the Field of Environmental Protection and Climate Change.

213 Mining and Metallurgy Institute Bor, Ambient Air Quality Testing in Bor – 2025 Annual Report, available at: https://bor.rs/wp-content/uploads/2026/02/Izvestaj-br.-22-26_GU-Bor_GODISNJI-za-2025.pdf?utm_source=chatgpt.com (accessed on August 20, 2026).

Recommendations

Strategic and Legislative Framework

1. Fully implement the Industrial Emissions Directive (IED), primarily through the new Law on Integrated Prevention and Control of the Environment Pollution; harmonize the Law on Planning and Construction with international standards; implement consistently the new Law on Environmental Impact Assessment (EIA) and the Law on Strategic Environmental Assessment (SEA), as well as the Air Protection Program, the new Law on Air Protection, decarbonization plans and programs, the energy and climate plan, and other environmental and air quality protection programs.
2. Adopt and consistently enforce the new Law on Integrated Prevention and Control of the Environment Pollution and its accompanying by-laws, alongside regular and transparent monitoring of their implementation.

Implementation of Regulations

3. Accelerate the issuance of integrated permits, implement the Action Plan for the Development of Administrative Capacities, improve all administrative procedures related to the issuance and control of integrated permits, and increase capacities across all levels of administrative management, including inspections.
4. Strengthen the capacities of local self-government units for the application of regulations both in the field of industrial pollution and in the entire field of environmental pollution.

5. Through the implementation of the new Law on Integrated Prevention and Control of the Environment Pollution, improve the existing public Register of Integrated Permits, making it more complete, accurate, and accessible to the interested public.

6. Through the implementation of the new Law on Integrated Prevention and Control of the Environment Pollution, develop a unique electronic system to support administrative procedures for issuing and controlling integrated permits, which would significantly increase the efficiency and transparency of the process.

7. Strengthen the system for monitoring water, air and soil quality in areas affected by industrial facilities.

8. Educate employees in the business sector, professional associations, scientific and educational institutions, and other competent and relevant authorities, as well as CSOs and citizens, on industrial emissions and Best Available Techniques (BAT), and ensure timely and objective public information.

9. Through the implementation of the new Law on Integrated Prevention and Control of the Environment Pollution and other regulations, increase public participation in the process of issuing integrated permits and improve cooperation between competent authorities and the public. Encourage civil society organizations and citizens to participate in decision-making regarding industrial emissions and in monitoring the implementation of adopted decisions on issuing and revising integrated permits.

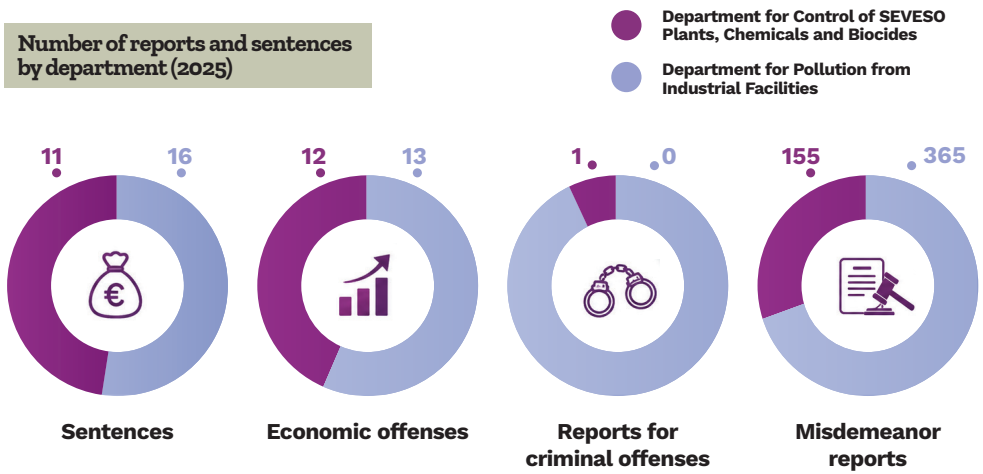
INDUSTRIAL POLLUTION

JUDICIAL AUTHORITY PROCEEDINGS

Department	Misdemeanor reports	Reports for economic offenses	Reports for criminal offenses	Sentences
Department for Pollution from Industrial Facilities	**365**	**13**	**-**	**16**
Department for Control of SEVE-SO Plants, Chemicals and Biocides	**155**	**12**	**1**	**11**

Table 1. Overview of judicial authority proceedings[1]:

Number of reports and sentences by department (2025)



Year	2019	2024	2025
Number of submitted reports	**69**	**169**	**289**

Table 2. The number of submitted reports on technological wastewater monitoring

1 Ministry of Environmental Protection, Environmental Supervision and Preventive Action Department, 2025 Report on the Work of the Environmental Protection Inspectorate, source, accessed 6 June 2026. https://www.ekologija.gov.rs/sites/default/files/inline-files/Godisnji%20Izvestaj%20o%20radu%20Inspekcije%20za%20zzs%20za%202025.pdf.