

Workshop to Promote the Ratification of the Protocols under the LRTAP Convention

Tuesday 4th – Wednesday 5th March 2014, Oslo, Norway

We would like to offer participants from the EECCA region the opportunity to give a brief presentation on their national situation. **You can choose yourself the subject you want to present (e.g. a research or administrative project to support the ratification process or a modernisation project)**. The questions below give you some hints, but an indication only, of topics you may wish to cover.

This will be information we would like you to share with all participants. Answers to the suggested questions will also be of great interest to participants from Western Europe and the UNECE Secretariat.

Prepare your presentation to last about 15 to 30 minutes, please. Naturally, there will be the possibility to give a PowerPoint presentation from a computer.

Point Sources

1. Do you have an overview/register for all major sources (e.g. manufacturing plants) of heavy metals (i.e. mercury, lead and cadmium) in your country? Have you improved your plant register (or other reporting tools) during the recent years?

Yes.

Inventory preparation is under responsibility of Serbian Environment Protection Agency (SEPA). SEPA undertakes all activities in preparation of NFR tables and IIR from collected data.

Data collection started in 2007 establishing the Register. In 2012, the information system of the National Register of pollution sources was completed.

Reporting obligations are set also under PRTR Protocol that Serbia ratified in 2011. There are currently around 260 PRTR installations in Serbia (197 operators in total reported their data).

The Serbian CLRTAP Inventory for the period 2000 to 2010 reported in 2012 was compiled mainly according to the recommendations for inventories as set out by the UNECE Executive Body and in the EMEP/EEA Emission Inventory Guidebook 2009. This was the first year Serbia reported emission data for all relevant pollutants covered by three most recent CLRTAP protocols as well as IIR document. This Inventory was also under stage 3 in-depth review of emission inventories submitted under the UNECE LRTAP Convention and EU National Emissions Ceilings coordinated by the EMEP emission centre CEIP.

During 2012 Serbia established the emission inventory covering time period 1990-2011. The EMEP/EEA methodology is used for development of this emission inventory. Emissions of air pollutants originated from road transport have been recalculated for the period from 1990 to 2011 using new version 9.3. of COPERT IV model of the European Environment Agency.

For 2014 reporting year, emission inventory for time period 1990-2012 has been prepared and submitted to CEIP on 13th February.

The main official sources of activity data for the inventory of pollutant emissions are: the Statistical Office of Serbia that collects data on the amounts of raw materials and products; the Ministry of

Interior that keeps databases of road and off-road vehicles; SEPA that collects data from emission point sources; Energy Balance of the Republic of Serbia.

Emissions per EMEP grid and LPS data were not reported until now.

2. Do all installations which fall under Annex II of the HM Protocol have a permit? Will that permit be regularly updated or adjusted to new technical or environmental standards?

IPPC directive is fully transposed 100% into Law on IPPC and the relevant by-laws. Planned year of full implementation is linked to the schedule defined by the Law on IPPC.

Based on the last review of the Preliminary list of the existing installations subject to integrated permitting in the Republic of Serbia there are 178 installations of this type. New activities under ANNEX I of the Directive 2010/75/EU are yet to be transposed into national legislation so the list will be updated accordingly.

To date 142 integrated permit applications have been submitted to the competent authorities (64 applications at ministerial level, 29 at provincial level and 49 at local level (farms and food industry) to the local self-government units). There are 3 levels of competence for issuing IPPC permits.

Currently there are 7 IPPC permits issued in the Republic of Serbia: 1 permit from local level (food industry), 3 permits issued at Provincial level for the new installations (1 chemical industry- production of biocides and 2 metallurgies- processing of old lead-acid batteries and production of steel) and 1 for the existing installation (cement industry), while in the Ministry 2 permits are issued for existing installations (cement industry). Period of IPPC permit validity for e.g. cement industry and metallurgies is 10 years and the deadline for submission of a new request is 2022.

Program of measures with deadlines for the adaptation of the existing plant to environment standards is an integral part of IPPC permit. Each IPPC installation is obligate to submit this Program if currently not comply with BAT.

Amendments to the IPPC Law which are in preparation will provide the extension of the period for integrated permitting to the existing installations until 2020.

Ongoing IPA 2011 project *Law enforcement in the field of industrial pollution control, prevention of chemical accidents and establishing the EMAS system in Serbia* is providing technical assistance to the Ministry in developing a draft IPPC permits for selected industrial installations (metallurgy, smitheries and foundries), developing of guidelines for monitoring and guidelines for application of BAT as well as the translation of some BAT documents.

3. Does your country assist with carrying out clean-up/renovation programmes for industrial installations which are mentioned in Annex II of the HM Protocol?

Thermal power plants in Obrenovac, Kolubara and Kostolac, oil refineries in Pančevo and Novi Sad, chemical industry and metallurgical complexes in Pančevo, Bor and Smederevo represent large air pollutants.

Power and heat generation facilities are, generally speaking, in a bad condition. Main reasons are: lack of maintenance and investment over the last two decades.

There are numerous clean-up programmes for industrial installations which were carried out/are carried out in Serbia.

Power plants in Serbia done a lot to achieve the environmental requirements by conducting a numerous projects for the reconstruction of electrofilters, which resulted in significant reduction of particulate matter emissions. Also, the equipment for continuous air emission measurement of harmful and hazardous substances is procured and installed. Still, significant challenges remain and a lot of investment is planned for the upcoming period.

In addition, in order to reduce the negative impact of landfills of ash on the environment, replacement of existing technologies for collecting, transport and disposal of ash and slag with the new so-called 'acqualess technology' is planned.

4. Does your country use the concept of BAT (best available techniques)?

Yes.

Law on Environmental Protection, Law on Air protection and especially Law on Integrated Pollution Prevention and Control set a legal framework for application of BAT. There is a clear legal obligation for all industries (as they are described by in Regulation on type of activities and installations to which integrated permit is required) to apply BAT. Further on, a Regulation on the criteria for determining of the best available techniques, environmental quality standards and of emission limits values in the integrated permit (OG RS No 84/2005) is the by-law that gives more detailed requirements and definitions of BAT application, being harmonized with the EU definitions of BAT.

Law on Integrated Pollution Prevention and Control states that legal authority is responsible to ensure that operation of new plants does not start without previously issued a permit with exception of test operation approved in accordance with law and that existing plants, which are not in compliance with BAT, are obligate to submit Program of the measures for the adjustment with BAT. In addition, there is a need for availability of BREFs in Serbian language in order to facilitate introduction and application of BAT. Currently the following executive summary and BAT chapters from BREF (as they are published by The European IPPC Bureau) are translated to Serbian language: Cement Manufacturing Industries, Production of Iron and Steel, Ferrous Metals Processing Industry, Non-Ferrous Metals Industry, Mineral Oil and Gas Refineries, Slaughterhouses and Animals By-products Industries, Smitheries and Foundries Industry and Waste Incineration. Translation of remaining BREFs into national language and official publication of all BAT would contribute to better implementation. Second issue is classification of stationary sources according to the Annex II/III. This part is addressed in Regulation on type of activities and installations to which integrated permit is required (OG RS No 84/2005). Therefore, a comparison of List of 11 categories presented in Annex II/III and list of categories described in Serbian Regulation (taking into account minor differences in definitions) is fully applicable.

Assessment of compliance with BAT requirements will be possible only after review of complete integrated permit applications by majority of existing key installations subject to IPPC law.

5. Is particulate matter or dust emission control an important issue in your country?

Regulation on limit values of emission of pollutants in the air adopted in 2010 recognizes particulate matter as an important issue and the emission limit values are prescribed for large and medium combustion plants and for certain types of installations. ELVs for particulate matter are set according to LCP Directive and TALuft 2002 for certain types of installation. For some of stationary sources ELV for specific heavy metals Pb, Hg are prescribed i.e. sinter plants, production of copper and zinc, production of lead, glass industry, chlor-alkali industry.

Measurement of particulate matter in waste gas, determination of position of sampling points and the sampling procedure, analysis and quality control during the emission measurements of particulate matter should be done according to reference method ISO 9096.

Regulation also prescribes the cases in which the operator (installation) is obligated to conduct continuous monitoring of emission of particulate matter as well as SO₂ and NO_x. Concentration of particulate matter is continuously measured in all installations with thermal input above 100 MWth.

The registry of emissions of particulate matter from all combustion plants with the thermal input of 50 MWth or above is established by the Serbian Environment Protection Agency (SEPA).

According to data collected and analyzed by National Register of Polluters the biggest emitting sectors of particulate matter are: heating plants and individual heating, agriculture, energy production and road transport.

The most significant point sources of particulate matter in Serbia are thermal power plants, plants for the production and processing of metals and mineral industry.

Products

6. Do you have an overview of products on the market which contain heavy metals?

Progress was made in respect of the implementation of Directive 98/70/EC on the quality of petrol and liquid fuels. The Inspection and Supervision in this field fall under the responsibility of the Ministry of Foreign and Internal Trade and Telecommunications. Progress has been achieved since the adoption of the amendments of Rulebook on technical and other requirements for liquid fuels of petroleum origin in August 2013. Domestic refineries are producing petrol which corresponds to EU standards. Evaluation of the national fuel consumption is made annually in the form of the Energy Balance, prepared by Ministry of Energy, Development and Environmental Protection and adopted by the Government.

According to the Report "Approximating the EU's Mercury Ban in Serbia – Quick Scan", developed in 2011 within the Project *Technical Assistance for Development of a national Environmental Approximation Strategy (EAS)*, the total number of bulbs containing mercury and its vapours in cars, households and working places is very hard to estimate. The estimated number of bulbs containing mercury and its vapour is more than 200.000.000. The quantity of mercury and its vapour in those bulbs is minimum 4 tons. It is practically impossible to get to data on thermometers, pressure measurement devices, thermostats, switches, relays and other devices containing mercury.

Trade in Hg-containing pesticides is within the scope of the Rotterdam Convention. Serbia, which neither produces nor imports such pesticides, is a Party to that Convention.

7. Is the content of heavy metals in products regulated?

Republic of Serbia was in non-compliance in accordance with lead content of marketed petrol. Since 2010 significant progress has been made on the national legislation and implementation in this regard. Placing leaded petrol on the market was banned in 2011. According to the amendments of the Rulebook on technical and other requirements for liquid fuels originated from oil derivatives adopted in August 2013, it is permitted to place petrol on the market which corresponds to European Standard EN 228. This fuel has lead content of 0,005 g/l.

When it comes to mercury concentration in batteries from Annex VI, reference legislation is Law on waste management. Article 47, paragraph 1 of this law states: "Marketing of batteries and accumulators that contain more than 0,0005 % of mercury by weight is prohibited, unless it is otherwise noted by this law. Exceptionally from paragraph 1, it may be allowed marketing of button cells and batteries composed of button cells with mercury content not exceeding 2 wt %". The provisions regarding collection or recycling system for mercury-containing batteries is covered by the Rulebook on manner and procedures for the management of waste batteries and accumulators, adopted in 2010. Therefore, Serbian regulation is in compliance with enforcement of Law on waste management and relevant by-law, in accordance with paragraph 5 of Annex VI.

8. Are there already products which are no longer marketed due to international/national regulations (for example: parts of cars, thermometers)?

The Rulebook on prohibition and restriction of production, marketing and use of chemicals that represent an unacceptable risk to human health and environment, contains provisions for prohibition of mercury and mercury containing compounds, regarding marketing of mercury-containing fever thermometers and other measuring devices such as manometers, barometers, sphygmomanometers, thermometers other than fever thermometers intended for sale to the general public. It is forbidden to put into a market these products. The prohibition applies from 5 July 2011.

Rulebook on medical waste management prescribes the provisions for the treatment of medical waste with high content of heavy metals (such as broken mercury containing termometers and manometers, residues of dental amalgam, etc.)

By the Rulebook on manner and procedures for management of end-of -life vehicles (Article 6, hazardous substances in vehicles) it is stated that "Production and import of the motored vehicles, materials and components for vehicles which contain lead, mercury, cadmium or hexavalent chromium is prohibited, except for the materials and components listed in Annex I of this Rulebook..." under the conditions specified therein. In Annex I of this regulation it is stated that mercury containing discharge lamps and instrument panel displays need to be labelled or made identifiable, in accordance with Article 6 of this Rulebook. It is also stated that a maximum concentration value up to 0,1 % by weight and per homogeneous material, for lead, hexavalent chromium and mercury and up to 0,01 % by weight per homogeneous material for cadmium shall be tolerated. This Rulebook is in compliance with Directive 2000/53/EC.

Rulebook on the list of electrical and electronic products, the measure of prohibition and reduction of the use of electrical and electronic equipment containing hazardous substances, methods and procedures for management of waste from electrical and electronic products (Official Gazette of RS, 99/10) partially transposes Directives 2011/65/EU on electrical and electronic equipment and 2002/96/EC on electrical and electronic products. Implementation of the Directive 2011/65/EU has also been started, only in the sense of establishing methods for the implementation of provisions relating to the prohibition of placing in the market the electrical and electronic equipment containing lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls or polybrominated-biphenyl-diphenyl ethers.

Politics and Science

9. Does your country plan to ratify one or more of the Protocols (POPs, Heavy Metals, Gothenburg) in the near future; e.g. steps taken in national administration and politics?

The project for Western Balkan countries (2009-2012) funded by the Netherlands and coordinated by UNECE to support the implementation of the CLRTAP has been completed with following major outputs for the Republic of Serbia: the elaboration of the National Action Plan for the implementation and ratification of three most recent CLRTAP Protocols (2010), and Ratification of the 1998 HM and the 1998 POPs Protocol on March 2012 (The Law on ratification of the Protocol on heavy metals to the Convention on Long-range Transboundary Air Pollution („Official Gazette of the Republic of Serbia”, no. 1/2012) and The Law on ratification of the Protocol on persistent organic pollutants to the Convention on Long-range Transboundary Air Pollution („Official Gazette of the Republic of Serbia”, no. 1/2012)).

The National Action Plan identifies the laws, rules and regulations and sets what need to be developed, amended or adjusted in order that Republic of Serbia can comply with the Protocols' obligations, and effectively enforce them. The National Action Plan lists the concrete actions explaining on how particular gaps/shortcomings, identified through the analysis of the national legislation, can be addressed for each Protocol, specify the national authorities taking responsibilities for particular actions, as well as deadlines for implementation.

National Programme for the Adoption of the Acquis – NPAA (2013–2016) was prepared in the beginning of 2013 year. This document defines development and strategic goals, relevant policies, reforms and measures required for realisation of these goals, establishes a detailed plan for harmonisation of legislation and defines human and budget resources and other funds required for the implementation of envisaged tasks. The NPAA should become one of the key Government documents in the following years.

According to NPAA, ratification of the 1999 Gothenburg protocol is planned for 2016 after establishing the NEC and adoption of National Programme for gradual reduction of maximum annual national emissions of pollutants.

At this moment more in depth analysis for the Republic of Serbia are needed in regard to the accession of Amended CLRTAP Protocols.

10. Have there been recent developments in your national legislation to reduce air pollution?

Since 2009 Republic of Serbia has achieved great success in the field of air protection by adopting the Law on Air Protection and thereafter 11 by-laws dealing with air emission and air quality issues.

The Law on Air Protection (Official Gazette of RS, 36/09) and the relevant by-laws regulate the field of emission of pollutants into the air, and partially transpose the requirements of Directive 2001/81/EC, 2001/80/EC, 1999/13 / EC, 1994/63/EC 2009/126/EC.

Law Amending the Law on Air Protection („Official Gazette of the Republic of Serbia”, no. 10/2013) was adopted in January 2013. Main reason for amendments was to improve legal bases for adoption of by-laws in order to achieve better transposition of EU legislation. Regulation on Emission Limit Values for stationary emission sources („Official Gazette of the Republic of Serbia”, no. 71/2010, 6/2011) will be repealed and replaced with two regulations. The first one is Regulation on Emission Limit Values from combustion plants, which will enable better transposition of LCP Directive and take also into account Decision of the Ministerial Council of the Energy Community on LCP Directive implementation adopted at the 11th Ministerial Council. The second one is Regulation on Emission Limit Values from other stationary sources, which will prescribe ELVs for other stationary (mostly industrial) sources, but is not directly related to transposition of the EU aquis, and Regulation on the measurements of the emission of pollutants into the air from the stationary sources. Other relevant changes are related to transposition to NEC directive.

In the period November 2009 – April 2012 a *Twinning* project entitled "*Strengthening Administrative Capacity in the Field of Air Quality Management*" was successfully completed with the aim of exchanging information concerning air quality and protection, transferring knowledge and experience and providing support and help to institutions and experts in the Republic of Serbia in implementing legislation related to air quality management, air quality monitoring and air quality assessment process, according to applicable European regulations. The main result of the project is the establishment of an air quality management system in the Republic of Serbia which complies with EU requirements. Legislation of the EU covering AQ and air emissions was transposed or revised within the project and largely implemented. The project resulted in a preliminary AQ assessment, the establishment of air quality monitoring system and the procedures for data quality control and calibration of equipment. The pilot modelling of emissions from point sources and traffic was carried out, zones and agglomerations were determined and categorized, a draft pilot air quality plans for Belgrade, Novi Sad and Bor were prepared in cooperation with local self-governments.

Serbian Environmental Protection Agency performed first Air Quality Assessment in accordance with new AQ legislation in Serbia. Based on AQ Assessment, the existing implementing legislation regulating the zones and agglomeration has been amended in 2012. Previous Regulation on determination of zones and agglomerations („Official Gazette of the Republic of Serbia”, no. 58/2011) was based on Preliminary AQ assessment, thus amendments (Regulation on amendments to the Regulation on determination of zones and agglomerations has been adopted in October 2012 („Official Gazette of the Republic of Serbia”, no. 98/2012)) recognized 4 additional agglomerations. Air quality management plan has been prepared and adopted for one agglomeration - the city of Bor, whereas those for agglomerations Belgrade and Novi Sad are still under preparation.

There are also numerous of important national strategic documents adopted in the recent period which are important for air pollution issue.

11. Has the monitoring and the reporting of emissions improved in recent times. For example, are there any new measuring/monitoring stations?
12. Are steps being taken to improve the situation concerning air pollution, e.g. reporting of emissions, administrative basis for inspection and enforcement?

Answer (questions 11 and 12):

The obligations for the operators (installations) are clearly stated in Law on air protection and Regulation on ELVs. The operators must ensure regular monitoring of emissions and to keep records about it, enable continuous measurement of the emission when prescribed for specific pollutants and/or pollution sources, independently, through automatic device for continuous measurement (CEMS), with the consent of the Ministry, which is controlled periodically over the authorized laboratories.

The operators are obligate to provide periodic measurements of emissions, through authorized laboratories, twice a year, if not performing continuous measurement of emissions.

Regulation on emission limit values of pollutants in the air (Official Gazette of RS, 71/10 and 6/11-amended) prescribes referent methods for measuring the emission of heavy metals (e.g. ISO 9096, EN 13211, EN 14385)

On the other hand Regulation on waste incineration (Official Gazette of RS, 102/10) prescribes measurement conditions for heavy metals (minimum twice per year, or minimum 4 measurements during first year of operation).

Numerous activities related to the collection, management and analysis of the emission sources data were performed in the *National Pollution Sources Register* (NPSR) Department within the Serbia Environmental Protection Agency. Namely, first phase of the National Pollution Sources Information System development successfully ended in 2012.

List of basic categories of companies that are required to submit data about emissions of pollutants for Register: energy sector; production and processing of metals; mineral industry; chemical industry; waste management and waste water; production of paper and wood processing; intensive livestock production and fisheries; food industry; other industrial activities.

Reporting obligations are set also under PRTR Protocol which Serbia ratified in 2011. There are currently around 260 PRTR installations in Serbia (197 operators in total reported their data). Full completion of PRTR register is expected in 2014.

Reporting of the emissions from continuous monitoring is submitted to National Pollution Sources Register Department once in three months and for periodic measurements within 30 days after performing the measurements. The operators are obligate to submit the Report on the annual balance of the emissions until 31 January for the previous calendar year.

The Register is publicly available on the SEPA website. It contains reports over 3000 companies (260 of PRTR) subject to this register.

SEPA is actively involved in all activities under EEA and EIONET network.

The Law on Air Protection (2009) has provided much wider authorization of inspection in monitoring of pollutants, more frequent control of the operators as compared to previous period. Operators are obligate to take more frequent measurements of pollutants emission to the emitters. The Law provides much higher penalty, which amounts from 1,500,000.00 to 3,000,000.00 dinars for economic offenses, and from 500,000.00 to 1,000,000.00 dinars for the violation. This results in a voluntary investment by operators in solving environmental problems. It is foreseen that the economic offenses may pronounce the prohibition of activities of the legal entity for a period of 5 to 10 years, and the prohibition to responsible person for a period of 3 to 10 years.

The inspector may also propose revoking of the permit for conducting the emission measurements issued by the Ministry to the authorized laboratories if these measurements are not performed in accordance with the Law and Regulation on ELV.

13. What are the problems you have encountered?

When it comes to the improvement of emission inventories, there are several difficulties we are facing: limited administrative capacities (6 people are working in National register), lack of reliable statistical data, national emission factors not developed, and development of QA/QC procedure for specific sectors is needed. Emissions per EMEP grid and projections were not reported until now. Expert support and practical trainings on this matter would be of great help.

Linkages between environmental impact assessments and IPPC need to be strengthened and their synergies exploited. Capacity at central and local level for issuing IPPC permits is insufficient (4 people in the Ministry are working on permit issuing). Intra- and interinstitutional cooperation needs to be established. Minimum standards for assuming statutory duties at local level are yet to be

ensured before competencies are devolved. The public participation foreseen in the integrated permitting process needs to be significantly enhanced.

Main problems to implement BAT and comply with ELV: need of big investment to replace old technology and use of low quality raw materials (for example use of coal with 0,7 % content of sulfur and heavy oil).

On the other hand, main problems in the legislation implementation in the field of air protection are related to the small number of employees who perform these activities. Data quality from the national automatic monitoring of air quality is ensured using the reference methods of monitoring. The limitation is the lack of financial resources from the budget that are to be allocated for the undisturbed operation and maintenance of the national network for automatic air quality monitoring.

14. What factors could enhance or facilitate next steps on the way to a ratification of protocols?

Expert support and financial support would be of great help for further improvement of the Serbian emission inventory.

Ratification of the 1999 Gothenburg protocol is planned for 2016. Until then, national emission ceilings need to be established.

Exchange of experience with other countries Parties to the Protocols in adapting to the requirements of the Protocols would be beneficial.

At this point of view more in depth analysis for the Republic of Serbia are needed in regard to the accession of Amended Protocols. National action plan for ratification and implementation of HM, POPs and Gothenburg protocol needs to be updated!