Republic of Serbia
Ministry of Energy, Development and Environmental Protection

National situation concerning ratification and implementation of HM Protocol_Republic of Serbia

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Workshop to Promote the Ratification of the Protocols under the LRTAP Convention across the entire UNECE region
March 4th – 5th 2014 in Oslo, Norway

Capacity building activity

The project ***Implementation and Ratification of the Protocol on Heavy Metals, the Protocol on Persistent Organic Pollutants and Gothenburg Protocol*** (2009-2012) for Western Balkan countries 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
- Ratification of the 1998 HM and the 1998 POPs Protocol on March 2012
- Promotion of the implementation of the Convention in the country

Responsible authorities for the implementation of specific requirements of the Protocol

❖Ministry of Energy, Development and Environmental Protection is a National Focal Point for LRTAP Convention, HM Protocol and POPs protocol

Environmental Protection Department ➡ Air and Ozone Layer Protection Unit

Department for Planning and Management in Environment Sector

➡ Section for the Integrated Permits (IPPC)

➡ Section for Waste Management

➡ Sector for Environmental Impact Assesment

Control and Surveillance Department

Department for International Cooperation and Project Management

Oil and Gas Department

❖Serbian Environment Protection Agency (SEPA) is responsible for data collection and preparation of inventory

National Air Protection Legislation in line with EU acquis

- **LCP Directive** is in advanced stage of transposition with monitoring score of 74%. Full implementation of the LCP Directive is not yet determined
- **IPPC Directive** is fully transposed 100% into Law on IPPC and the relevant by-laws. Full implementation depends on IPPC permitting
- Progress is made in respect of implementation of **Quality of Petrol Directive** 98/70/EC
- **Directive 2000/76/EC** on waste incineration has been transposed completely by national regulations
- **National Emission Ceiling** shall be determined by the end of 2015
- Several by-laws regulating the field of waste management transposing **End-of-Life Vehicles Directive**, **WEEE Directive** and **Batteries Directive** in a significant percentage → implementation is in progress
- **AQ Directive 2008/50/EC** is largely transposed by the Law on Air Protection and related bylaws, full implementation is not yet determined

Overview of Serbian environmental legislation relevant for HM Protocol

Since 2009 Republic of Serbia has achieved great success in the field of air protection by adopting the Law on Air Protection, IPPC Law (2004) and then numerous by-laws dealing with air emission and air quality issues

- Law on Environmental Protection (OG RS No. 135/2004, 36/2009)

- Law on Integrated Pollution Prevention and Control (Law on IPPC) (OG RS No. 135/2004)
  Regulation on type of activities and installations to which integrated permit is required (2005)
  Regulation on the criteria for determining of the best available techniques, environmental quality standards and of emission limits values in the integrated permit (2005)

- Law on Air Protection (OG RS No. 36/2009, 10/2013)
  Regulation ELV of pollutants in the air (2010)

- Law on Waste Management (OG RS No. 36/2009, 88/2010)
  Regulations on WEEE, batteries and accumulators, end-of-life vehicles
  Regulation on waste incineration (2010)

- Law on Chemicals (OG RS No. 36/2009, 88/2010, 92/2011, 93/2012)
  Rulebook on prohibition and restriction of production, marketing and use of chemicals

- Regulation on the technical and other requirements for liquid fuels originated from oil derivates (2013)

Obligations related to BAT and ELV

Key categories Annex II/III presence in the Republic of Serbia

Category	Description of the category	* No. of installations in Serbia	Translated ES and BAT Chapters from BREF Documents
1.	Combustion installations with a net rated thermal input exceeding 50 MW	28	NO
2.	Metal ore (including sulphide ore) or concentrate roasting or sintering installations with a capacity exceeding 150 tons of sinter per day for ferrous ore or concentrate.....	23	YES
3.	Installations for the production of pig-iron or steel (primary or secondary fusion, including electric arc furnaces).....		
4.	Ferrous metal foundries with a production capacity exceeding 20 tons per day.		
5.	Installations for the production of copper, lead and zinc from ore, concentrates or secondary raw materials by metallurgical processes....		
6.	Installations for the smelting (refining, foundry casting, etc.), including the alloying, of copper, lead and zinc....		
7.	Installations for the production of cement clinker in rotary kilns....	3	YES
8.	Installations for the manufacture of glass using lead in the process....	1	NO
9.	Installations for chlor-alkali production by electrolysis using the mercury cell process.	-	NO
10.	Installations for the incineration of hazardous or medical waste with a capacity exceeding 1 tonne per hour....	-	NO
11.	Installations for the incineration of municipal waste with a capacity exceeding 3 tonnes per houp....	-	YES

*According to the latest Preliminary list of IPPC installations in Serbia (updated in June, 2012)

Obligations related to BAT and ELV

List of 11 key categories presented in Annex II/III ➡ Regulation on type of activities and installations to which integrated permit is required (OG RS No 84/2005)

❖Law on Integrated Pollution Prevention and Control states:

"..... legal authority is responsible to ensure that operation of *new plants* does not start without previously issued IPPC permit with exception of test operation approved in accordance with law

.....the *existing plants*, which are not in compliance with BAT, are obligate to submit Program of the measures for adjustment with BAT"

There is a need for availability of BREFs in Serbian language in order to facilitate introduction and application of BAT to the operators

translated:*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 and Waste Incineration*

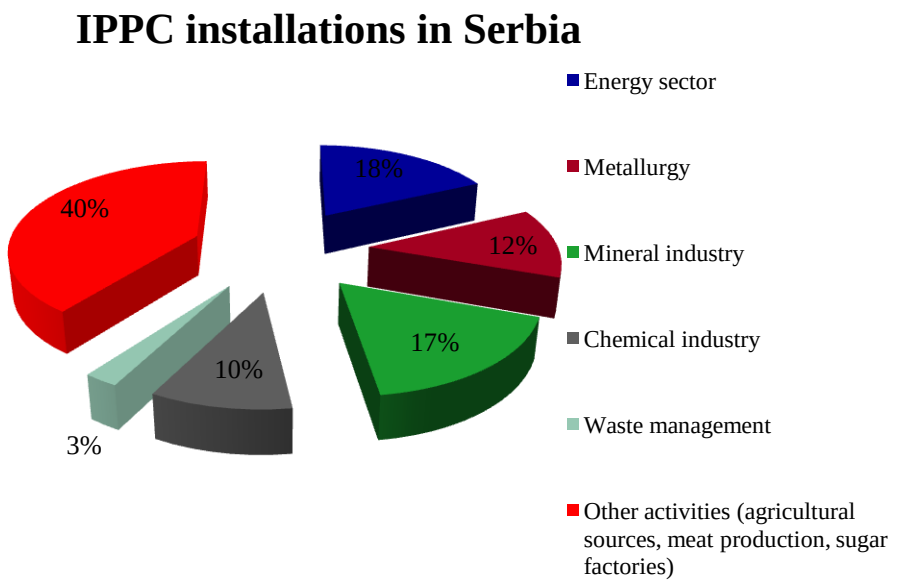
Obligations related to BAT and ELV

Total 178 installations / 7 issued

3 cement industry
2 metallurgy
1 chemical industry
1 food industry

142 applications for IPPC permit are in procedure

❖3 levels of competence for issuing permits (Ministry,Province,Local-self government)



❖Assessment of compliance with BAT requirements will be possible after completing permitting process by majority of existing installations subject to IPPC Law

❖Deadline set by IPPC Law for issuing all IPPC permits for existing installations end of 2015 → ***unrealistic*** → should be postponed with the amendments of the IPPC Law until 2020

Obligations related to BAT and ELV

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.

❖*Regulation on emission limit values of pollutants in the air* (Official Gazette of RS, 71/10 and 6/11-corr.)

➡ ELVs for air pollutants from stationary sources (LCP, medium and small combustion plants) and certain types of installations (TA Luft 2002)

Regulation is in compliance with the ELV set by Annex V

Regulation prescribes a list of referent methods for measuring the emission of particulate matter and heavy metals (e.g. ISO 9096, EN 13211, EN 14385)

❖*Regulation on waste incineration* (Official Gazette of RS, 102/10)

➡ ELVs for particulate matter and heavy metals

Regulation transposes Directive 2000/76/EC on waste incineration

Product control measures

- 4 years ago Republic of Serbia was in non-compliance in accordance with lead content of marketed petrol ➡ several types of petrol have permissible Pb content significantly above required value
- 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 August 2013 amendments of Rulebook on technical and other requirements for liquid fuels originated from oil derivates adopted ➡ placing only petrol on the market which corresponds to European Standard EN 228 (Pb 0,005g/l)

- Law on waste management

"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...."

- Rulebook on manner and procedures for the management of waste batteries and accumulators (2010) ➡ provisions regarding collection or recycling system for mercury-containing batteries

Reporting obligations

❖Data collection started in 2007 establishing the Register of polluters. The Information system of the National Register of pollution sources was completed in 2012

❖Reporting obligations are set also under PRTR Protocol ratified by Serbia in 2011

❖Serbian CLRTAP Inventory for the period 2000 to 2010 reported in 2012

→ first year that Serbia reported emission data for all relevant pollutants covered by 3 most recent Protocols together with IIR document.

❖During 2012 Serbia established the emission inventory covering the period **1990 - 2011**. The EMEP/EEA methodology is used

❖Emissions of air pollutants originated from road transport have been calculated for the period 1990 - 2011 using new version of COPERT IV model

❖Emission inventory for time period **1990-2012** has been prepared and submitted to CEIP on 13th February 2014

Key NFR sectors contributing to the emissions of Pb, Cd and Hg in Serbia

Pb (2012)

1 A 1 a Public electricity and heat production → 5,21 Mg
2 C 1 Iron and steel production → 2,57 Mg
2 C 5 a Copper production → 7,01 Mg
2 C 5 b Lead production → 95,59 Mg
National total → 115,49 Mg (1990: 235,24 Mg)

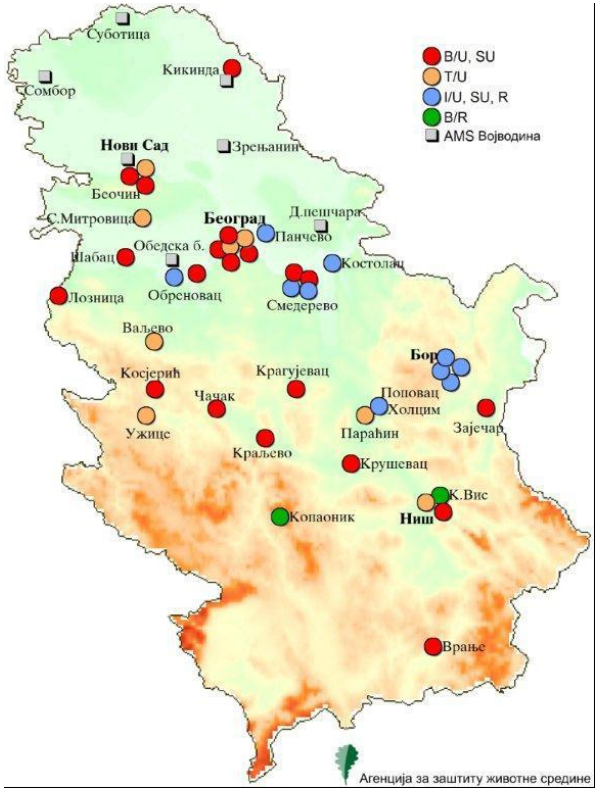
Cd (2012)

1 A 1 a Public electricity and heat production → 0,62 Mg
1 A 1 b Petroleum refining → 0,13 Mg
1 A 3 d ii National navigation (Shipping) → 0,23 Mg
2 C 5 a Copper production → 0,62 Mg
2 C 5 b Lead production → 0,24 Mg
National total 1,98 Mg (1990: 4,43 Mg)

Hg (2012)

1 A 1 a Public electricity and heat production → 1,01 Mg
1 A 3 d ii National navigation (Shipping) → 0,15 Mg
1 A 1 c Manufacture od solid fuels and other energy industry → 0,27 Mg
National total 1,65 Mg (1990: 2,96 Mg)

PM10 and heavy metals measurements in the state air quality monitoring network



- 40 stations for AQ monitoring at state level, 7 stations at the provincial level
- Measurements of PM10 are performed by the reference gravimetric method (EN 12341) and by non reference method with automatic analyzers (GRIMM)
- Analysis of heavy metals Pb, As, Cd, Ni in particulate matter PM10 is performed. The methods are described in standards EN 14902:2008 and ISO 11885: 2007
- National Referent Laboratory Department - method for assessment of PM10 suspended particles in the air as well as method for measuring heavy metals in fractions of PM10 suspended particles were fully adopted and operationally performed, passing also a preliminary test according to the SRPS ISO EN 17025:2006 standard
- November 2009 – April 2012 *Twinning* project *'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

Challenges and future steps in the implementation process

- Republic of Serbia was in non-compliance in accordance with lead content of marketed petrol. Since 2010 significant progress has been achieved → 0,005 g/l

- For the improvement of the 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, development of activity data and QA/QC procedure is needed for specific sectors.

- Emissions per EMEP grid and projections were not reported until now → Expert support and practical trainings on this matter would be of great help

- The adoption of the amendments of the IPPC Law would provide for the extension of the period for integrated licensing to the existing installations

- Lack of compliance of the LCP sector with ELV for SO_2, NOx and dust. Establishment of continuous measurement is in progress. Serbia plans to develop National Emission Reduction Plan for existing LCP

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

Challenges and future steps in the implementation process

❖In recent times, Electric Power plants of Serbia done a lot to achieve the environmental requirements by conducting several projects for the reconstruction of electrofilters → decrease of PM emissions from this sources

❖Estimated approximation costs of the investments in the air quality and climate change sector together are around €452 million (4% of total approximation costs in environmental sector) for the period until 2030 (*source: National Environmental Approximation Strategy for Serbia*)

❖Study on a plant-by-plant analysis should be launched

❖At this point of view **more in depth analysis** for the Republic of Serbia are needed in regard to the accession of the Amended Protocols

❖National action plan for ratification and implementation of HM, POPs and Gothenburg protocol needs to be updated!

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Ministry of Energy, Development and Environmental Protection

Thank you

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