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Progress in the implementation of the 2014-2015 workplan

Report by the Task Force on Heavy Metals on the workshop to promote the ratification of the protocols to the Convention on Long-range Transboundary Air Pollution

Summary

In accordance with item 2.2.3 of the 2014–2015 workplan on the implementation of the Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/122/Add.2), a workshop was to be held to promote the ratification of the amended Protocol to the Convention on Heavy Metals.

The present report by the Task Force on Heavy Metals sets out the background to and results of a workshop, which sought to promote not just the ratification of the Protocol on Heavy Metals, but also the two other most recent protocols to the Convention on Long-range Transboundary Air Pollution in the entire United Nations Economic Commission for Europe region (also in accordance with item 2.2.2 of the workplan). The workshop, which was held on 4 and 5 March 2014 in Oslo, was organized by the Task Force in cooperation with the Expert Group on Techno-Economic Issues.

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I. Introduction

1. In accordance with item 2.2.3 of the 2014–2015 workplan on the implementation of the Convention (ECE/EB.AIR/122/Add.2), the workshop to promote the ratification of the protocols to the Convention on Long-range Transboundary Air Pollution in the entire United Nations Economic Commission for Europe (ECE) region was held in Oslo on 4 and 5 March 2014.

A. Attendance

2. The workshop was attended by 29 persons from the following 15 countries: Belarus, Croatia, France, Georgia, Germany, Kazakhstan, Kyrgyzstan, Norway, Republic of Moldova, Russian Federation, Serbia, Sweden, Switzerland, Ukraine and Uzbekistan. One participant, a technical expert of the Task Force on Heavy Metals, represented a company.

B. Organization of work

3. The workshop was organized by the Task Force on Heavy Metals in cooperation with the Expert Group on Techno-economic issues. Ms. Katja Kraus (Germany), Chair of the Task Force on Heavy Metals chaired the workshop.

II. Objectives and main discussion points of the workshop

4. The aim of the workshop was to stimulate interest within the countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia (the target subregion) in joining the three most recent protocols to the Convention — the Protocol on Heavy Metals, the Protocol on Persistent Organic Pollutants (Protocol on POPs) and the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) — by sharing experiences with existing Parties, and to encourage them to accede to or ratify these Protocols. The workshop provided a platform for information exchange about difficulties and obstacles in the ratification process and information about the legal and technical demands for implementation.

5. In particular, the workshop aimed at:

(a) Increased awareness of the countries of the subregion of the obligations under the Protocol on Heavy Metals and the Gothenburg Protocol and their guidance documents;

(b) Understanding of national intentions to ratify the Protocol on Heavy Metals (Belarus, Georgia, Russian Federation) and the Gothenburg Protocol (Serbia, Georgia; considerations by Belarus and Russian Federation regarding accession at a later stage);

(c) Improved awareness of progress made throughout the ECE region with regard to emission abatement, particular challenges with regard to ratification/accession to the Convention's Protocols and assistance needs by countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia (see annex for listing by country).

6. The following issues were also highlighted:

(a) Visible progress has been made in many countries in terms of modernized legal frameworks, and several countries use best available techniques (BAT) as an obligation or a voluntary measure combined with emission limit values (ELVs);

(b) Visible progress has also been made regarding inventories in several countries (e.g., more countries are able to report on emissions compared to 2008 when the first workshop by the Task Force on Heavy Metals was held in Armenia);

(c) First steps have been made by certain countries regarding the regulation of products (e.g., batteries), separate collection of mercury-containing devices and scarce (illegal) use of leaded petrol;

(d) There is a need for up-to-date and background information on monitoring and to raise awareness on its importance for the Convention (capacity-building and technical support, e.g., expert visits, were requested by countries in the subregion);

(e) There is an increased awareness of the health effects from air pollution;

(f) There had been an improvement over the past few years in the supply of information on exceedances of heavy metals' critical loads and country-specific data, which were available on the website the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) in Russian and English (e.g., emission data, spatial distribution, trends, modelling, source-receptor relationships);

(g) Assistance was available for countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia seeking to ratify the Protocols, in the form of projects and activities carried out by the Convention secretariat and several Parties.

III. Summary of the presentations and discussions

7. Emission abatement of heavy metals has been successfully introduced in some countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia. Progress has been made since the first workshop of the Task Force on Heavy Metals, held in Armenia in 2008, e.g., with regard to the following:

(a) The Coordinating Group on the promotion of actions towards implementation of the Convention in Eastern Europe, the Caucasus and Central Asia has been established to promote the implementation of the Convention and to enhance the exchange of information;

(b) Several countries use specific National Implementation Plans, and in general a higher level of awareness and more capacity is available;

(c) All countries reported that they updated their national legislation at least partially with regard to environmental aspects, and several included the requirement to use BAT (e.g., Belarus, Ukraine, Kazakhstan, Republic of Moldova);

(d) There are more stringent requirements for new installations;

(e) A large percentage of the larger industrial facilities are covered by State control using ELVs;

(f) First steps and regulations regarding product control have been introduced;

(g) A larger number of countries are reporting fully or partially on emissions of heavy metals under the Convention;

(h) Improvements have been made in recent years with regard to country-specific data. The website of the Meteorological Synthesizing Centre-East is now available in Russian and English and includes websites with data (e.g., emission data, spatial distribution, trends, modelling, source-receptor relationships);

(i) Several projects in the region contributed to the progress, such as the ECE tripartite project covering Belarus, Kazakhstan and the Russian Federation;

(j) Examples of cost-efficiency analysis of measures for large combustion plants (Russian Federation) can be a starting point for other industrial sectors and a key argument to influence decision-making by policymakers (such work could be conducted in cooperation with the Expert Group on Techno-Economic Issues).

8. However, there are numerous challenges remaining, including:

(a) Political and administrative instability and frequent changes of staff in the administration or on committees in the countries of the subregion slows down progress;

(b) Increasing economic development is still a priority;

(c) Information and advice is needed regarding implementation (i.e., reporting (e.g., on volatile organic compounds (VOCs) and fine particulate matter (PM_{2.5})), monitoring, inventories and projections of emissions);

(d) Use of the BAT concept is still a challenge; countries in the subregion have expressed the wish to learn from the experience of EU member States, a lack of knowledge in administrations on how to use BAT in permitting has been voiced, and there is a need to adapt BAT documents to national requirements;

(e) Central Asia is less developed regarding the requirements of the Convention's Protocols than the Western part of the subregion;

(f) A mercury mine is still in operation in Kyrgyzstan;

(g) Training of experts needed, though well-trained experts tend to also leave for better paid jobs;

(h) Waste disposal continues to remain a problem, in particular for water bodies.

IV. Conclusions and recommendations

9. Countries in Eastern and South-Eastern Europe the Caucasus and Central Asia, following a comment by Belarus, stressed the importance of the acceptance of amendments by the European Union (EU) and its member States to not only the Gothenburg Protocol but also to the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants. Ratification by 16 Parties to the original Protocol on Heavy Metals is a requirement for the amendments to enter into force. Only then can countries of the subregion ratify the amended Protocols (i.e., using flexible transitional arrangements). Progress by Parties to the original Protocols has thus the potential to keep up the momentum with regard to the progress towards accession to the amended Protocols in countries of the subregion.

10. While environmental improvements are often motivated by concerns of human well-being and other political or economic factors (e.g., the Russian Federation's accession to the Organisation for Economic Co-operation and Development, EU association of Georgia and Serbia), there is a need for continued awareness-raising at the political level.

11. Based on information presented by the EMEP Chemical Coordinating Centre, there is a need for more information on monitoring of air pollutant emissions from Eastern and South-Eastern Europe, the Caucasus and Central Asia, by improving the existing monitoring network and expanding it. Countries in the subregion are encouraged to consider acceding to the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe.

12. The participants from the target countries voiced the need for guidance in calculating, monitoring and reporting emissions and using reduction plans for VOCs, monitoring and reporting on PM_{2.5} and PM₁₀ and general improvement of inventories in order to implement and accede to the Gothenburg Protocol. This need could be addressed by the Task Force on Techo-economic Issues in the future.

13. There was also a need expressed for the organization of workshops on BAT — something which could be addressed in the context of the establishment of a regional clearing house for control technology information for primary emissions of nitrogen oxides, sulphur dioxide, VOCs and particulate matter (PM), including short-lived climate pollutants, heavy metals and persistent organic pollutants (POPs) (see item 2.2.12 of the 2014–2015 workplan).

14. The cost-assessment methodology could be tested with different industrial sectors (other than large combustion plants) and countries in the subregion (apart from the Russian Federation where testing has already been carried out).

15. With regard to further strengthening the implementation and ratification of the Convention Protocols in Eastern and South-Eastern Europe, the Caucasus and Central Asia, it was agreed that:

(a) Awareness-raising at the political level on the environmental and health effects should continue;

(b) Existing Parties should ratify the amendments to the Gothenburg Protocol, the Protocol on Heavy Metals and the Protocol on POPs, including the countries in the EU and the European Free Trade Association, as a prerequisite for the amendments to enter into force;

(c) Continued technical assistance is important to address the assistance priorities/needs highlighted (see annex), e.g., with regard to the improvement of inventories, the development of projections, the application of BAT, permitting and the legal and institutional framework;

(d) Exchange of experiences on strategies, policies and measures, e.g., in the framework of sessions of the Working Group on Strategies and Review, can support the efforts to learn from practices throughout the region.

Annex

Progress made, remaining challenges and assistance needs by country

1. This annex presents a record of progress made, the remaining challenges and assistance needs by country on the basis of country presentations and the round-table discussion during the workshop to promote the ratification of the Protocols to the Convention on Long-range Transboundary Air Pollution across the entire ECE region, held on 4 and 5 March 2014 in Oslo. More information is available in the detailed country presentations.¹

A. Belarus

Progress made

2. Progress made in Belarus includes:

(a) On the level of enterprises, technical guidance was prepared and emission inventory was improved;

(b) The use of ELVs in permits (based on calculations) was introduced;

(c) Technological standards for emissions of heavy metals were updated in 2013 with information from all sectors, e.g., from the cement industry not included previously. This should lead to improvements in national emission figures;

(d) A three-day workshop on BAT took place, which included a discussion of “who will check the compliance if enterprises use BAT?”;

(e) Eighty per cent of installations are covered by State monitoring (at least once a month);

(f) In accordance with a review of products carried out in 2008, Belarus does not produce any mercury-containing products (emissions from lamps are included in the general inventory);

(g) New State standards for stationary engines and cars is to be introduced (Euro 4, from 2015).

Upcoming activities

3. Among upcoming activities:

(a) Belarus plans to proceed with the ratification of the Protocol on Heavy Metals (Belarus considers that it already fulfils almost all of the obligations of the amended Protocol on Heavy Metals and hopes to be the first country to ratify the amended Protocol);

(b) Belarus envisages ratification of the Gothenburg Protocol at a later stage.

¹ Available from <http://www.unece.org/index.php?id=34416>.

Challenges

4. Challenges for Belarus include:
 - (a) Politically, there are some challenges with regard to accession: the Ministry of Foreign Affairs and the Ministry of Justice issued two reports stating that Belarus can become a Party to the amended Protocol on Heavy Metals and the amended Gothenburg Protocol only once the amended Protocols enter into force. Belarus thus faces the question of whether to proceed with ratification or whether to wait, as advised by the Ministry of Foreign Affairs;
 - (b) Legally, Belarus would like to understand the difference between the United Nations Environment Programme Minamata Convention on Mercury and the Protocol on Heavy Metals;
 - (c) Technically, the high cost of emission abatement in Belarus is a challenge.

Priority assistance needs

5. Among priority assistance needs for Belarus are:
 - (a) Emission reduction of VOCs (monitoring, calculation, reduction plans);
 - (b) Implementation of BAT;
 - (c) Ammonia emission abatement from agriculture.

B. Ukraine

Progress made

6. Progress made in Ukraine includes:
 - (a) Categorization of stationary sources with regard to their application of BAT (facilities under State control that have capacity and technological equipment to use BAT; facilities under State control that do not have the technological equipment to use BAT; small facilities);
 - (b) New legislation takes BAT into account, but there are difficulties in implementing it in practice;
 - (c) Norms on air pollution have improved for existing facilities, in accordance with EU and national legislation;
 - (d) There is an approved list of equipment for which ELVs are set, corresponding to the type of equipment.

Challenges

7. Among the challenges Ukraine faces:
 - (a) There is no modern measurement technology, assessment of emission concentrations are not adapted to European legislation and continuous monitoring is costly;
 - (b) There is no register for products containing heavy metals;
 - (c) PM_{2.5} is not yet being measured, only dust in general;
 - (d) Black carbon/soot has not been introduced into the regulatory system yet and is also not being monitored;
 - (e) There is a complicated process of granting permits (based on a database).

Assistance needs

8. Ukraine's assistance needs comprise:
- (a) The development of methodological documents/recommendations for different sectors of industry with regard to PM_{2.5} (since there is presently no emission monitoring of PM_{2.5});
 - (b) Guidance on the application of BAT and the desire to learn from EU countries' approach;
 - (c) A need for clarity on definitions, e.g., soot and black carbon.

C. Republic of Moldova**Progress made**

9. In terms of progress made in the Republic of Moldova, the following was noted:
- (a) A national strategy on air quality management is under development;
 - (b) There is a continuous assessment of compliance in accordance with Protocol requirements.

Upcoming activities

10. Upcoming activities include:
- (a) Development of a legal act limiting mercury content in alkaline manganese batteries;
 - (b) Further development and maintenance of emission inventories and projections;
 - (c) Improvement of the capacity of government institutions, including to maintain emission inventories.

Lessons learned

11. A lesson learned by the Republic of Moldova is the importance of foreseeing a preparation period for ratifying Protocols, as the fulfilment of Protocol obligations is mandatory and the reputation of the country depends on it.

Challenges

12. Among challenges the Republic of Moldova faces are:
- (a) Meeting the requirements under the Protocol on POPs and the Protocol on Heavy Metals to which the Republic of Moldova is a Party;
 - (b) Air pollution is not considered a priority (as industry is not developed on a large scale, transport is the main source of air pollution);
 - (c) Political and administrative instability and lack of political will;
 - (d) A lack of institutional capacity and structures responsible for the development of a legal framework in the air quality management sector (no department, no mechanisms, no procedures);
 - (e) A fragmented national inventory system.

Assistance needs

13. In terms of assistance needs, the Republic of Moldova asked for information and/or training with regard to:

(a) Improving emission inventories, gridded data calculations and projections (the Republic Moldova does not yet provide projections and gridded data);

(b) The different guidance documents available, also under other Conventions, e.g., the Stockholm Convention on POPs and the Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

D. Kazakhstan

Progress made

14. Progress made by Kazakhstan included:

(a) The permitting system enshrined in the legislation grants permits for five years. Through an annual audit, there is an evaluation of the application of ELVs. Forty-three large enterprises go through an annual audit and submit documents to the Committee on Environmental Control and Regulation. There is a system of penalties. Not all enterprises meet the requirements;

(b) There are very stringent requirements for the operation of new plants;

(c) Effective transport management systems have been introduced in big cities;

(d) There is enhanced state control over fuel quality and compliance with standards for motor vehicles.

Challenges

15. Among the challenges facing the country are:

(a) A lack of expertise to develop emission inventories;

(b) The application of BAT;

(c) A need for reference and promotional materials in Russian that demonstrate the benefits of emission regulations (e.g., brochures prepared for thirtieth anniversary of the Convention) to decision makers to enhance political support;

(d) Institutional challenges, e.g., frequent changes in the Committee on Environmental Control and Regulation.

Assistance needs/proposals

16. Assistance needs included:

(a) A leaflet/brochure that includes recent success stories with regard to emission abatement in Europe;

(b) Training for experts to create emission inventories, based on an assessment of technical needs;

(c) Undertaking an analysis of how the Government resolution on BAT in Kazakhstan prepared in 2008 can be updated.

E. Georgia

Progress made

17. In Georgia, the following progress and positive trends were noted:

- (a) Since 2013 some sectors are now required to submit data on emissions of heavy metals and a register of heavy metals' emissions will soon be established;
- (b) A new monitoring station has recently been installed;
- (c) A national action plan, feasibility study and cost-benefit analysis have been elaborated in the framework of the EU Air Quality Governance project;
- (d) A road map and strategic plan have been developed which foresee ratification of the Gothenburg Protocol, the Protocol on Heavy Metals and the Protocol on POPs as a package in 2019;
- (e) Approximation to EU legislation through the association agreement is a main driving force;
- (f) A State programme on reduction of emissions from the transport sector has been elaborated with the objective of reducing emissions by half, renewal or replacement of the old car park and introducing EURO 5 and EURO 6 standards to optimize the transport sector improve public transport and the health of population.

Challenges

18. Challenges Georgia faces include:

- (a) The weakness of monitoring, the unavailability of data and the fact that there is only one monitoring station measuring PM;
- (b) BAT has only a recommendatory character in the national legislation and it is very difficult to implement BAT as mandatory for the industrial sector;
- (c) A plant register of emissions exists, but is not divided by the different substances;
- (d) Introduction of BAT as a requirement would harm the existence of several industries in the country;
- (e) A lack of institutional and human resources;
- (f) A lack of scientific know-how and low awareness of technologies.

F. Uzbekistan

Progress made

19. The following progress and positive trends were noted in Uzbekistan:

- (a) A workshop on PM in 2013 increased awareness, in particular among experts in the region;
- (b) Work on inventories has begun;
- (c) The Russian Federation has provided assistance to analyse and assess measures and efforts made.

Challenges

20. Remaining challenges for Uzbekistan include:
- (a) Out-of-date equipment and processes used by industry;
 - (b) An increase in ammonia emissions; advice is needed on how to tackle that problem.

G. Kyrgyzstan

Challenges

21. The following challenges were noted for Kyrgyzstan:
- (a) Old equipment in plants;
 - (b) A mercury-producing mine is still operational;
 - (c) Waste disposal is polluting water;
 - (d) There is a lack of legislation in the field of environment.

Assistance needs

22. Kyrgyzstan needs assistance in monitoring of air emissions.

H. Russian Federation

Progress made

23. For the Russian Federation, positive trends and progress includes:
- (a) Formal procedures will be started this year to accede to Protocol on Heavy Metals (a proposal was sent to federal ministries and agencies for comments and work on the corresponding documents is under way);
 - (b) The Russian Federation will consider ratification of the amended Gothenburg Protocol at a later stage in the light of the introduction of the flexible mechanisms;
 - (c) The preparation of BAT Reference (BREF) documents has commenced;
 - (d) After many years, measures to reduce PM were introduced, old technology was removed and new, more efficient technology installed;
 - (e) There has been an improvement in emission inventories (including PM_{2.5} and PM₁₀).

Assistance needs

24. In terms of assistance needs, the following were identified:
- (a) Inventories for black carbon emissions;
 - (b) Determination of the cost-efficiency of emission reduction activities, as one of the key arguments to impact the decision-making process by policymakers (the Russian Federation has previously worked with the Expert Group on Techno-Economic Issues in the specific evaluation of a cost assessment in one particular plant);
 - (c) Sharing of practical experience from experts on what BAT is and how it can be applied;

(d) A need to address the fragmented understanding regarding the problem of ammonia emissions.

I. Serbia

Progress made

25. Progress made in Serbia includes:

(a) The elaboration of a national action plan as a result of a project for Western Balkan countries on implementation of the Convention and its protocols, carried out in 2009–2011 to support the implementation and ratification of the Protocol on Heavy Metals, the Protocol on POPs and the Gothenburg Protocol;

(b) Ratification of the Protocol on Heavy Metals and the Protocol on POPs in 2012;

(c) Since 2009, there is a Law on Air Protection with ELVs for stationary sources and a Law on Integrated Pollution Prevention and Control (IPPC) (which includes requirements on the use of BAT, criteria for determining BAT, regulates the type of installations for which permits are required, establishes a list of 11 key activities and a programme of measures for plants that are not in compliance);

(d) A significant decrease of emissions from heavy metals recently;

(e) In accordance with the national programme for adoption of the EU *acquis*, there is a need to determine national emission ceilings and to ratify in 2016 the Gothenburg Protocol.

Challenges

26. Among challenges, only 7 permits have been issued so far for 178 installations in Serbia: enforcement of the IPPC law is problematic and lengthy due to three levels of competencies for issuing permits — ministerial, provincial and local.

Assistance needs

27. Serbia would benefit from the availability of BREFs in Serbian to facilitate introduction of BAT among the operators.
