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Mid-term review of the main outcomes of the Eighth Environment for Europe Ministerial Conference: greening the economy and cleaning the air, including the activities of the GREEN Action Task Force and the regional environmental centres

Implementation of the Batumi Action for Cleaner Air: fostering progress towards improved air quality

Report by the secretariat

Summary

At the Eighth Environment for Europe Ministerial Conference (Batumi, Georgia, 8–10 June 2016) ministers endorsed the Batumi Action for Cleaner Air, welcomed the actions committed to by interested countries and organizations during the Conference aimed at improving air quality management and invited countries and other actors to implement the initiative (ECE/BATUMI.CONF/2016/2/Add.1, para. 7). They also requested the Committee on Environmental Policy to convene in a mid-term review of the Conference's main outcomes, including the Batumi Action for Cleaner Air, in 2018 (*ibid.*, para. 16).

Following a request by the Committee on Environmental Policy at its twenty-third session in November 2017 (ECE/CEP/2017/5, para. 46), and based on the responses received from most of the stakeholders, the secretariat prepared the present document to present the progress made in implementing the Batumi Action for Cleaner Air. The document aims to facilitate the discussion by Committee during the mid-term review.

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Introduction

1. The Batumi Action for Cleaner Air (ECE/BATUMI.CONF/2016/7) is a collection of possible actions for improving air quality within the United Nations Economic Commission for Europe (ECE) region. It provides Governments and other stakeholders with suggestions for concrete actions to address local, national and regional air pollution problems, including those that are currently not being addressed. It also seeks to aid the further implementation of the commitments under the ECE Convention on Long-range Transboundary Air Pollution (Air Convention) and its protocols and to invite stakeholders to support actions that improve air quality, in particular capacity-building and technical assistance actions. The time frame for the Batumi Action for Cleaner Air is 2016–2021.
2. Twenty-seven countries¹ and four organizations² have committed to 108 actions in the framework of the Batumi Action for Cleaner Air.
3. Registered actions to which countries and organizations have committed in the framework of the initiative are available on the ECE website.³ In addition, a compilation of the actions that were presented at the Batumi Ministerial Conference is available in an information document submitted to the Conference.⁴
4. At its twenty-third session (14–17 November 2017), the Committee on Environmental Policy invited stakeholders to report on progress achieved in implementing the commitments under the Batumi Action for Cleaner Air, on the basis of a survey template prepared by the secretariat in consultation with the Bureaux of the Committee and of the Air Convention. The survey was sent out on 20 April 2018.
5. The present report synthesizes the responses to the survey received from 21 countries⁵ and 2 organizations.⁶ It reflects the progress made on 84 (or 77.7 per cent) of the 108 submitted actions implemented within the Batumi Action for Cleaner Air framework.
6. The report also identifies trends and future steps to be taken by stakeholders. Examples are provided to illustrate progress, achievements, challenges and future steps. The document also summarizes the views expressed by countries on the usefulness of the Batumi Action for Cleaner Air.

¹ Armenia, Austria, Azerbaijan, Belarus, Belgium, Canada, Croatia, Czechia, Estonia, France, Georgia, Germany, Hungary, Italy, Latvia, Lithuania, the Netherlands, Poland, Portugal, the Republic of Moldova, Romania, Slovenia, Spain, Sweden, Switzerland, the United States of America and Uzbekistan.

² ECE, the Nordic Council of Ministers, the Regional Environmental Centre for Central and Eastern Europe and the World Health Organization.

³ See www.unece.org/environmental-policy/environment-for-europe/initiatives/baca.html.

⁴ See informal document ECE/BATUMI.CONF/2016/INF/39, available from the web page for the conference (<https://www.unece.org/environmental-policy/environment-for-europe/efe-conferences/batumi-conference/welcome.html>; see documents and materials, information documents).

⁵ Armenia, Austria, Azerbaijan, Belarus, Canada, Croatia, Czechia, Estonia, Georgia, Germany, Hungary, Italy, Latvia, Lithuania, the Netherlands, Poland, the Republic of Moldova, Romania, Sweden, Switzerland and the United States.

⁶ ECE and the Nordic Council of Ministers.

I. Progress made in the implementation of commitments in the framework of the Batumi Action for Cleaner Air

7. Overall, remarkable progress has been made in the implementation of the Batumi Action for Cleaner Air, in particular on the 84 actions that countries and organizations reported on. Of those 84 actions, 44 are in progress and 32 have been completed. One has not been implemented yet. For seven actions, no information has been provided.

8. In 2016, countries and organizations attributed each committed action to one or several actions outlined in the initiative. The Batumi Action for Cleaner Air proposes actions grouped as follows: section I suggests actions related to the establishment of systematic, comparable and transparent monitoring activities and emissions inventories; section II lists actions related to the establishment of national action programmes that reduce air pollution; section III contains actions related to the improvement of public awareness; section IV proposes actions related to capacity-building and technical support; and section V lists actions related to policy.

9. Most of the actions reported on are focused on actions related to the establishment of national action programmes that reduce air pollution (section II). While some of these actions set general targets to reduce air pollutants, others relate to measures in specific sectors, such as transport, energy or agriculture. A number of actions also relate to establishing monitoring networks and to developing emission inventories (section I). Actions related to improving public awareness (section III) are geared towards enhancing public access to information on air pollution, including emission data. Actions related to capacity-building and technical support (section IV) have been undertaken mostly with a focus on assisting countries in developing emission inventories and monitoring systems and in implementing best available techniques. Policy actions (section V) are geared towards the ratification and implementation of the Air Convention and its protocols. Examples of the progress on the actions reported on are given below.

A. Establishment of systematic, comparable and transparent monitoring activities and emissions inventories

10. Several countries reported on their monitoring activities. Canada mentioned its National Air Pollution Surveillance Program, which monitored and assessed the quality of ambient (outdoor) air at more than 280 sites.

11. Romania set up the National Air Quality Monitoring Network Development and Optimization Programme and established new sampling points for continuous measurement of several indicators accordingly. Since 2017, five air quality monitoring stations have been integrated into the National Air Quality Monitoring Network.

12. Georgia drafted a by-law on new ambient air quality standards based on European norms. It also reported that, since 2016, six new automated air quality monitoring stations had been installed in the country. Thus, since September 2016, Tbilisi has a fully automated air quality monitoring network with four stations that are in line with European Union standards.⁷ In addition, one automated monitoring station is being installed. Quarterly passive sampling surveys have been conducted since autumn 2015 in more than 20 settlements of the country. Georgia also reported that, since 2017, operators of large point sources reported annual data through an electronic system, which had increased the quality

⁷ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

of data and reduced the time needed for the submission of the report and data processing. Detailed information about emissions from each point source has been made available for the public in a user-friendly manner.

13. Latvia reported on the modernization of eight air observation stations and the installation of three new stations within the framework of a European Union project on the development of an environmental monitoring and control system. Procurement for the supply and installation of air and precipitation measuring equipment was under way. Atmospheric air measurement equipment would be installed in a new air monitoring container, with added meteorological observations. After the equipment was installed, a modern data collection and data processing system would be put into operation.

14. Lithuania reported that a plan for improving the national air pollutant emission inventory for 2015–2022 was being prepared. That plan included actions for collection and evaluation of missing inventory input data on air pollutant emissions from certain economic sectors – such as agriculture, households and sectors that emitted volatile organic compounds – and uncertainty analyses. Studies to gather input data from various sources were currently being carried out. Those studies would help Lithuania in applying Tier 2 emission inventory methodologies according to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)/European Environment Agency (EEA) air pollutant emission inventory guidebook 2016.

B. Establishment of national action programmes that reduce air pollution

15. Countries reported on strategies, policies and programmes to reduce air pollution, either covering multiple sectors or those setting measures for individual sectors. Examples are given below.

Multisectoral strategies and policies

16. Several European Union member States (Czechia, Estonia, Latvia and Romania) reported on progress in reducing emissions in line with European Union Directive 2016/2284.⁸ They also reported on steps taken to establish their national air pollution control programmes in accordance with that Directive.

17. The Netherlands reported on a national programme for cooperation on better air quality, which had helped improve air quality in the country's previous air pollution hotspots. Canada was reviewing its ambient air quality standards for ozone and fine particulate matter in a multi-stakeholder process. Italy made progress in establishing and implementing agreements on interregional cooperation to improve air quality in some of the most polluted areas in Northern Italy, covering a number of measures in sectors such as transport, agriculture and heating.

18. As a follow-on action to strengthening the National Ambient Air Quality Standards for ground-level ozone in 2015, the United States completed the process of designating geographic areas as meeting or not meeting the standards (attainment/non-attainment) and setting the maximum dates for attainment depending on the severity of the ozone pollution in 2018. In comparison with designations issued in 2012 for the 2008 standards, there were more than 10 per cent fewer areas designated as not meeting the more stringent 2015 standard.

⁸ Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC.

19. Belarus reported on an emission reduction programme to reduce emissions of nitrogen oxides, ammonia, volatile organic compounds, particulate matter and sulphur dioxide, which was currently being finalized as part of the preparation of documentation for the ratification of the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to the Air Convention (Gothenburg Protocol).

Transport

20. Croatia, Hungary and Lithuania reported on economic instruments, such as taxes and financial incentives to promote measures to reduce emissions in the transport sector. Croatia and Hungary also promoted electric mobility through financial incentives, such as tax breaks and subsidies for the purchase of plug-in hybrid and electric vehicles and the development of electric mobility infrastructure. Lithuania had also introduced several additional measures to support sustainable mobility, such as eco-driving training courses, the installation of electric vehicle charging stations and new bicycle lanes and pedestrian paths.

21. Canada, Georgia and the United States reported on regulatory actions in the transport sector. While Canada detailed measures it had taken to reduce air pollution from off-road small spark-ignition engines, Georgia had introduced regulations to reduce the sulphur content in gasoline and diesel, which had been set at 10 parts per million (ppm) and 100 ppm maximum, respectively, as of 1 January 2017. As of 2019, the permissible sulphur content for diesel would be set at 50 ppm. The United States provided information on new motor vehicle regulations as of 2017 that set new vehicle emissions standards and lowered the sulphur content of gasoline, considering the vehicle and its fuel as an integrated system.

22. Belarus reported that the creation of an intelligent transport system was under way in the city of Minsk, with an expert council currently examining technical tasks for implementation.

Industry

23. Canada established a number of regulations to reduce emissions from industry, including methane and certain volatile organic compound emissions from the upstream oil and gas sector and volatile organic compounds in the petroleum sector. Canada also introduced a code of practice to reduce volatile organic compound emissions from cutback and emulsified asphalt. Another code of practice aimed at the reduction of emissions of fine particulate matter (PM_{2.5}) from the aluminium sector.

24. The United States also introduced new source performance standards for the oil and natural gas sector and two final rules that clarified permitting requirements in 2016.

Residential heating

25. Hungary funded actions to increase energy efficiency in municipal and residential buildings and promoted a campaign to raise awareness on reducing emissions, specifically, particulate matter, from residential heating. Canada, for its part, introduced a code of practice for residential wood burning appliances. The United States introduced new source performance standards for residential wood heaters to make new heaters significantly cleaner and improve air quality in communities where people burn wood for heating.

C. Improvement of public awareness

26. Countries and organizations took actions to raise public awareness of the air pollution problem and to better inform the public about the air quality situation in their vicinity.

27. For example, Georgia had started publishing daily information bulletins on air quality data.⁹ Using the CHIMERE air quality model¹⁰ for research and forecast purposes, Hungary planned to make air quality forecasts accessible for residents in 2019. The Netherlands provided detailed information about emissions into the air, among others, through its compendium of the physical environment.¹¹

28. Switzerland disseminated information on the health effects of ozone.¹² Several applications and websites¹³ had been developed to inform the public about the air quality situation in any city of the country. In addition, Switzerland had developed short videos to explain the nitrogen cascade and the relation between ammonia pollution, agriculture and biodiversity.¹⁴

29. The Chief Inspectorate for Environmental Protection of Poland launched an air quality portal and mobile applications called “Air quality in Poland” that had raised public awareness on air pollution and had increased public pressure to implement stringent policies and actions to reduce air pollution.

30. The United States supported the development of the Long-range Energy Alternatives Planning Integrated Benefits Calculator,¹⁵ a tool that provides a framework and internationally validated data sets for individual countries to develop emission inventories for current conditions and under a range of scenarios with changes to the energy system or adoption of pollution control technologies. It specifically allows users to target short-lived climate forcers, such as black carbon, where emission reductions can benefit both human health and climate change mitigation.

31. Finally, the secretariat to the Air Convention reported on actions to raise public awareness on the Convention and the overall visibility of air pollution issues throughout the ECE region, in particular through outreach in a number of international forums and various communications activities.

D. Capacity-building and technical support

32. Several countries and organizations reported on capacity-building projects and technical support they had provided to other countries in the ECE region.

33. Austria, for example, implemented a number of activities to strengthen the administrative capacity of national agencies in charge of greenhouse gas and air pollutant emission inventories. It also organized trainings to assist countries in developing and updating their emission inventories in accordance with the reporting requirements under the Air Convention and under the United Nations Framework Convention on Climate Change. In addition, Austria supported countries in improving public availability of up-to-date and comparable air quality data. For example, through an Environmental Monitoring Twinning project with Azerbaijan financed by the European Union, the transfer of air quality data

⁹ See <http://nea.gov.ge/>.

¹⁰ The CHIMERE model is a multi-scale chemistry-transport model for atmospheric composition analysis and forecast, see www.lmd.polytechnique.fr/chimere/.

¹¹ See www.emissieregistratie.nl/erpubliek/bumper.en.aspx.

¹² See www.bafu.admin.ch/bafu/fr/home/themes/air/info-specialistes/qualite-de-l-air-en-suisse/ozone---smog-estival.html.

¹³ Applications: [aircheck](#); [MeteoSuisse](#); and <http://explor-air.ch/>.

¹⁴ See www.bafu.admin.ch/bafu/en/home/topics/air/info-specialists/air-quality-in-switzerland/nitrogen-containing-air-pollutants-affect-biodiversity.html and www.bafu.admin.ch/luft/13793/14818/15041/index.html?lang=fr.

¹⁵ See www.energycommunity.org/Default.asp.

from two automated monitoring devices in Baku to the European Air Quality Index portal¹⁶ was tested.

34. Germany reported on an assistance project on implementing best available techniques using integrated permits in Eastern Europe, the Caucasus and Central Asia to support the ratification of protocols under the Air Convention. Two workshops had already been organized in the Russian Federation. Subsequent site visits and meetings with permitting authorities were planned.

35. Sweden had started implementing a project with Bosnia and Herzegovina to reduce air pollution. Earlier bilateral cooperation with the Russian Federation, Belarus and Ukraine, respectively, would be continued in the future. In addition, Sweden reported on the Saltjöbaden VI workshop, held in Gothenburg in March 2018, which had resulted in a list of recommendations on international cooperation to reduce air pollution to be further discussed with relevant stakeholders.

36. Switzerland has been supporting countries in Central Asia and Azerbaijan in their efforts to ratify and implement the Air Convention and its protocols. This is being done by providing financial support for trainings and to facilitate participation of experts in meetings of the Air Convention held in Geneva.

37. The United States worked closely with the United Nations Environment Programme (UNEP) to provide technical and policy advice as the organization expands its air quality programme. For example, coordination on planned air quality capacity-building work in Ethiopia is ongoing. The United States also tested a low-cost air quality sensor developed by UNEP.

38. The Nordic Council of Ministers financed two cooperation projects between Nordic and Russian and Nordic and Belarusian air pollution experts. In Belarus, the project focused on the development of PM_{2.5} and black carbon emission inventories and Greenhouse Gas Air Pollution Interactions and Synergies (GAINS) modelling in Belarus – sharing the experience from Nordic countries and strengthening cooperation. The project resulted, among others, in improvements in the PM_{2.5} emission inventory and the development of a first black carbon emission inventory. The project with the Russian Federation focused on the development of the GAINS model and the Russian model of EMEP, which resulted in scenario analysis for the years 2020 and 2030.

39. In the framework of the assistance programme under the Air Convention, the secretariat provided trainings to national teams of experts to develop national emission inventories in accordance with the reporting requirements under the Convention. Trainings were held for experts from Armenia, Azerbaijan, Georgia, Kazakhstan, the Republic of Moldova, Tajikistan and Uzbekistan in the period 2016-2018. The secretariat also provided advice to national authorities during the same period to support the development and implementation of air quality management policies and measures, such as through legislation analysis in Azerbaijan, Georgia, Kazakhstan, and Tajikistan. In addition, the secretariat facilitated the exchange of information between countries on issues related to air pollution through, for example, providing support to meetings of the coordinating group on the promotion of actions towards implementation of the Air Convention in Eastern Europe, Caucasus and Central Asia.

¹⁶ See www.eea.europa.eu/themes/air/air-quality-index.

E. Policy

40. Countries reported on their progress in the ratification of the three most recent protocols under the Air Convention – the Gothenburg Protocol, the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants – all of which have been amended. Croatia, Estonia and Switzerland reported on the ratification of the amendments to the Protocol on Heavy Metals and of the amendments to the Protocol on Persistent Organic Pollutants. Preparations for the ratification of the amendments to the Gothenburg Protocol are under way in Belarus, Estonia and Switzerland.

II. Challenges and lessons learned

41. Among the challenges encountered by countries and organizations was the lack of adequate human resources, including insufficient personnel, frequent personnel changes, or a lack of the necessary expertise, especially with regard to emission inventory development and maintenance of monitoring stations.

42. With regard to air quality monitoring, several countries also mentioned that financial resources were often scarce, which made the high initial investments in modern automated monitoring stations and subsequent funding for maintenance very difficult.

43. Several countries encountered difficulties with the quality of emissions and air quality data, which also led to difficulties in sharing these data through, for example, the European Air Quality portal.

44. Several countries and organizations also encountered difficulties in implementing actions due to limited financial resources. Countries also reported on challenges in implementing measures in different sectors, such as in transport, agriculture, the solvents industry and the residential heating sector.

45. Governance issues were highlighted by several respondents. Countries stressed the need for clear roles and responsibilities within and between Government agencies and cooperation and coordination between institutions with responsibilities in the field of air pollution. Difficulties were also encountered with enforcement of regulations, which required adequate funding. Some countries mentioned delays with the ratification process due to changes in the Government. Countries also stressed the need to raise awareness of decision makers about the air pollution challenge.

III. Future steps and follow up

46. Countries and organizations outlined concrete steps to continue to implement and follow up on their actions under the Batumi Action for Cleaner Air.

47. For example, Austria will continue to support the Environmental Monitoring Twinning project with Azerbaijan and work with the European Environment Agency within the Shared Environmental Information System East project towards developing adequate reporting procedures for non-European Union countries. Azerbaijan, for its part, is in the process of integrating technical standards for air quality monitoring into the national standardization system. Georgia and Romania also reported that they would continue to improve their air quality monitoring networks. Latvia reported that it was in the process of procuring air quality reference equipment for the National Reference Laboratory.

48. Azerbaijan, Georgia and Romania will continue to improve their national emission inventories. The secretariat to the Air Convention will continue to support countries in Eastern Europe, the Caucasus and Central Asia in building capacity in relation to air

pollutant emission inventories and projections and air quality management policies and measures through its assistance programme.

49. Several European Union member States (Czechia, Hungary, Latvia and Romania) outlined next steps in relation to establishing their national air pollution control programmes in accordance with European Union Directive 2016/2284. For Romania, for example, this included the organization of general and thematic consultations with representatives of the designated national authorities, the drafting of the programme, public consultations and the launching of the Government approval procedure.

50. As regards the implementation of measures in specific sectors, Georgia is planning to upgrade public transport services in Tbilisi, with significant modernization of the bus fleet, a new bus lane project, an upgrade of the metro and the creation of a comprehensive sustainable urban mobility plan. Hungary is planning to further expand the electric charging network in order to achieve the aim of having 30,000 electric vehicles on the roads in the country. The United States is considering steps to provide relief for manufacturers of certain types of wood-burning heaters while the country works to ensure its New Source Performance Standards for Residential Wood Heaters are based on real-world conditions.

51. Germany is planning to start a second project on implementing best available techniques using integrated permits to support the ratification of protocols under the Air Convention in Ukraine. Sweden reported that planning was ongoing for the project in Bosnia and Herzegovina, with the agreement expected to be signed in autumn 2018. The Netherlands planned to increase international cooperation to reduce air pollutant emissions in the European Union and beyond as the possibilities for the Netherlands to reach the WHO air quality standards depend on the background levels of air pollution emitted beyond national boundaries.

IV. Usefulness of the Batumi Action for Cleaner Air

52. Many countries and organizations agreed that the Batumi Action for Cleaner Air was useful to strengthen awareness of policymakers of the need to improve air quality, not only in environment ministries, but also across Governments. Many countries also highlighted that the initiative had helped to strengthen political support at the national level for specific measures to improve air quality. Countries also noted positively that the Batumi Action for Cleaner Air was acknowledged in United Nations Environment Assembly resolution 3/8 on preventing and reducing air pollution to improve air quality globally, as inspiration for action in other regions.

53. Some countries mentioned that the initiative was helpful in the implementation of other international obligations, such as those under the Air Convention and those under European Union legislation. However, some countries thought that much more international cooperation was needed to improve air quality in line with the WHO air quality standards. Some countries also mentioned that the Batumi Action for Cleaner Air had led to concrete commitments, but that actual implementation had been less strong than for legally binding international commitments.

V. Questions for discussion by the Committee on Environmental Policy

54. The Committee on Environmental Policy is invited to discuss the following questions:

- (a) What is the added value of the Batumi Action for Cleaner Air? Has the Batumi Action for Cleaner Air contributed to improving air quality?;
 - (b) What are the positive and negative lessons of the Batumi Action for Cleaner Air?;
 - (c) What are the main challenges in implementing the Batumi Action for Cleaner Air? How can they be overcome?;
 - (d) How could the impact of the Batumi Action for Cleaner Air be increased and the experience sharing between stakeholders intensified? Does the Batumi Action for Cleaner Air have enough visibility?;
 - (e) How could the progress and results of the Batumi Action for Cleaner Air be reported to the next Environment for Europe ministerial conference?
-