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Final report on the implementation of the Batumi Action for Cleaner Air

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Final report on the implementation of the Batumi Action for Cleaner Air

Note by the secretariat

Summary

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. Twenty-seven countries and four organizations have committed to 108 actions in the framework of the Batumi Action for Cleaner Air.

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. At its twenty-fourth session (29-31 January 2019), the Committee welcomed the document "Implementation of the Batumi Action for Cleaner Air: fostering progress towards improved air quality" (ECE/CEP/2019/6) and the progress achieved in implementing voluntary commitments by the member States and organizations participating in the Batumi Action for Cleaner Air. The Committee also called upon the member States and other stakeholders to continue active participation in this Batumi initiative.

At its twenty-seventh session (3-5 November 2021), the Committee on Environmental Policy took note of the draft list of documents to be prepared for the Ninth Environment for Europe Ministerial Conference. The list includes the final report on the implementation of the Batumi Action for Cleaner Air.

The online reporting tool "EfE Final report of the Batumi Action for Cleaner Air (BACA)" has been launched by the secretariat on 28 February 2022.

A consultant was contracted by the UNECE to assist the secretariat to prepare the report.

The Committee will be invited to consider the paper, as appropriate, and guide the secretariat to finalize it and process as an official document of the Ninth Environment for Europe Ministerial Conference (5-7 October, Nicosia, Cyprus).

Introduction

1. At the Eighth Environment for Europe Ministerial Conference (Batumi, 8–10 June 2016) launched the Batumi Action for Cleaner Air (BACA) which is a set of voluntary commitments taken by countries to improve air quality and protect human health and ecosystems. It is a unique tool that gives an opportunity to countries and other stakeholders to set realistic goals based on their priorities and specific actions to achieve them. More specifically, the Batumi Action for Cleaner Air has the following objectives:

(a) To provide Governments and other stakeholders with a list of possible concrete actions to address local, national and regional air pollution problems for their consideration;

(b) To inspire action on air pollution issues that are not currently being addressed;

(c) To aid the further implementation of the commitments under the ECE Convention on Long-range Transboundary Air Pollution (Air Convention) and its protocols;

(d) To invite stakeholders (international organizations, donors and non-governmental organizations (NGOs)) to support actions that improve air quality, in particular capacity-building and technical assistance actions;

(e) To invite Governments to voluntarily commit to implementing specific actions and to share their successes and further challenges at future meetings of the ECE Committee on Environmental Policy.

2. Voluntary commitments of the Batumi Action for Cleaner Air cover all key aspects of air quality management, from air quality monitoring and assessment, through emission reduction policies and capacity building, to information sharing and awareness raising. BACA activities are taken at city, national and regional levels. The time frame for the BACA was five years and half (June 2016- December 2021) during which many very important activities have been implemented by several countries and organizations.

3. In total, twenty-seven countries and four organizations have taken 110 voluntary commitments under the BASA initiative. The committing countries are Armenia, Austria, Azerbaijan, Belarus, Belgium, Canada, Croatia, Czech Republic, 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. Following organizations took commitments: the Nordic Council of Ministers; the Regional Environmental Centre for Central and Eastern Europe; UNECE; the World Health Organization. Voluntary commitments made by countries and organizations are available on the ECE website[1].

4. Different countries and organizations took different number of voluntary commitments. In particular: 7 countries[2] and one organization[3] took one commitment; 4 countries[4] and one organization[5] committed to implement two commitments; 3 countries[6] and one organization[7] made three voluntary commitments; 4

[1] https://unece.org/baca
[2] Armenia, Azerbaijan, Czech Republic, Germany, Italy, Portugal, Spain
[3] The Nordic Council of Ministers
[4] Austria, Latvia, Lithuania, Netherlands
[5] UNECE
[6] Republic of Moldova, Romania, Slovenia
[7] The World Health Organization

countries[8] and one organization[9] took four commitments; 6 countries[10] pledged to fulfill five commitments; the United States of America took six commitment; Georgia committed to implement seven commitments; Canada made commitment to accomplish seventeen voluntary commitments (annex, figure I).

5. With the aim to prepare the "Final report on the implementation of the Batumi Action for Cleaner Air", to be submitted to the 9th EfE Ministerial Conference (Nicosia, Cyprus, 05-07 October 2022) a survey template was prepared by the secretariat in consultation with the Bureaux of the Committee and of the Air Convention. To collect information on implementation of the BACA, based on the survey template, the online reporting tool "EfE Final report of the Batumi Action for Cleaner Air (BACA)" was launched in 28 February 2022.

6. The present report has been developed based on the responses received by the online reporting tool, as well as through individual communication via e-mail with contact points. Responses were received[11] from 16 countries and 1 organization. This document provides information based on these responses, as well as information collected during the mid-term review conducted in 2018 for countries[12] where data could not be collected. Following countries and organizations submitted information in 2022: Canada, Croatia, Czech Republic, Estonia, Georgia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Republic of Moldova, Romania, Spain, Sweden, Switzerland, UNECE. This report reflects the progress made on 81[13] (74%) of 110 commitments taken under the Batumi Action for Cleaner Air initiative.

7. The report provides information on the overall progress in the implementation of BACA commitments, key achievements of countries and organizations grouped within each section of the BACA. Moreover, the document summarizes challenges and future steps, as well as the views of the countries on usefulness of the BACA. In an annex are presented tables and charts about the implementation status of commitments and some other findings.

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

A. General overview

8. This report analyzes the 110 commitments taken by the 27 countries and 4 organizations with the aim to reduce air pollution and its negative impact on human health and ecosystems. Under the BACA commitments were grouped in five following sections: I. Establishment of systematic, comparable and transparent monitoring activities and emissions inventories; II. Establishment of national action programmes that reduce air pollution; III. Improvement of public awareness; IV. Capacity-building and technical support; V. Policy (annex, figure II). Information on progress made in fulfilling the commitments of BACA is presented by these sections.

9. In terms of geographical distribution of the participating countries, the following picture is observed: 18 European Union member States, 1 non-European Union country from Western Europe, 2 countries from

[8] Estonia, Hungary, Sweden, Uzbekistan
[9] The Regional Environmental Centre for Central and Eastern Europe
[10] Belarus, Belgium, Croatia, France, Poland, Switzerland
[11] As for 5 April 2022
[12] Austria, Azerbaijan, Belarus, France, the Netherlands, Portugal, the United States of America
[13] As for 5 April 2022

the Eastern Europe (non-European Union), all 3 states of the Caucasus and 1 Central Asian States (annex, figure III). South-Eastern Europe (non-European Union) is the only sub-region that is absent.

10. Almost half (48%) of the commitments are dedicated to measures that reduce air pollution (section II). The other half of the commitments are more or less evenly distributed among further four sections: I. Establishment of systematic, comparable and transparent monitoring activities and emissions inventories (14%); III. Improvement of public awareness (12%); IV. Capacity-building and technical support (12); and V. Policy (14%).

11. In total, progress on 81 commitments were reported within the final and mid-term[14] survey, indicating significant overall progress in the implementation of the Batumi Action for Cleaner Air. Of those 81 actions, 61 have been completed, 19 are in progress and only one commitment has not been implemented. For 29 commitments no information has been submitted.

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

12. Air quality monitoring and assessment is the basis for ambient air quality management. Air quality monitoring is necessary to assess the current situation, and together with emissions inventory, to identify the key sources of pollution. This makes it possible to develop the most effective and targeted air protection policy. It is essential to have reliable data on the quality of ambient air. To ensure high quality and comparable data, a standardized monitoring system is needed. 10 countries[15] and 1 organization[16] made 15 commitments to establish or improve systematic, comparable and transparent monitoring activities and emissions inventories.

Monitoring activities

13. Canada highlighted the National Air Pollution Surveillance (NAPS) system that is operational in every province and territory of the country. In particular, currently there are 286 sites in 203 communities. Also, it was reported that air quality standards for sulphur dioxide and nitrogen dioxide for the years 2020 and 2025 were established in 2017, and for 2025, more stringent standard for ozone was set in 2019.

14. France established national platform for forecasting air quality. Thanks to this now, it is possible to view 3 days forecasts on the PREVAIR site[17].

15. Georgia switched to European air quality standards from 1 August 2018. The country has significantly improved its air quality monitoring system by increasing the number of automatic monitoring stations from one to 8 and establishing passive sampling in 25 municipalities. Furthermore, monitoring network was enhanced by 3 gravimetric air quality monitoring equipment that allowed to start monitoring of heavy metals (Pb, As, Cd, Ni) and benz(a)pyrene in line with European methodology. In addition, to improve air quality monitoring system several important activities where conducted such as: establishment of air quality modeling, improvement of QA/QC, setting up air quality monitoring criteria based on the relevant EU

[14] From the mid-term survey, only commitments that were reported as implemented have been taken into account.

[15] Azerbaijan, Canada, France, Georgia, Hungary, Latvia, Lithuania, Republic of Moldova, Romania, Uzbekistan

[16] The World Health Organization

[17] http://www2.prevair.org

Directives and development of Air Quality Monitoring Network Development Plan. Air quality data is available on the Georgian Ambient Air Quality Portal[18].

16. The Hungarian Meteorological Service developed air quality modeling and forecasting system. Results of the modeling are available on the webpage[19]. Also, modelling tool is used to estimates the effect of the emission reduction measures during the planning of activities.

17. Latvia finalized the modernization of national air pollution monitoring network. Three new air quality stations have been installed and five existing ones have been upgraded. Moreover, a new data collection system has been introduced and real time data using Air Quality Index has been made available to the public. Pollutant measurement programs have been improved as planned and expanded to include automatic hourly CO measurements on all traffic stations and BTX range expanded to include ethylbenzene, m,p-xylenes and o-xylene in urban stations. In addition, automatic and high volume samplers have been installed in Rucava to measure heavy metals, PAHs, cations, anions, and OC/EC.

18. Romania extended its air quality monitoring network by 18 new sampling points for continuous measurement of the following pollutants: nitrogen dioxide (NO_2) and oxides of nitrogen (NOx) in one zone; ozone (O_3) in six zones; volatile organic compounds (Benzene, Toluene, Ethylbenzene, Xylene) in four zones; − particulate matter (PM_{10}) in five zones; − particulate matter ($PM_{2.5}$) in two zones.

Emissions inventories

19. The latest air pollutants emission inventory[20] of Canada developed and published at the national, provincial and territorial level. Inventory covers period for 1990 to 2020 and emissions of 17 air pollutants.

20. France reported about the development and annual update of its national air pollutants emission inventories which is publicly available on the webpage[21].

21. Georgia has established an electronic reporting system[22] for the annual inventory of emission from stationary sources. The system that is operational since 2017, significantly reduced time for reporting and analysis and increased amount and quality of received data. Information about the point sources and their emissions is openly available on the webpage[23]. In addition, the county improved its emission inventory covering full time series (from 1990 to 2020) and using the latest version of EMEP/EEA Guidebook (2019). Emission projection for the years 2020, 2025, and 2030 have been developed as well.

22. Lithuania developed a plan for improvement of the national air pollutant emission inventory for 2015-2022. Several activities were carried out to identify and obtain more detailed activity data, which allowed improving emission inventory process by switching to Tier 2 methodologies.

23. In 2017, Republic of Moldova established the Pollutant Release and Transfer Register. Since then, the number of registered and reporting operators has more than doubled from 75 in 2017 to 192 in 2020.

[18] http://air.gov.ge

[19] https://legszennyezettseg.met.hu/en/modelling/map

[20] https://www.canada.ca/en/environment-climate-change/services/air-pollution/publications/emissions-inventory-report-2022.html

[21] https://www.citepa.org/fr/activites/inventaires-des-emissions/secten

[22] emoe.gov.ge

[23] map.emoe.gov.ge

24. Romania highlighted improved national emissions inventory based on modern methodology[24] and taking into account recommendations provided through the review of Romania's emission inventories conducted by the European Commission.

C. Establishment of national action programmes that reduce air pollution

25. Emission reduction of harmful substances and particulate maters from different sources of air pollution is a main way to improve ambient air quality all over the world. Consequently, the most of the commitments taken by 21[25] countries and 1 organization[26] under the BACA initiative fall under this section. In particular, 53 (48%) commitments of 110 dedicated to the pollution reduction activities. These activities cover specific sectors or several sectors at the same time. Thus, commitments are grouped accordingly.

Multisectoral strategies and policies

26. Czech Republic reported about reached specific emission ceilings for 2020 scheduled by Gothenburg protocol. It has been emphasized that achieved emission reduction is significantly beyond to the emission reduction commitments established by the protocol. Furthermore, synergies with the climate policies were mentioned that have an impact on the significant reduction of SO_2, due to decrease in coal consumption.

27. Croatia, Estonia, France, Hungary, Italy, Latvia, the Netherlands, Poland, Romania, Switzerland and The United States of America adopted the national plans, programmes and strategies for the reduction of air pollution, which includes measures to reduce emissions in several key sectors such as transport, agriculture, energy, heating etc.

28. Georgia established limits of sulphur in certain liquid fuels based on relevant EU Directive (Directive 2016/802/EU), which regulates fuels used in transport, industry, households, energy and other sectors.

Transport

29. Croatia, Georgia and Hungary developed new taxation system to support process of car fleet renovation and promotion of cleaner, as well as electric/hybrid vehicles. Increase of electric vehicle share by enhancement of charging infrastructure, awareness rising and establishment of legal base has been supported by France, Georgia, Hungary and Lithuania.

30. France and Hungary introduced "air quality certificates" or "green license plates" that make possible to classify vehicles according to their emission level and can be used by local authorities to modulate their policies in terms of vehicle traffic and parking. France established several low-emission zones with restrictions on high emission vehicles. To reduce emissions from the transport sector France implemented a national subsidiary programme on replacement of old vehicles with new, cleaner ones.

31. Hungary, Georgia, and Poland reported about continuation of the bus change program. In particular, Georgia, in the capital city of Tbilisi replaced whole bus fleet, which was old and in very bed technical conditions, with totally new 680 Euro 5 and Euro 6 buses and 1 000 new minibuses.

32. Improvement of fuel quality standards was highlighted by Canada, Georgia and The United States of America. Georgia improved its petrol and diesel quality significantly reaching Euro 5 standard for petrol in 2017 and Euro 4 standard for diesel fuel in 2019, with prescribed further improvement to Euro 5 from 1

[24] The latest version of the EMEP/EEA Guidebook (2019): https://www.eea.europa.eu/publications/emep-eea-guidebook-2019

[25] Armenia, Belarus, Belgium, Canada, Croatia, Czech Republic, Estonia, France, Georgia, Italy, Hungary, Latvia, Lithuania, the Netherlands, Poland, Republic of Moldova, Romania, Slovenia, Switzerland, United States of America, Uzbekistan

[26] The Regional Environmental Centre for Central and Eastern Europe

January 2023. Canada switched to ultra-low sulphur content (12 ppm) petrol from 2020 and updated regulations on sulfur content in diesel fuel in 2017. The United States improved petrol quality in parallel with implementation of new vehicle emission standards.

33. Lithuania and Georgia emphasized progress in road infrastructure for public transport. Specifically, in the Georgia's capital city of Tbilisi bus lanes were arranged in numerous main streets. Lithuania established 20 plans for sustainable city mobility. Development of metro system is another important achievement that was realized in Tbilisi with new metro station and 40 new metro cars. While, Lithuania reported the acquisition of 10 diesel trains of new generation and 13 electric trains.

34. Hungary and Lithuania reported about development of walking and cycling infrastructure and building of by roads.

35. Georgia reestablished mandatory periodic technical inspection to reduce emissions from road transport. Lithuania introduced an electronic taxation system for commercial vehicles and a new parking scheme to discourage unnecessary use of commercial and private cars.

Industry

36. Moldova and Canada reported on activities to reduce emissions of Volatile Organic Compounds (VOC). In particular, Republic of Moldova adopted legal acts regulation content of (VOC) in paints, varnishes and vehicle refinishing materials, as well as regulations on reductions of VOC emissions from storage and distribution of petrol. Canada took measures to reduce VOC emissions from petroleum refineries, asphalt and vehicle refinishing products.

37. Canada and the United States established the requirements addressing fugitive emissions from leaking equipment in the Oil and Natural Gas Sector.

38. In 2020, Canada updated regulations on Emission Regulations for off-road and stationary diesel engines. Code of Practice to Reduce Emissions of Fine Particulate Matter ($PM_{2.5}$) from the aluminium sector has been developed in Canada.

Residential heating

39. Hungary launched the Building Energy Efficiency Program with significant budget that should reduce PM_{10} emissions from combustion processes in the residential sector. The United States and Canada took steps to improve quality of residential wood-burning appliances. The United States adopted Step 1 emission standards for all residential wood-burning appliances manufactured and sold in the U.S. Canada provides guidance on best practices of using these appliances through Code of Practice for Residential Wood Burning Appliances.

D. Improvement of public awareness

40. Information and awareness rising among the general public and targeted groups is crucial to the successful implementation of specific emission reduction measures and air quality policy in general. Thus, continues information dissemination about the air quality and its improvement measures is necessary. Under the BACA initiative 13 commitments was made by 9 countries[27] and 2 organizations[28].

[27] Belarus, Georgia, Hungary, the Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland

[28] The Regional Environmental Centre for Central and Eastern Europe and UNECE

41. Hungary and Switzerland reported on awareness raising campaign that were dedicated to increase awareness air quality issues. Hungary is running 'Heat wise!' campaign. Under the campaign was developed special webpage[29] which contains useful information about various aspects in different forms (posters, leaflets, videos). To widely disseminate important information, during the campaign have been used TV, radio, press and printed advertisement. Switzerland implemented national communication efforts[30] and prepared and disseminated a video[31] on the nitrogen cycle.

42. Georgia, Poland and Spain have developed ambient air quality portals[32] that provide up-to-date and historic air quality data, emission inventories, air quality plans, ongoing emission reduction measures, health recommendations for each air quality index and recommendations on air protection for general public.

43. UNECE conducted awareness raising activities on air pollution issues and work going under the Air Convention all over the region. These efforts result in increased communication and intensive joint activities with other programs, organizations and networks in the field of air quality management.

E. Capacity-building and technical support

44. The implementation of any activity, measure or policy requires sufficient capacity. Therefore, capacity-building and technical support is the basis for achieving high quality results. 6[33] countries and 4[34] organizations took 13 commitments to increase capacity and provide technical support in the field of air protection.

45. Austria reported about the progress in strengthen the administrative capacity of national authorities in charge with Air Pollutants Emission and Green House Gas (GHG) inventories through training and workshops establishing/strengthening the National Inventory System (NIS) and improving the Air Emissions and GHG inventory according to the relevant Conventions[35].

46. Germany and UNECE highlighted capacity-building and technical assistance activities in the Eastern Europe, Caucasus and Central Asia (EECCA) region aimed at the ratification and implementation of the Gothenburg Protocol to the Air Convention, the development and implementation of air quality management policies, measures and legislation, the establishment of an integrated permits system, the improvement of quality of emission inventories, the development of emission projection and the promotion of Best Available Techniques (BAT). Switzerland also supported the ratification of the Air Convention protocols in the Caucasus and Central Asia through the development of various action plans, organization of workshops and other activities.

47. Since 2017, Sweden has been supporting countries in the south-east of Europe in various directions of air quality assessment and management. Sweden provided support in: harmonize of legislation with the EU acquis; development of air quality monitoring, emissions inventories and reporting systems; analysis of data and implementation of pollution reduction measures.

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[29] http://www.futsokosankampany.hu/

[30] https://www.bafu.admin.ch/bafu/fr/home/documentation/magazine/magazine2021-1-un-danger-invisible.html

[31] https://www.youtube.com/watch?v=9Y1nyJPHujc%20

[32] http://air.gov.ge;

[33] Austria, Germany, Sweden, Switzerland, The United States and Uzbekistan

[34] The Nordic Council of Ministers, the Regional Environmental Centre for Central and Eastern Europe, UNECE, the World Health Organization

[35] The UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP) and the UN Framework Convention on Climate Change (UNFCCC)

48. The United States reported close cooperation with UNEP to provide technical and policy advice as UNEP expands its air quality program. Under this cooperation air quality capacity building work was carried out in Ethiopia and a low-cost air quality sensor developed by UNEP was tested.

49. The Nordic Council of Ministers provided support to Belarus and Russia in the fields of emission inventory, gridded emissions, modelling and projection, mostly oriented on $PM_{2.5}$ and black carbon.

F. Policy

50. Canada reviewed its air quality standards for the main pollutants and established more stringent norms and targets[36].

51. Croatia, Estonia and Switzerland reported on ratification of all or some of the latest three protocols of the Air Convention aimed to reduce emissions of the major air pollutants such as: sulphur dioxide (SO_2), nitrogen oxides (NOx), ammonia (NH_3), volatile organic compounds (VOCs) and fine Particulate Matter ($PM_{2.5}$), heavy metals and persistent organic pollutants.

52. Sweden organized and hosted an international science-policy workshop entitled "Clean Air for a Sustainable Future – Goals and Challenges", which was focused to discussing and suggesting ways forward for further international collaboration in abating air pollution.

II. Challenges and lessons learned

53. Some countries mentioned the difficulties associated with the promotion of electric vehicles. In particular, issues related with vehicles registration, high prices for electric cars, lack of charging stations, low market penetration rate, still not enough advanced market. To overcome these barriers, creation of favorable legal environment, development of a charging network, provision of subsidies and other incentives were highlighted.

54. Many countries reported on high cost and insufficient financial resources to implement emission reduction measures and ensure compliance with regulations. Long-term planning, finding flexible and reliable funding sources, and involving science, society, and business appear to be the best ways to address financial issues.

55. Several countries and one organization encountered problems with emission inventory. Lack of activity data (especially historic data), changes and gaps in inventory methodologies, absence of country specific emission factors and improvement of the spatial resolution of the emission database were identified as major challenges for developing a high quality emission inventory.

56. The biggest challenge in the field of ambient air quality monitoring is a high investment and operational cost of modern air quality monitoring network. In this regard, significant donor support was emphasized, in parallel with spending from the state budget.

57. Lack of human resources in general and skilled professionals in particular have been stressed by many participating countries and organizations. This issue is relevant in various areas of ambient air quality management, such as: maintenance of monitoring stations, development of emission inventory and reporting, air quality modeling, QA/QC, introduction of BATs. Capacity building activities have no alternatives to increase qualification of staff and even partially overcome this barrier.

58. Many countries and one organization faced difficulties caused by poor coordination between stakeholders. Complicated or even miscommunication between ministries, agencies and other institutions creates challenges in different fields of air quality management, but mainly during the implementation of

[36] https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/air-quality.html

action planes and development of emission inventory. The importance of identifying appropriate partners and maintaining continues successful cooperation was highlighted.

59. Some countries and organizations mentioned several other general difficulties, such as: the COVID-19 pandemic, languages barriers, challenges of ammonia emission reduction from agriculture sector and lack of mitigation techniques.

III. Future steps and follow up

60. Canada, Georgia, Hungary, Italy and Lithuania plan to continue their efforts to reduce emissions in the transport sector by restricting vehicle emission standards, improving fuel quality, strengthening fuel quality control, developing and modernizing public transport, and promoting electric mobility.

61. Some activities have huge potential for reducing emissions in the agriculture sector. Switzerland, Hungary and Italy will continue to implement further emission mitigation measures in agriculture sector through national/regional plans or targeted measures.

62. Household sector is the key source for some pollutants in some countries. Future steps will be taken by Poland, Italy and Hungary to increase the energy efficiency of buildings, as well as to switch to cleaner heat sources with low or zero emissions and to replace wood burning facilities with new, cleaner and more energy efficient ones.

63. Georgia, Romania and Hungary have concrete plans to further extension of ambient air quality monitoring network, improve of data quality and enhance the assessment system. In particular, Georgia, with the support of the Swedish government and the European Union, will add 8 new automatic monitoring stations in 2022, and 10 more in 2023. Hungary will continue improvement of its modeling system through perfection of input data and will establish of air quality forecast. Romania will optimize its monitoring network to reach the data quality objectives set at European level and to meet the reporting obligations.

64. Latvia, Romania and Georgia reported on additional steps to improve the accuracy of emission inventories and projections, as well as to develop gridded emission reports and improve the data collection system.

65. Georgia, the Republic of Moldova, Switzerland and UNECE will continue awareness raising activities such as dissemination of information through air quality portal, National Register of Emissions and Transfer of Pollutants (PRTR) and participation in various fora. Romania and Switzerland plan to strengthen cooperation with different institutions and communicate more actively with stakeholders.

66. Germany, Latvia, Lithuania, Sweden and UNECE will take additional steps towards capacity building in different directions and countries. Latvia and Lithuania are striving to build domestic capacity, mainly in the area of emission inventories. Germany and UNECE are focusing on capacity building in the EECCA region on air quality management policies and measures (including BAT) and air pollutant emission inventories and projections. While Sweden will continue to support air quality management activities in the Western Balkan countries.

67. Moldova plan to coordinate air quality management and climate change adaptation activities, together with improvement of legal frame and establishment of enforcement system for existing requirements in the VOC sector. Romania will continue work on approval of the national programme to control air pollution.

IV. Usefulness of the Batumi Action for Cleaner Air

68. All 15 countries[37] and one organization[38] that responded on question about the usefulness of the BACA considered this voluntary instrument useful and most of them (9 out of 15) found BACA very useful. Some of the participating countries considered BACA to be a very valuable tool for the adoption and implementation of activities aimed to improvement of ambient air quality. Other countries found that BACA is a good instrument for sharing best practices and example of successful projects.

69. UNECE and other countries have concluded that BACA is a useful tool to raise awareness about air quality issues in different levels and target groups. One country finds that BACA can be used for introduction of BAT that will be useful for the implementation of requirements under various MEAs.

[37] Canada, Croatia, Czech Republic, Estonia, Georgia, Germany, Hungary, Italy, Latvia, Lithuania, Poland, the Republic of Moldova, Romania, Sweden, Switzerland

[38] UNECE

Annex

Fact sheets and graphs

Table 1

Number of commitments taken/reported by the participants in the Batumi Action for Cleaner Air

Albania	0	Czechia	1/1	Italy	1/1	Poland	5/5	Tajikistan	0
Andorra	0	Denmark	0	Kazakhstan	0	Portugal	1/0	Former Yugoslav Republic of Macedonia	0
Armenia	1/0	Estonia	4/4	Kyrgyzstan	0	Republic of Moldova	3/3	Turkey	0
Austria	2/0	Finland	0	Latvia	2/2	Romania	3/3	Turkmenistan	0
Azerbaijan	1/0	France	5/5	Liechtenstein	0	Russian Federation	0	Ukraine	0
Belarus	5/0	Georgia	7/7	Lithuania	2/2	San Marino	0	United Kingdom of Great Britain and Northern Ireland	0
Belgium	5/0	Germany	1/1	Luxembourg	0	Serbia	0	United States of America	6/5
Bosnia and Herzegovina	0	Greece	0	Malta	0	Slovakia	0	Uzbekistan	4/0
Bulgaria	0	Hungary	4/4	Monaco	0	Slovenia	3/0	Nordic Council of Ministers	1/0
Canada	17/17	Iceland	0	Montenegro	0	Spain	1/1	REC CEE	4/0
Croatia	5/5	Ireland	0	Netherlands	2/2	Sweden	4/4	UNECE	2/2
Cyprus	0	Israel	0	Norway	0	Switzerland	5/5	WHO	3/3

Figure I

Number of commitments taken by participating countries and organizations under the BACA

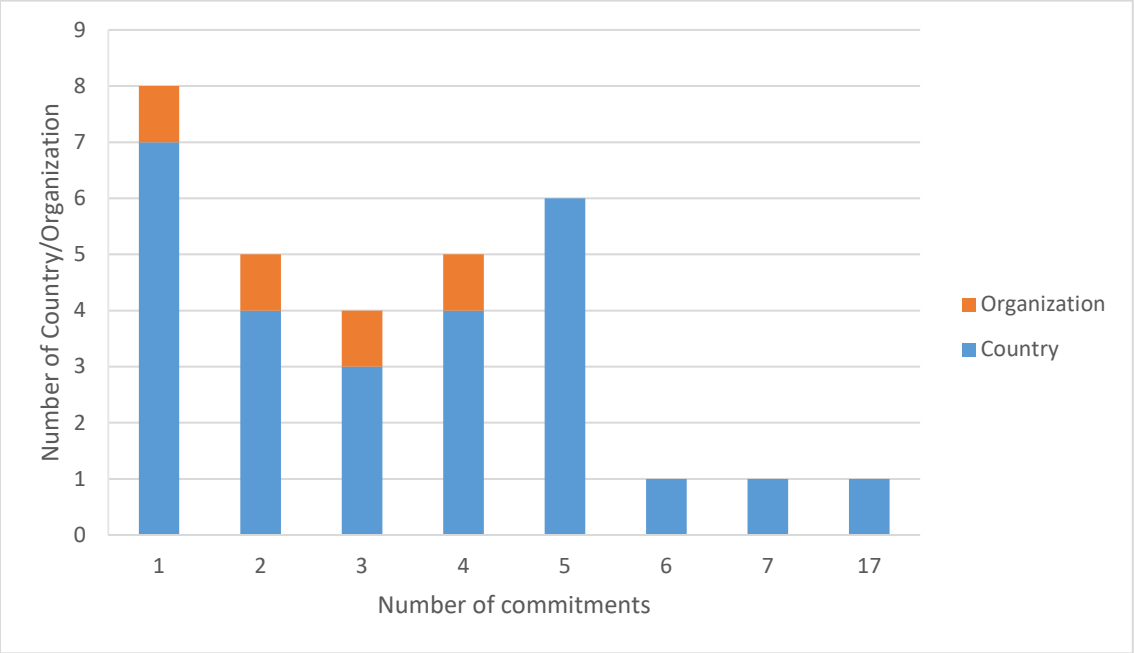

Figure II

BACA commitments by sections

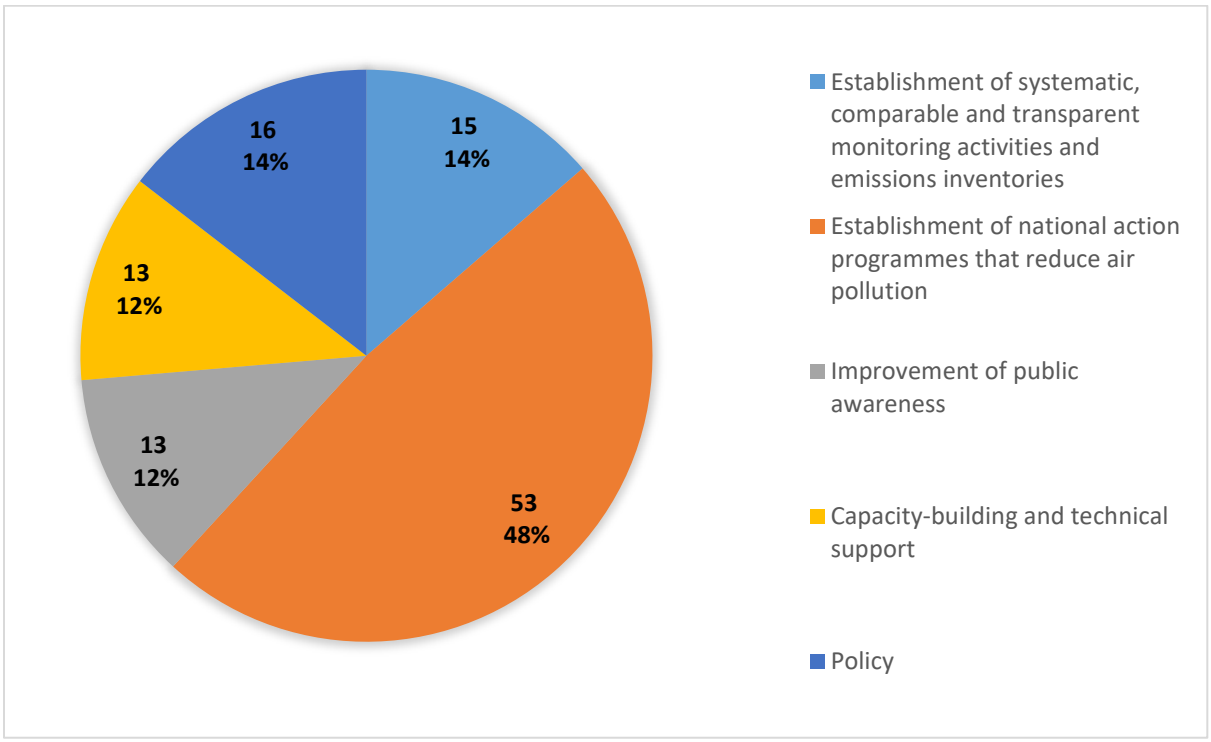

Figure III

States participating in and reporting to the BACA by subregion

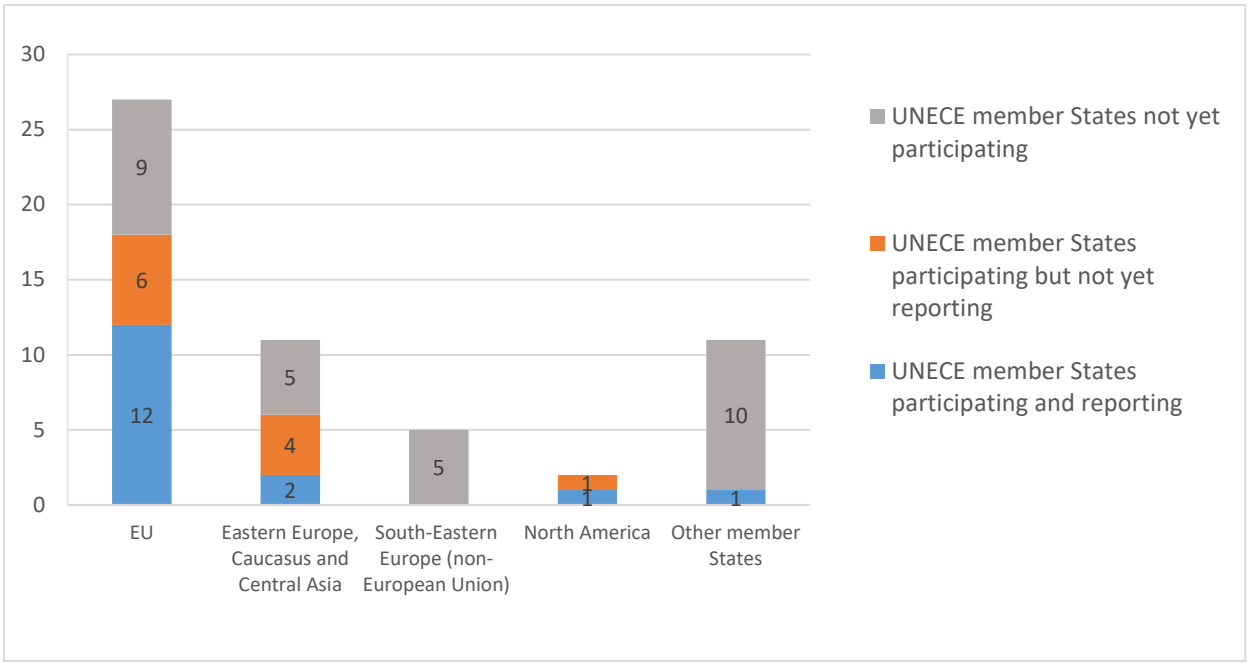

Figure IV

Progress in implementation of BACA commitments