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Executive Body for the Convention on Long-range  
Transboundary Air Pollution

### Working Group on Strategies and Review

#### Fifty-first session

Geneva, 30 April–3 May 2013

## Report of the Working Group on Strategies and Review on its fifty-first session

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## **I. Introduction**

1. The fifty-first session of the Working Group on Strategies and Review was held in Geneva, Switzerland, from 30 April to 3 May 2013.

### **A. Attendance**

2. The session was attended by representatives of the following Parties to the Convention on Long-range Transboundary Air Pollution: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, European Union (EU), Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Kyrgyzstan, Latvia, Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Russian Federation, Serbia, Slovakia, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Ukraine, United Kingdom of Great Britain and Northern Ireland and United States of America. Japan, Tajikistan, and Uzbekistan were also represented.

3. Representatives of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) Meteorological Synthesizing Centre-East (MSC-E) and the Karlsruhe Institute of Technology were present. The World Health Organization (WHO), the International Cryosphere Climate Initiative and the oil companies' European association for environment, health and safety in refining and distribution (CONCAWE) were also represented at the meeting.

### **B. Organizational matters**

4. The meeting was chaired by Mr. W. Harnett (United States).

5. The Working Group adopted the agenda for the meeting as set out in document ECE/EB.AIR/WG.5/109, with an additional sub-item under the discussion of the proposals by the ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy for the Convention and by the ad hoc group of experts to review the International Cooperative Programmes, on "Needs assessment of United Nations Economic Commission for Europe member States that have not ratified the Convention".

## **II. Adoption of the report of the fiftieth session**

6. The Working Group adopted the report of its fiftieth session as set out in document ECE/EB.AIR/WG.5/108 with the following amendments:

- (a) In paragraph 25, "Protocol on POPs" should be replaced by "Gothenburg Protocol";
- (b) In paragraph 58, the word "legal" should be deleted.

### **III. Proposals by the ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy for the Convention and the ad hoc group of experts to review the International Cooperative Programmes**

7. The Working Group on Strategies and Review considered the Proposals by the ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy for the Convention (ECE/EB.AIR/2012/15), based on the recommendation by the Executive Body at its thirty-first session that part of the Working Group's fifty-first session be devoted to considering these proposals and a draft 2014–2015 work plan to be prepared by the Bureau of the Executive Body with the secretariat. In addition, the Executive Body had requested its Bureau to appoint a time-limited ad hoc expert group to exclusively review the International Cooperative Programmes (ICPs) (see ECE/EB.AIR/113).

8. The Working Group welcomed the report by the ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy. After its consideration of the proposals contained therein, it decided to forward draft decision 2013/1 (annex I) to the Executive Body for its consideration at its thirty-second session (Geneva, 9–13 December 2013).

#### **A. Update on the review of the International Cooperative Programmes**

9. A representative of the ad hoc group of experts established by the Executive Body to review the ICPs, on behalf of its Chair, updated the Working Group on the progress of the review. The first meeting of the Group had taken place on 10 April 2013 in connection to the meeting of the Task Force on Modelling and Mapping in which all the ICPs had participated and given presentations on their current and planned work.

10. So far, the review group had focused its discussions on organizational issues of the ICPs, communication, availability and reliability of data and possibilities for improvements. The ICPs provided knowledge on air pollution effects on the environment, materials and crops and received little feedback from the Working Group on Strategies and Review or the Executive Body. Various ICPs by their nature had a different proximity to policies. In particular, the monitoring of the effects of air pollution was far away from policymaking; however, that should not be a key criterion for the assessment. The ICPs were expected to carry out a self-evaluation which would be the starting point for further analyses.

11. An informal draft document from the review group was expected to be ready in June 2013. It would be available for the meetings of the EMEP Steering Body and the Working Group on Effects in September 2013. An official document on the review outcome was expected to be submitted for the consideration of the Executive Body at its thirty-second session.

#### **B. Structural issues: Working Group on Effects and the Cooperative Programme on the Monitoring and Evaluation of Air Pollutants in Europe**

12. The Working Group recommended that the Executive Body consider the final ICP review in deciding on the structural issues related to the Working Group on Effects and the Steering Body to EMEP.

### C. Further work on persistent organic pollutants and heavy metals

13. The Working Group considered further work on persistent organic pollutants (POPs) and heavy metals, taking into account the review, findings and recommendations by the ad hoc group of experts on the Action Plan for the Implementation of the Long-Term Strategy under the Convention.<sup>1</sup> It welcomed the recommendations of the expert group concerning further work on POPs and heavy metals (ECE/EB.AIR/2012/15, paras. 27–35), acknowledging that it might be appropriate at a later time to address other recommendations not addressed below. The Working Group recommended the following for the Executive Body's consideration:

(a) With regard to future Action under the Protocol on Persistent Organic Pollutants:

(i) Before proposing a new substance for listing under the Protocol, Parties should consider first nominating that substance under the Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention);

(ii) Parties should consider the results of any such nomination under the Stockholm Convention, as well as the potential added value to the protection of environment and human health in the United Nations Economic Commission for Europe (ECE) region, in evaluating the need for future action under the Protocol;

(iii) Parties should generally consider additional action<sup>2</sup> under the Protocol on POPs, including amendments thereto if:

a. The substance was listed under the Stockholm Convention but stricter measures in the ECE region were warranted;

b. The substance was not listed under the Stockholm Convention, e.g., because no agreement could be reached on listing it or because negotiations under the Stockholm Convention had become protracted;

(iv) Recognizing that both the Protocol on POPs and the Stockholm Convention included obligations relating to best available techniques (BAT) for controlling sources of unintentionally produced POPs, in the future Parties should consider, inter alia, paragraph 31 of document ECE/EB.AIR/2012/15 and paragraph 7 (b) of the Action Plan for the Implementation of the Long-term Strategy for the Convention;

(b) With regard to future action under the Protocol on Heavy Metals:

(i) Parties to the Convention should focus their efforts with respect to the Protocol on Heavy Metals on full implementation and further ratifications of the Protocol, including its amendments adopted through Executive Body decisions 2012/5 and 2012/6 (see ECE/EB.AIR/113/Add.1);

(ii) Parties should consider, before proposing to add a product control measure or product or product group or to make other amendments to the Protocol related to mercury, the latest scientific knowledge on their effects on human health and ecosystems, and the potential benefits beyond those provided by the Minamata

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<sup>1</sup> The Long-term Strategy for the Convention is annexed to Executive Body decision 2010/18 (ECE/EB.AIR/106/Add.1); the Action Plan for the Implementation of the Strategy is annexed to decision 2011/14 (ECE/EB.AIR/109/Add.1).

<sup>2</sup> Parties should generally refrain from making use of the nominating process under Article 14 of the Protocol outside of the above listed circumstances.

Convention on Mercury (Minamata Convention). In particular Parties should consider, with respect to any future potential amendments relating to mercury:

- a. Whether the Minamata Convention addressed the topic of the potential amendment;
- b. To what extent such a potential amendment would deliver increased health and environmental protection beyond those that could be envisioned from implementation of the Minamata Convention;
- c. Whether, presuming the topic were addressed:
  - i. More stringent requirements were needed in the ECE region;
  - ii. Earlier regional action was required compared to timelines for global measures, where such measures existed;

(iii) The Working Group recommended continuing the work of the Task Force on Heavy Metals in 2014 on technical assistance to Parties in the region of Eastern Europe, the Caucasus and Central Asia in implementing the Protocol on Heavy Metals as amended. It also recommended that future work as of 2015 on abatement techniques for reducing emissions of heavy metals be addressed under the proposed new Task Force on Techno-Economic Issues.

#### **D. Regional and global agreements and networks**

14. The Working Group considered ways to further foster cooperation between regional agreements and networks around the world, including on short-lived climate forcers, and to link regional and global action at the scientific as well as strategic/policy levels, on the basis of the background information, main conclusions and recommendations by the ad hoc group of experts on the Implementation of the Action Plan. The Working Group recommended to continue and, if requested, increase outreach and collaboration with other global and regional networks and agreements on air pollution. To that end:

(a) The Convention subsidiary groups and centres should, within their financial and technical capacity, maintain and, if requested, establish scientific and technical cooperation with relevant international bodies and processes on air pollution, climate change and biodiversity. Scientific collaborations should continue under task forces (in particular the Task Force on Hemispheric Transport of Air Pollution and the Task Force on Reactive Nitrogen) with other regional and global organizations;

(b) The secretariat should maintain contacts with international and regional organizations and agreements that addressed regional and global air pollutants, including black carbon and tropospheric ozone, such as the Acid Deposition Monitoring Network in East Asia (EANET), the Malé Declaration on Control and Prevention of Air Pollution and Its likely Transboundary Effects for South Asia, the International Union of Air Pollution Prevention and Environment Protection Associations, including the Global Atmospheric Pollution Forum, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), and other networks that expressed an interest in collaborating with the Convention;

(c) The secretariat should compile a list of existing outreach activities and formal links and, depending on resources, identify additional opportunities that could be pursued. The subsidiary bodies should provide a list of activities in which they engaged with groups outside the Convention and include it in their annual reports and/or submit it to the secretariat for inclusion in the list. The Executive Body could consider this information at

its meeting in 2015 with the aim of considering further possible outreach to other international and regional organizations and agreements;

(d) The scientific and technical subsidiary bodies, as resources allowed, should work with existing global organizations and initiatives to establish common standards or practices and help facilitate the sharing of information on monitoring, emissions, modelling, effects and air quality impacts;

(e) The anticipated Task Force on Techno-economic Issues, as resources allowed, should serve as a regional clearinghouse for control technology information for primary emissions of nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC) and particulate matter (PM), including short-lived climate pollutants, heavy metals and POPs, and make that information publicly available.

## **E. Communication strategy**

15. The Working Group considered the main conclusions and recommendations by the ad hoc group of experts on the Implementation of the Action Plan with regard to the communication strategy for the Convention (ECE/EB.AIR/2012/15, sect. V), and the review of the 2003 communication strategy presented in document ECE/EB.AIR/WG.5/2013/2.

16. The Working Group recommended that the secretariat and a volunteer from the United States work informally to assess the communication recommendations contained in paragraphs 58 and 59 of document ECE/EB.AIR/2012/15 and report on the possibility of implementing those recommendations to the Executive Body at its thirty-third session, taking into account concerns expressed during discussions at the fifty-first session of the Working Group on Strategies and Review.

## **F. Needs assessment of member States that have not ratified the Convention**

17. The Working Group noted with appreciation the recommendations of the expert group on the Implementation of the Action Plan concerning cooperation efforts within the ECE region, in particular involving countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia, to enable ratification and implementation of the protocols; and decided, at this time, to forward the following recommendations to the Executive Body for its consideration, acknowledging that it might be appropriate at a later time to address other recommendations of the expert group not addressed below:

(a) The subsidiary bodies and the secretariat should be invited to increase capacity-building efforts for the countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia, as resources allowed;

(b) The Coordinating Group on the promotion of actions towards implementation of the Convention in Eastern Europe, the Caucasus and Central Asia (Coordinating Group) should continue its work and, as resources allowed, activities aimed at implementation of its workplan should be undertaken;

(c) Best efforts should be made to expeditiously translate documents requested by the Coordinating Group into Russian, to the extent resources allowed.

## **G. Preparations for the 2014–2015 workplan**

18. The Working Group reviewed the policy part of the draft 2014–2015 workplan for the Convention (on the basis of informal document No. 1) and agreed to provide further comments on it to the secretariat by 20 August 2013, to be incorporated in a revised version for the consideration of the Executive Body and its Bureau. It thanked the secretariat for the preparation of a first draft that captured the linkages with the Long-Term Strategy and the recommendations from the group of experts on Implementation of the Action Plan.

19. Furthermore, the Working Group took note of the proposed template/outline for reporting by Task Forces/Expert Groups to the Working Group on Strategies and Review and other subsidiary bodies on the implementation of the workplan (informal document No. 3), and decided to provide, in line with comments on the workplan, comments to the secretariat by 20 August 2013.

20. The Working Group further recommended that the Executive Body clearly communicate its priorities to the secretariat, and requested the secretariat to report its significant activities on an annual basis. The Executive Body should also be mindful of the secretariat's limited resources and consider ways to reduce the workload of the secretariat, as appropriate.

## **IV. Information sharing by Parties on the implementation of the Convention**

21. On the basis of presentations by representatives of the Parties and a background note (ECE/EB.AIR/WG.5/2013/4), the Working Group shared information on the implementation of the Convention throughout the ECE region, considering challenges in Eastern Europe, the Caucasus and Central Asia, as well as eminent and emerging policy issues and scientific findings.

### **A. Good practices to strengthen the implementation of air pollution-related policies, strategies and measures**

22. The Working Group exchanged information, experiences and good practices on air pollution-related policies, legislation, strategies and measures and took note of the Chair's summary of the discussion on this matter (annex II). It decided that it should continue to provide a platform for policy discussions related to the design and implementation of different regulatory, voluntary, economic or other measures in line with the Convention's article 8 through which Parties agreed to "exchange information on ... national, subregional and regional policies and strategies for ... the control of ... major air pollutants".

### **B. Challenges faced by countries in Eastern Europe, the Caucasus and Central Asia with regard to accession and implementation**

23. The Working Group exchanged information on the challenges faced by countries in Eastern Europe, the Caucasus and Central Asia and their capacity-building needs to accede to and implement the Convention's three most recent protocols, and took note of the co-Chair's summary of the discussion on this matter (annex III). It decided that the Working Group on Strategies and Review should continue to provide a platform for information sharing on the challenges faced by countries in Eastern Europe, the Caucasus and Central Asia, as well as in countries of South-Eastern Europe, in acceding to the

Convention's three recently amended Protocols and the implementation of their commitments.

24. A representative of Switzerland indicated that financial means would be available to support efforts to build capacity in Eastern Europe, the Caucasus and Central Asia. The co-Chair of the Expert Group on Techno-Economic Issues indicated the Group's readiness to support efforts to organize meetings and workshops with the countries of Eastern Europe, the Caucasus and Central Asia, as well as providing further information on the content of the guidance documents. Participants from several countries in Eastern Europe, the Caucasus and Central Asia considered that support to the improvement of emission inventories was particularly needed. The Chair of the EMEP Steering Body stressed the importance of overcoming methodological discrepancies and supporting the development of inventories.

### **C. Imminent and emerging policy issues and scientific findings**

25. The Working Group exchanged information on imminent and emerging policy issues, in particular recent health-related findings on the basis of the work by WHO. A representative of the WHO Regional Office for Europe gave a presentation on the evidence of the health effects of air pollution.

26. A representative of WHO Headquarters informed the Working Group of efforts to develop the WHO indoor air quality guidelines for household fuel combustion. In the framework of this work, there was particular interest in the use of solid fuels and liquid fuels, especially for heating. He expressed an interest in collaboration in the light of the need to gather more information on the effectiveness of interventions to improve indoor air and fuel combustion, as well as any information that estimated exposure to indoor air pollutants or associated health impacts.

## **V. Exchange of information and technology**

27. The Working Group shared information on the implementation of decisions taken at the thirtieth and thirty-first sessions of the Executive Body (Geneva, 30 April–4 May and 11–13 December 2012, respectively), in particular, regarding the procedures for applying for adjustments under the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) to emission reduction commitments or to inventories for the purposes of comparing total national emissions with them. The secretariat informed delegates that it had received no notification of an adjustment to Parties' inventories by 15 February, in accordance with paragraph 2 of decision 2012/3 (see ECE/EB.AIR/111/Add.1) and paragraph 1 of the annex to decision 2012/12 (see ECE/EB.AIR/113/Add.1). It had also not received a notification of an adjustment to emission reduction commitments in line with paragraph 3 of decision 2012/3 and paragraph 1 bis of the annex to Decision 2012/12. The delegation of Germany considered that Germany had submitted a notification of an adjustment in response to a letter from the secretariat. The secretariat then noted that several Parties had mentioned their intention to apply the adjustment procedure in response to correspondence they had received from the secretariat concerning possible non-compliance with the emission ceilings under the Gothenburg Protocol. However, that did not follow the process described in decision 2012/12, according to which notifications of adjustments had to be submitted together with the annual submission of emission inventories by 15 February and all supporting documentation by 15 March.

## **VI. Protocol to Abate Acidification, Eutrophication and Ground-level Ozone and guidance document on health and environmental improvements**

28. The secretariat informed the Working Group that the amendments to the Gothenburg Protocol contained in decisions 2012/1 and 2012/2 had been submitted to the Treaty Section of the United Nations Office of Legal Affairs, which had communicated them to all Parties to the Protocol. While the amendments to annex I of the Protocol became effective as of 5 June 2013 for the Parties that had not indicated an objection upon notification to the Depositary, the amendments to the main text and all other annexes required ratifications by two thirds of the Parties for entering into force. The secretariat explained that the consolidated text of the Protocol and its annexes had been compiled for information purposes; and that that document was not a true certified copy of the text as amended.

29. The Working Group was informed that the revised draft of the guidance document on health and environmental improvements was under preparation. At its fiftieth session, the Working Group on Strategies and Review had invited the Working Group on Effects, in cooperation with the EMEP Steering Body, to update the draft guidance document on health and environmental improvements to better reflect the commitments of the revised Gothenburg Protocol, namely to include 2005 as the base year and 2020 emission reduction commitments. The draft guidance document would be presented to the EMEP Steering Body and, subsequently, to the Executive Body.

30. Furthermore, the Working Group was briefed by a representative of the International Cryosphere Climate Initiative on approaches to decreasing black carbon emissions under the Gothenburg Protocol.

## **VII. Protocol on Heavy Metals**

31. The secretariat informed the Working Group that the advance version of the consolidated text of the Protocol on Heavy Metals was available on its website<sup>3</sup>. The amendments to the Protocol contained in document ECE/EB.AIR/113/Add.1 would be deposited with the United Nations Treaty Section once available in all three official ECE languages. Parties would be notified by the Treaty Section of the United Nations Office of Legal Affairs when they could deposit their instruments of acceptance.

## **VIII. Activities of bodies of the United Nations Economic Commission for Europe and international organizations relevant to the Convention**

32. A representative of the European Commission provided an update on its Air Quality Policy and the review of the Thematic Strategy on Air Pollution.

33. The secretariat shared information on behalf of the UNEP secretariat that the text of the Minamata Convention as agreed at the fifth session of the Intergovernmental Negotiating Committee was now available on the UNEP website.<sup>4</sup>

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<sup>3</sup> Available from [http://www.unece.org/env/lrtap/hm\\_h1.html](http://www.unece.org/env/lrtap/hm_h1.html).

<sup>4</sup> See <http://www.unep.org/hazardoussubstances/Mercury/Negotiations/INC5/INC5Report/tabid/3496/Default.aspx>.

## **IX. Progress in the implementation of the 2012–2013 workplan**

34. The Working Group took note of the reports by the Chairs of the Task Force on Reactive Nitrogen, the Expert Group on Techno-economic Issues and the Task Force on Integrated Assessment Modelling. The Working Group reiterated its invitation to Heads of delegations at its fiftieth session to nominate experts on techniques to abate emissions from mobile sources (off- and on-road) to participate in the work of the Expert Group on Techno-economic Issues in further revising the guidance on control techniques for emissions of sulphur, NO<sub>x</sub>, VOC and dust (including coarse PM (PM<sub>10</sub>), fine PM (PM<sub>2.5</sub>) and black carbon) from mobile sources.

## **X. Other business**

35. The Working Group was updated on progress in the preparations for the “Saltsjöbaden V” workshop to be held in Gothenburg, Sweden, from 24 to 26 June 2013.

## **XI. Adoption of the decisions of the Working Group**

36. On 3 May 2013, the Working Group on Strategies and Review adopted the decisions taken at its fifty-first session.

## Annex I

### **Draft decision 2013/1 on the report of the ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy for the Convention**

*The Executive Body,*

*Recognizing* that the Long-term Strategy provides a strategic road map for the Convention and that the structure and functioning of the Convention should complement that road map,

*Further recognizing* the valuable contributions of the Convention's main and subsidiary bodies to the work of the Convention,

*Recalling* its decision 2011/14 on the Action Plan for the Implementation of the Long-term Strategy for the Convention, which created an ad hoc group of experts on the Action Plan for the Implementation of the Long-term Strategy for the Convention (ad hoc group of experts) to undertake several tasks in the Action Plan,

*Noting with appreciation* the report by the ad hoc group of experts on items in the Action Plan,

1. *Decides* to develop a rolling plan to adapt the length and timing of the Executive Body's meetings to match its workload. The plan should cover four to five years and be based on a well-defined policy cycle where assessment and review, based on the latest scientific knowledge, has a central role;

2. *Requests* the Working Group on Strategies and Review to propose for review by the Executive Body at its thirty-third session an update to the mandate of the Expert Group on Techno-economic Issues to establish a task force to address emission abatement techniques for stationary and mobile sources in relation to atmospheric emissions of nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC) and particulate matter (PM), including black carbon, heavy metals and persistent organic pollutants (POPs);

3. *Decides* to discontinue the Network of Experts on the Benefits of Economic Instruments, while noting with appreciation its work and dedication over the years and inviting its experts to participate in the work of the Task Force on Integrated Assessment Modelling;

4. *Also decides* to discontinue the Task Force on Persistent Organic Pollutants, recognizing that any further work should be organized under ad hoc expert groups when the need arises or under the proposed new Task Force on Techno-economic Issues;

5. *Further decides* to continue the work in the centres identified in the Protocol on the Long-Term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) — the Chemical Coordinating Centre (CCC); the Meteorological Synthesizing Centre-East (MSC-East); and the Meteorological Synthesizing Centre-West (MSC-West) (including the Centre on Emission Inventories and Projections (CEIP) and the Centre on Integrated Assessment Modelling (CIAM)) — and, as it relates to the scientific and technical work on the protocols to the Convention, including the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol), the Protocol on Persistent Organic Pollutants and the Protocol on Heavy Metals, as these Centres are providing the Convention, as well as other international bodies, with sound and unique scientific advice

and information. There may be additional tasks for the EMEP Centres in the future related to providing scientific and methodological support to the Convention Parties, particularly in the region of Eastern Europe, the Caucasus and Central Asia, in the field of emission inventories, adjustment procedures, monitoring and modelling using, inter alia, web sites of the EMEP Centres;

6. *Agrees* that, subject to the final report of the review of the International Cooperative Programmes (ICPs), activities related to the effects of pollutants on human health and ecosystems covered by the Protocols should be maintained;

7. *Decides* to structure the workplan under headings based on the objectives defined in the Long-Term Strategy under the Convention (ECE/EB.AIR/106/Add.1, decision 2010/18, annex) and to include information on the availability of financial and other resources to complete the tasks;

8. [Add recommendations related to ICP review and merger/no-merger of EMEP and the Working Group on Effects.]

## Annex II

### **Chair's Summary of information sharing on good practices to strengthen the implementation of air pollution-related policies, strategies and measures**

#### **A. Policies, strategies and measures to abate air pollution**

1. There are different motivations for policymakers to implement policies, strategies and measures with the objective of abating air pollution, including:

(a) *Protecting and improving public health*: The United States revised and strengthened one of its National Ambient Air Quality Standards for fine particulate matter (PM<sub>2.5</sub>) and is implementing regulations and programmes to achieve reductions in PM<sub>2.5</sub> and black carbon.

(b) *Protecting the environment*:

(i) In Switzerland, nutrient balance restrictions have been implemented through incentive programmes as part of agricultural policy;

(ii) Denmark introduced regulatory measures in response to fish mortality aiming also at raising public awareness;

(iii) Belgium introduced voluntary measures to reduce NO<sub>x</sub> and SO<sub>2</sub> emissions in order to abate acidification;

(c) *Mitigating climate change*: reducing PM and black carbon emissions through the regulation of emissions from construction machinery to achieve a health benefit also helps to mitigate climate change effects, through the reduction of short-lived climate forcers;

(d) *Market and industrial competitiveness*:

(i) To create a level playing field on the market, the EU regulates fuel quality used by many different sectors and industries.

(ii) In Belgium, cost-effectiveness was an important driver for choosing voluntary measures to reduce SO<sub>2</sub> and NO<sub>x</sub>.

(e) *Compliance with emission ceilings of the Gothenburg Protocol*: Compliance with emission reduction ceilings, such as the ones set out in the Gothenburg Protocol, was a main driver in implementing the NO<sub>x</sub> tax scheme in Norway, in addition to environmental health.

2. While policies, strategies and measures can have direct or indirect positive effects for air pollution abatement, unintended negative effects could arise in cases when policy objectives are different or even compete with each other. An example of competing policy objectives is the promotion of renewable energy through ambitious targets and strategies by ECE member States, which can lead to an increase in PM emissions from biomass and biogas combustion. Consequently, cross-sectoral exchange of information and the involvement of air pollution experts in policy and instrument design are critical to avoid unintended outcomes with regard to air pollution abatement, to mitigate them, and to achieve greater policy coherence. The use of wood for domestic heating is promoted as part of the climate policy in the EU, including in Germany, while it has led to negative

implications for air quality. Germany has revised its ordinance for small combustion installations such as pellet stoves to introduce more stringent dust emission standards.

3. The implementation of measures conducive to air pollution abatement can reduce pollutants while maintaining and increasing levels of economic productivity:

(a) In Denmark and Switzerland, production levels in agriculture have been maintained (or even increased) while nutrient reduction policies were implemented, leading to a decreasing use of fertilizers;

(b) In the Flanders Region of Belgium, all emission reduction targets for SO<sub>2</sub> and NO<sub>x</sub> were achieved while electricity production increased.

## **B. Different types of instruments to promote air pollution abatement, including economic, voluntary and educational measures**

4. Different types of regulatory measures have been implemented to reduce air emissions:

(a) In Germany, a 2010 amendment to the ordinance on small combustion installations introduced new emission limit values for dust emissions for new installations (boilers, pellet ovens) and with a 5–15 year transition period for existing installations;

(b) The United States has a number of national regulations designed to reduce PM<sub>2.5</sub>. These programmes include rules for mobile sources, regional haze, mercury and air toxics and emissions standards that address categories such as reciprocating internal combustion engines;

(c) Denmark introduced a cap on the price of ammonia abatement measures set to €15 per kilogram of nitrogen;

(d) Belgium sets mandatory emission limit values (ELVs) for new installations;

(e) Switzerland sets particle number emission limit values, which require the use of construction equipment with high-efficiency diesel particle filters.

5. In addition to legislative and regulative approaches, measures beneficial to air pollution abatement can include economic, voluntary and educational measures. Such measures can have additional benefits including awareness-raising, increased cooperation and information exchange. For example:

(a) In Belgium, voluntary programmes encourage the exchange of information and cooperation between a certain sector (electricity, chemical, glass industry) and the government;

(b) Direct payments linked to ecological criteria in Switzerland have increased farmers' awareness of manure management.

6. Economic instruments include incentives and disincentives, like direct payments or taxes:

(a) The Norwegian NO<sub>x</sub> tax scheme has led to reductions in NO<sub>x</sub> emissions based on an agreement with the Government and 14 business organizations to reduce emissions to agreed levels. If the reduction cannot be achieved, a tax has to be paid by all businesses;

(b) Direct payments linked to ecological criteria in agriculture in Switzerland have led to a reduction in the use of fertilizers and increased nutrient efficiency;

(c) The United States Environmental Protection Agency (EPA) residential wood smoke initiative includes cash rebates for homeowners to change out their woodstoves in certain communities. Some of these are financed by industry through settlement agreements. Industry can opt for this option rather than paying a fine for not complying with certain regulations;

(d) Switzerland applies a disincentive by charging a tax on VOC for solvents and solvent-containing products.

7. Voluntary programmes can provide flexibility in finding the right approach to encourage national or regional compliance with new emission reduction targets in a cost-effective way, while making use of synergies with other sectors and objectives. They can be designed in many different ways and connected to long-term objectives of achieving emission reductions, thereby offering a stable regulation framework. Measures can be adjusted over time to adapt them to changing circumstances and lessons learned. For example:

(a) In Belgium, voluntary agreements based on a contract between the Government and associations for the electricity sector (on SO<sub>2</sub> and NO<sub>x</sub>) and the chemical and glass industry (on NO<sub>x</sub>) have been quite successful. The voluntary agreements with the electricity sector, applied since 1993, have led to significant reductions of SO<sub>2</sub> and NO<sub>x</sub> emissions at Flemish power stations. In the first phase, these ran for 10 years; in the current phase the agreement has a 5 year span and can be terminated at any time;

(b) In Switzerland, farmers may commit to a resource efficiency programme to implement nutrient balance restrictions for a period of six years, as well as to the continuation of the new approach beyond that term;

(c) In the Netherlands, industry encouraged the Government to discontinue the voluntary programmes on NO<sub>x</sub> and sulphur reduction and instead to implement regulatory measures for those companies that did not want to take part in the voluntary programmes;

(d) In Switzerland, a direct payment programme to reduce the environmental impact of agriculture was first introduced in 2004 for the cantons. As of 2014 it will be complemented by Federal Resource Efficiency Incentives;

(e) The United States EPA residential wood smoke initiative has voluntary and regulatory components. Voluntary components include the EPA Hydronic Heater and Fireplace Programs, partnership programmes that include a labelling scheme (hang tag) for EPA-certified appliances.

8. Along with regulatory measures, voluntary agreements can be used as tools to achieve the obligations set out in the Gothenburg Protocol and as an alternative approach to applying ELVs at the installation level, in line with the alternative to applying ELVs at installation level (annexes IV, V and X), and the flexibility options of article 3, paragraphs 2 and 3 (alternative reduction strategy achieving equivalent overall emission levels).

9. Voluntary programmes also offer the possibility of achieving emissions reductions for sources that are not addressed by regulations. Currently in the United States there is no national regulation that addresses fireplaces. The United States EPA has a voluntary partnership programme.

10. Educational measures such as information campaigns can also be important tools of the overall policy and instrument mix. Examples are:

(a) The “Burn Wise” education campaign to reduce residential wood smoke in the United States, which includes information, videos and information materials on a dedicated website;

(b) Personal consultations carried out for every operator of small combustion installations (boilers, pellet stoves, etc.) by chimney sweeps in Germany. Chimney sweeps additionally check wood and fuel quality as per a list of requirements;

(c) In Denmark, the farmers' association advises farmers on how to comply with Government regulations.

11. There are a variety of different educational tools and web resources. Examples of web platforms are [www.policymeasures.com](http://www.policymeasures.com) and [www.economicinstruments.com](http://www.economicinstruments.com). The principal challenges for such sites are good design, quality content and a sufficient level of initial content. These three components are necessary to generate a level of user interest and added value that will sustain engagement with the resource.

### **C. Designing and implementing targeted measures to abate air pollution**

12. The right choice of a measure might require a comparison of the cost of implementation of several measures, their objectives and benefits. In Belgium, for instance, voluntary agreements have been described as cost-effective tools for existing installations, while the continuous strengthening of mandatory ELVs was found to be the better approach for new installations.

13. Choosing and designing appropriate measures needs to be based on national, regional and local circumstances:

(a) In the United States, regulation is applied to more widespread emission sources, e.g., mobile sources, while voluntary measures are used to address certain more local issues. For example, 50 communities implemented the woodstove change-out programme;

(b) In Switzerland, the programme incentivizing more efficient nitrogen use in agriculture has been implemented by 24 of the 26 cantons. Each canton can choose the strategies and measures which it wants to include.

14. Adequate monitoring and assessment of implemented measures is crucial in order to be able to judge their implementation and effectiveness. Expenses for monitoring and assessment should be foreseen in the design of and budgeting for the implementation of the policy or measure. In Denmark, the inspection/monitoring of regulatory measures for livestock takes place every three years by local authorities; water quality measurements are used as an indicator. In Germany, the inspection of small combustion installations is mandatory and costs have to be borne by the operators.

15. When considering the costs of introducing a new or more stringent measure, it is imperative to also take the avoided costs into account. For example, the average public health benefits of reducing directly emitted PM<sub>2.5</sub> in the United States are estimated to range from \$290,000 to \$1.2 million per ton PM<sub>2.5</sub> in 2030. The EU estimated that the implementation of its new fuel quality regulations will cost €0.6 billion–€3.7 billion annually until 2020, while the benefits for human health would be sevenfold higher, with €8–€16 billion annually until 2020.

16. Measures can be implemented in planning for the accession to and implementation of the recently amended Protocols (the Gothenburg Protocol, the Protocol on Heavy Metals and the Protocol on POPs). Switzerland has already introduced a regulation to limit the emission of PM from construction machinery. It stipulates that further regulation for all diesel-powered non-road mobile machinery and vehicles should include a particle number limit value. The United States has regulatory and voluntary measures which address PM<sub>2.5</sub> and black carbon.

17. A step-wise approach to the implementation of new targets can support their gradual introduction, for example:

(a) In the United States, the EPA plans to propose an updated new source performance standard for woodstoves;

(b) In Germany, different limit values for boilers and pellet stoves are gradually being introduced and transition periods are given for existing installations;

(c) In the EU the staged approach of the introduction of fuel quality regulation makes it possible to manage costs in industry, energy production and households;

(d) In Norway, the first NO<sub>x</sub> scheme agreement was for a period of three years; following its successful implementation, a second agreement was set up for a further six years.

#### **D. Exchanging information on strategies, policies and measures to support implementation of the Convention**

18. Exchanging information and experience on air pollution-related policies and strategies can help identify good practices and their applicability to different national circumstances, and thus assist Parties in the implementation the Convention, which in its article 8, calls on Parties to exchange information on national, subregional and regional policies and strategies for the control of major air pollutants.

19. Exchanging pertinent information on strategies, policies and measures can assist Parties in preparing for the implementation of the Convention's Protocols, in particular the three most recently amended ones. For example, the Gothenburg Protocol, as amended in 2012, encourages the implementation of management programmes to reduce emissions, including voluntary programmes, and the use of economic instruments (article 6).

20. Exchanging experiences on the implementation of the Convention in the framework of the Working Group on Strategies and Review can also allow the sharing of selected examples of the work carried out in the framework of its Task Forces, e.g., with regard to measures to reduce nitrogen and ammonia, techno-economic measures and others.

## Annex III

### **Co-Chair's summary of information sharing on challenges faced by countries in Eastern Europe, the Caucasus and Central Asia with regard to accession and implementation**

1. During a second information exchange session, Working Group participants discussed the important challenges faced by countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia in the implementing air pollution-related commitments. These challenges, which could be obstacles to the countries' accession to the amended Protocols of the Convention, include, among others:

- (a) Data deficiencies/low reliability of data, which hinders adequate monitoring and modelling of emissions, as well as a limited number of methods and equipment to estimate emissions;
- (b) Gaps in national legislation and a lack of incentives to introduce BAT and improve environmental management;
- (c) High investments that are necessary in order to implement BATs;
- (d) Lack of institutional capacities and resources, both financial and human;
- (e) Low priority and funding given by Governments to the implementation of environmental projects;
- (f) Insufficient scientific know-how and a low level of awareness of clean technologies.

2. Participants suggested that the following steps forward needed to be taken in order to advance the implementation and ratification of the Protocols to the Convention:

- (a) Develop national and sectoral programmes and an appropriate regulatory basis;
- (b) Introduce economic incentives for pollution abatement and cost-benefit analyses;
- (c) Improve access to information on BAT;
- (d) Develop and improve emission inventories and projections;
- (e) Monitor emissions from stationary sources and within the EMEP framework;
- (f) Reporting of emissions in accordance with the EMEP requirements;
- (g) Control of compliance with emission standards and the requirements under the Protocols;
- (h) Scientific research related to emissions.

3. In this regard, the following needs requiring expert and financial or in-kind support have been expressed:

- (a) Development of sectoral strategies and action plans for emission reduction, in particular for POPs and heavy metals;
- (b) Analysis of emission sources and plant-by-plant analysis;
- (c) Development of emission inventories, or improving existing inventories;

- (d) Equipment for emissions monitoring at stationary sources;
- (e) Modernization of equipment at monitoring stations according to the EMEP requirements;
- (f) Development of national ELVs and BAT;
- (g) Identification of emission reduction targets and ceilings, as well as the base year;
- (h) Undertaking cost-benefit analyses;
- (i) Advice on data collection, processing and reporting, as well as making recalculations and projections.

4. Training opportunities have been identified as being potentially helpful, especially within the same region where several countries face the same problems. Support by ECE and other Parties would be welcome regarding the organization of such regional trainings of experts.

5. Apart from these challenges, it was also seen that considerable progress was being made in these countries. In order to further build on existing progress, the exchange of knowledge between countries on the design of successful policies, strategies and measures to abate air pollution was considered to be very useful.

6. The Working Group on Strategies and Review and the Coordinating Group could continue to provide a platform for the information exchange on addressing the challenges faced by the countries in Eastern Europe, the Caucasus and Central Asia, as the future focus of the work in the framework of the Convention would be on promoting their accession to the recently amended Protocols.

7. The Coordinating Group would discuss in detail further actions to address the needs listed in paragraph 3 above. In the margins of the session, the countries in Eastern Europe, the Caucasus and Central Asia discussed the proposal by Belarus to organize technical assistance for countries of the subregion on methodological and practical issues in preparing emission inventories of POPs, heavy metals and PM in accordance with the requirements in the framework of the Convention. It is assumed that this work will be carried out by Belorussian experts directly with countries that are involved in the Coordinating Group, subject to the availability of sufficient financial support.

8. The Coordinating Group suggested that Belarus prepare a proposal on providing technical assistance to countries in Eastern Europe, the Caucasus and Central Asia on methodological and practical issues in preparing emission inventories of POPs, heavy metals and solid particles and to present it to the secretariat for the possible review by the Executive Body at its thirty-second session.

9. Providing assistance to countries on other pollutants covered by the Convention's Protocols (including NO<sub>x</sub>, SO<sub>2</sub>, VOC and ammonia) is part of the overall workplan and efforts of the Coordinating Group.

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