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Item 7 of the provisional agenda
Revised mandates of task forces and centres under the Convention

Revised mandates for the centres under the Steering Body to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe: draft decisions of the Executive Body

Note by the secretariat

Summary

At its thirty-eighth session (Geneva, 10–14 December 2018), the Executive Body took note of the draft revised mandates for the centres under the Steering Body to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (as contained in document ECE/EB.AIR/2018/6) and adopted them provisionally. It further requested the secretariat to finalize them and submit draft decisions for their formal adoption at its next session (ECE/EB.AIR/142, para. 55).

The present document contains draft decisions on the adoption of revised mandates for the Chemical Coordinating Centre, the Meteorological Synthesizing Centre-East, the Meteorological Synthesizing Centre-West, the Centre for Integrated Assessment Modelling and the Centre on Emission Inventories and Projections.

The Executive Body is invited to consider and adopt the draft decisions.

Revised mandates for the centres under the Steering Body to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe

A. Revised mandate for the Chemical Coordinating Centre

The Executive Body,

Recalling the provisions of article 9 and other relevant provisions of the Convention on Long-range Transboundary Air Pollution,

Recalling also the provisions of the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP Protocol),

Noting that the Chemical Coordinating Centre has been in operation since 1979 – the beginning of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) – as one of the three cooperating international centres of EMEP,

Recalling the terms of reference for the international EMEP centres (EB.AIR/GE.1/8, annex IV), adopted at its fourth session (ECE/EB.AIR/10),

Recognizing the Centre's contribution to the scientific assessment of past trends and current status in air pollution throughout the United Nations Economic Commission for Europe (ECE) region and to the evaluation of the implementation of the Protocols to the Convention,

Acknowledging the support provided by the Chemical Coordinating Centre to the Parties to the Convention and EMEP, among other things, through the following actions:

(a) Development and updating of the EMEP monitoring strategy (including quality assurance framework) and support to Parties in its implementation to ensure availability of high-quality comparable data on air pollution throughout the ECE region;

(b) Promotion and dissemination of best practices available and recommendations for implementation of the EMEP monitoring strategy, in particular through the provision of the EMEP Manual for Sampling and Chemical Analysis;[1]

(c) Contribution to the improvement of the scientific understanding of the processes that control European air pollution levels through regular intensive measurement campaigns;

(d) Contribution to the elaboration of assessment reports and trend analyses of air pollution concentrations and deposition in the EMEP domain over the past 40 years;

(e) Development and maintenance of the database hosting observation data of atmospheric chemical composition and physical properties (EBAS), which collects, gathers, checks and publishes all observations and measurements performed by the Parties to the Convention;

(f) Support and assistance to Parties for running new observation sites, especially in Eastern Europe, the Caucasus and Central Asia.

Recognizing the need to update the mandate of the Chemical Coordinating Centre to ensure its consistency with the provisions of the amended Protocols to the Convention, and to take into account its strategic priorities as set out in the following documents:

(a) The long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (decision 2018/5, annex);

[1] See https://projects.nilu.no//ccc/manual/index.html.

(b) The 2016 scientific assessment of the Convention;[2]

(c) The policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3 and Corr.1 and ECE/EB.AIR/2017/4).

Noting that the annual costs of the centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP are covered in accordance with the EMEP Protocol, from contributions by the Parties to the Convention on the basis of the annual EMEP budget approved by the Executive Body upon the recommendation of the Steering Body to EMEP:

1. *Notes with appreciation* the hosting of the Chemical Coordinating Centre by the Norwegian Institute for Air Research;

2. *Adopts* the revised mandate of the Chemical Coordinating Centre as contained in the annex to the present decision, which includes the key objectives and functions of the Centre to be carried out on an ongoing basis, whereas additional activities and specific tasks and associated deliverables to be carried out in a shorter time frame will be included in the biennial workplans for the implementation of the Convention;

3. *Decides* that the Centre is responsible for communicating with national experts, for maintaining an up-to-date web page that includes information on its work and for other organizational arrangements in accordance with the biennial workplan;

4. *Decides* that the Centre is responsible for carrying out the work assigned to it in the biennial workplans approved by the Executive Body, and reporting thereon, as well as for keeping other relevant bodies apprised of its work.

Annex

Revised mandate for the Chemical Coordinating Centre

1. The Chemical Coordinating Centre will continue to provide scientific support to the Convention, with information on measurements of all pollutants and precursors addressed by the Convention.

2. The Chemical Coordinating Centre reports on its activities and deliverables to the Steering Body to EMEP.

3. The functions of the Centre are to:

(a) Develop and coordinate the observation activities required to assess air pollution across the EMEP geographical domain;

(b) Secure and improve the quality and representativeness of observations:

(i) Develop adequate methodology to support EMEP needs where not available elsewhere, and ensure harmonization with the European Committee for Standardization, the International Organization for Standardization, the metrology community, etc.;

(ii) Develop and update measurement guidelines and standard operation procedures in cooperation with the Task Force on Measurements and Modelling, the central quality assurance facilities in the European Union (for example, the Network of Air Quality Reference Laboratories, the European Committee for Standardization and the European Research Infrastructure for the observation of Aerosol, Clouds and Trace Gases) and the World Meteorological Organization (WMO) Global Atmosphere Watch Programme;

(iii) Organize training courses and undertake site visits (selection of new sites, audits) and laboratory audits;

[2] See Rob Maas and Peringe Grennfelt, eds., *Towards Cleaner Air: Scientific Assessment Report 2016* (Oslo, 2016); and United States Environmental Protection Agency and Environment and Climate Change Canada, *Towards Cleaner Air: Scientific Assessment Report 2016 – North America* (2016).

(iv) Arrange regular laboratory intercomparisons for all variables required by the EMEP monitoring strategy, and link results to data usage and interpretation;

(v) Arrange field intercomparisons and assess the representativeness of observations.

(c) Carry out quality assurance and quality control of data submitted by Parties, including by:

(i) Developing data-reporting templates allowing sufficient metadata provision;

(ii) Providing training and assistance to personnel involved in data reporting;

(iii) Carrying out technical handling of data flow; checking of individual data sets submitted, including statistical methods; visual inspection of time series plots, consistency in time and space; and bilateral discussions on corrections and re-submissions with data originators.

(d) Archive observation data and associated metadata and disseminate them to users,[3] including provision of development and operational support of the underlying information technology-infrastructure used to host data and provision of access to data for operational users (other EMEP centres, external modelling groups and external users (for example, the European Environment Agency, the WMO/Global Atmosphere Watch Programme and the Copernicus Atmosphere Monitoring Service));

(e) Improve the timeliness of observation data to users (EMEP Near-Real-Time);

(f) Assess data and provide information to stakeholders on results from monitoring activities;

(g) Support Parties, EMEP centres and others in data assessments and interpretations; provide expert advice on the use of data, taking into account knowledge about data quality and other metadata; prepare data reports providing status of observations and main findings;

(h) Contribute to the EMEP status reports prepared for the EMEP Steering Body; serve the interests of EMEP monitoring activities towards relevant activities under other frameworks to ensure harmonization, efficient use of resources and multiple use of data; promote the use of EMEP observations in supporting European scale assessment of air pollution and source apportionment with respect to monitoring required in response to the European Union directives; maintain links with external bodies addressing similar issues within Europe (the European Environment Agency, the Baltic Marine Environment Protection Commission, the Commission for the Protection of the Marine Environment of the North-East Atlantic, among others); maintain links with external bodies addressing similar issues outside Europe (Arctic Monitoring and Assessment Programme, World Meteorological Organization Global Atmosphere Watch Programme, Stockholm Convention on Persistent Organic Pollutants, Minamata Convention on Mercury, regional programmes in North America, South-East Asia and elsewhere (in collaboration with the Task Force on Hemispheric Transport of Air Pollution)); promote EMEP observations as a contribution to the Copernicus Atmosphere Monitoring Service and the Global Earth Observation System of Systems; and encourage the involvement of research groups to ensure implementation of EMEP level 2 and level 3 monitoring activities;

(i) Carry out other tasks assigned to it by the EMEP Steering Body and the Executive Body.

B. Revised mandate for the Meteorological Synthesizing Centre-East

The Executive Body,

Recalling the provisions of article 9 and other relevant provisions of the Convention on Long-range Transboundary Air Pollution,

[3] See http://ebas.nilu.no.

Recalling also the provisions of the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP Protocol),

Noting that the Meteorological Synthesizing Centre-East has been in operation since 1979 – the beginning of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) – as one of the three cooperating international centres of EMEP,

Recalling the terms of reference for the international EMEP centres (EB.AIR/GE.1/8, annex IV), adopted at its fourth session (ECE/EB.AIR/10),

Recognizing the Centre's contribution to the scientific assessment of past trends and current status in air pollution throughout the United Nations Economic Commission for Europe (ECE) region and to the evaluation of the implementation of the Protocols to the Convention,

Acknowledging the support provided by the Meteorological Synthesizing Centre-East to the Parties to the Convention and EMEP, among other things, through the following actions:

(a) Continuously maintaining and promoting the development of modelling tools essential for the verification of the impact of the actions taken on pollutants emission reduction in the ECE region, in particular for heavy metals and persistent organic pollutants (POPs);

(b) Extending the EMEP model to the global scale to support assessment of the impact of heavy metals and POPs in the Northern hemisphere;

(c) Contributing to the evaluation and improvement of emission data reported by the Parties and supporting the Centre on Emission Inventories and Projections in gap-filling for heavy metals and POPs emissions that are not correctly documented;

(d) Contribution to the elaboration of assessment reports and trend analyses of air pollution concentrations and deposition in the EMEP domain over the past 40 years;

(e) Conducting several pilot studies with national experts to investigate the reasons for discrepancies between emissions, measurements and modelling results in some countries;

(f) Supporting the sharing, use and evaluation of EMEP models as tools for the assessment of air pollution transport and deposition at the national and regional levels by the Parties.

Recognizing the need to update the mandate of the Meteorological Synthesizing Centre-East to ensure its consistency with the provisions of the amended Protocols to the Convention, as well as its strategic priorities as set out in the following documents:

(a) The long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (decision 2018/5, annex);

(b) The 2016 scientific assessment of the Convention;[4]

(c) The policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3 and Corr.1 and ECE/EB.AIR/2017/4).

Noting that the annual costs of the centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP are covered in accordance with the EMEP Protocol, from contributions by the Parties to the Convention on the basis of the annual EMEP budget approved by the Executive Body upon the recommendation of the Steering Body to EMEP:

1. *Notes with appreciation* the hosting of the Meteorological Synthesizing Centre-East by the Russian Federation;

2. *Adopts* the revised mandate of the Meteorological Synthesizing Centre-East as contained in the annex to the present decision, which includes the key objectives and

[4] See footnote 2.

functions of the Centre to be carried out on an ongoing basis, whereas additional activities and specific tasks and associated deliverables to be carried out in a shorter time frame will be included in the biennial workplans for the implementation of the Convention;

3. *Decides* that the Centre is responsible for communicating with national experts, for maintaining an up-to-date web page that includes information on its work, and for other organizational arrangements in accordance with the biennial workplan;

4. *Decides* that the Centre is responsible for carrying out the work assigned to it in the biennial workplans approved by the Executive Body, and reporting thereon, as well as for keeping other relevant bodies apprised of its work.

Annex

Revised mandate for the Meteorological Synthesizing Centre-East

1. The Meteorological Synthesizing Centre-East will continue to provide scientific support to the Convention with information on modelling of heavy metals (lead (Pb), cadmium (Cd) and mercury (Hg)) and persistent organic pollutants (POPs, including polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dibenzo-p-dioxins and dibenzofurans (PCDD/Fs) and hexachlorobenzene (HCB)).

2. The Centre reports on its activities and deliverables to the Steering Body to EMEP.

3. The functions of the Centre are to:

(a) Prepare data on anthropogenic emissions of heavy metals and POPs on the regional (EMEP domain) and global scales, including auxiliary parameters (for example, emission height, temporal variation and chemical composition) as input for operational modelling based on gridded emission data sets provided by Centre for Emission Inventories and Projections and expert estimates;

(b) Prepare input data required for modelling of heavy metals and POPs on the regional and global scales, including wind suspension of mineral dust and atmospheric concentrations of chemical reactants and particulate matter;

(c) Collect and process measurement data for evaluation of model performance from various monitoring networks and databases (for example, EBAS, AirBase, Global Mercury Observation System and United Nations Environment Programme Stockholm Convention Global Monitoring Plan Data Warehouse);

(d) Update the modelling tools with new findings and improved parameterizations developed by the Centre in its research activities in accordance with the biennial workplan and in cooperation with the scientific community;

(e) Perform simulations of heavy metals and POPs dispersion on a global scale for evaluation of intercontinental transport of Hg and POPs and its impact on pollution levels in the EMEP countries;

(f) Perform further testing and evaluation of model performance in simulations of air concentration and deposition levels, as well as source-receptor relationships of heavy metals and POPs on the new EMEP grid;

(g) Perform operational model assessment of heavy metal (Pb, Cd and Hg) and POP (PAHs, PCBs, PCDD/Fs and HCB) pollution levels over the EMEP domain;

(h) Perform quality assurance and quality control of modelling results through evaluation against measurements from the EMEP and other monitoring networks;

(i) Provide support to Parties to the Convention in using the model assessment results and access to the modelling tools, and, in particular, present and discuss results of national scale case studies and other research activities on heavy metal and POP pollution with fine resolution;

(j) Prepare annual status reports and individual country reports for the EMEP countries and make results of model calculations available online at the Meteorological

Synthesizing Centre-East website; develop and maintain a website in Russian to facilitate access to information by countries in Eastern Europe, the Caucasus and Central Asia;

(k) Continue collaboration with the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops on the evaluation of heavy metal pollution levels in Europe using modelling results and measurements in mosses and develop cooperation with other International Cooperative Programmes; provide support to the Coordination Centre for Effects with information on ecosystem-specific deposition heavy metals and POPs for assessment of critical load exceedances; contribute to the Task Force on Health with information on toxic substances (PAHs, PCDD/Fs and others);

(l) Cooperate on dissemination of information and data exchange with international bodies, including the United Nations Environment Programme, the Arctic Monitoring and Assessment Programme, the Stockholm Convention on Persistent Organic Pollutants, the Minamata Convention on Mercury and the Baltic Marine Environment Protection Commission;

(m) Report on its activities and deliverables to the Steering Body to EMEP and the Working Group on Effects and participate in annual meetings of the relevant task forces (Task Force on Measurements and Modelling, Task Force on Hemispheric Transport of Air Pollution);

(n) Carry out other tasks assigned to it by the EMEP Steering Body and the Executive Body.

C. Revised mandate for the Meteorological Synthesizing Centre-West

The Executive Body,

Recalling the provisions of article 9 and other relevant provisions of the Convention on Long-range Transboundary Air Pollution,

Recalling also the provisions of the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP Protocol),

Noting that the Meteorological Synthesizing Centre-West has been in operation since 1979 – the beginning of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) – as one of the three cooperating international centres of EMEP,

Recalling the terms of reference for the international EMEP centres (EB.AIR/GE.1/8, annex IV), adopted at its fourth session (ECE/EB.AIR/10),

Recognizing the Centre's contribution to the scientific assessment of past trends and current status in air pollution throughout the United Nations Economic Commission for Europe (ECE) region and to the evaluation of the implementation of the Protocols to the Convention,

Acknowledging the support provided by the Meteorological Synthesizing Centre-West to the Parties to the Convention and EMEP, among other things, through the following actions:

(a) Continuously maintaining and promoting the development of modelling tools essential for the verification of the impact of the actions taken on pollutants emission reduction and the assessment of transboundary air pollution fluxes in the ECE region;

(b) Providing the Centre for Integrated Assessment Modelling with source/receptor matrices computed annually to feed the Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS) model;

(c) Extending the EMEP model to the global scale to support assessment of source/receptor relationships between regions in the Northern hemisphere;

(d) Contributing to the evaluation of emission data reported by the Parties, implementing gridded emission inventories in the EMEP model and evaluating its performances against observations;

(e) Contributing to the elaboration of assessment reports and trend analyses of air pollution concentrations and deposition in the EMEP domain over the past 40 years;

(f) Investigating methodologies to build up linkages between regional and local air pollution patterns;

(g) Supporting the sharing, use and evaluation of EMEP models as tools for the assessment of air pollution transport and deposition at the national and regional levels by the Parties.

Recognizing the need to update the mandate of the Meteorological Synthesizing Centre-West to ensure its consistency with the provisions of the amended Protocols to the Convention, as well as its strategic priorities as set out in the following documents:

(a) The long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (decision 2018/5, annex);

(b) The 2016 scientific assessment of the Convention;[5]

(c) The policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3 and Corr.1 and ECE/EB.AIR/2017/4).

Noting that the annual costs of the centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP are covered in accordance with the EMEP Protocol, from contributions by the Parties to the Convention on the basis of the annual EMEP budget approved by the Executive Body upon the recommendation of the Steering Body to EMEP:

1. *Notes with appreciation* the hosting of the Meteorological Synthesizing Centre-West by the Norwegian Meteorological Institute;

2. *Adopts* the revised mandate of the Meteorological Synthesizing Centre-West as contained in the annex to the present decision, which includes the key objectives and functions of the Centre to be carried out on an ongoing basis, whereas additional activities and specific tasks and associated deliverables to be carried out in a shorter time frame will be included in the biennial workplans for the implementation of the Convention;

3. *Decides* that the Centre is responsible for communicating with national experts, for maintaining an up-to-date web page that includes information on its work, and for other organizational arrangements in accordance with the biennial workplan;

4. *Decides* that the Centre is responsible for carrying out the work assigned to it in the biennial workplans approved by the Executive Body, and reporting thereon, as well as for keeping other relevant bodies apprised of its work.

Annex

Revised mandate for the Meteorological Synthesizing Centre-West

1. The Meteorological Synthesizing Centre-West will continue to provide scientific support to the Convention on atmospheric modelling of photochemical compounds, sulphur, nitrogen and particulate matter.

2. The Centre reports on its activities and deliverables to the Steering Body to EMEP.

3. The functions of the Centre are to:

(a) Perform model simulations to trace progress towards the emission controls under existing Protocols and support the design of new or revised Protocols, when necessary;

(b) Provide: annual assessment of transboundary air pollution fluxes inside the EMEP area; and source-receptor matrices, air concentrations and deposition fields for the EMEP domain for photochemical compounds, sulphur, nitrogen and particulate matter for

[5] ibid.

the most recent year where emissions are available. Update historic model runs when necessary to keep consistency with previous years;

(c) Maintain the EMEP/Meteorological Synthesizing Centre-West model as "state-of-the-art". Evaluate results of the EMEP/Meteorological Synthesizing Centre-West model using EMEP data, as well as measurement data from other networks and projects; Improve methodologies (including multiscale modelling) and understanding of processes, parametrizations, emissions and linkages to climate and vegetation impacts;

(d) Facilitate the use of the EMEP/Meteorological Synthesizing Centre-West model by Parties, for example, by maintaining an updated open source code on the web and providing training courses for EMEP/Meteorological Synthesizing Centre-West model users;

(e) Provide annual country reports with model products and web access to model results, including data on high temporal resolution and source-receptor matrices, for use in air quality assessment by Parties;

(f) Provide support and facilitate involvement of Parties in Eastern Europe, the Caucasus and Central Asia, for example, by providing country reports in Russian, target country participation in EMEP/ Meteorological Synthesizing Centre-West model training courses, provide support on the use of EMEP data and tools;

(g) Collaborate with EMEP centres and task forces and the Working Group on Effects on: (i) interpretation, evaluation and assessment of measured and modelled air pollution, including intercontinental transport; (ii) evaluation and improvement of emission inventories; (iii) use of EMEP/Meteorological Synthesizing Centre-West model results in integrated assessment; and (iv) risk of air pollution damage to vegetation and health;

(h) Continue cooperation with the Baltic Marine Environment Protection Commission and the Commission for the Protection of the Marine Environment of the North-East Atlantic on nitrogen deposition to sea areas, with a specific focus on shipping emissions; explore options for cooperation between EMEP and European Union programmes such as the Copernicus Atmosphere Monitoring Services, focusing on regional assessments. Support Arctic Monitoring and Assessment Programme in modelling of short-lived climate pollutant impacts; collaborate with the Aerosol Comparisons between Observations and Models and the Aerosol Chemistry Model Intercomparison Project within phase 6 of the Coupled Model Intercomparison Project on the climate impacts of short-lived climate pollutants;

(i) Carry out other tasks assigned to it by the EMEP Steering Body and the Executive Body.

D. Revised mandate for the Centre for Integrated Assessment Modelling

The Executive Body,

Recalling the provisions of article 9 and other relevant provisions of the Convention on Long-range Transboundary Air Pollution,

Recalling also the provisions of the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP Protocol),

Recalling further its decision 1999/2 concerning the structure and organization of work, whereby it established the Centre for Integrated Assessment Modelling (ECE/EB.AIR/68, annex III),

Noting that the Centre for Integrated Assessment Modelling has been providing scientific support in the development of cost-effective emission control strategies and Protocols under the Convention,

Recognizing the Centre's contribution to the scientific assessment of past trends and current status in air pollution throughout the United Nations Economic Commission for Europe (ECE) region and to the evaluation of the implementation of the Protocols to the Convention,

Acknowledging the support provided by the Centre for Integrated Assessment Modelling to the Parties to the Convention and EMEP, among other things, through the following actions:

(a) Contributing to the improvement of the scientific understanding of the processes that control European air pollution levels through the development and regular updating of the Greenhouse Gas Air Pollution Interactions and Synergies (GAINS) model – a modelling tool for advanced integrated assessment of climate change and air pollution;

(b) Contributing to the elaboration of assessment reports and trend analyses of air pollution concentrations and deposition in the EMEP domain over the past 40 years;

(c) Incorporating the results of the Meteorological Synthesizing Centre-West atmospheric dispersion model and the latest information on critical loads and ozone fluxes into the GAINS model;

(d) Cooperating with the Task Force on Health to maintain the health impact assessment in the GAINS model in line with latest scientific findings;

(e) Conducting analyses of the likely future health and ecosystems impacts resulting from the current trends in energy use, agricultural activities and industrial production, considering the effects of the already agreed emission control measures;

(f) Exploring the cost-effectiveness of further emission controls, in view of their impacts on human health and ecosystems.

Recognizing the need to update the mandate of the Centre for Integrated Assessment Modelling to ensure its consistency with the provisions of the amended Protocols to the Convention, and to take into account the findings and strategic priorities as set out in the following documents:

(a) The long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (decision 2018/5, annex);

(b) The 2016 scientific assessment of the Convention;[6]

(c) The policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3 and Corr.1 and ECE/EB.AIR/2017/4).

Noting that the annual costs of the centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP are covered in accordance with the EMEP Protocol, from contributions by the Parties to the Convention on the basis of the annual EMEP budget approved by the Executive Body upon the recommendation of the Steering Body to EMEP:

1. *Notes with appreciation* the hosting of the Centre for Integrated Assessment Modelling by the International Institute for Applied Systems Analysis,

2. *Adopts* the revised mandate of the Centre for Integrated Assessment Modelling as contained in the annex to the present decision, which includes the key objectives and functions of the Centre to be carried out on an ongoing basis, whereas additional activities and specific tasks and associated deliverables to be carried out in a shorter time frame will be included in the biennial workplans for the implementation of the Convention;

3. *Decides* that the Centre is responsible for communicating with national experts, for maintaining an up-to-date web page that includes information on its work, and for other organizational arrangements in accordance with the biennial workplan;

4. *Decides* that the Centre is responsible for carrying out the work assigned to it in the biennial workplans approved by the Executive Body, and reporting thereon, as well as for keeping other relevant bodies apprised of its work.

[6] ibid.

Annex

Revised mandate for the Centre for Integrated Assessment Modelling

1. The Centre for Integrated Assessment Modelling will continue to provide scientific support to the Convention on the development of cost-effective emission control strategies that protect human health and vegetation from the adverse effects of air pollution. The Centre will continue to develop an integrated assessment modelling tool for scientific assessment of past and future trends in air pollution throughout the ECE region.

2. The Centre reports on its activities and deliverables to the Steering Body to EMEP.

3. The functions of the Centre are to:

(a) Maintain, develop further and harmonize common methods and tools for the scientific assessment of cost-effective emission control strategies and to explore the distributions of costs and benefits across Parties;

(b) Maintain the GAINS model as a "state-of-the-art" tool for Convention analyses, integrate information from the various scientific bodies under EMEP and the Working Group on Effects in the GAINS model and organize ex post analyses by these scientific bodies;

(c) Improve methodologies and understanding of processes, parametrizations and linkages to climate, biodiversity and vegetation impacts;

(d) Enhance the modelling of multiscale air quality management approaches, from the urban to the hemispheric scale;

(e) Update the GAINS databases on energy and agricultural statistics, activity projections, emission inventories, emission control options and their costs, taking into account the latest national and international data sources, and consult with experts from Parties on these data;

(f) Facilitate the use of the GAINS model by Parties, for example, by providing online access to the model and its databases and providing training courses for GAINS model users;

(g) Provide support to and facilitate the involvement of Parties in Eastern Europe, the Caucasus and Central Asia, for example, through model training courses, support on the use of GAINS model data and tools and, to the extent funding allows, national versions of the GAINS model; assess future scenarios and the cost-effectiveness of abatement strategies upon request by the Working Group on Strategies and Review;

(h) Perform model simulations to trace progress towards emission controls under the existing Protocols and support the design of new or revised Protocols, when necessary;

(i) Closely collaborate with:

(i) The Task Force on Emission Inventories and Projections and the Centre on Emission Inventories and Projections to improve emission estimates and projections;

(ii) The Meteorological Synthesizing Centre-West and the Task Force on Measurements and Modelling to use the latest version of the EMEP model for source-receptor relationships and the development of a methodology to assess local exposure;

(iii) The Task Force on Health and the International Cooperative Programme on Modelling and Mapping of Critical Levels and Loads and Air Pollution Effects, Risks and Trends to use the latest findings on exposure response relationships and impacts on biodiversity;

(iv) The Task Force on Hemispheric Transport of Air Pollution to assess cost-effective abatement strategies at the hemispheric scale.

(j) Exchange information with the Arctic Monitoring and Assessment Programme, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, the Organization for Economic Cooperation and Development, the United Nations Environment Programme (UNEP), the World Health Organization and the World Bank

Group to encourage cost-effective strategies for health and ecosystems at a global scale. Cooperate with: the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants on short-lived climate pollutants; UNEP on hemispheric and global emission scenarios; the European Commission on in-depth analyses for the member States of the European Union; the Artic Council and the Arctic Monitoring and Assessment Programme on modelling pollution controls that benefit the Arctic and the modelling of short-lived climate pollutant impacts; and the Baltic Marine Environment Protection Commission and the Commission for the Protection of the Marine Environment of the North-East Atlantic on the modelling of emissions from shipping;

(k) Carry out other tasks assigned to it by the EMEP Steering Body and the Executive Body.

E. Revised mandate for the Centre on Emission Inventories and Projections

The Executive Body,

Recalling the provisions of article 9 and other relevant provisions of the Convention on Long-range Transboundary Air Pollution,

Recalling also the provisions of the Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP Protocol),

Recalling further its decision to establish the Centre on Emission Inventories and Projections at its twenty fifth session in 2007 (ECE/EB.AIR.91, para. 27 (f)) upon the recommendation of the EMEP Steering Body on the reorganization of the emission-related work within EMEP (ECE/EB.AIR/GE.1/2007/9, annex II),

Recognizing the Centre's contribution to the scientific assessment of past trends and current status in air pollution throughout the United Nations Economic Commission for Europe (ECE) region and to the evaluation of the implementation of the Protocols to the Convention,

Acknowledging the support provided by the Centre on Emission Inventories and Projections to the Parties to the Convention and EMEP, among other things, through the following actions:

(a) Ensuring that all emission data reported by Parties are stored in a database, publicly accessible via the Centre on Emission Inventories and Projections website and presented in interactive data viewers;

(b) Providing the results of the initial checks of emission inventories (stage 1 and stage 2) to Parties and EMEP annually; organizing two cycles of in-depth reviews of emission inventories since 2008, with up to 10 Parties reviewed annually and 44 in a five-year cycle; developing a system for the annual review of adjustment applications and managing the process since 2015, including the assessment of the applications by two independent reviewers and submission of the recommendations of the expert review team to the EMEP Steering Body in a status report and their publication on the Centre on Emission Inventories and Projections website;

(c) Putting in place a module-based gridding system with detailed spatial resolution of 0.1° x 0.1° (longitude/latitude) and annual provision of data for modellers; publishing technical reports on methodologies used for gap filling and information on discrepancies between reported and expert emission estimates of the main pollutants, particulate matters, heavy metals and persistent organic pollutants.

Recognizing the need to update the mandate of the Centre on Emission Inventories and Projections to ensure its consistency with the provisions of the amended Protocols to the Convention, as well as its strategic priorities as set out in the following documents:

(a) The long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (decision 2018/5, annex);

(b) The 2016 scientific assessment of the Convention;[7]

(c) The policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3 and Corr.1 and ECE/EB.AIR/2017/4).

Noting that the annual costs of the centres cooperating within EMEP for the activities appearing in the work programme of the Steering Body of EMEP are covered in accordance with the EMEP Protocol, from contributions by the Parties to the Convention on the basis of the annual EMEP budget approved by the Executive Body upon the recommendation of the Steering Body to EMEP:

1. *Notes with appreciation* the hosting of the Centre on Emission Inventories and Projections by Environment Agency Austria;

2. *Adopts* the revised mandate of the Centre on Emission Inventories and Projections as contained in the annex to the present decision, which includes the key objectives and functions of the Centre to be carried out on an ongoing basis, whereas additional activities and specific tasks and associated deliverables to be carried out in a shorter time frame will be included in the biennial workplans for the implementation of the Convention;

3. *Decides* that the Centre is responsible for communicating with national experts, for maintaining an up-to-date web page that includes information on its work, and for other organizational arrangements in accordance with the biennial workplan;

4. *Decides* that the Centre is responsible for carrying out the work assigned to it in the biennial workplans approved by the Executive Body, and reporting thereon, as well as for keeping other relevant bodies apprised of its work.

Annex

Revised mandate for the Centre on Emission Inventories and Projections

1. The Centre on Emission Inventories and Projections will continue to have principal responsibility for coordinating the emission-related work under EMEP.

2. The Centre reports on its activities and deliverables to the Steering Body to EMEP.

3. The functions of the Centre are to:

(a) Compile emission data reported by Parties to the Convention and import them into the EMEP/Centre on Emission Inventories and Projections database; maintain and improve the EMEP/Centre on Emission Inventories and Projections database system and the Centre on Emission Inventories and Projections website; Adjust the database system (WebDab, RepDab) according to new reporting requirements and reporting formats; make reported data accessible to public on the web;

(b) Carry out annual quality control of inventories reported under the Convention; evaluate timeliness, consistency and completeness of submitted data; plan and organize an annual technical in-depth review of submitted inventories; regularly improve/develop new tests for emission checking; set up review teams and communicate with Parties; communicate the results to the Parties and the EMEP Steering Body;

(c) Develop emission data sets for modellers (gridded data of EMEP pollutants for the EMEP area); calculate expert estimates for missing data and use a module-based gridding system and proxies for the spatial distribution of gap-filled emission data for the new EMEP grid domain in geographical coordinates (0.1° x 0.1° longitude/latitude); develop distribution of emissions for Parties that do not report gridded data; perform checks of gridded data; during a transition period, provide gridded data also in resolution 50 x 50km EMEP grid, if requested;

(d) Support the Implementation Committee in reviewing compliance with reporting obligations: carry out periodic review of compliance with Parties' reporting

[7] ibid.

obligations and emission trends, based on emission and projection data submitted to EMEP and available in the WebDab emission database;

(e) Support EMEP by managing review of adjustment applications to emission reduction commitments or inventories and any supporting documentation submitted by Parties in accordance with Executive Body decisions 2012/3, 2012/4 and 2012/12; set up review teams and communicate with Parties; maintain the online database system for storage and review of approved adjustments and supporting documentation provided by Parties;

(f) Assess emission uncertainties by comparison of Convention data with emission data from other sources, such as the Joint Research Centre of the European Commission, the International Institute for Applied Systems Analysis and the United Nations Framework Convention on Climate Change, and, to the extent possible, quantification of the differences;

(g) Cooperate closely with the secretariat, the Task Force on Emission Inventories and Projections and the European Environment Agency through capacity-building activities (training sessions, workshops, country visits) in Eastern Europe, the Caucasus and Central Asia. Furthermore, the Centre on Emission Inventories and Projections provides online ad hoc support to technical experts from the region;

(h) Build on the emission-related work within EMEP; cooperate with the other EMEP centres and task forces and the Arctic Monitoring and Assessment Programme, the Austrian Ministry of Environment, the European Environment Agency, the Joint Research Centre of the European Commission and the European Commission; Participate in relevant meetings organized by the partner organizations and EMEP bodies; contribute to joint reports with other centres;

(i) Carry out other tasks assigned to it by the EMEP Steering Body and the Executive Body.