Revised mandate for the Meteorological Synthesizing Centre-East (MSC-E)

The EMEP Steering Body, considering the evolution of EMEP since the MSC-E was established decided:

1. The mandates for EMEP Centres need to be revised and updated to make them consistent with the current provisions and priorities of the Convention and EMEP set in the following documents:

(a) Revised Strategy for EMEP for 2010-2019 (ECE/EB.AIR/2009/16/Rev.1);

(b) EMEP Revised Monitoring Strategy 2010-2019 (ECE/EB.AIR/GE.1/2009/15);

(c) Long-term Strategy for the Convention on Long-range Transboundary Air Pollution (ECE/EB.AIR/106/Add.1);

(d) The 2016 scientific assessment of the Convention;[1]

(e) Policy response to the 2016 scientific assessment of the Convention (ECE/EB.AIR/WG.5/2017/3, ECE/EB.AIR/WG.5/2017/3/Corr.1 and ECE/EB.AIR/2017/4 forthcoming);

(f) Draft 2018-2019 workplan for the implementation of the Convention.

The revised mandates will include key objectives and functions of the task forces and centres. The mandates are expected to be in force for the next 5 to 10 years. Specific activities and related deliverables on a shorter timeframe will be included in the bi-annual workplans for the implementation of the Convention.

2. The Meteorological Synthesizing Centre-East (MSC-E) was established by decision of Executive Body to offer to the Parties, the EMEP task forces (in particular the Task Force on Measurements and Modelling, the Task Force of Hemispheric Transport of Air Pollution) and other international organizations modelling tool for scientific assessment of past and future trends in air pollution throughout the ECE region and evaluating the impact of the implementation of the Protocols of the Convention.

3. Within the period of its existence, MSC-W has supported the Convention and EMEP *inter alia*, through the following actions:

(a) Continuously maintained and fostered the development of modelling tools that are essential for the verification of the impact of the actions taken on pollutants emission reduction in the UNECE region, in particular for heavy metals and persistent organic pollutants (POPs);

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

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

[1] 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, online report).

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

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

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

Annex

Revised mandate for the Meteorological Synthesizing Centre-East (MSC-E)

1. The Meteorological Synthesizing Centre-East has been carrying out its functions as one of three cooperating international centres of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) as indicated in Article 1 of the EMEP Protocol to the Convention. It will be responsible for providing 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 will assume principal responsibility for coordinating the relevant activities under EMEP including development of technical projects, provision of annual reports and access to all relevant information and data, provision of deliverables according to the workplan, participation in the relevant task force meetings, organization of technical workshops and training workshops, and provision of communication with and direct support to Parties.

3. The Centre will be responsible for the production and the provision with respect to the processes set by the EMEP Steering Body (in particular regarding the time lines) of all information and data necessary for the implementation of the Convention and its Protocoles in the Parties.

3. The Centre will report on its activities and deliverables to the Steering Body to the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP).

4. The scientific and technical activities developed by the Centre beyond this mandate should be discussed and approved by the EMEP Steering Body and be included in the biannual workplan.

5. EMEP Centres are co-funded through the Convention trust fund managed by UNECE. The draft EMEP budget is developed by the EMEP Steering Body according to the priorities of EMEP and the Convention. The Executive Body decides about the workplan and the associated EMEP budget.

6. The functions of the Centre will be to:

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

(b) Prepare input data required for modelling of heavy metals and POPs on regional and global scales, including wind suspension of mineral dust as well as 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 (e.g. EBAS, AirBase, GMOS, UNEP SC GMP Data Warehouse, etc.);

(d) Update the modelling tools with new findings and improved parameterizations developed by the Centre in its research activities in accordance with the bi-annual work-plan and cooperation with 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 of Parties to the Convention with use of the model assessment results and access to the modeling tools. In particular, present and discuss results of the 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 MSC-E 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 ICP-Vegetation on evaluation of heavy metal pollution levels in Europe using modeling results and measurements in mosses and develop cooperation with other International Cooperative Programmes; provide support of the Coordination Centre for Effects (CCE) 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) Working Group on Effects: Cooperate on dissemination of information and data exchange with international bodies including UNEP, AMAP, Stockholm Convention, Minamata Convention, HELCOM, etc.;

(m) Report on its activities and deliverables to the Steering Body to EMEP and Working Group on Effects and participate in annual meetings of the relevant Task Forces (TFMM, TFHTAP).

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