Revised mandate for the Task Force and the Programme Centre of the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops

1. The current terms of reference (mandates) for International Cooperative Programmes (ICPs) and the Task Force on the Health Aspects of Air Pollution had been specified in document *Future Development of Effects-Oriented Activities* (EB.AIR/WG.1/2000/4, Annexes II-VIII) approved by the Working Group on Effects (WGE) and the Executive Body in 2000. The mandates need to be revised and updated to make them consistent with the current provisions and priorities of the Convention and of WGE set in the following documents:

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

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

(c) 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);

(d) Guidelines for reporting on the monitoring and modelling of air pollution effects (ECE/EB.AIR/2008/11, ECE/EB.AIR/WG.1/2008/16/Rev.); and

(e) Draft 2018-2019 workplan for the implementation of the Convention (ECE/EB.AIR/2017/1, forthcoming).

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. Highlights of achievements of the Task Force and Programme Centre of the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops are:

(a) The establishment of more than twenty ozone flux-based critical levels for vegetation (including forests), biologically a more relevant indicator of the risk of ozone impacts on vegetation than concentration-based critical levels, and identifying areas most at risk of ozone impacts;

(b) The provision of evidence of ozone impacts on vegetation, including interactions with nitrogen pollution and climate change, and consequences for ecosystem services and biodiversity, showing that impacts are widespread;

(c) Demonstrating that no clear trends of impacts of ozone on vegetation have been observed in the last two decades, hence ozone pollution remains of global concern with background concentrations rising in Europe, contributing to impacts on vegetation;

[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) Monitoring heavy metal and nitrogen concentrations in naturally growing mosses since 1990 has identified declines in concentrations in many areas of Europe whilst hotspots of heavy metal and nitrogen pollution still remain;

(e) The considerable decline in cadmium and lead concentrations in mosses since 1990, and to a lesser extent mercury concentrations, provides evidence for the success of heavy metal air pollution abatement policies in Europe, with mercury pollution remaining of global concern.

Annex

Revised mandate for the Programme Centre of the International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops (ICP Vegetation).

1. The Programme Centre (at the Centre for Ecology & Hydrology, Bangor), hosted by the United Kingdom of Great Britain and Northern Ireland, will be responsible for the detailed planning and coordination of the Programme.

2. The Centre will assume principal responsibility for coordinating the relevant activities under the ICP Vegetation including development of technical projects, provision of deliverables according to the workplan (including reports and access to relevant information and data), participation in relevant Task Force meetings and workshops, organizing the Task Force meeting, technical and training workshops, and providing 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 WGE (in particular regarding the time lines) of information and data on air pollution impacts on natural vegetation and crops, necessary for the implementation of the Convention and its Protocols by the Parties.

4. The Centre will report on its activities and deliverables to WGE and to other bodies of the Convention as needed.

5. Specific scientific and technical activities developed by the Centre should be discussed and approved by WGE and included in the biannual workplan.

6. The functions of the Centre will be to:

(a) Plan and conduct its technical work to collate and review evidence of i) impacts of ozone on vegetation from monitoring activities, experiments, surveys and the literature, including impacts in a changing climate, at the regional and global scale, and assess spatial patterns and temporal trends; ii) spatial patterns and temporal trends of the deposition of heavy metals, nitrogen and persistent organic pollutants to vegetation using naturally growing mosses as biomonitors;

(b) Develop further and apply flux-based ozone critical levels for vegetation, map areas at risk of ozone impacts on vegetation and exceedances of critical levels at the regional and global scale in the current and future climate; update the *Manual on Methodologies and Criteria for Modelling and Mapping Critical Loads and Levels and Air Pollution Effects, Risks and Trends*[2] and associated background documents with the latest relevant scientific

[2] A first version of the Mapping Manual was published in 1993. It has since been updated three times: in 1996, 2004 and again in 2016. The full text of the 2016 version is available as online, by chapter, from the website of the International Cooperative Programme on Modelling and Mapping of Critical Levels and Loads and Air Pollution Effects, Risks and Trends: http://icpmapping.org/Latest_update_Mapping_Manual.

knowledge; collate and review information on the impacts of ozone on food production (including economic assessments), ecosystem services and biodiversity;

(c) Stimulate outreach activities and train new partners to apply methodologies described under (a) and (b), liaise with global networks and initiatives inside and outside the Convention to contribute to the United Nations' Sustainable Development Goals; invite new partners to attend the annual Task Force meeting and specific workshops;

(d) Support the Parties with the further development and implementation of methodologies described under (a) and (b), including requirements of the new European Union National Emissions Ceilings Directive (Directive (EU) 2016/2284); organise the annual Task Force meeting and invite Parties to attend, present their work related to the programme, and contribute to discussions and new developments;

(e) In 2014, the coordination of the moss survey to monitor deposition of specified air pollutants (see (a)) was transferred to the Russian Federation to enhance participation of countries in Eastern Europe, Caucasus and Central Asia. New contacts made within this network are used to stimulate participation in ozone-related activities too. Relevant documents will be translated into Russian to stimulate knowledge transfer and the organisation of relevant meetings and workshops in countries in Eastern Europe, Caucasus and Central Asia, is encouraged;

(f) Collaborate with the ICP on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) on monitoring ozone impacts on forests and monitoring deposition of relevant air pollutants to mosses; with the Meteorological Synthesizing Centre-West on modelling ozone fluxes and nitrogen deposition to vegetation; with the Meteorological Synthesizing Centre-East on modelling heavy metal deposition to vegetation; with the Task Force on Integrated Assessment Modelling and the Centre for Integrated Assessment Modelling on modelling ozone fluxes in the Greenhouse Gas Air Pollution Interactions and Synergies (GAINS) model; with the Task Force on Hemispheric Transport of Air Pollution (HTAP) on modelling ozone fluxes to vegetation using HTAP scenarios and assess implications for food production and ecosystem services;

(g) Collaborate with the Tropospheric Ozone Assessment Report (TOAR), initiated by the International Global Atmospheric Chemistry (IGAC) Project, on producing reports and generate globally easily accessible ozone exposure and dose metrics; the Climate and Clean Air Coalition (CCAC) and future United Nations Environment Programme (UNEP) initiatives benefiting from assessment of the risk of ozone impacts on vegetation;

(h) Carry out other tasks assigned to it by WGE and the Executive Body.