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**EXECUTIVE BODY FOR THE CONVENTION ON LONG-RANGE
TRANSBOUNDARY AIR POLLUTION**

Twenty-fifth session
Geneva, 10–13 December 2007
Item 15 of the provisional agenda *

Working Group on Effects

Twenty-sixth session
Geneva, 29–30 August 2007
Item 6 of the provisional agenda **

REVISED DRAFT 2008 WORKPLAN FOR EFFECTS-ORIENTED ACTIVITIES ¹

Note by the Bureau of the Working Group on Effects

* ECE/EB.AIR/90.

** ECE/EB.AIR/WG.1/2007/1.

¹ This document was revised by the Working Group on Effects at its twenty-sixth session for submission to the twenty-fifth session of the Executive Body.

INTRODUCTION

1. The Executive Body, at its twenty-fourth session, agreed that the procedures for the workplan used during two years had worked well and agreed to continue to use these in the future (ECE/EB.AIR/89, para. 72 (a)). At its meeting held in Geneva from 14 to 16 February 2007, the Extended Bureau of the Working Group on Effects, comprising the Bureau of the Working Group, the Chairs of the Task Forces and the representatives of the programme centres of the International Cooperative Programmes (ICPs), agreed to prepare a draft workplan for 2008 as requested. The numbering follows that of the Convention workplan for 2007.

3. EFFECTS OF MAJOR AIR POLLUTANTS ON HUMAN HEALTH AND THE ENVIRONMENT

3.1 REVIEW OF EFFECTS OF MAJOR AIR POLLUTANTS

Description/objectives: Annual review of activities and results of the International Cooperative Programmes (ICPs) and the Task Force on the Health Aspects of Air Pollution. Appropriate reports to the sessions of the Executive Body on the reviews and revisions of Convention's protocols.

Main activities and time schedule:

- (a) Submission of relevant information by ICPs and the Task Force on Health to the secretariat (April/May 2008);
- (b) Submission of results to the secretariat for the 2008 joint report of the ICPs and the Task Force on Health to the Working Group on Effects (May 2008);
- (c) Submission of appropriate reports to the sessions of the Working Group on Effects and the Executive Body;
- (d) Report from the workshop on critical loads for heavy metals, held in Windermere, United Kingdom, from 21 to 22 November 2007, to the twenty-seventh session of the Working Group on Effects;
- (e) Activities common to all ICPs, the Task Force on Health and the Joint Expert Group on Dynamic Modelling:
 - (i) Updated review of the robustness of monitored and modelled air pollution impacts;
 - (ii) Updated compilation of observed parameters, monitoring methodologies and intensities of effects-oriented activities;

- (iii) Updated summary of effects-oriented activities in countries of Eastern Europe, Caucasus and Central Asia.

3.2 INTERNATIONAL COOPERATIVE PROGRAMME ON EFFECTS OF AIR POLLUTION ON MATERIALS, INCLUDING HISTORIC AND CULTURAL MONUMENTS

Description/objectives: Quantification of the multi-pollutant effects on the corrosion of selected materials under different environmental conditions, inter alia, as a basis for economic evaluation of air pollution damage. A Programme Task Force led by Sweden and co-chaired by Italy, in cooperation with the Programme's main research centre (Corrosion and Metals Research Institute, Stockholm), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) Map of zinc runoff due to corrosion in Europe;
- (b) Case study on stock at risk in Madrid;
- (c) Progress report on corrosion and air pollutant trends in the period 1987–2006;
- (d) Report on combined corrosive effects of climate change and air pollution on cultural heritage;
- (e) Twenty-fourth meeting of the Programme Task Force, tentatively scheduled to be held in Tallinn from 2 to 4 April 2008.

3.3 INTERNATIONAL COOPERATIVE PROGRAMME ON ASSESSMENT AND MONITORING OF ACIDIFICATION OF RIVERS AND LAKES

Description/objectives: Identification of the state of surface water ecosystems and their long-term changes with respect to the regional variation and impact of selected air pollutants, and including effects on biota. A Programme Task Force led by Norway, which also provides the Programme's centre (the Norwegian Institute for Water Research, Oslo), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) Annual chemical intercomparison (in collaboration with all ICPs);
- (b) Annual biological intercalibration (in collaboration with all ICPs);
- (c) Report on 20 years of surface water monitoring;

(d) Twenty-fourth meeting of the Programme Task Force, tentatively scheduled to be held in October 2008.

3.4 INTERNATIONAL COOPERATIVE PROGRAMME ON ASSESSMENT AND MONITORING OF AIR POLLUTION EFFECTS ON FORESTS

Description/objectives: Collection and assessment of comprehensive and comparable data on changes in forests under actual environmental conditions (in particular, air pollution, including acidifying and eutrophying deposition as well as other stresses) and determination of cause-effect relationships. A Programme Task Force led by Germany, in cooperation with the Programme's main coordinating centre (the Federal Research Centre for Forestry and Forest Products, Hamburg, Germany), is responsible for the detailed planning and coordination of the Programme. Extensive large-scale monitoring (level I), intensive monitoring of forest ecosystems on the permanent sample plots (level II), and integrated evaluation of results are carried out.

Main activities and time schedule:

- (a) Annual report on trends in sulphur and nitrogen deposition;
- (b) Report on relationships between exceedance of critical loads and ecosystem responses;
- (c) Report on dynamic modelling of deposition effects on plant species diversity;
- (d) Report on ozone concentrations, impacts on vegetation and further development of the flux approach;
- (e) Report on annual data quality assurance for defoliation assessment;
- (f) Twenty-fourth meeting of the Programme Task Force, to be held in Larnaca, Cyprus, from 24 to 28 May 2008.

3.5 INTERNATIONAL COOPERATIVE PROGRAMME ON EFFECTS OF AIR POLLUTION ON NATURAL VEGETATION AND CROPS

Description/objectives: Evaluate the effects of air pollutants and other stresses on (semi-)natural vegetation and crops. For ozone: identify dose/response functions; assess economic losses on crops; validate critical levels for (semi-)natural vegetation and crops and further develop the flux-based approach; evaluate (semi-)natural vegetation and crops as indicators of potential damage to natural ecosystems. Evaluate and map heavy metal deposition on vegetation. Evaluate the impacts of nutrient nitrogen on (semi-)natural vegetation. A Programme Task Force led by the United Kingdom, with the cooperation of the Programme's coordination centre (the Centre

for Ecology and Hydrology, Bangor, United Kingdom), is responsible for the detailed planning and coordination of the Programme.

Main activities and time schedule:

- (a) Annual report on experimental responses of vegetation to ozone;
- (b) Report on the evidence for effects of current ambient ozone on vegetation in 1990–2006;
- (c) Flux-based maps of ozone damage risks to crop and tree species using local parameterizations (in collaboration with Meteorological Synthesizing Centre-West of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP/MSC-West) and ICP Forests);
- (d) Progress report on flux-based methods for (semi-) natural vegetation;
- (e) Report on European heavy metals in the 2005–2006 mosses survey;
- (f) Report on the nitrogen concentration in mosses in the 2005–2006 mosses survey;
- (g) Twenty-first meeting of the Programme Task Force, tentatively scheduled to be held in Oulu, Finland, during the week of 25 to 29 February 2008.

3.6 INTERNATIONAL COOPERATIVE PROGRAMME ON INTEGRATED MONITORING OF AIR POLLUTION EFFECTS ON ECOSYSTEMS

Description/objectives: Determination and prediction of the state of ecosystems and their long-term changes with respect to the regional variation and impact of selected air pollutants, with special attention to effects on biota. A Programme Task Force led by Sweden is responsible for planning, coordinating and evaluating the Programme. The Programme's centre (Finnish Environment Institute, Helsinki) is entrusted with collecting, storing, processing and analysing data from countries taking part in the Programme.

Main activities and time schedule:

- (a) Progress report on air pollution effects on biodiversity (in collaboration with the European Union Alter-Net project);
- (b) Interim report on modelled site-specific interactions between acidification and climate;
- (c) Report on links between climate change and air pollution effects using site-specific data;
- (d) Nineteenth meeting of the Programme Task Force, tentatively scheduled to be held in Pamplona, Spain, in spring 2008.

3.7 INTERNATIONAL COOPERATIVE PROGRAMME ON MODELLING AND MAPPING OF CRITICAL LEVELS AND LOADS AND AIR POLLUTION EFFECTS, RISKS AND TRENDS

Description/objectives: Determine critical loads and levels and their exceedance for selected pollutants. Develop and apply other methods for effects-based approaches such as dynamic modelling. Model and map the present status of and trends in impacts of air pollution. A Programme Task Force led by Germany is responsible for the detailed planning and coordination of activities. The Task Force uses available and accepted data drawing on the work of other task forces, ICPs and EMEP. The Coordination Centre for Effects (CCE, at the Netherlands Environmental Assessment Agency, Bilthoven, the Netherlands) provides scientific and technical support to the Task Force and to other effects-related activities. It develops methods and models for calculating critical loads and levels and for other effects-based approaches. It produces maps of critical loads and levels and their exceedance and other risk parameters related to potential damage and recovery.

Main activities and time schedule:

- (a) Report on modelling nitrogen effects on terrestrial ecosystems, including biodiversity (in collaboration with ICPs and other programmes);
- (b) Report on links between air pollution and climate change effects on European ecosystems (in collaboration with ICPs, EMEP and other programmes);
- (c) Report on modelling critical loads and risk trends for heavy metals, as appropriate (in collaboration with ICPs and other programmes);
- (d) Twenty-fourth meeting of the Programme Task Force, to be held in Berne from 21 to 25 April 2008.

3.8 EFFECTS OF AIR POLLUTANTS ON HUMAN HEALTH

Description/objectives: Preparation of state-of-the-art reports on the direct and indirect effects of long-range transboundary air pollution on human health:

- (a) The World Health Organization (WHO) is invited to present relevant progress and technical reports to the Working Group on Effects, so that knowledge acquired by WHO can be applied in the further implementation of the Convention. Additional information/reports should be provided, when appropriate, by other international organizations, interested Governments and/or other subsidiary bodies under the Convention;
- (b) To support the Working Group on Effects and the Executive Body in preparing and substantiating new and/or updating existing protocols, the joint Task Force of

WHO/European Centre for Environment and Health (ECEH) and the Executive Body, led by WHO/ECEH, Bonn Office, will evaluate and assess the health effects of long-range transboundary air pollution and reports on the subject.

Main activities and time schedule:

- (a) Annual progress report on health impacts of particulate matter;
- (b) Interim report on health impacts of ozone;
- (c) Final report on health risks of heavy metals;
- (d) Eleventh meeting of the Task Force on the Health Aspects of Air Pollution, tentatively scheduled to be held in Bonn, Germany, in March/April 2008.

3.9 DYNAMIC MODELLING

Description/objectives: Recovery of ecosystems is an important consideration for the development of air pollution strategies, and work on various ecosystems at different scales is carried out by several ICPs. A Joint Expert Group on Dynamic Modelling, led by the United Kingdom and Sweden, collaborates with ICPs by bringing together experts from these programmes to share knowledge and produce joint reports on all aspects of dynamic modelling.

Main activities and time schedule:

- (a) Assessment report of the 2007 dynamic model data submission and other national modelling activities;
- (b) Scenario assessments at site, national and European levels;
- (c) Progress report on recent dynamic model developments;
- (d) Report on strategies to incorporate climate change in dynamic models at all spatial scales;
- (e) Report on the consistency in dynamic model methodologies;
- (f) Report on interpretation and presentation of dynamic model outputs;
- (g) Report of the eighth Joint Expert Group meeting to the twenty-seventh session of the Working Group on Effects;
- (h) Ninth meeting of the Joint Expert Group, tentatively scheduled to be held in autumn 2008.
