

## **Economic Commission for Europe**

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

#### **Draft workplan for the implementation of the Convention for 2014-2015**

1. At its 31st session in December 2012, the Executive Body proposed that a draft 2014-2015 workplan be prepared by the Bureau of the Executive Body with the secretariat (ECE/EB.AIR/113, para. 47). In response to this request, the secretariat had prepared a first draft outline of the 2014-2015 workplan for the consideration by the Bureau at its meeting on 3 May 2013. The “policy” and “compliance” related parts of the draft workplan had also been considered by WGSR at its 51st session on 30 April – 3 May 2013, and the Implementation Committee at its 31st meeting on 22-24 May 2013, respectively.

2. Following these meetings, the secretariat was requested to produce a revised draft for circulation to all Parties. Parties are requested to send their comments on the version as enclosed by 20 August 2013 to the secretariat at [air\\_meetings@unece.org](mailto:air_meetings@unece.org).

3. The outcome of the discussion on the recommendations by the ad-hoc group of experts on the implementation of the long-term strategy (ECE/EB.AIR/2012/15) at the WGSR session has been taken into account in the preparation of this revised draft. The workplan will be further elaborated following its review by the Bureau and Parties, and with the input by all respective bodies. Substantive details received from the scientific bodies have now been integrated into the enclosed version following agreement on its proposed structure. Due consideration has been given to the comments by several representatives of the Parties that the length of the workplan be shortened and some sections be presented in a more succinct, aggregate manner.

4. The workplan translates the vision, objectives and strategic approaches as set in out in the Long-term Strategy for the Convention on Long-Range Transboundary Air Pollution (Decision 2010/8, see ECE/EB.AIR/106/Add.1) into a biannual workplan for the period 2014-2015. Its structure builds on the primary needs of the Convention and its Parties, relating to five main areas: science, policy, compliance, capacity building and communication and outreach. For each area, an introduction captures a short description and objectives of the activities and the main intended outcome of the activities in line with the long-term strategy. Table 1 below presents the specific activities planned and the main responsible body. The main responsible bodies, i.e. the Executive Body and its subsidiary bodies, function within the framework of their mandates.

5. This approach of structuring the workplan allows Parties to assess the work of the different subsidiary bodies and its deliverables in light of meeting the Convention’s needs to ensure progress in realizing the vision set out in the long-term strategy. This approach takes account of the recommendation by the ad hoc group of experts on the Action Plan for the implementation of the long-term strategy for the Convention that “*The Executive Body and its Bureau should give more attention to developing and scrutinizing work plans to provide better focus for targeting the Convention’s priorities and ensuring appropriate outputs*” (ECE/EB.AIR/2012/15, para 7).

5. The full implementation of the activities in the workplan will require resources in addition to those provided under the EMEP Protocol. Therefore, Parties are invited to support the Convention’s activities in 2014–2015, particularly those not covered by the EMEP Protocol, by contributing to the Convention’s trust fund, by financing activities

directly and by making in-kind contributions. Parties are also invited to take the lead in supporting the specific activities substantially.

## 1. Science

6. In line with the priorities set out in the Long-term Strategy for the Convention, science-based decision making and the effects-oriented approach will remain an essential component and strength of the Convention and the links between science and policy development will be retained and further strengthened. Science and monitoring have an important role to play in the evaluation and assessment of the effectiveness of policies and Protocols. User-friendly effect indicators and cost-benefit assessments are important to policy, politicians and the public and will be further developed. The science related work in the period 2014-2015 will aim to address the remaining and emerging challenges identified in the long-term strategy (e.g. PM, tropospheric ozone, critical loads exceedances, linkages between air pollution, climate change and biodiversity). It will also aim to further integrate the various elements covered by the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) and the effects-oriented activities. This integration will be demonstrated through common/joint outcomes/deliverables like assessment reports, country reports, joint website, capacity building or responses to the needs of Parties. Many of the scientific tools developed under the Convention, such as emission inventories, modelling and mapping tools and tasks, identification of critical loads, and integrated assessment modelling, among others, are used by other stakeholders and will continue to be further developed.

7. The main goal of atmospheric and effects monitoring (table 1, 1.1) is to provide relevant data and to analyze air pollutant concentrations and depositions and their adverse effects on human health and ecosystems, damage to crops and materials. In general, the monitoring provides the information on the status and long-term trends of the environment in time and across the ECE region. The monitoring underpins the knowledge of the environment and how it responds to environmental pollution. Environmental monitoring also provides evidence to validate critical loads, critical levels and dose-response functions and provides input to modelling and mapping.

8. The main goal of the work on dose response and critical loads (table 1, 1.2) is to provide comprehensive information that gives a measure of damage or potential damage caused by air pollution to various ecosystems including Natura 2000 protected areas. Dose response functions, critical loads and critical levels provide input for modelling and mapping of the air pollutant effects.

9. The main goal of the atmospheric and effects modelling activities (table 1, 1.3) is to support the implementation of protocols to the Convention by providing the modelling tools necessary for the assessment of abatement policies. The modelling provides predictive capacity and enables the development of effective policies. It also helps to compile and evaluate information on transboundary air pollution exchange and assists the implementation of the EMEP monitoring strategy. Temporal and spatial effects modelling and mapping enable extrapolation of damage over time and across the ECE region. This work provides direct input to integrated assessment modelling and assessment of the hemispheric transport of air pollution.

10. The main goal of further developing national emission inventories (table 1, 1.4) is to improve their quality, transparency, consistency and completeness. Parties are supported with their emission reporting requirements under the Convention and its protocols. Methodologies are being developed to evaluate emission data and projections, reporting problems are identified and resolved. Reporting requirements, to the extent possible, are constantly being harmonized with other bodies, in particular the United Nations Framework

Convention on Climate Change (UNFCCC) and the EU National Emission Ceiling (NEC) Directive. Estimated emissions and their projections provide direct input to integrated assessment modelling and a basis for the review of compliance.

11. The main goal of integrated assessment (table 1, 1.5) is to carry out science-based evaluation and assessment of the effectiveness of policies (past and future ones) and Protocols (a strategic priority of the Convention). The main tools for the integrated assessment are the environmental assessment and the integrated assessment modelling (IAM). IAM is carried out to analyze scenarios on cost-effective reduction of acidification, eutrophication, tropospheric ozone, human exposure to PM and ozone, and short-term regional radiative forcing. IAM covers: (a) abatement options for reducing sulphur, nitrogen oxides, ammonia, non-methane volatile organic compounds (NMVOCs), methane, primary PM, organic and black carbon and carbon monoxide, including structural measures in energy, transport and agriculture, as well as their costs; (b) projections of emissions; (c) assessments of the atmospheric transport of substances; and (d) analysis and quantification of environmental and health effects and benefits of emission reductions.

12. The main goal of the work on hemispheric transport of air pollution (table 1, 1.6) is to develop a fuller scientific understanding of the intercontinental transport of air pollution across the Northern Hemisphere, its impacts on health, ecosystems and climate, and the linkages between regional air pollution and global change. The activities include collaboration with international bodies, programmes and networks, both within and outside the ECE region, with related interests. The work is organized around six themes: model development and evaluation, source attribution and source/receptor analysis, impacts of air pollution on health, ecosystems and climate, impact of climate change on air pollution, emissions inventories and projections and distributed data network and analysis tools.

13. A key factor to strengthening the relevance of the Convention as a leading regional agreement in addressing the remaining and emerging transboundary air pollution challenges in the twenty-first century is the achievement of increased ratification and implementation of, and compliance with the three latest and recently amended Protocols (para 17 (a) of the Long-term Strategy). Parties to the Gothenburg Protocol adopted decision 2012/3 setting out a procedure for adjustments to emission reduction commitments or inventories for the purpose of comparing total national emissions with them, decision 2012/4 on its provisional application, and decision 2012/12 on the Guidance for adjustments under the 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone to emission reduction commitments or to inventories for the purposes of comparing total national emissions with them (table 1, 1.7).

Table 1 Science

	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Main responsible body</i>	<i>Resource requirements (in US\$)</i>
<b>1.1</b>	<b>Atmospheric and effects monitoring</b>			
1.1.1	Assist Parties in implementing the EMEP monitoring strategy (2010-2019); strengthen activities in regions with inadequate monitoring activities. Evaluate site representativeness, support Parties in the establishment of new monitoring sites, re-locations or impact of local	Strengthened monitoring activities and implementation of the EMEP monitoring strategy	CCC	covered by EMEP mandatory contributions and Norway

	emission changes on long-term trends through provision of advice, support letters and site visits as necessary			
1.1.2	Revise and develop further the methodologies to be applied in monitoring atmospheric composition change; harmonize with other international standardization bodies like CEN, WMO etc. as appropriate; update the EMEP manual chemical speciation of particulate matter (PM) (inorganic and elemental/organic carbon,), nitrogen oxides, volatile organic compounds, aerosol properties, methane, mercury monitor	Updated EMEP manual	CCC	covered by EMEP mandatory contributions and Norway
1.1.5	Carry out quality assurance and quality control, handle and store for the long term the observation data reported by Parties	Reports on EMEP observation data, On-line access to data via CCC website database <a href="http://ebas.nilu.no/">http://ebas.nilu.no/</a>	CCC	covered by EMEP mandatory contributions and Norway
	a) Arrange laboratory intercomparisons for variables required by the EMEP monitoring strategy, link results of these with the usage and interpretation of data originating from participating institutions	Results presented at CCC website and/or in technical reports Increased quality and of air pollution measurements;		
	b) Training courses related to measurement activities, quality assurance and quality control. Organize a workshop in cooperation with European Union (EU) Aerosols, Clouds, and Trace gases Research InfraStructure Network (ACTRIS) and other projects, and/or training at CCC depending on the needs	Improved databases with measurements results New templates presented at CCC website		
	c) Update and further develop database to comply with emerging international standards, provide access to data for collaborating organizations, reduce time delay to access			

	observations, improve statistical routines and output			
	d) Develop improved reporting templates for meta data documentation and dissemination. Provide training and assistance to Parties on data reporting			
1.1.6	Interpret and assess the observation data, interact with EMEP modelling centres on data use, assess temporal and spatial trends.	EMEP status reports, EMEP joint report on PM. CCC and Task Force on Measurements and Modelling websites	CCC, MSC-E, MSC-W+TFMM	covered by EMEP mandatory contributions and Norway
1.1.9	Ensure strong links with scientific groups involved in level2 and level3 measurement activities,	Publication of peer reviewed papers from EMEP intensive measurement periods.	CCC	covered by EMEP mandatory contributions and Norway
1.1.9 (bis)	Implementation of Intensive Observation Periods (IOPs) according to the EMEP monitoring strategy	Plan for the intensive measurement campaign and coordination of its implementations	CCC	
1.1.10	Ensure linkages with effects oriented monitoring activities. Facilitate linkages between EMEP monitoring obligations and other monitoring obligations with complementary objectives, including linkages with activities on local air quality, short lived climate forcers (SLCF) and long lived greenhouse gases.	Provide support to Parties and groups under the Convention through participation and input to relevant meetings, representing EMEP.  Report on the task and inform parties on relevant findings and actions needed or taken.	CCC	covered by EMEP mandatory contributions and Norway
1.1.11	Foster outreach activities. Contribution to and visibility in a variety of different reports from other organizations, bodies, programmes and projects.	Report on relevance, significance and lessons learned from participation in and interaction with monitoring efforts and data assessments external to the Convention,	CCC	covered by EMEP mandatory contributions and Norway

		including the EU Directives, European Environment Agency, WMO-Global Atmosphere Watch, the Helsinki Commission (HELCOM), OSPAR Commission, Arctic Monitoring and Assessment Programme (AMAP), Stockholm Convention, Acid Deposition Monitoring Network in East Asia (EANET), Global Earth Observation System (GEOSS)/COPERNICUS (European Programme for the establishment of a European capacity for Earth Observation).		
1.1.12	Trends analysis of air concentrations and deposition based on monitoring data and model results	Report on observed and modelled trends if atmospheric concentrations and depositions in the Parties over the 20 past years)	TFMM	Covered by France, WMO and all Parties.
1.1.13	Exchange views, experiences and suggestions (i) on the quality, efficiency and sufficiency of EMEP measurements and data.  (ii) on performance of models, (EMEP models and those developed by the Parties) and the scope of their application  (iii) on the applicability and reliability of model results for national assessments of air quality, assessment of transboundary fluxes and its influence on air quality at national levels, trend analyses, etc.  (iv) on the needs for improvements, alternative	Annual Task Force meeting.  Annual summary report to EMEP SB on activities and science-relevant messages and recommendations  Recommendations to national measurement and modelling teams and for EMEP centres.  Examples of good practices on national and international scales.  Annual summary report to EMEP	TFMM	Covered by France, WMO and Parties.

	approaches, complementary data etc.	Steering Body (SB) with policy-relevant messages and recommendations.		
1.1.14	Take actions to (i) further implement the Guidelines on Reporting of Monitoring and Modelling of Air Pollution Effects (ii) enhance the involvement of countries in the Eastern Europe, the Caucasus and Central Asia and (iii) cooperate with programmes and activities outside the ECE region and provide information on them	Annual reports to sessions of the Working Group on Effects and to the Executive Body	ICPs/TFH )/Joint Expert Group on Dynamic Modelling	covered by the respective lead countries and recommended contributions
1.1.15	Contribute to the annual joint report of ICP/Task Force on Health/Joint Expert Group on Dynamic Modelling	Annual joint reports with policy-relevant messages and recommendations to WGE and EB	ICPs/TFH /Joint Expert Group on Dynamic Modelling	covered by the respective lead countries and recommended contributions
1.1.16	Quantify multi-pollutant effects on the corrosion and soiling of selected materials under different environmental conditions	Report on trends in pollution, corrosion and soiling 1987-2012	ICP Materials	covered by Sweden and recommended contributions
1.1.17	Quantify multi-pollutant effects on United Nations Educational, Scientific and Cultural Organization (UNESCO) cultural heritage sites	Updated report on inventory and condition of stock of materials at risk at UNESCO cultural heritage sites	ICP Materials	covered by Italy and recommended contributions
1.1.18	Identify the state of surface water ecosystems and their long-term changes with respect to the regional variation and impact of selected air pollutants including effects on biota	Report on trends in surface water chemistry and biology up to 2011; ecosystem response to emission reductions	ICP Waters	covered by Norway and recommended contributions
1.1.19	Identify changes in biodiversity and climate in surface water ecosystems	Report (to be decided at the next Task Force meeting in October 2013)	ICP Waters	covered by Norway and recommended contributions
1.1.20	Collect, assess and carry out integrated evaluation of comprehensive and comparable data on nitrogen critical load exceedance on tree defoliation	Report on nitrogen critical load exceedance on tree defoliation	ICP Forests	covered by Germany and recommended contributions
1.1.21	Collect, assess and carry out integrated evaluation of impact of air pollution and climate	Report on impact of air pollution and climate change on	ICP Forests	covered by Germany and recommended

	change on forest growth	forest growth		contributions
1.1.22	Evaluate impact of nitrogen deposition on tree diseases	Report on impact of nitrogen deposition on tree diseases	ICP Forests	covered by Germany and recommended contributions
1.1.23	Assess impact of nitrogen deposition and nitrate leaching into the groundwater	Report on nitrogen deposition and nitrate leaching into the groundwater	ICP Forests	covered by Germany and recommended contributions
1.1.24	Evaluate (semi-)natural vegetation and crops as indicators of potential ozone damage to ecosystems	Annual report on supporting evidence for ozone impacts on vegetation	ICP Vegetation	covered by UK and recommended contributions
1.1.25	Review interacting effects of co-occurring pollutants (ozone and nitrogen) and climatic stresses on vegetation	Report on the interacting effects of co-occurring pollutants (ozone and nitrogen) and climatic stresses on vegetation	ICP Vegetation	covered by UK and recommended contributions
1.1.26	Assess impacts of air pollution deposition to vegetation in countries in EECCA/SEE region and in South-East Asia	Report on air pollution deposition to, and impacts on vegetation, in EECCA/SEE countries and South-East Asia	ICP Vegetation	covered by UK and recommended contributions
1.1.27	Review contribution of rising background ozone levels in Europe to impacts on vegetation	Report on the implications of rising background ozone for vegetation in Europe	ICP Vegetation	covered by UK and recommended contributions
1.1.28	Develop further the flux-based approach for setting critical levels of ground-level ozone for vegetation. Update the dose-response functions	Updated chapter 3 of the Manual on Methodologies and Criteria for Modelling and Mapping Critical Loads and Levels; and Air Pollution Effects, Risks and Trends,	ICP Vegetation	covered by UK and recommended contributions
1.1.29	Carry out preparatory work for the European moss survey 2015/2016	Annual progress reports on preparations for European moss survey 2015/16 (HM, nitrogen and POPs)	ICP Vegetation	covered by UK and recommended contributions
1.1.30	Evaluate long-term trends in ecosystem effects of sulphur, nitrogen and heavy metals	Report and scientific paper	ICP Integrated Monitoring	covered by Finland, Sweden and



				recommended contributions
<b>1.2</b>	<b>Dose response and critical loads</b>			
1.2.1	Analyze and compile the responses by National Focal Centres (NFCs) to the 2012 call for data and contributions to a dedicated CCE report addressing (a) dynamic modelling of abiotic and biotic changes in European Nature Information System (EUNIS) habitat classes and (b) tentative applications on a regional scale.	Annual reports to sessions of the WGE and EB	ICP Modelling and Mapping and CCE	covered by the Netherlands, France and recommended contributions
1.2.2	Make progress on identification and use of biodiversity endpoints and indicators.	Preliminary application of the endpoints and indicators at European scale	ICP Modelling and Mapping	covered by the Netherlands
1.2.3	Foster collaboration between NFCs, CCE and habitat experts on evaluation and reporting on effects of air pollution with emphasis on nitrogen deposition on protected areas. Exchange information and experiences on collaboration between NFCs and habitat experts at annual Task Force meetings	Increased collaboration between NFCs, CCE and habitat experts	ICP Modelling and Mapping	covered by the Netherlands and France
1.2.4	Determine and predict 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, and a special focus on monitoring the state of catchments and other ecosystems	Report and scientific paper on mass balances and indicators for sulphur and nitrogen in catchments	ICP Integrated Monitoring	covered by the Netherlands and recommended contributions
1.2.5	Develop further the methodologies for assessment of direct and indirect effects of long-range transboundary air pollution on human health	Report on update of methods for quantification of health burden of air pollution	Task Force on Health	covered by Germany, Switzerland and recommended contributions
1.2.6	Collect and analyze the evidence on health impacts of ozone and particulate matter (including black carbon)	Updated data on the evidence on health impacts of ozone and PM	Task Force on Health	covered by Germany, Switzerland and recommended contributions

**1.3 Atmospheric and effects modelling**

1.3.1	Develop new gridding system for new EMEP area in finer resolution (0.1 deg x 0.1 deg long/lat). Collect and control data reported by countries. Identify data gaps. Harmonize data from other sources (JRC, IIASA) with the EMEP system. Perform expert estimates for remaining areas	Base grids for selected pollutants in geographical coordinates (0.1x0.1). Provision of gridded data for selected pollutants in this resolution for “new” EMEP area	CEIP	covered by EMEP mandatory contributions
1.3.2	Provide air concentrations and deposition fields and source-receptor matrices for the EMEP domain for 2012 and 2013 for: (i) photochemical compounds, sulphur, nitrogen and PM, and (ii) POPs and heavy metals.	Annual status reports to EMEP SB, including model performance analysis.  EMEP country reports with associated EMEP model data.  Annual update of the database for status run results, including data on high temporal resolution, and source-receptor matrices.	MSC-W MSC-E	covered by EMEP mandatory contributions and Norway
1.3.2	Evaluate results of the EMEP models in the new grid: model performance, trends and source receptor relationships	Reports on the new EMEP grid based on cooperative efforts with Parties and TFMM	MSC-W MSC-E	covered by EMEP mandatory contributions
1.3.3.	Input data preparation for modelling: emissions and meteorological data for years 2012 and 2013 for regional and global modelling and fine scale simulations on a new EMEP grid in cooperation with TFEIP and TFMM	Updated web-accessible input datasets for 2012-2013.	MSC-W MSC-E	
1.3.4.	Assessment of pollution levels of HMs in selected countries	Results and data published on web.	MSC-E  The Netherlands	
1.3.4. bis	In-depth analysis of re-emission and wind re-suspension and estimates of contribution of global anthropogenic and secondary sources to Hg and POP pollution in the EMEP	Technical reports  Results and data published on web.  Presentation of	MSC-E	covered by EMEP mandatory contributions

	domain for 2012-2013.	results at TFMM and other scientific meetings		
1.3.5.	Global scale modelling to assess contribution of the intercontinental transport and secondary sources to HM and POP pollution in the EMEP domain in cooperation with TFHTAP, AMAP and UNEP.	Technical report Results and data published on web. Presentation of results at TFMM and other scientific meetings	MSC-E	covered by EMEP mandatory contributions
1.3.7	Facilitated the use of the EMEP model by Parties	Bi-annual training course for EMEP model users. Present the EMEP model and instructions to facilitate the usage of model products. Provide a platform for a discussion on further EMEP model development with partners and users of EMEP model products  Make annual release of EMEP and GLEMOS open source codes.	MSC-W MSC-E	covered by EMEP mandatory contributions and Norway
1.3.7 bis	Collate national EMEP data in unified web presentation. Provide web access to datasets/model calculation results in high temporal resolution (hourly) for use in air quality assessment by Parties	Access to information and data for use in air quality assessment by Parties	MSC-W	covered by EMEP mandatory contributions and Norway
1.3.8	Develop further methodologies for modelling. Improve the understanding of processes, parameterizations, emissions and linkages to climate:	Annual note on EMEP model updates based on EMEP intensive campaigns and other scientific information	MSC-W MSC-E	covered by EMEP mandatory contributions and Norway
	(i) Investigate the role of dynamic climate sensitive emissions (nitrogen oxide, ammonia, VOCs, methane) for future effectiveness of the Gothenburg Protocol for reducing levels of ozone, PM and nitrogen deposition	Technical report on climate impact on achieving the Gothenburg Protocol goals	MSC-W	covered by EMEP mandatory contributions and Norway
	(ii) Calculate SLCP forcing for	Technical report on	MSC-W	covered by

	Gothenburg Protocol implementation. Evaluate uncertainty in black carbon forcing	SLCP forcing originating in EMEP domain (for black carbon, methane, ozone);		EMEP mandatory contributions and Norway
	(iii) Investigate the role of interactions and processes to lower the uncertainties of heavy metal and POP emissions and modelling in the EMEP domain	Technical report on (i) interaction of Hg and POPs with atmospheric aerosols; (ii) Hg dispersion in the environment with focus on aqueous ecosystems(iii) model parameterization of wind re-suspension and re-volatilization of HMs and POPs (iv) influence of climate change on secondary emissions of HMs and POPs pollutants	MSC-E	covered by EMEP mandatory contributions
1.3.8 bis	Investigate the key processes affecting HM and POP air pollution to support the implementation of the Protocols on POPs and HMs  (Hg/POP interaction with aerosol, Hg multi-media modelling, wind re-suspension and re-volatilization, climate sensitive secondary emissions)	Technical report on (i) interaction of Hg and POPs with atmospheric aerosols; (ii) Hg dispersion in the environment with focus on aqueous ecosystems (iii) refinement of model parameterization of wind re-suspension and re-volatilization of HMs and POPs (iv) influence of climate change on HM and POP secondary emissions	MSC-E	covered by EMEP mandatory contributions
1.3.9	Communicate scientific developments, model and methodology improvements, data and products.	Develop new web interface to EMEP with better access to EMEP programme	MSC-W, MSC-E, CCC	covered by EMEP mandatory contributions

		products, technical documentation and news.		and Norway
		Develop and maintain EMEP website in Russian to facilitate access to information by EECCA countries.		
		Near real-time concentration and deposition data on heavy metals and POPs for 2013-2014 (2 months delay);		
1.3.10	Perform model simulations to support the assessment of the EU Thematic strategy on air pollution, Gothenburg Protocol, HTAP, UN-SLCP reduction policy and to inform the Arctic Council, HELCOM and OSPAR	Database of EMEP simulations and annual explanatory note on model simulations  Technical report on estimates and analysis of transboundary pollution to the Arctic.	MSC-W	covered by EMEP mandatory contributions and Norway
1.3.10 (bis)	Evaluation of the EMEP model and comparison with models developed by the Parties	Report/publication of the results of the first phase of the EURODELTA3 modelling exercise (model evaluation)	TFMM	Covered by France with contribution from participating Parties
1.3.10 (ter)	Set up use of modelling for trends analysis (see objective 1.1.12)	Report on observed and modelled trends if atmospheric concentrations and depositions in the Parties over the 20 past years	TFMM	Covered by France with contribution from participating Parties
1.3.11	Develop and validate models for the simulation of ecosystem responses; Carry out biomonitoring to detect natural changes, in particular to assess integrated effects of air pollutants and climate change	Report on dynamic modelling on vegetation changes in relation to nitrogen deposition	ICP Integrated Monitoring	covered by Finland and recommended contributions
1.3.12	Develop further dynamic modelling of acidification and nutrient nitrogen, including the interactions between climate change, air pollution and biological responses	Annual reports on progress in dynamic modelling	Joint Expert Group on Dynamic Modelling	covered by Sweden and Italy

**1.4 Emission inventories**

1.4.1	<p>Compile reported emission data, import into the CEIP database. Evaluate timeliness and completeness of submitted data. Carry out annual quality control of inventories reported under the LRTAP Convention. Communicate the results to the Parties.</p> <p>Update long-term strategy for the review of emission data. Improve/develop new tests for emission checking.</p>	<p>Annual status reports to EMEP SB. Contribution to assessment report(s)</p> <p>Annual country reports, assessment country reports and CEIP/EEA annual inventory review report with summary information.</p> <p>Update of methodology report.</p>	CEIP (Review activity supported by EC via ETC ACM)	covered by EMEP mandatory contributions
1.4.2	<p>Maintain and improve EMEP/CEIP database system and CEIP website. Adjust the database system (WebDab, RepDab) according to new reporting requirements and reporting formats. Develop/update formats for presentation of emission data. Provide support to Parties and the general public by posting data in real-time. Harmonise the EMEP system with revised Common Reporting Format (CRF) 2015 under UNFCCC.</p>	<p>Online access to updated information and instructions for reporting, reported data (Web/Dab), results of emission reviews and other relevant information</p> <p>Revised emission reporting templates as annexes to emission reporting guidelines. Updated RepDab</p>	CEIP	covered by EMEP mandatory contributions
1.4.3	<p>Manage centralized in-depth review process, including preparation of long term plan. Maintain the roster of inventory experts. Set up two review teams annually. Develop templates. Communicate with reviewed countries. Develop tools for reviewers and web space for communication and data exchange between teams</p>	<p>Annual centralised in-depth review of emission inventories. 10 country review reports with findings and recommendations</p>	CEIP	covered by EMEP mandatory contributions and Parties
1.4.4	<p>Carry out compilation, quality assurance and quality control of reported gridded and Large Point Source data, make expert estimates for missing data. Make annual gridding of emission data for 13 pollutants and re-gridding for historical emissions</p>	<p>Annually updated web-based data sets of gridded data for 13 pollutants for use by modellers for current reported year plus update of selected years</p>	CEIP	covered by EMEP mandatory contributions

1.4.5	Develop further the EMEP/EEA air pollutant emission inventory guidebook methodologies. Update the Maintenance and Improvement Plan for the Guidebook	Updated Maintenance and Improvement Plan. Updated chapters of the EMEP/EEA air pollutant emission inventory guidebook	TFEIP	subject to availability of resource (no estimate given)
	Develop guidance on compiling fine time-scale emissions inventories and pollutant speciation	Guidance chapters for inclusion in the EMEP/EEA air pollutant emission inventory guidebook	TFEIP	subject to availability of resource (\$30,000)
1.4.6	Exchange information on national and international activities on emission inventories and projections at annual Task Force meetings	Annual summary report to EMEP SB with policy-relevant messages and recommendations	TFEIP	covered by UK Finland and EU
<b>[1.5 Integrated assessment]</b>				
1.5.1	Update and further develop the GAINS model with new information on emission data (the 2010 emission inventories), on emerging technologies (provided by TFTEI), on ecosystem impacts, ozone fluxes and health impacts of NO <sub>x</sub> , and downscaling ammonia deposition to protected areas  Interact with Parties (meetings, consultations, workshops) on input data to the GAINS model	Technical notes on: (i) downscaling ammonia deposition to protected areas; (ii) implementation of new information on ecosystems impacts; (iii) improved modelling of ozone fluxes and (i) implementation of health impacts of nitrogen dioxide.	CIAM TFIAM TFTEI TFRN ICP M&M	covered by EMEP mandatory contributions and International Institute for Applies Systems Analysis (IIASA)
1.5.2	Analyse implications of EU policy proposals on air quality in the LRTAP region. Analyze effectiveness of hemispheric control strategies.	Two annual status reports to EMEP SB	CIAM TFIAM TFHTAP	covered by EMEP mandatory contributions and IIASA
1.5.3	Increase linkages with global scale scenarios and issues (climate, nitrogen, energy, transport, food production) in cooperation with IPCC, INI, UNEP and CCAC	Global emission scenarios.  Technical notes on: (i) Cost-effectiveness analysis; (ii) Impact of changes in hemispheric ozone on cost-effective emission reductions in Europe  Emission scenarios for mercury	CIAM	covered by EMEP mandatory contributions and IIASA
1.5.4	Increase linkages with local scale air pollution and cost-	Technical notes on: (i)Downscaling of	CIAM	covered by EMEP

	effective local measures, including co-benefits (congestion, healthy lifestyles, reduced heat stress)	changes of long-range transboundary air pollution to hot spots (ii) Analysis of (cost-) effectiveness of local vs. national vs. international measures (iii) Alternative agricultural scenarios.	TFIAM	mandatory contributions and IIASA
1.5.5	Provide support to Parties and other scientific groups in line with the priorities of the Convention's long-term strategy	New annexes to Guidance documents on national nitrogen budgets  Contribution to the updated handbook on emission inventories for black carbon  Contribution to the Joint EMEP-WGE Assessment Report	CIAM TFRN	covered by EMEP mandatory contributions and IIASA
1.5.6	Communicate and disseminate scientific developments, model and methodology improvements, data and products through the TFIAM website	Web access to datasets, models and results	CIAM TFIAM	covered by EMEP mandatory contributions and IIASA
1.5.7	Exchange information on national and international integrated assessment activities at annual Task Force meetings	Annual summary report to EMEP SB and WGSF on activities and policy-relevant messages and recommendations	TFIAM	partially covered by Netherlands and Sweden; 10 000 for travel support to EECCA participants
1.5.8	Workshop on linking geographical scales	Report to TFIAM	TFIAM CIAM	host country to be determined (tbd)
<b>1.6</b>	<b>Hemispheric transport of air pollution</b>			
1.6.1	Develop updated and improved global emissions inventories and future scenarios to serve as the basis for assessments of intercontinental transport and possible mitigation strategies.	Documented global air pollution emissions mosaic for 2008 and 2010 for use by global and regional modellers.  Documented set of "benchmark" air pollutant emissions scenarios for 2010-2030.	TF HTAP CIAM TFIAM	covered by the US, EU and in-kind contributions from national experts

**Comment [K01]:** Entire 1.5 is in square brackets due to budget/funding considerations



		Workshop/report on cost-effective global strategies.		
1.6.2	Conduct updated and improved simulations of air pollution transport using an ensemble of global and regional models to quantify source-receptor relationships on intercontinental scales.	Ensemble of 2008-2010 global and regional modelling base and sensitivity simulations.  Report/publications summarizing the contribution of regional and extra-regional sources to baseline and peak air pollution levels.	TF HTAP (MSCW) (MSCE)	in-kind contributions from national experts
1.6.3	Conduct detailed model to observation and model to model comparisons to better understand the ability of current modelling tools to represent intercontinental transport.	Report/publications on insights from model-to-model and model-to-observation comparisons.	TF HTAP (MSCW) (MSCE) (CCC)	in-kind contributions from national experts
1.6.4	Evaluate the availability of mitigation strategies for air pollution in the Northern Hemisphere. Assess implications of strategies for health, ecosystem, and climate impacts.	Workshop on impact assessment methods of regional and transported air pollution in cooperation with the WGE and similar expert groups from South and East Asia.  Report/publications on improved methods and impacts of mitigation measures affecting regional and extra-regional sources.	TF HTAP WGE CIAM (TFIAM)	covered by the US, EU and in-kind contributions from national experts
1.6.5	Examine the impact of climate change on the contribution of regional and extra-regional sources of air pollution.	Report on robust findings from IPCC and other studies on impacts of climate change on air pollution transport.	TF HTAP	covered by the US, EU and in-kind contributions from national experts
1.6.6	Develop a distributed network of data repositories and web-enabled tools to facilitate broader participation in the assessment of intercontinental transport.	Update and further populate HTAP-OBS database.  Complete in 2014 and possibly revise in 2015 HTAP database phase II. Provide IT infrastructure to hold a harmonized HTAP	CCC MSCW TF HTAP	covered by EMEP mandatory contributions, and contributions from Norway, US, and EU.

<b>Policy</b>		database; Provide free access to the database.		
		Create web enabled tools to access, visualize, and analyze HTAP experiment results.		
1.6.7	Communication of policy-relevant messages concerning intercontinental transport of air pollution and cooperation with other relevant regional and global efforts.	Annual report to EMEP Steering Body highlighting new policy-relevant findings. Jointly organized workshops with other regional and global cooperative efforts. Participation in major international conferences.	TF HTAP	covered by the US, EU and in-kind contributions from national experts
<b>1.7 Adjustment procedure</b>				
1.7.1	Reviews applications for adjustments to emission reduction commitments or inventories and any supporting documentation submitted in accordance with Decision 2012/3, 2012/4 and 2012/12 by experts	Expert assessments submitted to the EMEP Steering Body	EMEP Steering Body/CEIP	Estimates to be provided by CEIP/TFEIP
1.7.2	Consider expert assessments of the applications for adjustments to emission inventories or commitments and make recommendations to the Executive Body	Recommendations to the EB	EMEP Steering Body	
1.7.3	Provide support to the implementation of the adjustment procedures under the Gothenburg Protocol as laid out in Decision 2012/3 and Decision 2012/12	Implementation of decision 2012/3, and decision 2012/12	secretariat	tbd