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Draft 2022–2023 workplan for the implementation of the Convention

Draft 2022–2023 workplan for the implementation of the Convention*

Summary

The present document sets out the draft workplan for the implementation of the Convention, translating the vision, objectives and strategic priorities outlined in the Long-term strategy for the Convention on Long-range Transboundary Air Pollution for 2020–2030 and beyond (ECE/EB.AIR/142/Add.2, decision 2018/5, annex) into a list of activities to be implemented by respective bodies under the Convention during the period 2022–2023.

The present document was compiled by the Executive Body Bureau and the secretariat, with input from the subsidiary bodies. The draft workplan presents proposed additional activities for the biennium, not included in the revised mandates of scientific centres and task forces adopted by the Executive Body.

The Executive Body is invited to consider and adopt the draft 2022–2023 workplan.

* The present document is being issued without formal editing.



Introduction

1. The biennial workplan for the Convention on Long-range Transboundary Air Pollution aims to translate the vision and strategic priorities set out in the long-term strategy for the Convention for 2020–2030 and beyond (ECE/EB.AIR/142/Add.2, decision 2018/5, annex) into a list of activities to be implemented by respective bodies under the Convention during the period 2022–2023. Its structure is built on five main areas of work: science; policy; compliance; capacity-building and awareness-raising; and communication, outreach and cooperation. The document was compiled by the Executive Body Bureau and the secretariat, with input from subsidiary bodies. It also contains a list of the main meetings under the Convention for the period 2022–2023.

2. During the biennium, the task forces and centres under the Convention will carry out the activities in accordance with their revised mandates as adopted by the Executive Body at its thirty-eighth and thirty-ninth sessions (Geneva, 10–14 December 2018 and 9–13 December 2019, respectively). The workplan contains additional activities of the task forces and centres not mentioned in the mandates.

3. The full implementation of the activities in the workplan will require resources in addition to those provided by the United Nations regular budget and 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). Therefore, Parties are invited to support the Convention's activities in 2022–2023, particularly those not covered by the EMEP Protocol, by contributing to the Convention's trust fund, financing activities directly and making in-kind contributions. Resources required for activities not covered by the United Nations regular budget, the mandatory contributions under the EMEP Protocol or the recommended contributions under decision 2002/1 on the financing of core activities are indicated in United States dollars. The United Nations Economic Commission for Europe (ECE) secretariat will continue to administer the trust funds established for financing the activities under the Convention and to enter into contractual arrangements with designated international centres for implementation of the workplan.

4. In accordance with article 11 of the Convention, ECE will continue to carry out the secretariat functions with which it has been entrusted. It will: convene and prepare the sessions of the Executive Body, the Working Group on Strategies and Review, the EMEP Steering Body, the Working Group on Effects and; continue to support the Implementation Committee in accordance with decision 2012/25, including by arranging for and servicing the meetings of the Implementation Committee; and discharge other functions assigned to it by the Executive Body subject to available resources.

I. Science

5. In line with the priorities set out in the long-term strategy for the Convention for 2020–2030 and beyond, science-based decision-making and an effects-oriented approach as a foundation for sound policy will remain essential components of the Convention. Improving the scientific and technical basis of the Convention by better assessing progress in improving air quality and reducing human health impacts and materials and ecosystem effects will help to ensure that policymaking remains evidence-based and effective. The science-related work in the period 2022–2023 will aim to make additional progress on the remaining challenges identified in the long-term strategy and to include broad participation throughout the ECE region.

6. Science project activities in the 2022–2023 period are presented in table 1 below.

Table 1
Scientific activities

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
1.1 Improving tools to assess air pollution and its effects in the United Nations Economic Commission for Europe region				
1.1.1 Monitoring and modelling tools				
1.1.1.1	Contribute to the Gothenburg Protocol review by: (a) Taking stock of long-term trend analysis and key messages for policy effectiveness; (b) Assessing the fitness for purpose of the monitoring and measurement tools to support policy (including recent developments on condensables, for instance).	Notes and contribution for the review of the Gothenburg Protocol (2022)	TFMM, MSC-W, CCC, MSC-E; Task Force on Health, ICPs	Covered by the EMEP budget Covered by recommended contributions
1.1.1.2	Revising historical PM _{2.5} emissions from residential combustion to consistently include condensable organics and assessment of the implication for the review of the Gothenburg Protocol	Analysis of emission data sets including condensables for 2005–2018, EMEP MSC-W model calculation of PM trends and source-receptor matrices Contribution of condensables to population exposure and health impacts review (spring 2022, review during the EMEP Task Force meetings and the eighth joint session of Steering Body to EMEP and WGE)	MSC-W in co-operation with CIAM, CCC, CEIP and TNO	Funding from Nordic Council of Ministers or other sources
1.1.1.3	Prepare and conduct an intensive measurement period focused on improved understanding of high ozone pollution episodes	New EMEP field campaign (spring–summer 2022)	TFMM, CCC	Covered by the EMEP budget and national contributions
1.1.1.4	Review of the use of in-situ VOC measurements (including high quality and potential complementary sensors or passive methods) for the revision and improvement of chemistry-transport models across a range of spatial scales: from local (industrial and urban) to regional background sites	EMEP report in 2022 Potential implications to revise the profiles of VOC emission reporting (2023)	TFMM, CCC, MSC-W TFEIP	Covered by the EMEP budget
1.1.1.5	Perform a Eurodelta multi-model intercomparison exercise focusing on BaP	First report in 2022 Final report and publications in 2023	TFMM, MSC-E, CCC	Covered by the EMEP budget and national contributions

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
		Assessment of the relative importance of residential wood burning		
1.1.1.6	Investigating monitoring of chemicals of emerging concern	Workshop on measurement and modelling of new contaminants (2023)	TFMM, CCC, MSC-E, TFHTAP	Covered by the EMEP budget
1.1.1.7	Preparation of data and model calculations that are necessary for “Multiscale GAINS”	EMEP/MSC-W country to grid (0.3° x 0.2°) based on “brute force”, 5 years of meteorology, 5 source pollutants (PPM, SO ₂ , NO _x , NH ₃ , VOC), extended EMEP domain including EECCA	MSC-W	Covered by the EMEP budget
		Local fraction tracking (sectoral) of PPM with EMEP model (0.1°) “Exposure Correction Factor” and “Exceedance distribution correction” per grid (sector) based on uEMEP		
		(End 2022)		
1.1.1.8	Analysis of changes in chemical regime for N-compounds: is the efficiency of NH ₃ measures changing? Impact on aerosol concentrations and depositions. Is the transport distance of reduced N changing?	Analysis of source receptor calculations for the past and the future (EMEP report 2022)	MSC-W	Covered by the EMEP budget
1.1.1.9	Monitoring and assessment of the impact on the environment of corrosion and soiling effects on materials and their trends	Report of corrosion and soiling data from the exposure for trend analysis 2017–2021 (2022) Environmental data report (2023)	ICP Materials	Covered by recommended contributions
1.1.1.10	Gathering information on policy-relevant user-friendly indicators to evaluate air pollution effects on materials by conducting case studies on UNESCO cultural heritage sites	Report of trends in corrosion, soiling and pollution 1987–2021 (2023) Report on Call for Data – Part VI: Study on the relationship between the environment and the artefact on selected UNESCO sites (2022)	ICP Materials	Covered by recommended contributions
		Report on Call for Data –Part VII: Application of models with increased resolution on selected UNESCO sites (2023)		
1.1.1.11	Biological recovery and responses to changing water chemistry	Thematic report (2022)	ICP Waters	Covered by recommended contributions

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
1.1.1.12	Trends in base cations, potential drivers and implications for acidification status and biological recovery (to be discussed at the TF meeting).	Thematic report (2023)	ICP Waters	Covered by recommended contributions
1.1.1.13	Call for data for moss survey 2020–2021(22) on heavy metals, N and POPs	Annual progress report (Final report 2024)	ICP Vegetation	In-kind contributions from participating countries
1.1.1.14	Ozone flux-based risk assessment for vegetation for air pollution scenarios relating to: (a) Implication on vegetation of scenarios focusing on the characterisation of the contribution of methane as an ozone precursor - post-hoc analysis; (b) The application of ozone modified photosynthesis-based flux-response models; (c) The effects of drought under present and future climatic conditions.	Maps and report (2023) Maps and report (2023) Maps and report (2023)	ICP Vegetation in collaboration with MSC-W, CIAM, TFMM and TFHTAP	United Kingdom and in-kind contributions from participating countries
1.1.1.15	Review of ozone pollution and climate change impacts on vegetation – focus on implications for calculation and application of flux-based Critical Levels and risk assessment	Report (2023)	ICP Vegetation	United Kingdom and in-kind contributions from participating countries
1.1.1.16	State-of-knowledge report on “genetics of crop resilience to ozone and potential for crop breeding”	Report (2023)	ICP Vegetation	United Kingdom and in-kind contributions from participating countries
1.1.1.17	N deposition and its effects on forest health, productivity, carbon sequestration and biodiversity	Report and scientific paper on status and trends of N levels in European forests (2022, 2023) Publication of the responses of European forest ecosystems to decreasing N deposition	ICP Forests	Covered by recommended contributions
1.1.1.18	Status and trends of heavy metals in forest ecosystems	Scientific paper on heavy metal concentrations in level I plots across Europe (2023)	ICP Forests	Covered by recommended contributions
	Air pollution-related cause-effect relationships in forests in a changing climate	Impact of climate on foliar nutrition in European tree species (scientific paper in 2023)	ICP Forests	Covered by recommended contributions

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	Effects of air pollution on forest health, productivity, carbon sequestration and biodiversity	Report on the effect of air pollution on forest health and productivity (2023)	ICP Forests	
1.1.1.19	Steady-state Critical Loads: (a) Update of National Critical Loads by National Focal Centres; (b) Establishment of European Background Database by CCE.	Database (2020/2021) for Critical Loads for acidification and eutrophication; Report (2022)	CCE and ICP Modelling and Mapping	National Focal Centres and recommended contributions
1.1.1.20	Empirical Critical Loads: Review and revision of the CLemp N published in 2011 (continued)	Report on empirical Critical Loads in Europe (2022)	CCE and ICP Modelling and Mapping	Covered by CCE, CCE National Focal Centres and by recommended contributions
1.1.1.21	Update of the harmonized Convention receptor map	Harmonized receptor map for Europe (2023)	ICP Modelling and Mapping/CCE	CCE and Germany
1.1.1.22	Critical Levels of ammonia: literature review and empirical data provision supporting a workshop	Organization of an international workshop (2022) and workshop report (2023)	ICP Modelling and Mapping/CCE	CCE and Germany
1.1.1.23	Modelling interaction between air pollution and climate change: N and C	Expert workshop (2022)	ICP Modelling and Mapping/CDM	CDM and National Focal Centres experts
1.1.1.24	Modelling biodiversity change to set critical loads for N	Report on methodology development and proposal for call for data (2023)	ICP Modelling and Mapping/CDM/CE	CDM, CCE, and National Focal Centres experts
1.1.1.25	Operationalizing and advertising “IM light” as an attractive monitoring protocol, aiming at adding more ecosystem types in the monitoring by ICP Integrated Monitoring	An extension of the Integrated Monitoring methodology to include two additional levels of monitoring with fewer mandatory variables and an invitation to countries to join (2022)	ICP Integrated Monitoring	Covered by recommended contributions
1.1.1.26	Modelling and assessment of biodiversity and ecosystem impacts	Scientific paper (2023)	ICP Integrated Monitoring and CDM	Covered by recommended contributions
1.1.1.27	Consolidate existing evidence on health outcomes of exposure to air pollution	A report on methods for health risk/impact assessment of air pollution and cost-benefit analysis (update to HRAPIE project) An overview on air pollution and COVID-19	Task Force on Health in collaboration with other groups, for example, TFIAM Task Force on Health	Expected to be covered by recommended contribution; further funding needed

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
		(optional, pending resources)		
1.1.1.28	Further develop methodologies for assessment of direct and indirect impacts of long-range transboundary air pollution on human health	Update of tools for quantification of the health impacts of air pollution, including links to climate change mitigation Assessment of health co-benefits and trade-offs between climate change and clean air agendas (optional, pending resources)	Task Force on Health	Expected to be covered by recommended contribution and other potential donors; further funding needed
1.1.2 Emission and projection tools				
1.1.2.1	Planning and delivery of an updated EMEP/EEA Guidebook in 2023	Guidebook delivered (2023)	TFEIP, CEIP and national experts	Covered by national contributions
1.1.2.2	Review new guidance/methods for emissions from solvent and product use (Combustion and industry)	Contribution to the Guidebook (2023)	TFEIP and national experts	Covered by national contributions
1.1.2.3	Agriculture: further clarifying issues around proper accounting of emissions resulting from manure import/export and livestock allocations	Contribution to the Guidebook (2023)	TFEIP and national experts	Covered by national contributions
1.1.2.4	Proposal for an updated projection reporting template	Template adopted by the EMEP Steering Body (2022)	TFEIP and national experts	Covered by the EMEP budget
1.1.2.5	Detailed analysis of the status of inclusion of the condensable component in PM emissions reported by Parties based on the data provided by Parties in their Informative Inventory Reports and on direct communication with Parties for selected Nomenclature for Reporting categories (case studies)	Status reports (2022 and 2023)	CEIP and TFEIP in collaboration with MSC-W and TFMM	Covered by the EMEP budget
1.1.2.6	Improving spatial distribution of emissions, assuring consistency across pollutants, especially for regions where incomplete gridded data is reported to CEIP. New data sources will be explored jointly with IIASA/CIAM	Updated spatial distribution of emission inventories (2022)	CEIP in cooperation with CIAM	Need to find complementary resources

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	CORINE Land Cover, population statistics)			
1.1.2.7	Improvement of data for the modellers: comparison of EMEP gridded emissions with other sources (CAMS, Fairmode)	Updated EMEP gridded emissions (2022–2023)	CEIP in collaboration with MSC-W and CAMS, JRC, Fairmode	Covered by the EMEP budget
1.1.2.8	Gap-filling of 2020 and 2021 emission data sets (the special conditions in these years (COVID pandemic) will need refinement of the standard approaches)	Updated data sets and report (2022)	TFEIP	Need to find complementary resources
1.1.2.9	Refinement of reporting and gap-filling of the shipping emissions to anticipate changes in modelling	Updated methodologies and emission data sets (2023)	TFEIP and CEIP	Need to find complementary resources
1.1.2.10	Complete refactoring of the WebDab database and the user interface for data queries to state-of-the-art technology, including integration of the gridding system to accelerate the gridding process and provide a more user-friendly access to gridded emissions	Updated WebDab interface (2023)	CEIP	Covered by the EMEP budget
1.1.3 Integrated assessment tools				
1.1.3.1	Scenario assessment relevant for the Gothenburg Protocol review and potential revision using multiscale GAINS and EMEP/uEMEP and including an extension of the GAINS domain (EECCA/West Balkans/Turkey)	Data and scenario analyses (2022–2023)	CIAM, TFIAM and MSC-W	Covered by the EMEP budget
1.1.3.2	Scenario development for the (potential) revision of the Gothenburg Protocol, including cost-effectiveness analysis of specific measures and assessment of the implication of improved modelling, among others, inclusion of condensables and marine deposition targets	Scenario analyses (2023)	TFIAM and CIAM	Covered by the EMEP budget
1.1.3.3	Assessing observed trends in air pollution at the various scales Linkages between global and regional air pollution	Contribution to the review of the Gothenburg Protocol (2022)	TFMM, TFHTAP, TFIAM and MSC-W	Covered by the EMEP budget

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
1.1.3.4	Impact of additional measures: Assess extent of recently implemented (by the Parties) additional measures, including best available technologies, and their respective contribution to meeting obligations	Report (2022)	CIAM in collaboration with TFTEI, TFEIP, TFRN	Covered by the EMEP budget
1.1.3.5	Perform an evaluation of the impact of potential methane mitigation measures on regional ozone	Report and workshop organized in 2023	TFMM, TFHTAP, MSC-W, TFIAM and CIAM	Covered by the EMEP budget
1.1.4 Linking the scales				
1.1.4.1	EPCAC activities	Activity report (2022) Two annual meetings of EPCAC (2022 and 2023)	TFIAM with nominated experts	Covered by in-kind contributions from participating countries
1.1.4.2	Development and design of global emission scenarios with a regional and sectoral breakdown to explore the mitigation potential in comparison to the baseline with a data set for use in Convention modelling tools	Report (2022–2023)	TFIAM and TFHTAP	
1.1.4.3	Complete the updated global emissions mosaic for traditional air pollutants (HTAPv3, 2000-2018)	Updated data set (2023)	TFHTAP in cooperation with CAMS, JRC, CIAM, TFEIP	Covered by Parties' in-kind contributions
	Incorporate emissions estimates for heavy metals and POPs, the actual work on this is unlikely to begin before 2023	Workshop to be organized in 2022	TFHTAP, MSC-E, TFEIP, CIAM	
1.1.4.4	Continue development of the openFASST tool for screening analysis of future scenarios and implications of global and regional model uncertainties	Tool updates (2022,2023)	TFHTAP	Covered by Parties' in-kind contributions
1.1.4.5	Investigating the air-surface exchange rates of Hg	Report (2023)	TFHTAP and MSC-E	Covered by the EMEP budget and Parties' in-kind contributions
1.1.4.6	Elaborating global source/receptor relationships of combustion-related POPs and PM	Report (2023)	TFHTAP, TFMM and MSC-E	Covered by the EMEP budget and Parties' in-kind contributions

1.2 Cooperation with Parties

1.2.1	Country-scale assessment of heavy metal and POP pollution	A case study of Hg pollution in Norway involving national	MSC-E, TFMM, national experts	Covered by the EMEP budget and
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<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
		measurement data and modelling (2022–2023)		Norway and Poland
		Continue the case study of PAH pollution and exceedances of air quality guidelines in Poland (2022–2023)		
1.2.2	Focus on EECCA and West Balkan countries: Implementation of updated information about activities, costs of mitigation options, and improvement of spatial distribution of emissions; development of projections	Application of the updated GAINS multiscale model/EMEP/uEMEP (2022 and 2023 for projections for the potential Gothenburg Protocol revision)	MSC-W and CIAM in collaboration with CEIP, TFTEL, MSC-E	
1.2.3	Capacity-building for the health impact assessment of air pollution at regional and subregional levels	Development and implementation of the capacity-building curriculum to address different needs	Task Force on Health	Expected to be covered by recommended contribution and other potential donors
1.3 Cooperation with other projects and bodies (outreach activities)				
1.3.1	Cooperation with HELCOM and OSPAR; marine environment protection	Evaluation of atmospheric load of heavy metals and POPs to the Baltic and North Seas Reports (2022-2023) Evaluation of the impact of air pollution on marine environment Evaluation of the impact of chemicals of emerging concern in the Baltic Sea	MSC-E, WGE, MSC-W, TFIAM AMP (Ad hoc Group on Marine Protection including CCE and ICP Waters)	Covered by HELCOM and OSPAR funding Further funding needed
1.3.2	Cooperation with Climate and Clean Air Coalition	Report to annual joint sessions of Steering Body to EMEP and WGE	EMEP with support from TFEIP, TFHTAP, TFMM	
1.3.3	Cooperation with Arctic Council and AMAP	Focus on BC in framework of a European Union contract	CEIP, CIAM, MSC-W	Budget provided by AMAP (European Union contract)
1.3.4	Support Stockholm and Minamata Conventions in relation to atmospheric observations and data management within the ECE region	Report to annual joint sessions of Steering Body to EMEP and WGE	MSC-E	
1.3.5	Capacity-building on the health impact assessment of	Development and implementation of capacity-	Task Force on Health	Expected to be covered by recommended contribution and

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	air pollution at the regional and subregional levels	building curriculum to address different needs		other potential donors
1.3.6	Promote health messages related to air pollution in Europe	Formulation of health messages in air pollution, including on personal-level interventions Workshop on risk communication, including for medical professionals, on health messages related to air pollution to the public and at individual level	Task Force on Health	Covered by the European Commission; further funding needed
1.3.7	Cooperation and support to the Task Force on International Cooperation on Air Pollution (TFICAP)	Participation in the TFICAP meetings (2022–2023) and sharing of current capacity building activities. Provision of scientific and technical input to TFICAP activities which: (a) Facilitate mutual learning and collaboration on air pollution; (b) Foster emissions reductions of air pollutants through exchange of information on best practices and policy approaches; (c) Facilitate the sharing of information technical capacity building.	WGE and EMEP ICPs, task forces and centres	Expected to be covered by recommended contributions and other potential donors

1.4 Improving the functioning of the WGE and EMEP and of their subsidiary bodies

1.4.	Restructuring the common WGE website (www.unece-wge.org) to highlight main areas of work conducted under the WGE	New version of the website launched (2022 and update in 2023)	WGE Bureau, CDM	Covered by recommended contributions
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Abbreviations: AMAP, Arctic Monitoring and Assessment Programme; BaP, benzo[a]pyrene; BC, black carbon; C, carbon; CAMS, Copernicus Atmosphere Monitoring Service; CCC, Chemical Coordinating Centre; CCE, Coordination Centre for Effects; CEIP, Centre on Emission Inventories and Projections; CIAM, Centre for Integrated Assessment Modelling; CL, critical loads; CLemp, empirical critical loads; COVID-19, coronavirus disease; EECCA, Eastern Europe, the Caucasus and Central Asia; EDGAR, Emission Database for Global Atmospheric Research; EEA, European Environment Agency; Gothenburg Protocol, Protocol to Abate Acidification, Eutrophication and Ground-level Ozone; EMEP, Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe; EPCAC, Expert Panel on Clean Air in Cities; GAINS, Greenhouse Gas and Air Pollution Interactions and Synergies; Hg, mercury; HRAPIE, Health risks of pollution in Europe; ICP, International Cooperative Programme; ICP Forests, ICP on Assessment and Monitoring of Air Pollution Effects on Forests; ICP Integrated Monitoring, ICP on Integrated Monitoring of Air Pollution Effects on Ecosystems; ICP Materials, ICP on Effects of Air Pollution on Materials, including Historic and Cultural Monuments; ICP Modelling and Mapping, ICP on Modelling and Mapping of Critical Levels and Loads and Air Pollution Effects, Risks and Trends; ICP Vegetation, ICP on Effects of Air Pollution on Natural Vegetation and Crops; ICP Waters, ICP on Assessment and Monitoring of Acidification of Rivers and Lakes; IM, integrated monitoring; JRC, Joint Research Centre of the European Commission; Minamata Convention, Minamata Convention on Mercury; Modelling and Mapping Manual, Manual on Methodologies and Criteria for Modelling and Mapping Critical Loads and Levels and Air Pollution Effects, Risks and

Trends; MSC-E, Meteorological Synthesizing Centre-East; MSC-W, Meteorological Synthesizing Centre-West; N, nitrogen; NH₃, ammonia; NO_x, nitrogen oxides; OpenFASST, open-source FASST Scenario Screening Tool; PAH, polycyclic aromatic hydrocarbon; PM, particulate matter; PPM, primary particulate matter; POPs, persistent organic pollutants; S, sulfur; SO₂, sulfur dioxide; Stockholm Convention, Stockholm Convention on Persistent Organic Pollutants; Task Force on Health, Joint Task Force on the Health Aspects of Air Pollution; TFEIP, Task Force on Emission Inventories and Projections; TFHTAP, Task Force on Hemispheric Transport of Air Pollution; TFIAM, Task Force on Integrated Assessment Modelling; TFMM, Task Force on Measurements and Modelling; TFRN, Task Force on Reactive Nitrogen; TFTEI, Task Force for Techno-economic Issues; TNO, Netherlands Organization for applied scientific research; uEMEP, urban EMEP; UNEP, United Nations Environment Programme; UNESCO, United Nations Educational, Scientific and Cultural Organization; VOC, volatile organic compound; WGE, Working Group on Effects; WGSR, Working Group on Strategies and Review; WMO, World Meteorological Organization.

II. Policy

7. In line with the priorities set out in the long-term strategy for the Convention, the policy-related work in the period 2022–2023 will, inter alia, aim to support increased ratification and implementation of the three most recent Protocols as amended (i.e. the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol), the Protocol on Heavy Metals and the Protocol on Persistent Organic Pollutants) throughout the United Nations Economic Commission for Europe (ECE) region, with a particular emphasis on the countries of Eastern Europe, the Caucasus and Central Asia. It will also continue to focus on the pollutants best controlled at the regional level and consider the need for further action to address emerging issues, including particulate matter and its precursors, black carbon as a component of particulate matter, tropospheric ozone and its precursors, eutrophying pollution with a focus on ammonia and, where still needed, acidifying pollution. An integrated approach to environmental policymaking will be sought that includes: interaction between ground-level ozone, nitrogen, climate change and ecosystems; integrated nitrogen management; and co-benefits and interactions between air pollution and climate change policies.

8. Policy work will also support the completion of the review of the Gothenburg Protocol as amended and consideration of the need for any future update of the Protocol. The Working Group on Strategies and Review is also expected to continue policy conversations on the hemispheric transport of ozone and particulate matter and their precursors, including a discussion of control strategies to recommend for use by the Task Force on Hemispheric Transport of Air Pollution in future scenarios. Specific policy-related activities in the 2022–2023 period are presented in table 2 below.

Table 2
Policy

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
2.1	Exchange of information, review of protocols and strategies and policies			
2.1.1	Exchange information on national, subregional and regional policies and strategies for the control of major air pollutants, in accordance with article 8 of the Convention and the Protocols to the Convention. Provide a platform for sharing information on progress and challenges faced by countries in acceding to and implementing the Convention's three most recent Protocols	Information on strategies and policies for air pollution abatement throughout the ECE region, including information on measures shared at the sessions of the Working Group, following Executive Body decision 2016/3	Secretariat	
2.1.2	Review of the sufficiency and effectiveness of the Gothenburg Protocol as amended	(a) Input provided to support the review; (b) Consideration of the main findings and conclusions of the review of the amended Gothenburg Protocol; final report on the review submitted to the Executive Body; (c) Session on barriers to ratification and implementation. ¹	WGSR, TFIAM, TFTEI, TFRN and scientific bodies WGSR WGSR, EECCA Coordinating Group	
2.1.3	Consideration of the conclusions and implications for the way forward of the review of the amended Gothenburg Protocol	Recommendations to the Executive Body for next steps and further work	WGSR	
2.1.4	Policy discussions in follow-up to the Gothenburg Protocol review on reporting of condensable part in emissions of particulate matter	Recommendations provided to the Executive Body	WGSR	
2.1.5	Demonstrate the costs of inaction on air pollution to encourage ratification of the key Protocols to the Convention, in particular the Gothenburg Protocol.	The report for policymakers on the costs of inaction on air pollution submitted to the Executive Body for adoption	TFIAM, TFTEI	
2.1.6	Promotion of multiscale modelling for formulating effective measures and policies	Policy brief on multilevel governance	TFIAM	Funding needed

¹ In case it is feasible to organize an in-person event in 2022.

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
2.1.7	Discuss the implications of future global and regional emissions scenarios	(a) Based on scientific work in point 1.1.4.3, identify priority emission sectors and regions outside the Convention that have a significant potential to have an impact on the achievement of the Convention's goals; (b) Make recommendations to the EB.	WGSR, TFHTAP, TFIAM, CIAM WGSR	
2.1.8	Activities to support broader geographic cooperation on air pollution	Carry out activities specified in the mandate	TFICAP (pending EB decision)	In-kind contributions by participating countries
2.1.9	Review of the rules of procedure for the Convention and discussion on possible amendments	Recommendations provided to the Executive Body	WGSR	
2.2	Development and promotion of guidance documents			
2.2.1	Analysis of the interactions between emissions of methane and ammonia, and other nitrogen compounds, and the potential for their co-mitigation from agricultural sources	Guidance document and policy brief	TFRN in cooperation with other bodies	€50,000, subject to co-funding
2.2.2	Promotion of the Guidance document on integrated sustainable nitrogen management	Workshops with further analysis	TFRN	€50,000, subject to co-funding
2.2.3	Development of a Guidance document on non-technical and structural measures	Draft guidance document submitted for adoption by the Executive Body at its forty-third session	TFIAM, TFRN, TFTEI	In-kind contributions by participating countries
2.2.4	Promotion of guidance documents, including those recently adopted	Explore opportunities to promote guidance documents, including those recently adopted within and outside ECE	TFRN, TFTEI, TFIAM	

Abbreviations: CIAM, Centre for Integrated Assessment Modelling; EB, Executive Body; EECCA Coordinating Group, Coordinating group on the promotion of actions towards implementation of the Convention in Eastern Europe, the Caucasus and Central Asia; TFFICAP, Task Force for the Forum for International Cooperation on Air Pollution; TFIAM, Task Force on Integrated Assessment Modelling; TFHTAP, Task Force on Hemispheric Transport of Air Pollution; TFRN, Task Force on Reactive Nitrogen; TFTEI, Task Force on Techno-economic Issues; WGSR, Working Group on Strategies and Review.

III. Compliance

9. In accordance with the long-term strategy for the Convention for 2020–2030 and beyond, the Implementation Committee “should maintain its approach to compliance review with a focus on long-standing cases of non-compliance and should continue to support countries’ efforts to meet their emission reduction and reporting obligations” (decision 2018/5, annex, para. 48). Any submission or referral made under paragraph 3 (b) of the Implementation Committee’s functions (decision 2012/25, annex) will be dealt with as a priority, taking into account decision 2019/2. In this regard, the Committee will continue to review the progress made by the Parties in response to decisions taken by the Executive Body based on the Committee’s recommendations, and the need for possible additional measures for dealing with non-compliance on a case-by-case basis. Furthermore, in accordance with its functions, the Implementation Committee will consider, as necessary, systemic issues relating to compliance that have been identified. On the basis of information provided by the secretariat, the Committee will evaluate the reporting by Parties on their emission and projection data. The Committee will continue its dialogue with appropriate bodies and experts, with a focus on improving communication with the technical bodies under the Convention. Compliance related activities in the 2022–2023 period are presented in table 3 below.

Table 3
Compliance

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
3.1	Review compliance with reporting obligations: periodic review of compliance with Parties’ reporting obligations under the Protocols to the Convention, based on emission and projection data submitted to EMEP and available in the WebDab emission database	(a) Overview tables on status of reporting, for each of the seven Protocols;	CEIP	EMEP mandatory contributions
		(b) Notes on reporting obligations prepared and draft recommendations on reporting submitted for consideration by the Implementation Committee;	Secretariat	United Nations regular budget
		(c) Review of information submitted by the secretariat; recommendations submitted to the Executive Body.	Implementation Committee	
3.2	Consider submissions and referrals: consideration of any submission or referral of possible non-compliance by an individual Party with any of its obligations under a given Protocol	(a) Emission data trend tables and updates provided to the secretariat;	CEIP	EMEP mandatory contributions
		(b) Analysis of information provided by CEIP; communication with Parties in potential non-compliance; referrals; overview of communications with Parties submitted to the Implementation Committee.	Secretariat	United Nations regular budget
		(c) Submissions by Parties and referrals by the secretariat reviewed; decisions on additional information to be requested from Parties in potential non-compliance; recommendations	Implementation Committee	

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
		on non-compliance submitted to the Executive Body.		
3.3	Prepare an annual report on the Implementation Committee's activities to the Executive Body	Annual report with background, considerations and recommendations on compliance cases under review	Implementation Committee	
3.4	Review recommendations contained in the Implementation Committee report	Decisions on non-compliance and related issues	Executive Body	
3.5	Review and consider possible revisions to the mandate of the Implementation Committee, taking into account relevant Executive Body decisions and the recommendations and strategic priorities set out in the long-term strategy for the Convention for 2020–2030 and beyond and the policy response to the 2016 scientific assessment of the Convention	Proposal to the Executive Body for revised mandate of the Implementation Committee	Executive Body	Bureau, the ad hoc group of legal experts

Abbreviations: CEIP = Centre on Emission Inventories and Projections.

IV. Capacity-building and awareness-raising to promote ratification and implementation

10. A viable future for the Convention depends on positive and vigorous participation by the Parties in all parts of the region and on ensuring extensive geographical coverage. Capacity-building measures and activities will aim to achieve increased ratification and implementation of and compliance with the three amended Protocols. They will aim to “enhance skills; increase understanding of the provisions of the Protocols; improve the use of existing capacity; share lessons learned; and transfer knowledge related to air quality monitoring, emission inventories and projections and abatement strategies ... so that countries, particularly in Eastern Europe, the Caucasus and Central Asia, can adopt the best available techniques and implement emission reduction commitments” (decision 2018/5, annex, para. 47). They will also aim at continued awareness-raising, particularly at the political level, of the need to improve air quality and the benefits of ratifying the Protocols (ibid., para. 46), of the environmental and health effects of air pollution, as well as of pollution abatement measures and their high benefit-to-cost ratio. The measures will also seek to further raise the political profile of the Convention in countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia, as well as Turkey. Specific capacity-building and awareness-raising activities in the 2022–2023 period are presented in table 4 below.

Table 4

Capacity-building and awareness-raising to promote ratification and implementation

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
4.1	Support for transposition of the provisions of the key protocols into national legislation, such as introduction of Best Available Techniques (BAT) and/or other cost-effective measures in various economic sectors:		Secretariat (implementation of commitments, as specified in the respective grant agreements)	\$1 497 000 ^a
	(a) Development of gap-analysis in national legal framework, economic and environment impact assessment, and national action plan for implementation;	Strengthened capacity to adjust national legislation, update air pollution policy and action to implement the Convention and its Protocols		European Union Norway, Sweden, Switzerland (and other potential donors)
	(b) Organization of sub-regional workshops on implementation of BATs, including integrated environmental permitting system and/or emission reduction measures in various sectors (such as energy, industry, transport and agriculture, and others);	Improved capacity in developing guidance on the introduction and implementation of an integrated permitting procedure, BAT and emission reduction measures covering specific sectors		European Union (and other potential donors)
	(c) Demonstration of BAT implementation practices at the selected enterprise(s) by implementing a pilot project on BAT application at the country level and/or organizing study tours at sub-regional level.	Increased awareness of the experience in introducing BAT and emission control technologies through organized study tours and pilot projects		Resources needed
4.2	Support provided for the development of emission inventories, cost-effectiveness analysis, emission projections and emission reduction targets		Secretariat (implementation of commitments, as specified in the respective grant agreements)	
	(a) Organization of technical workshops at country level to further improve national emission inventories including gridded emissions and/or developing emission projections;	Improved reporting of emission inventories and developed emission projections by the target countries		European Union, Russian Federation (and other potential donors)
	(b) Assistance to national groups in developing emission reduction scenarios and setting emission reduction targets using relevant methods, including the GAINS model;	Emission reduction targets set by the target countries in accordance with the requirements of the Gothenburg Protocol		European Union (and other potential donors)
	(c) Organization of sub-regional workshops on estimating emissions from	Improved emissions reporting by providing		Germany (and other potential donors)

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	road transport using advanced methods, including the COPERT model.	high-quality, accurate data on emissions from road transport		
4.3	Assessment of progress of target countries in relation to ratification (benefits, gaps, needs) and elaboration of the necessary steps to be taken on the way towards ratification	Needs for further assistance and milestones to be achieved towards ratification of target countries identified	Secretariat, Coordinating Group	
4.4	Awareness raising of air pollution, its environmental and health effects, and abatement measures among the target countries:		Secretariat, Coordinating Group	
	(a) Organization of targeted national clean air dialogues among stakeholders from different ministries to promote cross-sectoral cooperation and raise awareness;	Raised awareness through national clean air dialogues in target countries		European Union (and other potential donors)
	(b) Organization of events and campaigns to raise awareness of the effects of and measures to reduce air pollution (e.g. as described in technical guidance documents);	Raised awareness and understanding of effects of and measures to reduce air pollution		European Union (and other potential donors)
	(c) Development of self-paced e-learning courses to raise awareness of the Convention and its Protocols;	Increased understanding of the provisions of the Convention and its key protocols through e-learning courses		Germany, Sweden, European Union (and other potential donors)
	(d) Translation of relevant documentation and communication materials into Russian (priorities to be established by the Coordinating Group), and the further development and maintenance of the website in Russian, as relevant.	Availability of information materials in Russian; increased awareness of the Convention among countries of the subregion		
4.5	Support provided to increase information exchanges and peer-to-peer cooperation among target countries:		Secretariat	\$35 000 (Russian Federation and other potential donors)
	(a) Sessions of the Coordinating Group (in cooperation with TFTEI and, potentially, other groups and bodies under the Convention) to exchange information, build capacity and network;	Progress reports to the Executive Body	Coordinating Group, TFTEI	
	(b) Working sessions of the Coordinating Group on the margins of the sessions of the Executive Body and subsidiary bodies;	Progress reports to the Executive Body	Coordinating Group, Secretariat	\$18 000 (Russian Federation and other potential donors)
	(c) Strengthen the participation of countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia in the work of the	Participation of representatives of countries with economies in transition in the	Secretariat	\$180 000 (Switzerland, European Union)

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	Executive Body and its subsidiary bodies by providing travel support.	sessions of the Executive Body, its subsidiary bodies and other relevant meetings		and other potential donors)

^a Subject to funding availability.

Abbreviation: BAT, best available techniques; Coordinating Group, Coordinating Group on the promotion of actions towards implementation of the Convention in Eastern Europe, the Caucasus and Central Asia; POPs, persistent organic pollutants; TFTEI, Task Force on Techno-economic Issues; WGSR, Working Group on Strategies and Review.

V. Communication, outreach and cooperation

11. In accordance with the long-term strategy for the Convention for 2020-2030 and beyond, there is a need for improved communication on work under the Convention, achievements and remaining challenges in order to raise awareness among policymakers and the public. “The strong available scientific evidence of the negative impact of air pollution on health, materials and ecosystems highlights the need for further action in order to improve air quality and public health, including by increasing cooperation with non-ECE regions” (decision 2018/5, annex, para. 43). The strategy sets out that the “bodies under the Convention should also enhance efforts in their communication activities to raise awareness of the compelling environmental, health and economic rationale for action on air pollution and to increase the visibility of the Convention, building on the successes of multilateral cooperation within the Convention system in dealing with increasingly complex science-policy issues” (ibid., para. 71). Outreach activities will be undertaken to maintain the visibility of the Convention on the international scene, to foster cooperation between regional agreements around the world and to share the Convention’s experience with a view to advancing a shared response to addressing air pollution globally, in accordance with United Nations Environment Assembly resolution 3/8, paragraph 7 (i). Cooperation with other regions and forums on intercontinental air pollution issues will be pursued. The “Convention will share experience and scientific expertise” (ibid., para. 76) with other regions, specifically in the context of the forum for collaboration on reducing air pollution.

12. Table 5 below does not repeat the communication and outreach tasks specifically assigned to any of the technical or subsidiary bodies and, as such, incorporated as items under the science and policy sections in the workplan.

Table 5
Communication, outreach and cooperation

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
5.1	Communication			
	Raise public awareness of the Convention and the overall visibility of air pollution issues throughout the ECE region and beyond	(a) Press releases, leaflets, articles and other materials; Information disseminated through social media platforms. This may include relevant information provided by the Convention's scientific bodies, in particular non-technical summaries with clear conclusions, recommendations and interesting facts for dissemination among external audiences;	Secretariat	50 000 ^a
		(b) The Convention website as the main channel for communication with the public is updated in a user-friendly manner (within formal ECE limitations);	Secretariat	
		(c) Infographics, videos or other materials to inform the public of the positive impacts of decreasing transboundary air pollution for better air quality in cities.	Parties	
5.2	Outreach and cooperation			
5.2.1.	Engage in outreach and cooperation activities, including through participation in key regional and international events and processes and through organization of events to raise awareness of the Convention and its work on effects of and measures to reduce air pollution and to foster cooperation	Webinars, side-events and workshops with partners promoting reductions of air pollution and improved awareness of the Convention	Secretariat	\$80 000 ^b
5.2.2	Contact relevant partner organizations, international financial institutions and other networks (see decision 2018/5, annex, para. 73)	Maintain contact with other organizations and networks Cooperation with other international organizations, leading to improved understanding, information or data exchange	Secretariat, technical bodies	
5.2.3	Explore possibilities for continuing the BACA initiative launched at the Eighth Environment for Europe Ministerial Conference in 2016	Use of the BACA initiative as an instrument to support countries' efforts in improving air quality	Executive Body	
5.2.4	Promote awareness of the Convention, as relevant, with other ECE multilateral	Improved awareness among other ECE programmes of the Convention and the	Secretariat	

<i>Workplan item</i>	<i>Activity description/objective</i>	<i>Expected outcome/deliverable</i>	<i>Lead body(ies)</i>	<i>Resource requirements and/or funding source</i>
	environmental agreements and programmes	linkages between air pollution and relevant cross-sectoral issues		
5.2.5	Promote participation of ECE and non-ECE experts in technical meetings and meetings of task forces and make use of web-based meeting tools as far as possible	Improved participation and outreach	Task forces and technical bodies under the Convention	

^a Subject to funding availability.

^b Subject to funding availability for items 5.2.1 to 5.2.5.

VI. Main meetings under the Convention

13. The Executive Body, the Working Group on Strategies and Review and the EMEP Steering Body will hold their annual sessions in Geneva. The ECE secretariat will arrange for the meetings, for the preparation and translation of official documentation and for interpretation. The secretariat will also support the meetings of the Bureaux of the Executive Body and the main subsidiary bodies. Organization of any additional meetings will require additional resources according to the estimations provided by the secretariat (see ECE/EB.AIR/2021/1, table 17).

14. In accordance with decision 2012/25, the Implementation Committee will hold a total of four meetings in the period 2022–2023. The ECE secretariat will arrange for and service those meetings, as per paragraph 2bis of decision 2012/25.

15. Table 6 below contains a list of these meetings to be held in 2022–2023. Dates for 2023 are tentative and will be confirmed at a later date. A list of official documents for the plenary meetings of the Executive Body and the subsidiary bodies is presented as an informal document.

16. The full list of meetings, including those of task forces and the Coordinating Group on promotion of actions towards implementation of the Convention on Long-range Transboundary Air Pollution in Eastern Europe, the Caucasus and Central Asia, as well as capacity-building workshops, will be posted on the Convention website.

Table 6

Meetings of the Executive Body, the EMEP Steering Body, the Working Group on Effects, their Bureaux and the Implementation Committee

<i>Year</i>	<i>Body</i>	<i>Meeting/session</i>	<i>Dates</i>	<i>Location</i>
2022	Bureaux of the EMEP Steering Body and the Working Group on Effects		March 2022	To be decided
	Bureau of the Executive Body		April 2022	Geneva
	Working Group on Strategies and Review	Sixtieth session	11-14 April 2022	Geneva
	Implementation Committee	Forty-eighth session	May 2022	To be decided
	Working Group on Strategies and Review	Sixty-first session	July 2022 (tentative)	Geneva

<i>Year</i>	<i>Body</i>	<i>Meeting/session</i>	<i>Dates</i>	<i>Location</i>
	Implementation Committee	Forty-ninth session	September 2022	To be decided
	Bureau of the Executive Body		September 2022	Geneva
	EMEP Steering Body, Working Group on Effects	Eighth joint session	12 (p.m.)–16 (a.m.) September 2022	Geneva
	Bureau of the Executive Body		12 December (a.m.) 2022	Geneva
	Executive Body	Forty-second session	12 (p.m.)–16 December 2022	Geneva
2023	Bureaux of the EMEP Steering Body and the Working Group on Effects		March 2023	To be decided
	Implementation Committee	Fiftieth session	May 2023 (tentative)	To be decided
	Bureau of the Executive Body		May 2023 (tentative)	Geneva
	Working Group on Strategies and Review	Fifty-ninth session	May 2023 (tentative)	Geneva
	Working Group on Strategies and Review	Sixtieth session	August/September 2023 (tentative)	Geneva
	Implementation Committee	Fifty-first session	September 2023 (tentative)	To be decided
	Bureau of the Executive Body		September 2023	Geneva
	EMEP Steering Body, Working Group on Effects	Ninth joint session	September 2023	Geneva
	Bureau of the Executive Body		December 2023	Geneva
	Executive Body	Forty-third session	December 2023	Geneva