

**International Cooperative Programme on  
Integrated Monitoring of Air Pollution Effects on Ecosystems (ICP IM)  
25<sup>th</sup> Task Force meeting, Uppsala, Sweden, May 9-11, 2017.**

**Explanatory notes to the agenda**

**1. Opening of the meeting**

**2. Approval of minutes of the 24<sup>th</sup> ICP IM TF in Asker, Norway, 2016.**

**3. Report from Chairman and Programme Centre**

The ICP IM activities 2015-2016 are described in more detail in the 25<sup>th</sup> Annual Report 2016.

The Chairman and the Programme Manager presented the progress made by ICP IM during 2015/2016 at the joint EMEP SB and Working Group on Effects (WGE) meeting in September 2016. The work programme for 2016-2017 was also presented. The WGE welcomed the plan for future work.

The Chairman of WGE noted the positive results of further co-operation between ICPs in view of the priorities of the Executive Body (EB). Special notice was put on the preparations regarding the updated long-term strategies of the Convention. The strategy was adopted by EB in December 2011 and implementation is in progress. The strategy will go through a mid-term review in 2016. Protocols were accepted in December 2014 and now being implemented. The Protocol on Heavy Metals was retrieved in August 2014.

The Long-term strategy involves procedures for more policy relevant information, ongoing sufficient monitoring and modelling, improved understanding of air pollution processes and trends and to provide the scientific background for effectiveness of protocols to meet the pollution impacts. Emphasis is put on joint outcomes from EMEP and WGE for policy oriented messages and further actions by Parties.

There is great interest and needs to have wider and closer cooperation with EECCA (Eastern Europe, Caucasus and Central Asia) and SEE (South East Europe) countries. However, in the slightly difficult financial situation there were limited possibilities for these countries to participate in the WGE session. Another problem was that all documents were not translated into French or Russian. Anyhow, new attempts to increase these activities were promoted. Special funds exist to improve participation as capacity building.

The chair of the WGE presented the WGE Joint report and a report on recent results and updating of scientific and technical knowledge including the suggested Workplan for 2016-2017. The Working Group and subsidiary bodies have maintained the work in spite of financial constraints. In fact, output has even increased. Reports have been directed towards societal needs and partly also delivered in direct request of the Convention. An Assessment report was presented at the Ministerial conference in Batumi, Georgia in June 2016 and earlier also in Brussels in May. As a further outcome a summary for policymakers was produced under UN ECE "Towards Cleaner Air", being a co-operation between EMEP SB and WGE.

A number of highlights in the Joint report relate to;

- \* A road map for implementation of the first World Health Assembly resolution on air pollution and health has been set up and includes expanding the knowledge base, monitoring and reporting, global leadership and coordination and institutional strengthening.
- \* ICP Materials has carried out a pilot study on inventory and conditions of stock of materials at risk at five United Nations Educational, Scientific and Cultural Organization (UNESCO) cultural heritage sites. This is now followed by a call for data to enlarge the assessment. Damage to limestone buildings addresses PM 10 and HNO<sub>3</sub>.
- \* Ozone impacts on wheat yield revealed economic losses being highest in Central Europe, the eastern United States, western China and northern India and in many parts of Central and Southern Europe, Natura 2000 grassland habitats are at risk from impacts of ozone pollution.
- \* Climate warming may increase the vulnerability of ecosystems to air pollution and atmospheric deposition.
- \* Nitrogen (N) deposition enhances net primary production in the short term in N-limited areas, excess nitrogen may have negative effects on biomass growth in the long run. Reducing nitrogen deposition will contribute to the achievement of biodiversity policy targets.
- \* An integrated policy approach with regard to ozone, nitrogen and climate is necessary. Such an integration allows the selection of win-win scenarios and would give priority to more effective policy measures. It turns out that the most effective way forward is to reduce emissions of NH<sub>3</sub> in Europe to halt the loss of biodiversity and of methane (CH<sub>4</sub>) at the hemispheric scale to reduce ozone damage.
- \* Freshwater fish in lakes in boreal regions often contain levels of mercury above recommended limits for human consumption. ICP Waters and ICP IM aim to study spatial and temporal patterns of mercury in freshwater fish, which will be presented in the spring of 2017.
- \* Change in coordination of the moss survey to the Russian Federation has enhanced participation of countries of Eastern Europe, the Caucasus and Central Asia.
- \* TF HTAP aims at developing international cooperation for global scale assessment of air pollution patterns. HTAP and AMAP enhanced collaboration on evaluation of mitigation strategies for mercury, persistent organic pollutants, and short-lived climate pollutants including black carbon and methane, especially in the arctic region.
- \* Interactions between air quality and climate change have become better understood. In those cases where climate measures also included reductions of methane and nitrous oxide (N<sub>2</sub>O) emissions from the agricultural sector, also ammonia emissions could become lower.
- \* The CCE meets problems with financing activities and in 2018 this turn very problematic and is yet not solved.

The reports and meeting documents can also be found at the document pages of CLRTAP:  
<https://www.unece.org/index.php?id=40002#/>

Further development of effects-oriented activities included an impact assessment in the context of hemispheric transport of air pollution. It was also mentioned that a stronger scientific content and connections to EMEP and WGE are needed. Monitoring and modelling

need to continue with good scientific focus in line with the CLRTAP Long-term strategy. Specific work will be brought up further on in the document and session.

The draft 2016-2017 Workplan for the implementation of the Convention on Long-range Transboundary Air Pollution has been settled. The joint workplan between EMEP and WGE has been prepared and related issues will be discussed in this meeting.

EMEP and WGE homepages should have a common portal. Currently, the UNECE changed the webpages and WGE content is not easily found. Possibly, an entrance through EMEP provides some information. Work is ongoing for the WGE webpage to be launched in September.

#### **4. Progress in WGE activities 2016**

Highlights from the ICPs, TF Health and JEG;

Task Force on Health presented the use of the WHO AIRQ+ software to quantify the health impacts of air pollution. The Task Force had discussed national and international policies and processes regarding air quality and health. The WHO Ambient Air Quality Guidelines have been updated. It was also identified new opportunities for enhanced collaboration between the Convention and WHO.

The ICP Modelling and Mapping Task Force informed participants about the ongoing work and main achievements, including the assessment of ecosystems exposure to air pollution realized by means of critical load exceedances maps prepared by CCE and scenario analysis using the biodiversity-based critical loads. An update on the 2015–2017 Call for Data issued by CCE was mentioned. It was responded to the Call by calculating biodiversity critical loads and by updating the acidification and eutrophication critical loads. Special notes were taken to the announced cuts to CCE funding and noted that ICP Modelling and Mapping work would be significantly affected.

ICP Forests highlighted importance and use of the database. Seven of the papers had been highlighted as relevant for environmental policies. The fifth scientific conference had focused on the deposition, outputs and effects of nitrogen, sulphur and heavy metals on forest ecosystems; ozone levels, risks and effects; and climate change and the assessment of ecosystem responses. An assessment on eutrophication and vegetation is presented by Van Dobben and de Vries in *Ecology and Evolution* 7; 214-227.

ICP Waters recent research had led to the conclusion that biodiversity would increase, provided that chemical recovery of lakes and streams continued. However, aquatic biodiversity might be impacted by climate change in the future. In 2017–2018, two thematic reports were foreseen: on mercury and on the spatial extent of acidification.

ICP Materials reported on trends in air pollution, corrosion and soiling showing a 50% decrease in corrosion since 1987 but in recent years poor further improvements. A call for data has been made.

ICP Vegetation highlighted a report on revised ozone risk assessment methods for vegetation and a planned revision of chapter 3 of the Mapping Manual. Since 2015, the moss survey had been organized by the ICP Vegetation Coordination Centre at the Joint Institute for Nuclear Research at Dubna. Forty countries had participated in the 2015/16 survey, including seventeen countries of Eastern and South-Eastern Europe, the Caucasus and Central Asia, and six from Asia and Africa. A report presents analysis of tropospheric ozone – TOAR.

ICP IM found that measured nitrogen deposition exceeding the empirical critical loads led to eutrophication effects on biota. Sulphur accumulated in the past was released, with effects, in surface waters. No widespread regional increases in nitrate concentrations in surface waters had been observed, despite ongoing nitrogen accumulation in catchments. Also, mercury levels were increasing in the forest floor and mineral soil, with hazardous effects on biological activity and also providing extended possibilities for methylation and releases to surface waters.

Both the ICP Waters and ICP Integrated Monitoring communities had found the joint Task Force meeting useful and had decided to hold their next Task Force meetings jointly in Uppsala, Sweden, from 9 to 11 May 2017.

JEG presented progress in dynamic modelling for HM. Modelling for both terrestrial and aquatic biodiversity considers N, O<sub>3</sub>, HM and biodiversity in context of changing climate. Extremes should be included in dynamic modelling.

## **5. Updating of scientific and technical knowledge**

The Chairman of WGE drew attention to the pollutant specific topics presented in the 2015 Joint report, the technical reports of the ICPs and additional supporting documents such as for ICP IM, the Annual Report No. 25, 2016. ICP IM technical report is [ECE/EB.AIR/WG.1/2016/8](#). WGE noted with satisfaction the IM Annual Report and mentioned especially the report on progress on dynamic vegetation modelling at ICP IM sites and the report on sulphur and nitrogen input-output budgets at ICP Integrated Monitoring sites in Europe 1990-2012.

For the EMEP programme the Task Force on Measurements and Modelling reported on progress, including the results of the Task Force's seventeenth meeting (Utrecht, the Netherlands, 18–20 May 2016). In 2015–2016, key activities had included the publication of an assessment of trends in air pollution in the EMEP domain, an initiative to better constrain condensable emissions in atmospheric dispersion models and a new project on the added value of twinning urban and rural sites to understand the contribution of long-range transport to urban air pollution. It was also reported on activities on modelling of acidification, eutrophication and photo-oxidants, focusing on improvements in the EMEP model performance in the new EMEP grid.

Joint thematic sessions were held to discuss three issues: the linkages between climate change and air pollution; benzo(a)pyrene and wood burning; and ozone issues. It was mentioned about relative contribution of methane, black carbon and other climate forcers to climate change, and methods to evaluate the regional and extra regional impacts of climate change on air pollution. The Working Group on Effects was advised to develop new indicators to assess the effect of nitrogen deposition and ozone exposure and their interactions on the resilience of ecosystems to climate change. Long-term high quality observation data were fundamental in assessing the interactions between air pollution and climate. Several climate or air pollution measures entailed conflicting abatement results.

Information sharing by Parties; Spain reported on ozone episodes exceeding thresholds had both regional long-range and local components. Sweden reported on recent improvements in the national emission inventory and on constructing national nitrogen budgets. Calculations should be based on the guidance document on national nitrogen budgets.

Co-operation with international organizations and programmes included contributions made by AMAP, the Climate and Clean Air Coalition, EANET, the European Centre for Medium-Range Weather Forecasts, the Minamata and Stockholm Conventions, UNEP and WMO.

The joint workplan was discussed and major items presented. An updated 2016-2017 Workplan exists and preparations for 2018-2019 Workplan should start.

Financing is presently on a fairly stable level and the funds will be rather similar for 2016 ([https://www.unece.org/fileadmin/DAM/env/documents/2016/AIR/EMEP/ECE\\_EB.AIR\\_GE.1\\_2016\\_18\\_E.pdf](https://www.unece.org/fileadmin/DAM/env/documents/2016/AIR/EMEP/ECE_EB.AIR_GE.1_2016_18_E.pdf)). Trust fund support for ICP IM falls from 49800 \$ to 42600 \$ in 2017. Rather important though, is the scarce resources in the UNECE secretariat that are unfortunate.

The secretariat also presented information on the implementation of memorandums of understanding for 2016, and the preparation of new contracts. The current contracts for the Centres would be extended for another five-year period (until 30 June 2021).

Situation for CCE is financially problematic and the Netherlands intend to cut back totally after 2017. Problems were discussed at the meeting and there was a special meeting in Brussels on April 26, 2016. For the meeting it should be noted the high significance of the CCE work for CLRTAP and the link to policy dissemination.

Election of WGE officers; Ms. Isaura Rabago (Spain) was elected as the new Chair of the Working Group on Effects for a two-year term. Re-elected vice chairs Mr. Jesper Bak (Denmark), Ms. Gudrun Schuetze (Germany), Ms. Sabine Augustin (Switzerland), Mr. Thomas Dirnböck (Austria) and Mr. Nebojsa Redzic (Serbia).

Next WGE is scheduled for 11-15 September 2017 and this would be meeting No. 36.

## **6. Further notes from the WGE Extended Bureau meeting in March 2017**

The new chair of WGE participated in the WGE Extended Bureau meeting in Geneva on March 20-23, 2017. The Chair Isaura Rabago, Spain led the meeting together with the EMEP SB Chair Ms. Laurence Rouil (France).

The ICP review concludes the importance of continuing monitoring and enhances the co-operation between ICPs as well as between WGE and EMEP. It is important with financial support from Parties including EU and with connections to NECD. Use of data in science, modelling and policy work shows the importance of the networks. The Mandates, work, usefulness and responsibilities of Programmes, Centres and Task Forces should be updated including financial issues.

CLRTAP launched a summary report, Towards Cleaner Air, extracted from the 2016 Assessment report and has been presented for policy the community.

Upstart of the next Workplan has a schedule of first items reporting on May 20. This Workplan is biennial and includes specific items for the two years. Ordinary annual activities such as monitoring should be included in the Mandates.

The process to get a WGE homepage goes on and by September there should be a page under UN ECE; “[unece-wge.org](http://unece-wge.org)” and there could be possibilities to download data and also with links to ICP homepages.

Progress by TFIAM includes also local conditions but influences from agriculture, domestic heating, dust, tyres and road abrasion often are not included. Also hemispheric strategies and synergies between air pollution, climate and natural conditions should be considered.

Work within HTAP, Hemispheric Transport of Air Pollution, considered interactions between air pollution and climate including ozone, atmospheric compounds, Hg, ozone and POPs. HTAP co-operates with AMAP and PACES.

## **7. CLRTAP Workplan**

There is currently a two year workplan 2016-2017 and now starts the new two year biennial 2018-2019 in progress. The CLRTAP aims at getting more visible and to achieve this one way is enhanced collaboration with other ICPs and also EMEP. Items for this next Workplan should be presented to the secretariat by May 20.

Preparations for WGE 2017 addresses now a joint EMEP and WGE meeting with a joint report highlighting results from workplan items and showing the policy relevance. There will be a joint EMEP and WGE meeting in September and presentations will be made thematically. The programmes should also present the obligations and monitoring work content for the leading countries and the PCs with draft texts in June. This should be related to the CLRTAP strategy and an update of the MoU.

## **8. ICP IM activities 2016-2017**

The ICP IM activities in 2016/2017 included work on S and N in-/output budgets for IM sites, dynamic vegetation modelling, the Annual ICP IM Report No 25 and common items such as outreach and common activities (ECE/EB.AIR/WG.1/2016/8):

<https://www.unece.org/index.php?id=40002#/>

### *Meetings:*

- The Chairman Lars Lundin represented the ICP IM programme at the 32<sup>nd</sup> ICP Forests Task Force meeting in Luxembourg, 11–13 May 2016.
- ICP IM Programme Manager Martin Forsius and Maria Holmberg participated in the Annual meetings of the LTER-Europe network and the eLTER H2020 project in Riga, Latvia, 15–16 June 2016.
- The Chairman Lars Lundin and Martin Forsius represented ICP IM in the Second Joint Session of the Steering Body to the EMEP and the Working Group on Effects in Geneva, Switzerland, 13–16 September 2016.
- Martin Forsius took part in the International Long-Term Ecological Research (ILTER) 1st Open Science Meeting: Long-Term Ecosystem Research for sustainability under global changes - Findings and challenges of ILTER from local to global scales, organized in the Kruger National Park, South Africa, 9–13 October 2016.

- Maria Holmberg represented ICP IM programme in the Joint Expert Group on Modelling (JEG) meeting 26–28 October, 2016 in Sitges, Spain.
- Martin Forsius took part in the AdvanceLTER kick-off meeting in Leipzig, Germany, 1–2 February 2017.
- Lars Lundin represented ICP IM in the Joint EMEP Steering Body and Working Group on Effects Bureaux meeting in Geneva, Switzerland, 20–23 March 2017.
- Martin Forsius participated in the eLTER workshop in Creete, Greece, 27–31 March, 2017.
- The twenty-fifth meeting of the Programme Task Force on ICP Integrated Monitoring was organized as a joint 2017 Task Force Meeting of ICP Waters and ICP Integrated Monitoring in Uppsala, Sweden from May 9 to May 11, 2017.

The Programme Centre received the 2015 data from most IM sites, data are now stored in the ICP IM database; further on item 10.

Laboratories participating in the ICP IM Programme took part in the inter-comparison tests organised by ICP Waters, ICP Forests Expert panels and EMEP.

*Scientific work regarding priority topics has continued:*

The Programme Centre prepared the ICP IM contribution on common items for WGE reported in September 2016 (mentioned above).

The Programme Centre prepared the ICP IM contribution to the WGE 2016 Joint report (ECE/EB.AIR/WG.1/2016/3).

The Programme Centre prepared the ICP IM 25<sup>th</sup> Annual report 2016 and also the technical document ECE/EB.AIR/WG.1/2016/8 submitted to the WGE in 2016. Included in the reporting were the workplan items:

Progress report on dynamic vegetation modelling at ecosystem monitoring and research sites; Holmberg, M. and Dirnböck, T. 2016.

Interim report on trend assessment for deposition and runoff water chemistry concentrations and climatic variables at ICP Integrated Monitoring sites in 1990-2013; Vuorenmaa et al., 2016.

Further workplan items for 2017 and priority topics will be discussed under items 11, 12 and 13.

## **9. Reports from WGE and other ICPs**

The representatives of the WGE, UNECE Secretariat and other ICPs participating in the IM TF meeting may report progress in their work under this item.

At the WGE Extended Bureau meeting in Geneva on March 20-23, 2017, key issues discussed were related to the WGE Joint report, combined workshop with EMEP, outreach activities and implementation of recommendations for the Convention organisation. Mandates for the ICPs should be updated. See also item 6 report from Extended Bureau meeting.

- (i) The long-term strategy was adopted by EB in December 2011 and is valid until 2020 but will be revised this year.
- (ii) Workplan items and workshop events have been updated,
- (iii) Medium term workplan for ICP IM for the years 2016 and 2017 decided and plans for 2018-2019 should start to form which will be covered under items 11, 13 and 14;
- (iv) Co-operation between WGE and EMEP with a joint meeting September 2017,
- (v) Preparations of the 36<sup>th</sup> session of WGE, ordinary ICP activities will be given a short overview with main focus on common items and thematic scientific reporting, especially policy relevance of the ICP results,
- (vi) Financial issues with EB review; funding from Trust Fund for the nearest coming years seems fairly stable but in a decreasing trend.

## **10. Data submission and database status**

The Programme Centre will present the current status of the database for the meeting. A detailed description is given in the 26<sup>th</sup> Annual Report 2017.

Most of the National Focal Points have submitted the results from 2015 to the Programme Centre. These data are incorporated into the IM database.

The following countries have continued data submission to the ICP IM data base during the period 2012–2016: Austria, Belarus, the Czech Republic, Estonia, Finland, Germany, Ireland, Italy, Lithuania, Norway, the Russian Federation, Spain, Sweden, Switzerland and Ukraine.

Poland is preparing data and will soon include one or more sites to the network.

The number of sites with on-going data submission for at least part of the data years 2011–2015 is 43 from fifteen countries. Sites from Canada, Latvia and United Kingdom only contain older data.

The meeting is expected to discuss ways to improve the data reporting and criteria for participation in the programme, as well as ways to support the national ICP IM work.

## **11. Reports to be prepared/ finalized in 2017**

ICP IM reports:

a) 26<sup>th</sup> Annual ICP IM report (AR)

The Programme Centre has prepared the draft version of the report. According to a previous decision of the ICP IM Task Force, the Annual Report should contain summarised information on the status and progress of the activities. Detailed results from data assessments should be presented in scientific papers and separate technical reports. The workplan items should be reported in the AR. The content of the Annual Report 2017 follows this concept. It is proposed to include country specific reports as annexes in the AR. The Annual report should be presented at the WGE meeting in September 2017. The meeting is expected to discuss the content of the report and decide about the presentation to WGE.

b) Progress Report on connections between calculated CL exceedances and observed impacts of N. ICP IM PC.

c) Report on concentrations of heavy metals in important forest ecosystem compartments (Åkerblom and Lundin).

Activities common to all ICPs, the Task Force on Health and the JE Group:

d) Comparison of activities across continents and regions; outreach and hemispheric view will relate to HTAP, EECCA, SEE and LTER as regards ICP IM.

The Programme centre will report the ICP IM contributions to the common activities to the CLRTAP secretariat in the end of June (item 12) and September 2017.

## **12. ICP IM Technical reporting**

Report by June 30, 2017. Still there could be unofficial reports such as the ICP IM AR where we may present workplan item results. ICPs should explore possibilities to include country reports.

## **13. Considerations in perspective of more efficient organization**

Recommendations on ICP common activities from 2016 still valid are;

1. Updated WGE webpage
2. Develop a meta-data base;
3. Improve visibility. Common issue for EMEP and WGE. Cooperation with other Conventions;
4. Harmonised methods communicate that we are using but also making sure that this is the case. Intercalibrations across ICPs;
5. Thematic workshops; e.g. trends, ozone, nitrogen, biodiversity;
6. Open science workshops;
7. Improve collaboration within countries;

#### **14. Co-operation with other ICPs and external projects/organizations: EU, LTER-Europe, eLTER, ALTER-Net, LifeWatch, Expeer, Natura 2000, etc.**

##### ***The EU NEC directive:***

The EU has approved the new directive on national emission ceilings (2016/2284), and the Article 9 and Annex V of the directive contains instructions on reporting of ecosystem effects. Work of the ICPs is directly referred to. Member States must report by 1 July 2018 the location of the monitoring sites and associated indicators used for monitoring air pollution impacts. By 1 July 2019 Member States must report the first set of monitoring data measured at these sites.

##### ***UNECE activities:***

The meeting is expected to discuss coordination of work and cooperation with other ICPs, particularly regarding dynamic modelling (all ICPs), cause-effect relationships in terrestrial systems (ICP Forests, ICP Vegetation), and surface waters (ICP Waters). Decisions on further work should be reflected in the future work plan.

Further quantification of policy-relevant effects indicators such as biodiversity change that should be linked to integrated modelling work may be related to CBD.

More meetings could be found on CLRTAP www-pages.

##### ***LTER-Europe:***

The European LTER network (European Long-Term Ecosystem Research Network) is developing rapidly (<http://www.lter-europe.net/>). Many of the LTER-Europe sites include ICP IM sites so there is a need to discuss means of further cooperation. The research infrastructure project eLTER has received funding from the EU/H2020 programme, and has now passed half time.

##### ***ALTER-Net:***

ALTER-Net; “*A Long-term Biodiversity, Ecosystem and Awareness Research Network*” ([www.alter-net.info](http://www.alter-net.info)) ended the first phase in 2009 but continues in ALTER-Net II thereafter and first hosted by NINA in Norway but now by INBO, Belgium having the chair of the Network Council, whilst NERC CEH, UK and NINA, Norway, co-chair the Management Board. NFPs of ICP IM are involved in the project. This project is also related to the LTER and ILTER; “*International Long-Term Ecological Research*” (<http://www.ilternet.edu/>). ALTER-Net is also related to the preparatory work within ESFRI promoted LifeWatch infrastructure project (<http://www.lifewatch.eu/>). The meeting is expected to discuss the ICP IM vs. ALTER-Net connections.

##### ***Other future work priorities:***

The meeting is expected to discuss inclusion of new tasks in the short-term or more long-term work-plan. Relations to the Long-time strategy should be considered. NFPs may give short progress reports about national achievements regarding new topics (e.g. multisite experiments, ecosystem services). The meeting is also expected to discuss what the role of the international ICP IM network should be in relation to multi-effects evaluations and global change related topics, and how this work should be coordinated. Participation in the European biodiversity monitoring system should be noted. EPBRs activities should be followed; <http://www.epbrs.org/>. Decisions on further work should be reflected in the workplan 2018-2019 and longer term planning for the WGE.

The activity plans raised by the ICP evaluation group could be discussed.

### 15. ICP IM workplan for 2017 and tentatively for 2018–2019

The meeting is expected to decide on the work plan for 2018-2019, based on the discussion during the workshop and Task Force meeting. A preliminary suggestion prepared by the Programme Centre is presented below:

<b>Activity</b>	<b>Time-frame</b>	<b>Responsible</b>
<b>ICP IM work plan 2016</b>		
<b>Joint Report 2017 of the ICPs, TF Health and Joint Expert Group on Dynamic Modeling</b>	WGE 2017	UNECE Secretariat, WGE Bureau and ICP IM Programme Centre
<b>Finalization of 26<sup>th</sup> Annual Report 2017 (short National reports are welcomed)</b>	WGE 2017 (comments and national reports by x)	Programme Centre NFP contributions
<b>Progress Report on connections between calculated CL exceedances and observed impacts of N (chapter in AR2017)</b>	WGE 2017	Programme Centre in co-operation with NFPs Potential co-operation with ICP M&M
<b>Report on concentrations of heavy metals in important forest ecosystem compartments (chapter in AR2017)</b>	WGE 2017	NFP of Sweden and Programme Centre, in co-operation with other NFPs and ICP Waters
<b>Reporting of activities common to all ICPs, the Task Force on Health and the Joint Expert Group on Dynamic Modelling</b>	WGE 2017	Programme Centre and Chairman according to instructions of the UNECE Secretariat
<b>Submission of quality controlled results for year 2016 to Programme Centre</b>	December 1 <sup>st</sup> 2017	National Focal Points
<b>Cooperation with other ICPs, particularly regarding dynamic modelling (all ICPs), cause-effect relationships in terrestrial systems (ICP Forests, ICP Vegetation), and surface waters (ICP Waters).</b>	According to decisions at the TF meeting	According to decisions at the TF meeting
<b>Inter laboratory comparisons under leadership of ICP Waters, ICP Forests and EMEP</b>	ICP F and ICP W	Voluntary activities of the National Focal Points
<b>ICP IM draft work plan 2018-2019</b>		
<b>ICP IM Task Force meeting 2018</b>		
<b>ICP IM Annual Report 2018</b>	Task Force and WGE 2018	Programme Centre in collaboration with NFPs
<b>Report on mercury in the aquatic environment; Joint Report together with ICP Waters - ICP IM will contribute</b>	Task Force and WGE 2017 (POSSIBLE continuation)	NFP of Sweden and Programme Centre, in co-operation with other NFPs and ICP Waters

<b>Scientific paper on long-term trends in atmospheric deposition and runoff water chemistry of S and N compounds at ICP IM catchments in relation to changes in emissions and hydrometeorological conditions</b>	Task Force and WGE 2018	Programme Centre, in cooperation with NFPs
<b>Scientific paper on dynamic modelling on the impacts of future deposition scenarios on soil and water conditions in ICP IM catchments</b>	Task Force and WGE 2018	Programme Centre and NFPs
<b>Cooperation with external organisations (International Long Term Ecological Research Network ILTER, LifeWatch, GEO BON). Progress reports</b>	Task Force 2018	Programme Centre and NFPs eLTER EU-project activities
<b>Develop concepts for multi pollutant – multi effect relationships (NO<sub>x</sub>, O<sub>3</sub>, acidity, heavy metals, POPs, etc). Progress reports/contributions to Annual Report OR presentations in Workshop</b>	Task Force 2018	Voluntary activities at National Focal Points
<b>Reporting of ICP IM activities to WGE</b>	WGE 2018 and 2019	Programme Centre and Chairman
<b>Report on dynamic modelling on the impacts of deposition and climate change scenarios on ground vegetation (ICP IM)</b>	2019	Programme Centre and NFPs of Austria and Sweden
<b>Scientific paper on the relationship between critical load exceedances and empirical ecosystem impact indicators (ICP IM).</b>	2019	Programme Centre and NFPs of Austria and Sweden

## **16. Financing/external applications**

Financial support for the international coordination of effects-oriented activities under the CLRTAP is available through voluntary contributions to the Trust Fund. Tentatively a representative of the WGE Bureau will present information about the present situation regarding this funding.

Some key actions of the EU Horizon 2020 framework programme are open for research proposals. Such funding can be used for supporting research activities related to ICP IM, and the participating institutes are encouraged to look into the possibilities for joint applications. Information is available at: <http://cordis.europa.eu/>

The NFPs may report on any progress in this field.

## **17. Next Task Force meeting**

## **18. Other business**

## **19. Conclusion and end.**