



United Nations Economic Commission for Europe (UNECE)  
**Convention on Long-range Transboundary Air Pollution**

**Working Group on Effects (WGE)**

**International Cooperative Programme (ICP) on  
Integrated Monitoring of Air Pollution Effects on Ecosystems**

Minutes of the twenty-fifth Programme Task Force held on May 9-11 2017 in Uppsala, Sweden

**I. Introduction and opening of the meeting**

1. The meeting was organized jointly with the International Cooperative Programme on Assessment and Monitoring of the Effects of Air Pollution on Rivers and Lakes (ICP Waters). The meeting arrangements were carried out by Swedish University of Agricultural Sciences (SLU) and the meeting was financed by the Swedish Environmental Protection Agency. Meeting was attended by 50 experts from the following Parties to the Convention on Long-range Transboundary Air Pollution (CLRTAP): Armenia, Austria, Czech Republic, Finland, Germany, Ireland, Italy, Republic of Moldova, Norway, Poland, Russian Federation, Spain, Sweden, Switzerland, and United States of America. In addition a representative from South Africa attended the meeting. The Chair for Working Group on Effects (WGE), and the Chair for the CLRTAP Executive Body (EB) were also present. The list of participants is attached as Annex I.
2. Mr. L. Lundin, the Chair of ICP IM welcomed all participants and opened the Joint TF meeting.
3. Mr. K. Bishop, SLU, Sweden welcomed the participants to SLU. Mr. Bishop stated that monitoring and assessment are included in SLU's tasks.
4. Mr. B. Risinger, Swedish Environmental Protection Agency presented the active role of Sweden in the CLRTAP since the start of the Convention.
5. The joint Task Force adopted the agenda of the meeting (Annex II) including the full list of presentations. Presentations are available on page:  
[http://www.syke.fi/en-US/Research\\_Development/Ecosystem\\_services/Monitoring/Integrated\\_Monitoring/ICP\\_IM\\_Meetings/Joint\\_ICP\\_Waters\\_and\\_ICP\\_IM\\_Task\\_Force\\_2017\\_presentations](http://www.syke.fi/en-US/Research_Development/Ecosystem_services/Monitoring/Integrated_Monitoring/ICP_IM_Meetings/Joint_ICP_Waters_and_ICP_IM_Task_Force_2017_presentations)
6. Ms. I. Rabago, the Chair of WGE presented the latest news from CLRTAP, financial matters, the new WGE workplan 2018-2019, and the review of mandates for the ICPs. Ms. Rabago stressed the importance of the NEC directive Article 9 and Annex V (below) to all the ICPs. Additional information was provided by EB Chair Ms. A. Englyrd in a later presentation mentioning the joint harmonized network under WGE. She also stressed the need to contact national EC representatives.

*Article 9: Monitoring air pollution impacts*

1. Member States shall ensure the monitoring of negative impacts of air pollution upon ecosystems based on a network of monitoring sites that is representative of their freshwater, natural and semi-natural habitats and forest ecosystem types, taking a cost-effective and risk-based approach.

*Annex V: Optional indicators for monitoring air pollution impacts*

Link to the detailed presentation of Ms. Rabago: <http://www.syke.fi/download/noname/%7BF3691DBF-7530-4BEC-B4FA-16A6CEDE5C3E%7D/127755>

Link to the presentation of Ms. Engleryd ‘new NEC directive -implications for monitoring and international cooperation’:

<http://www.syke.fi/download/noname/%7BE773A78A-FF75-428C-8181-9A8D21E7C42B%7D/127765>

7. Mr. G. Skotte, the Chair of ICP Waters presented the current issues and the on-going work in the programme. A special mention was made of the Mercury report, work lead by ICP W with ICP IM participating. Mr. Skotte also highlighted the EU NEC directive and its legally binding obligation of the member states (MS) to monitor negative impacts of air pollution on ecosystems.

<http://www.syke.fi/download/noname/%7BB2933851-0513-4B44-B3C8-CC21B50B46E8%7D/127756>

8. Mr. L. Lundin, the Chair of ICP IM presented the current issues from ICP IM. These issues were covered in more detail in the separate ICP IM TF session.

<http://www.syke.fi/download/noname/%7BBCB38ED2-1171-41FC-9BC3-943D88A24EFB%7D/127757>

9. Ms. A. Engleryd, the Chair for the CLRTAP EB presented a short report on CLRTAP activities. Ms. Engleryd mentioned the 2016 report ‘Towards Cleaner Air’ and the fact that CLRTAP provides an established and well functioning science–policy network. A lot has been done, but there is more to be done. Ad hoc Policy Recommendation Group made 130 recommendations to be considered when updating the Long term strategy of CLRTAP. The main themes being: a) Addressing science and monitoring gaps, b) Addressing policy gaps, c) Maximizing the impact of the Protocols, d) Improving cooperation and outreach. Ms. Engleryd also mentioned the protocols: ‘The Heavy Metals Protocols (amended in 2012)’, ‘The Protocol on Persistent Organic Pollutants’ (amended in 2009), and ‘The Gothenburg Protocol’ (amended in 2012) and the good news that all three protocols may enter into force in 2018. She also welcomed everybody to get involved in the next ‘Saltsjöbaden meeting’ ‘? AP – Towards the 2030 agenda’ to be organized in Gothenburg in early 2018

<http://www.syke.fi/download/noname/%7B920CB0C0-DA56-4295-B8CC-BE2E25179A3E%7D/127761>

Detailed notes from the Joint TF meeting are available in the meeting report of ICP Waters, see

<http://www.icp-waters.no/2017/06/02/meeting-minutes-from-uppsala/>

*Below only notes from the short separate Task Force meeting of ICP IM are provided.*

## **II. Separate ICP IM Task Force Session**

10. Mr. Lundin, Chair of ICP IM, opened the separate ICP IM TF session attended by 24 participants.

11. Task Force approved the Minutes of the 24<sup>th</sup> ICP IM TF in Asker, Norway, 2016.

12. Mr. Lundin presented the Report from Chairman and ICP IM programme activities since the last Task Force meeting. For details, please see part three of the Explanatory notes:

<http://www.syke.fi/download/noname/%7B28C1098B-60E4-47B7-8067-F47167F41620%7D/127350>

and corresponding presentation:

<http://www.syke.fi/download/noname/%7BEB7D425F-519C-4755-B2E8-967BCBF13DAF%7D/127809>

Part of this information is also available in chapter 1 of the (draft) 26<sup>th</sup> Annual Report (AR) 2017.

13. Ms. S. Kleemola (ICP IM Programme Centre) described the status of data reporting to the Programme Centre. The following fifteen 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, and a site on Crimean peninsula.

Presently the number of ICP IM sites with on-going data submission, data for at least part of the ‘data period’ 2011–2015, is forty-three. Poland is preparing the data and will soon include one or more sites to the network. (Addition: Poland delivered data for two sites right after the TF meeting).

Altogether thirteen countries submitted data for the data year 2015, before the meeting.

The Programme Centre requested National Focal Points to submit 2016 data by 1<sup>st</sup> of December 2017, using same procedure as earlier. L. Lundin stressed the importance of reporting especially the data relevant to the on-going evaluations and scientific work.

14. The Task Force agreed on the workplan of ICP IM for 2017 and tentatively for 2018–2019, see Annex III for details.

In the second half of 2017 and in 2018, ICP Integrated Monitoring is going to contribute to or produce the following deliverables:

- (a) The 2017 joint progress report on the activities of the ICP Programmes, the Joint Task Force on the Health Aspects of Air Pollution and the JEG
- (b) Finalize the 26<sup>th</sup> Annual Report (covering activities in 2016-17)  
Draft Annual Report:  
<http://www.syke.fi/download/noname/%7B17C3C1F1-E361-4A1F-84A1-3F74F882C4FE%7D/127531>
  - 1) Report on connections between calculated CL exceedances and observed impacts of nitrogen (M. Holmberg et al.) (AR chapter 2)
  - 2) Report on concentrations of heavy metals in important forest ecosystem compartments (S. Åkerblom and L. Lundin) (AR chapter 3)
- (c) A report on mercury in the aquatic environment; Joint Report together with ICP Waters (in 2017) work lead by ICP Waters.

In addition the following scientific papers are planned for 2018:

- 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.
- Scientific paper on dynamic modelling on the impacts of future deposition scenarios on soil and water conditions in ICP IM catchments.

CLRTAP and WGE request updated Mandates for the ICPs and ICP IM should provide these mandates by the end of June 2017.

15. The Task Force approved in principle the draft Annual Report 2017 and invited NFPs to provide written comments by June 1<sup>st</sup> and to submit additional contributions (short National Reports) Annual Report by 15<sup>th</sup> of July 2017.

16. Mr. A. Bruder, Switzerland proposed that the Microbial decomposition data available in the ICP IM data base should be analysed. The Task Force approved the idea.

17. Mr T. Pecka, Poland kindly presented the invitation to hold the 2018 ICP IM Task Force meeting in Poland in May. The Task Force thanked Mr. Pecka and agreed that 2018 meeting could also be a Joint meeting with ICP Waters.

18. Mr. Lundin informed the Task Force that he will retire. The Task Force thanked Mr. Lundin for his work as the Chair of ICP IM Task Force and wished him all the best in the future.

19. Mr. U. Grandin, Ass. Professor at SLU presented himself. Mr. Grandin will co-chair ICP IM together with Mr. S. Valinia from Swedish EPA. The Task Force welcomed Mr. Grandin and Mr. Valinia.

20. The Task Force thanked the host country and the local organizers for the excellent arrangements.

## **Annex I: Participants at the joint ICP IM & ICP Waters Task Force meeting**

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## **Annex II: Agenda for the Joint ICP Waters & ICP Integrated Monitoring Task Force**

### **Tuesday 9 May**

#### **Session I: Introduction**

Opening words *Lars Lundin, SLU, Sweden and ICP IM*

Welcome to SLU, Sweden *Kevin Bishop, Sweden*

Ecosystem and water environments in Sweden *Björn Risinger, Swedish Environmental Protection Agency*

Adoption of the agenda *Lars Lundin, Sweden, ICP IM Chair*

General information about the meeting and excursion *Jens Fölster, SLU, Sweden*

WGE Common issues and reporting *Isaura Rabago, Spain, WGE Chair*

Current issues ICP Waters *Gunnar Skotte, Norway, ICP Waters Chair*

Current issues ICP IM *Lars Lundin, Sweden, ICP IM Chair*

#### **Session II: Acidification and recovery**

Potential impact of forest biomass harvest on the acidity of Swedish surface waters *Stefan Löfgren, Sverige*

Trends in S and N budgets of Swiss high-altitude mountain lakes *Steingruber Sandra, Switzerland*

Air and Surface Water Quality Monitoring System in Moldova *Natalia Zgircu, Moldova.*

Report on activities in CLRTAP, Anna Engleryd, Sweden, EB Chair

The regional assessment on surface water acidification status *Kari Austnes, Norway, ICP Waters Programme Centre*

A statistical method for detecting artefacts in time series. *Jens Fölster, Sweden*

DOC trends in Europe and North America, *Heleen de Wit, Norway, ICP Waters Programme Centre*

NEC directive - information and discussion on implication for national monitoring and international cooperation *Anna Engleryd, Sweden, EB Chair*

Integrated Monitoring Network in Poland - current status and future perspectives. *Tomasz Pecka, Poland*

## Wednesday 10 May

### Session III: Biology responses to air pollution

Species sensitivity to acidification in highly endemic regions of South Africa *Londiwe M Khuzwayo, South Africa*

Nitrogen deposition impacts in the Austrian IM site Zöbelboden – long-term observations and future research directions *Ika Djukic, Austria*

Gas supersaturation may cause effects on the biota comparable to acidification *Gaute Velle, Norway*

Co-analysis of coniferous forest state parameters and atmospheric deposition data series obtained by ICP IM and EMEP at European part of Russia *Ekaterina Pozdnyakova, Russia*

Recovery of benthic algal assemblages from acidification: how long does it take, and is there a link to eutrophication? *Jakub Hruska, Czech Republic*

### Session IV: Critical loads/Dynamic modelling

Soil modelling study VSD+ *Maria Holmberg, Finland, ICP IM Programme Centre*

Acidification and Critical Loads of Surface Waters: European Territory of Russia and Western Siberia *Marina Dinu/ Tatyana Moiseenko, Russia*

### Excursion in urban environment

Visit to the Botanical garden of Uppsala

In search for Carl von Linné – a guided tour through the historical centre of Uppsala

*Conference dinner at the Linnean conservatory*

## Thursday 11 May

### Session IV continues: Critical loads/Dynamic modelling

Relationships between critical load exceedances and empirical impact indicators - Update of N assessment *Jussi Vuorenmaa, Finland, ICP IM Programme Centre*

### Session V: Issues common for both ICPs

Chemical intercomparison *Øyvind Garmo, Norway, ICP Waters Programme Centre*

### Separate ICP Waters and ICP IM TF meetings

Formal issues including Workplans of each ICP

Conclusions and closing of meeting

### Annex III: ICP IM Workplan for 2017 and tentatively for 2018–2019

<b>Activity</b>	<b>Time-frame</b>	<b>Responsible</b>
<b>ICP IM work plan 2017</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 by 1 <sup>st</sup> June, National Reports by 15 July)	Programme Centre NFP contributions
<b>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</b>	Task Force and WGE 2018	Programme Centre, in cooperation with NFPs

<b>conditions</b>		
<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