

European Union / United Nations Economic Commission for Europe International Co-operative

Programme on Assessment and Monitoring of Air Pollution Effects on Forests

and

FutMon Life+ program [Contract n° LIFE07 ENV/D/000218]

13th Meeting of the Expert Panel on Deposition

(19 February 2010, Tampere, Finland)

Minutes of the meeting



Agenda:

8:00 - 10:00 The test of harmonized samplers being carried out under FutMon (Daniel Žlindra)

Sampling and non-sampling errors (Aldo Marchetto)

10:00 – 10:20 Coffee break

10:20 – 11:00 Other studies, e. g. on temperature effect (Karin Hansen, Peter Waldner)

11:00 – 11:45 QA/QC measures in QA/QC Labs sub-manual (Anna Kowalska)
QA/QC issues, including changes to the deposition sub-manual (Daniel Žlindra)

11:45 – 12:00 Other business & closing of the meeting (Daniel Žlindra)

(all presentations will be accessible in the FutMon web page)

1. Presentation on state-of-the-art of C1-Dep-22(SI) action was given by Daniel Zlindra (summarized activities and field/sampling protocols according to the “Guidelines” were sent by e-mail by Daniel Zlindra). There was a problem with not received e-mails; Daniel will make additional google e-mail account in order to avoid server’s security fire-walls.

2. Presentation of C1-Dep-22(SI) activities in Slovenia by Daniel. Preparation of the harmonized samplers (installation, bird ring, mesh ...), field set-up (sampling design),

sampling procedures and sampling, examples from other countries of the set-up samplers in the plot. Not all countries have purchased samplers from Slovenia, and do therefore not take part. Countries that do not take part, please contact PCC in order to discuss this.

3. Presentation of the statistical tools and evaluating of the action results C1-Dep-22(SI). The Deming regression, geometric mean regression and the Altman-Bland plots were presented. The statistical methods were so far used only on the Slovenian data.

- Testing of time series analysis combined with RM ANOVA;
- Performing more elaborate comparison data analysis approaches – only possible with larger dataset;
- Tentatively: develop general R package for methods comparison studies

It was agreed that an additional meeting will be organized in the beginning of 2011, where all statistical and other approaches and draft analysis of results will be discussed. The meeting will take place in Slovenia. C.–G. Schimming proposed to write hypotheses which will be worked on. They will be included in the report of this C1 action. On the statistical methods Daniel will discuss with Nicholas Clarke who has ideas for this.

A. Marchetto presented a test where samples, stored in two ways were analysed. One parallel was analysed immediately after the catching of precipitation and the other after the two weeks, storage at 4 respectively 40°C in the oven. There were no significant differences in N compounds.

Needed information for SFI (Daniel by mail daniel.zlindra@gozdis.si and daniel.zlindra@gmail.com) **about C1-Dep-22(SI) action:**

- **as soon as possible:** scheme of the plot with the marks where the national and harmonized samplers are placed. Daniel will send a mail on the exact details needed:
- after the end of sampling but not after the **31. October 2010:**
 - **2 files**, for each year separately, with the information about the plot, in the same form as .PLD file. The name of the file should be as follows: **Associated Beneficiary code_year.PLH** (- e.g. 22_2009.PLH for Slovenia)
 - **2 files**, with all mandatory parameters analysed. The form is the same as .DEM file. The name of the file should be as follows: **AB code_year.DEH.**

All four files should be sent to coordinating beneficiary's data base (contact person O. Granke), where all data will be checked and roughly evaluated. From there they will be sent to Associated Beneficiary 22 (Slovenia) where they will be statistically evaluated. The form of the files .PLH and .DEH are the same as .PLD and .DEM, but the extension is different in order not to influence/interfere on regular submission data. The data should be separated for each year (2 files .PLH and 2 files .DEH).

- after the end of sampling (**end of August 2010 at the latest**) the .xls file should be sent to Associated Beneficiary 22 (Slovenia) with all separate quantities measured during the sampling (2009 and 2010 together). The template file will be accessible in future months in the FutMon web page.
- DAR-Q-H should be sent (**end of August 2010**) to Associated Beneficiary 22 (Slovenia) and Coordinating Beneficiary (vTI) with all the sampling details. The template will also be accessible in the FutMon web page in coming months.

4. Aldo Marchetto presented a project where sampling and non-sampling errors in throughfall sampling were explained and discussed. No significant differences were noticed between the national and harmonized samplers in chemical composition of the bulk and throughfall samples. Also, no greater improvement was achieved with the increasing number of samplers (e.g. from 9 to 16).

5. Karin Hansen presented the effects of the temperatures of the samples, the critical temperatures and pH's where nitrification bacteria are active. All countries that earlier have performed some kind of temperature measurements in throughfall samples, please, contact Karin with the results. Karin suggested a way of cooling samples in the plot by external water reservoir where water evaporating cools the container with the sample solution in it. Karin presented a small Danish field experiment to outline the effect of the sampling method (soil covered sampler, sampler hanging freely in air, sampler self-cooled by water) using the Slovenian samplers and with analysis of only N compounds to take place during the summer of 2010. If any other countries are interesting in taking part, please contact Karin. We furthermore discussed the filters (mesh size and form). Karin suggested a mesh plate, placed just above the slope part of the funnel.

6. Peter Waldner presented the comparison of two types of harmonized samplers (container in the air and stored in the soil pit) and two types of national samplers (both in the air, but first

with the ventilating holes and the other without). The temperatures were measured and were quite high for some samplers (hanging in the air and hanging in the air with ventilating holes in the tube), but apparently the chemistry was not so different between the solutions of different samplers. The conclusions were that in general no significant differences were noticed, except in DOC between different installations of the harmonized containers and TN and pH between the different installations of national samplers.

7. Ana Kowalska presented the QA/QC in Laboratories manual. Ana exposed use of reference materials and control charts. Followed the checks of analytical results for water samples and, very important, participation in ring tests.

8. New form of the deposition sub-manual of the ICP-Forests was discussed (changes in the structure, but not in the content). In coming week every expert is invited to send comments to Nicholas or Daniel, so that they could be included in the new version of the manual, revision 2010. It is suggested that the chapter, which is missing (5.2.2.1 –Plausibility limits), we can fill in with the plausibility limits which are used for data validation at the point of submission to the data base.

9. Other business Daniel informed the participants to participate at water ring test (in progress).

A question from Oliver Granke was discussed on how to handle data for periods, which are not entirely made in the same year. We agreed that the submission stays at is, that means, according to periods, no matter if some days are in the next year. Problem with annual (not period) deposits will be solved appropriate in further steps of calculation.

Daniel announced that Nicholas (Norway) wants to withdraw from the EPD chairman position. Karin Hansen (Denmark) was asked if she would take over and she agreed. Experts of the EPD supported her. Therefore, she will be proposed to the Task Force to take over the EPD chairmanship.

At 12:00 the EPD meeting was at its end.

Daniel Žlindra, vice-chairman of the EPD