

## Meeting of the Programme Co-ordinating Group (PCG) of ICP Forests

Federal Ministry of Food and Agriculture, Wilhelmstr. 54, 10117 Berlin  
13–14 November 2018

### Minutes

#### Opening

- 1 On behalf of the German Ministry of Food and Agriculture, Ms Strich opened the meeting and welcomed all participants. Mr Ferretti then chaired the meeting on day 1, Mr Bolte on day 2.
- 2 The agenda was adopted.
- 3 Mr Bolte reported on the status of the nomination of the new PCC head. There are still negotiations with the selected candidate and a decision is expected by the end of November 2018. The new head will start his new position in February or March 2019 at the earliest.

#### Further development of ICP Forests

- 4 Mr Ferretti reported on the **countries' responses to the proposal** at the last Task Force meeting (TFM) in May 2018 on whether the ICP Forests Chair or the Programme Co-ordinating Centre (PCC) can be approached by potential partners for starting initiatives and participate in project proposals or consortia. Spain had requested further information, Switzerland had rejected the proposal. There are no formal rules of procedure installed by the UNECE for their subsidiary bodies (e.g., WGE) on how to proceed if there is no unanimous agreement<sup>1</sup>. Ms Schütze, Vice-Chair of the WGE, suggested contacting the respective country and making every effort to reach a decision by consensus. Mr Ferretti will contact Ms Sabine Augustin from the Swiss BAFU and will provide feedback as soon as possible.
- 5 The PCG agreed to start preparing for the next extensive revision of the ICP Forests Manual in 2020.
- 6 Mr Nicolas (NFC France) had been invited to give a presentation on “**Level II monitoring will face practical challenges within the next decades. How to adapt it? What information from NFCs will be needed?**”. He had identified practical challenges for forest monitoring on Level II plots, for example, forest regeneration, increasing heterogeneity, bias, and forest management, and proposed a course of action to prepare common guidelines for the countries participating in ICP Forests on how to respond to those challenges. He presented a table prepared for designing a questionnaire to collect information from the NFCs – in addition to parameters already defined in the database – with the aim to share practical experiences and collectively address those challenges. The PCG discussed the challenges and design of the questionnaire and agreed to give individual written feedback by 14 December 2018. Mr Nicolas agreed to initiate a working group comprising the members of the Programme Co-ordinating Group and to present the developed questionnaire at the next TFM for discussion.

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<sup>1</sup>Rule 21+29 [https://www.unece.org/fileadmin/DAM/env/documents/2016/AIR/Decision2010\\_9and2013\\_1.pdf](https://www.unece.org/fileadmin/DAM/env/documents/2016/AIR/Decision2010_9and2013_1.pdf)

- 7 Mr Verstraeten reported that the EP Deposition had received complaints from countries whose **plots were missing in the maps of the 2018 Technical Report**. They had been excluded because their data did not meet some of the following criteria: participation in mandatory Working Ring Test (as stated in the manual), all mandatory parameters reported, measured conductivity matches calculated conductivity for >50% of samples (not mandatory yet), ion balance OK for >50% of samples. The PCG made several suggestions to avoid leaving out the data of whole countries and to find a balance between quality assurance and country representation, e.g., by (1) adding a statement in the TR which explains the selection procedure, (2) adding a graph showing all plots for which data were submitted (e.g., with categories for the different reasons why plots could not be selected, (3) giving immediate feedback to countries if plots are missing, (4) including data but mentioning that data may not be in line with standards, (5) using shading in maps for plots not meeting all of the above criteria. The issue will be further discussed at the next EP Deposition meeting in Brussels in March 2019.
- 8 After discussing the **need for submission of mandatory parameters** for sound analyses, Ms Sanders agreed to prepare an overview of mandatory variables which are not yet fully submitted. She asked the PCG to discuss these and add other important parameters to that list for discussion at the next EP meeting. She also asked to again encourage participating countries to submit all mandatory data.
- 9 Mr Waldner (Co-chair EP Deposition) had sent a suggestion on how to initiate a comprehensive evaluation of the effect of this year's drought. It was suggested not to push for early data submission but concentrate on good planning first. The PCG agreed on a coordinated initiative and the Scientific Committee will prepare an outline based on suggestions given by the PCG.

#### News from the data infrastructure

- 10 Mr Kirchner presented new features and future developments of the data infrastructure. He presented the problem of missing data in the system instalment survey for the preparation of a freely available dataset, which had been agreed on by the TF during their last meeting, including general plot descriptions, metadata on which attributes are available, and aggregated data. The PCG agreed to send a request to all countries as prepared by the PCC to ask for submission of missing data in the System Instalment file.
- 11 All surveys with all their forms can now be downloaded as small-size ZIP archives including additional information such as publications, documentations, and pictures for clarification of certain aspects of the data in the Data Accompanying Reports.
- 12 With regard to differing authorships of published datasets and data papers, the PCG agreed to change the IPPP version as presented at the last TFM. The new paragraph reads: "The collection and pre-processing of used monitoring data is considered to be a major contribution to a ~~data-paper~~ dataset. In consequence each data contributing party (i.e. PCC, NFCs) of the ICP Forests Network should be invited to name one co-author of the ~~data-paper~~ published dataset." Mr Kirchner also suggested the following proper citation: "Dataset [DOI] published by XXX et al. further described in XXX et al." These minor changes will be proposed for adoption at the next Task Force meeting in June 2019.
- 13 Mr Kirchner also presented his efforts to harmonize the structure of forms during the upload and the download of data (e.g. different attribute names, merged forms) and how he handles changes over time (e.g. new attributes, changed keys and structure, moved content). He also presented suggestions for optimizing the data model to avoid redundancies and data anomalies. All changes will be discussed with the EPs.

- 14 Mr Kirchner presented his further course of action. For each survey separately and in collaboration with the respective EP chair, he will define a unique structure which will include the restructuring of tables and data transformation. He will then harmonize the upload and download by renaming attributes and merging forms and optimize the general data structure, including the coordinate problem, aggregated/redundant information, and identification of missing information.
- 15 The following action points from the TFM are in progress: development of a new website, harmonization of eLTER plot descriptions, revision of the data model to avoid redundancies of coordinates, and the definition of a unique structure of forms over time.

#### New developments from the EPs and committees

- 16 Mr Levanič (Chair **EP Growth**) specified issues as discussed at the last EP meeting in Zvolen with regard to the database, height measurements and volume calculations, changes on Level II plots, preparation of a data paper, and suggested changes to the Manual. He also gave an overview of the 2014/15 and 2019/20 tree growth surveys.
- 17 Mr Raspe (Chair **EP Meteorology, Phenology, and LAI**) gave a summary of the last EP meeting in Zvolen. He presented results of the phenological field course and from meeting discussions. Resulting future tasks include: error definitions (meteo), instructions for meteo measurements inside the stands, improvement of pheno data quality, photo intercalibration course/online-database, reorganization of LAI forms, proposal to the Task Force to make periodical LAI measurements mandatory for all Level II plots, speed up data submission and evaluation of that year's drought effect in central Europe. The call for hourly meteo data had been very successful and the data is available but not yet included in the database.
- 18 Mr De Vos (Chair **EP Soil and Soil Solution**) presented updates of the Manual planned for 2021 and informed about the completion of the 9<sup>th</sup> Solid Soil Ringtest. The 9<sup>th</sup> Soil Solution and Deposition Ringtest will be held in 2019. The merging of the first (2002) and second (2011, under BioSoil) Level I soil database is planned to be completed by the end of the year although several problems/needs during the integration had been detected. The work on an aggregated forest soil condition database for Level II is still ongoing. The aggregated forest soil solution database for Level II needs further documentation before it can be made available through the ICP Forests database. However, no resources are currently available.
- 19 Mr Fürst (Chair **WG QA/QC in Laboratories**) reported on the status of the latest three ringtests whose results will be discussed at the next EP meeting in Brussels. The 9<sup>th</sup> Soil Ringtest 2018/19 is already finished; the 21<sup>th</sup> Needle/Leaf Ringtest 2018/19 is ongoing and experiences of the evaluation of new elements (As, Cr, Co, Hg, Ni) will be shared at the next EP meeting; the 9<sup>th</sup> Deposition/Soil Solution Ringtest is expected to be finished soon and experiences with the evaluation of Fe, Mn, and Al will be also shared as well as evaluation limits for HM Zn, Cd, Cu, Cr, Co, Ni, and Pb fixed at the next EP meeting. The 7<sup>th</sup> Meeting of the Heads of the Laboratories will be held in Braşov, Romania, in September/October 2019. These meetings are generally well received because of their value also for the labs.
- 20 Mr Verstraeten (Chair **EP Deposition**) presented project updates, scientific publications, and conference contributions and presentations. The EP will ask the countries for resubmission of their deposition data in cooperation with Mr Kirchner (PCC) before the next EP meeting in March.
- 21 Mr Potočić (Chair **EP Crown Condition and Damage Causes**) presented results and changes to the crown condition chapter in the TR 2018. Because of the unsatisfactory number of countries participating in the last Photo ICC, he will inquire at the next EP meeting why active participation has become lower. He presented new scientific papers and projects. The results

of the questionnaire from 20 responding NFCs on the details of Level I crown condition monitoring practices will be shared at the next EP meeting. The Central and Northern ICC may be organized by Germany in 2019; countries for organizing the Mediterranean ICC were approached. Moldova expressed interest in organizing an ICP Forests meeting, e.g. an ICC with support by Romania.

- 22 Mr Schaub (Chair **EP Ambient Air Quality**) reported on the running AAQ initiatives PRO3FILE, ozone exposures-symptom relationships, ICP Forests Brief No. 3, VibEuroNet, Intercalibration Courses, OSVALD, recent scientific publications in collaboration also with Chinese scientists and presented potential contributions for the next 2019 Technical Report. Because of his new role as Chair of the ICP Forests Scientific Committee, he is planning to resign as Chair of the EP AAQ. So far, no new chair has been appointed; one option may be to merge the EP AAQ with the EP Deposition and EP Crown Condition and Damage Causes.
- 23 Mr Rautio (EP **Foliage and Litterfall**) reported that countries have started to store the 2017 foliar data to the database and that there are quite many requests for data, although it is not clear how many studies eventually use them in their publications. He reported on the participation status (18 countries at present) of the Europe-wide study on mercury in foliage by Lena Wohlgemuth from the University of Basel. He then showed an overview by Liisa Ukonmaanaho on the litterfall data in the database to which 24 countries have contributed for 1-18 years and listed latest publications published and in preparation using litterfall data. Ms Ukonmaanaho is chairing session C8b on Sustainable management of forest soils for timber and bioenergy at the XXV IUFRO World Conference in Curitiba, Brazil, in 2019. After many plots have recently been affected by management, clearcuts, bark beetle infestations, he would like to discuss at the next EP meeting at what age foliar sampling and the collection of litterfall should begin on smaller trees/saplings and whether the Manual needs to be updated to monitor the whole management cycle of stands.

#### Activities and agenda of the Scientific Committee

- 24 Mr Schaub (Chair Scientific Committee) presented the results from the preceding meeting of the Scientific Committee. With regard to addressing the **2018 drought effects**, the Scientific Committee had decided not to push for early data submission already the following year, but to support national initiatives (e.g. K. Meusburger, P. Waldner), integrate national and international initiatives, and also study not only drought effects but extreme events in general and make this topic a focus of the next ICP Forests Scientific Conference 2019 in Ankara. They decided to select drought indicators for each EP and discuss methodologies and future challenges at the next combined EP meeting in Brussels.
- 25 The EP Soil and Soil Solution will promote a **2020-25 soil survey** at the next TFM and ask countries for their support.
- 26 Mr Schaub presented details of the planning of the next Scientific Conference in Ankara and the XXV IUFRO World Congress and the Scientific Committee working paper, which includes the committee's history, organization, and strategic aims. The Scientific Committee also agreed on promoting new technologies/methodologies such as remote sensing and on assessing their potential for ICP Forests, potentially in cooperation with external experts for which they ask for suggestions. The Scientific Committee sees an increasing trend in publications using ICP Forests data. They will propose a concept/strategy before the next TFM to further increase the program's visibility. They invited one representative from each EP to participate in the Scientific Committee.
- 27 For the next ICP Forests Scientific Conference, Mr Schaub, Mr Vesterdal, Ms Sanders, Mr Fleck, Mr Verstraeten, Mr De Vos or Ms Cools, Mr Rautio or Ms Ukonmaanaho, and the PCC

have agreed to be on the conference panel and conference panel members have asked to be involved more substantially in the selection of speakers compared to last year. For potential keynotes at the next SC, the following names were suggested: Frank Veroustraete, Svein Solberg, David Coomes, Josep Peñuelas, Robert Dewulf, Ute Sass-Klaassen, Nate McDowell.

- 28 A one-day workshop on “Assessing and estimating ozone impacts on forest vegetation - opportunities for improved co-operation” will be held with 3-4 experts each from **ICP Vegetation and ICP Forests** to discuss differences in the results from models/controlled experiments (ICP Veg) and long-term monitoring (ICP Forests). The workshop will probably be held at WSL in Birmensdorf; the date has not yet been fixed. M. Cailleret, M. Ferretti, M. Häni, M. Schaub (all WSL, Switzerland), E. Gottardini (Research and Innovation Centre, Fondazione Edmund Mach, Italy) had been asked by the ICP Forests chair to attend that meeting and represent ICP Forests.

### Future meetings

- 29 The 35<sup>th</sup> Task Force Meeting will be held in Ankara, Turkey, 10-14 June 2019. After consultation with the local organizers, the meeting will be structured as follows: Mo reception, Tu excursion, We SC, Th SC and/or TFM, Fr TFM.
- 30 Mr De Vos presented the schedule of the next combined EP Meeting organized by the Research Institute for Nature and Forest INBO in Brussels, 25-29 March 2019. The excursion will be full-day on Friday and will include the visit of a Level II plot with an ICOS tower and nearby insect outbreak. He listed items to be discussed by all EPs during the meeting: submissions on drought and extreme weather events to Scientific Conference 2019, potential evaluations of drought, nominating one representative of each EP for Scientific Committee, new innovative techniques and methods to consider by Scientific Committee, database issues, discuss and contribute to management of Level II monitoring plots in the next decades, Manual updates.
- 31 Mr Ferretti presented the status of the joint workshop with EANET. Mr Hiroyuki Sase from the Asia Center for Air Pollution Research in Niigata, Japan, representing the Network Center for EANET is involved in organizing a joint session at the XXV IUFRO World Congress in Brazil between the two networks. Mr Ferretti had been invited to join the scientific committee of the Acid Deposition 2020 conference.

### Reporting

- 32 Ms Michel presented an overview of the 2018 reports the Programme Co-ordinating Centre had issued or contributed to (WGE Progress Report, WGE Joint Progress Report, 2018-2019 Workplan, new Mandate under the Convention, Technical Report 2018, Executive Report 2018, ICP Forests Briefs 1-3) and an outlook on 2019 reports (WGE Progress Report, WGE Joint Progress Report, Workplan 2020/21, Technical Report 2019, ICP Forests Brief No 4 on foliar phosphorus, Forest Europe – State of Europe’s Forests 2020 report). The PCC will not change the current reporting before the nomination of a new PCC head. Suggestions by the PCG for next ICP Forests Briefs included: biodiversity, mercury, and in general looking for collaboration also outside the community. With regard to the SoEF 2020 Report by Forest Europe, it is suggested that PCC will follow any developments closely in future to be able to take part in discussions of potential changes of indicators.
- 33 Mr Ferretti had been nominated to represent ICP Forests in the expert subgroup on ecosystem monitoring under the NECD until the new PCC head will be available to take over. Mr Ferretti will attend their next workshop on November 30, 2018 and report about it.

### Co-operation: LTER, eLTER RI and ICP Forests, how to co-operate?

- 34 Mr De Vos informed about the co-operation with LTER-Europe. Of the 1050 sites worldwide, 699 are situated in European countries with 44 ICP Forests Level I sites, 83 ICP Forests Level II sites, 7 ICP IM sites, 1 ICP Vegetation site, and 15 ICP Waters sites according to the DEIMS database<sup>2</sup>. He showed the eLTER RI timeline plan from design in 2015 to operation starting in 2026.
- 35 Ms Cools was approved by the PCG as contact person for LTER-Europe for discussion in eLTER preparatory phases to promote the ICP Forests Manual when protocols for long-term ecosystem research are discussed. In February, she will launch a questionnaire among NFCs to validate the number of plots that are both ICP Forests and LTER plots, check for willingness to follow ICP Forests methods on other LTER sites, check whether countries will adhere to ICP Forests methods if eLTER RI may decide on different approaches, and whether countries would perform parallel measurements of different methods. The PCC will distribute the questionnaire among the PCG and after their discussion to the NFCs.
- 36 It is suggested to ask countries to add their Level II plots to the DEIMS database. Plots can be registered very easily according to Mr Kirchner but the registration may take some time as quite a lot of plot information is required.
- 37 Mr Kirchner will meet with database managers from LTER in Vienna the following spring and discuss the harmonization of data of both networks.

### Closing of the meeting

- 38 Mr Ferretti thanked Ms Strich and the PCC for organizing the meeting and social dinner and closed the meeting.

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<sup>2</sup> [www.deims.org](http://www.deims.org)



## Action Points

No	What	Who	When	Status
1	Chair or PCC starting initiatives and participating in project proposals or consortia: Contact Ms Augustin from the Swiss BAFU and try to reach consensus	Mr Ferretti	ASAP	Ongoing
2	Start preparing for the next extensive revision of the Manual in 2020	All EP chairs	ASAP	Ongoing
3	Give individual written feedback on questionnaire on long-term monitoring challenges by 14 Dec. 2018	PCG	By 14 Dec. 2018	Done
4	Initiate a working group and present the developed questionnaire on long-term monitoring challenges at the next TFM for discussion	Mr Nicolas	ASAP	Ongoing
5	Discuss on how to deal with missing plots in Technical Reports	EP Deposition	At next EP Deposition meeting, March 2019	In preparation
6	Prepare a list of mandatory variables which are not yet submitted fully	Ms Sanders	ASAP	Done
7	Discuss current mandatory variables at next EP meetings; encourage participating countries to submit all mandatory data	All EP chairs	Before next EP meeting	Ongoing
8	Prepare an outline with regard to comprehensive drought evaluations	Scientific Committee	Before next EP meeting	Ongoing
9	Ask for submission of missing data in the System Instalment file	PCC	ASAP	In preparation
10	Propose minor changes of IPPP for adoption at TFM 2019	PCC	At next TFM	In preparation
11	Propose concept/strategy	Scientific Committee	Before next TFM	In preparation
12	Report on workshop of expert subgroup on ecosystem monitoring under the NECD	Mr Ferretti	After workshop on 30 Nov 2018	In preparation
13	Launch questionnaire among NFCs on number and methods of ICP Forests and LTER plots	Ms Cools	Feb. 2019	In preparation
14	Name representative to be a member of the Scientific Committee	All EP chairs	ASAP	Ongoing

## Agenda

<b>13 Nov. 2016, Tuesday</b>	Chairperson Day 1: M. Ferretti Symbols: <>: approx. time foreseen; (xx): item lead; >: <i>contribution from</i>
Start: 13:00	<b>Opening &lt;0:10&gt;</b> (A. Bolte, M. Ferretti) <ul style="list-style-type: none"> <li>- Adoption of agenda</li> <li>- Status of nomination of new PCC head</li> </ul>
	<b>Further development of the ICP Forests programme</b>
	(i) Results of the inquiry on the procedure to respond to contact for international projects and how to proceed <b>&lt;0:15&gt;</b> ; >M. Ferretti, PCC
	(ii) Manual revision <b>&lt;0:15&gt;</b> (M. Ferretti); >M. Ferretti, all EPs
	(iii) Level II monitoring will face practical challenges in the next decades. How to adapt the ICP Forests manual? What information from the NFCs will be needed for this? <b>&lt;1:00&gt;</b> ; >M. Nicolas, all EPs
	(iv) Data and evaluation issues <b>&lt;0:30&gt;</b> <ul style="list-style-type: none"> <li>- How to inform countries about quality standards for use of their data in reports? &gt; A. Verstraeten</li> <li>- Discussion on data consistency: Mandatory/obligatory parameters &gt;T. Sanders, all EPs</li> <li>- Evaluation of the effect of this year's drought and request for data submission by EP chairs. &gt;M. Ferretti</li> </ul>
15:00-15:30	<b>Coffee break &lt;0:30&gt;</b>
	(v) News from the data infrastructure <b>&lt;0:45&gt;</b> ; >T. Kirchner
	(vi) New developments from the EPs and committees <b>&lt;1:45&gt;</b> ; >EP chairs
End: 18:00	
19:30	<b>Social Dinner</b>
<b>14 Nov. 2016, Wednesday</b>	Chairperson Day 2: A. Bolte Symbols: <>: approx. time foreseen; (xx): item lead; >: <i>contribution from</i>
Start: 8:30	<b>Activities and agenda of the Scientific Committee &lt;1:00&gt;</b> (M. Schaub)
	<b>Future meetings &lt;0:45&gt;</b> <ul style="list-style-type: none"> <li>(i) ICP Forests meetings <ul style="list-style-type: none"> <li>- 35<sup>th</sup> Task Force Meeting 2019: Ankara; &gt;M. Ferretti</li> <li>- 8<sup>th</sup> Scientific Conference 2019: Ankara; &gt;M. Schaub</li> <li>- Joint EP Meeting 2019, 25-29 March 2019, Brussels: Crown Condition, Soil &amp; Soil Solution, Foliar and Litterfall, Deposition, QA/QC in lab. &gt;B. De Vos, respective EP chairpersons</li> </ul> </li> <li>(ii) Related meetings <ul style="list-style-type: none"> <li>- IUFRO; EANET; ICP Vegetation; Joint ICP Vegetation-ICP Forests. &gt; L. Vesterdal, M. Ferretti, M. Schaub</li> </ul> </li> </ul>
In between: 10:15-10:45	<b>Coffee break &lt;0:30&gt;</b>
	<b>Reporting &lt;0:30&gt;</b> <ul style="list-style-type: none"> <li>- Status of WGE reporting, TR, ER, briefs. &gt;A. Michel</li> <li>- SOeF2020 reporting indicators: 2.1 deposition, 2.2 soil, 2.3 defoliation. &gt;M. Ferretti, EP chairs</li> <li>- ICP Forests LII and NEC reporting: Follow up by ICP Forests. &gt;M. Ferretti</li> </ul>
	<b>Co-operation: LTER, eLTER RI and ICP Forests, how to co-operate? &lt;0:15&gt;</b> (M. Ferretti) > all
	<b>AOB &lt;1:30&gt;</b>
End: 13:00	<b>Closing of the PCG Meeting</b> (A. Bolte; M. Ferretti)



## List of participants

No	Last name	First name	Position	Institution	Country
1	Bolte	Andreas		Thünen Institute of Forest Ecosystems	DE
2	De Vos	Bruno	EP Soil and Soil Solution, Chair	Research Institute for Nature and Forest (INBO)	BE
3	Ferretti	Marco	Chair of ICP Forests	WSL Swiss Federal Institute for Forests, Snow and Landscape Research	CH
4	Fleck	Stefan	EP Meteorology, Phenology, LAI, Co-chair	Thünen-Institut für Waldökosysteme	DE
5	Fürst	Alfred	WG QA/QC in Laboratories, Chair	Austrian Federal Research Centre for Forests	AT
6	Gottardini	Elena	EP AAQ, Co-chair	Fondazione Edmund Mach	IT
7	Kirchner	Till	Programme Co-ordinating Centre (PCC)	Thünen-Institut für Waldökosysteme	DE
8	Levanič	Tom	EP Growth, Chair	Slovenian Forestry Institute	SI
9	Michel	Alexa	Programme Co-ordinating Centre (PCC)	Thünen-Institut für Waldökosysteme	DE
10	Nicolas	Manuel	Representative Level II, NFC France	Office National des Forêts	FR
11	Potočić	Nenad	EP Crown Condition and Damage Causes, Chair	Croatian Forest Research Institute	HR
12	Prescher	Anne-Katrin	Programme Co-ordinating Centre (PCC)	Thünen-Institut für Waldökosysteme	DE
13	Raspe	Stephan	EP Meteorology, Phenology, LAI, Chair	Bayerische Landesanstalt für Wald und Forstwirtschaft (LWF)	DE
14	Rautio	Pasi	EP Foliage and Litterfall, Chair	Natural Resources Institute Finland	FI
15	Sanders	Tanja	Programme Co-ordinating Centre (PCC)	Thünen-Institut für Waldökosysteme	DE
16	Schaub	Marcus	EP AAQ, Chair	Swiss Federal Research Institute WSL	CH
17	Schütze	Gudrun	WGE Vice-Chair	German Environment Agency	DE
18	Strich	Sigrid	Representative of ICP Forests Lead Country	Federal Ministry of Food and Agriculture	DE
19	Timmermann	Volkmar	EP Crown Condition and Damage Causes, Co-chair	Norwegian Institute of Bioeconomy Research (NIBIO)	NO
20	Verstraeten	Arne	EP Deposition, Chair	Research Institute for Nature and Forest (INBO)	BE
21	Vesterdal	Lars	Scientific Committee, Co-chair	University of Copenhagen	DK