

ICP Forests/EU ad hoc Expert Meeting on Phenological Observations in the
Pan-European Intensive Monitoring Programme (Level II)
"Phenology - Level II", Punkaharju, Finland, 21 - 23 September 1997

Preliminary minutes

1. The ad hoc expert meeting on phenology was held from 21 to 23 September 1997 in Punkaharju in southeastern Finland and hosted by the Finnish Forest Research Institute (METLA). It was attended by 28 experts from 15 European countries (Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Greece, Hungary, Italy, The Netherlands, Norway, Spain, Switzerland, Russia and United Kingdom), including representatives of EC, FIMCI, the Lead Country of ICP Forests and the expert panel on Crown Condition Assessment (see list of participants, annex 1).
2. The agenda (see annex 2) was adopted.
3. The 13th Task Force meeting (Farnham, 31 May to 4 June 1997) mandated the ad hoc group to further investigate phenological observations at Level II plots and to work out a draft sub-manual to be presented at the 14th Task Force Meeting of ICP Forests (May 1998). Moreover, the recommendations of the expert group will be considered for the future implementation of the EU Scheme on the Protection of Forests against Atmospheric Pollution.
4. The Finnish Forest Research Institute demonstrated its monitoring activities at the Level II plot of Punkaharju, part of the Finnish Level II programme and reported on recent research carried out at the Punkaharju Research Station.
5. Mrs. Astrid Vassela (CH), Mr. Eero Kubin (SF) and Mr. Koen Kramer (NL) presented results on phenological observations or modelling projects (annex 3).
6. In addition, the representatives of Austria, Belgium, Czech Republic, Denmark, Finland, Germany, Greece, Italy, Norway, Switzerland and United Kingdom presented information on phenological studies in their countries. The presented papers are included in annex 3.
7. Mr. Teja Preuhsler, chairman of the ad hoc expert meeting, introduced the results of the questionnaires circulated to all National Focal Centres. In total 17 countries responded. According to this information, at present, intensive phenological observations (developmental stages) are carried out on 156 Level II plots in 6 countries (from 227 existing Level II plots in these 6 countries), biotic and abiotic damaging events are already recorded on 226 Level II plots in 11 countries (from 315 existing Level II plots in these 11 countries). However, these observations within the Level II programme started only in the past two years, although a long experience within other networks exists in many countries. An overview on the results of the questionnaire is attached as annex 4.

8. Practical aspects on phenological observations were discussed during a field trip in the Punkaharju area. Important questions related to different phenological behaviour of different species and proveniences were discussed.
9. Several delegations stressed the fact that already now the Level II monitoring programme contains a large number of intensive studies therefore the use of phenological data has to be justified within the existing framework of Level II monitoring.
After in depth discussion the participants agreed to further examine this topic on basis of the draft recommendation of phenological observations (see annex 5). The present draft would allow countries to reduce their activities in the field of phenology to an early warning system for the plots with continuous measurements (recording of damage occurred at plot level), although use of intensive phenological observations and its importance was strongly underlined by the delegates.
All National Focal Centres are invited to comment on the paper before 31.12.1997.
A revised version of the paper will then be circulated in spring 1998 to all parties involved.
10. As several items of the methodology for phenological observations could not be discussed in greater details, a subgroup entitled "techniques of phenology monitoring Level II" consisting of Mrs. Vasella (CH), Mrs. Merilä (SF), Mr. Kramer (NL), Mr. Beuker (SF) and Mr. Ferretti (IT) was established and requested to work out in cooperation with the chairman of the ad hoc group on phenology the following items:
- Annex to the submanual phenology, describing definition, determination and assessment of
 *individual phenological phases for different tree species,
 *the recording of biotic and abiotic (damaging) events,
- Methods for harmonized litter fall measurements.
A first draft of this annex will be send to all participants and the NFCs together with the minutes and the draft of sub-manual by the end of November 1997. To assist this working group all NFCs are requested to submit by the end 31 December 1997 the following information to Mr. Beuker (coordinator of the subgroup, address see list of participants, annex 1) concerning:
- definitions, determination and assessment of
 *individual phenological phases, mentionned in paragraph 3.2.1. of Annex 5, for dominant tree species in level II plots,
 *methods of the recording of biotic and abiotic (damaging) events,
- methods of litter fall measurements.
Already existing internal reports or instruction papers for field staff are as well welcome, even if written in native languages.
It was also pointed out, that it might be necessary to further adapt/develop models for linking phenological events and phases to meteorological, increment and other monitoring data of level II plots.
11. Girth bands for automatic recording of yield were found to be an important method of assessment not only for increment studies but also for phenological observations. The ad hoc

group would therefore strongly welcome the elaboration of technical recommendations including information on accuracy by the next meeting of the Expert Panel on Increment, to be held on 6 - 7 November 1997 in Birmensdorf, Switzerland. These recommendations should afterwards be presented to the Task Force for inclusion in the Sub-manual on Increment.

12. The meeting agreed on the following steps:
 - Comments from the participants on the draft paper on phenological observations and the draft minutes (annex 5), distributed in Punkaharju to be sent to the chairman (Mr. Preuhsler, Freising, Germany) by mail, fax or e-mail by 15 October 1997.
 - Amendment to minutes and draft proposal for a sub-manual will be made by the chairman and revised version will be circulated to the participants end of October 1997.
 - Reaction by the participants are expected by 15 November 1997.
 - Circulation of minutes and draft proposal for a submanual to all NFC's end of November 1997 with the request to comment by the end of December 1997
 - Preparation of the annex for the draft of sub-manual with technical details on
 - * mandatory recording of biotic and abiotic (damaging) events
 - * optional intensive phenological monitoringby the subgroup "techniques of phenology monitoring level II" by the end of February 1998.
 - In spring 1998 submission of the draft submanual to the European Commission and ICP Forests.

13. The participants warmly thanked Mr. Eino Mälkönen and his team - namely Mrs. Päivi Merilä and Mrs. Tuire Kilponen for the technical arrangements, Mr. Egbert Beuker, Mr. Eero Kubin and Mr. John Derome for the preparation of the informative excursions and Mr. Hannu Rantanen, Mr. Sulo Lehtinen and Mr. Juhani Mäkinen for accompanying the participants with the cars - and the Finnish Ministry of Agriculture and Forestry and the Finnish Forest Research Institute for the organization and the kind hosting of this meeting, as well as the members of the subgroup "Techniques of phenological observations on Level II plots" for their willingness to contribute to the further progress of this topic/issue.