

United Nations Economic Commission for Europe
Convention on Long-range Transboundary Air Pollution

International Co-operative Programme on Assessment and
Monitoring of Air Pollution Effects on Forests (ICP Forests)

MANUAL

on

methods and criteria for harmonized sampling, assessment,
monitoring and analysis of the effects of air pollution on forests

Part I

Objectives, Strategy and Implementation of ICP Forests

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1. Introduction

In response to widespread concern that air pollution could affect forest condition, the International Co-operative Programme on the Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) was established by the Convention on Long-range Transboundary Air Pollution (CLRTAP) under the United Nations Economic Commission for Europe in 1985. One year later the European Union (EU) adopted the scheme on the protection of forests against atmospheric pollution and with Regulation (EEC) No. 3528/86 the legal basis for co-financing of relevant assessments was provided. This was replaced by a new Regulation (EC) No 2152/2003 (Forest Focus) adopted by the European Parliament and the Council for 2003 to 2006.

The monitoring system and the monitoring data can also be used for international processes of environmental policies other than CLRTAP. This applies in particular to the UNECE/FAO Forest Resources Assessment (FRA), to the Ministerial Conference for Protection of Forests in Europe (MCPFE), to the Convention on Biological Diversity (CBD), to the Framework Convention on Climate Change (UNFCCC), and to the European Commission (EC). The monitoring pursues the objectives of Resolution S1 of the Strasbourg, Resolution H1 of the Helsinki and Resolution L2 of the Lisbon Ministerial Conference on the protection of Forests in Europe. It also contributes to the discussion on global forest policy, such as the Intergovernmental Forum on Forests leading to the United Nations Forest Forum (UNFF).

At present, 41 European countries as well as the United States of America and Canada are participating in the Programme, which includes assessments according to harmonised methods following this ICP Forests Manual and which has developed into an important platform for the exchange of expert knowledge. Results of ICP Forests provide the scientific basis for political decisions on air pollution control and thus contribute to the elaboration and review of protocols of the Geneva Convention on Long-Range Transboundary Air Pollution (CLRTAP). Moreover, ICP Forests' monitoring activities can contribute to other aspects of relevance for forest policy, such as effects of climate change on forests, sustainable forest management and biodiversity in forests.

2. Objectives and strategy of ICP Forests

2.1 Political background

The objectives and the strategy of ICP Forests are based on the draft long-term strategy and the workplan for the effects-oriented activities of the Working Group on Effects (WGE) of CLRTAP. The draft long-term strategy of WGE specifies the following long-term aims to which all ICPs are expected to contribute:

Assessment of knowledge on

- The present status, long-term trends and dynamics, and the degree and geographical extent of the impact of air pollution, particularly, but not exclusively, its long range transboundary impact;
- Exposure-response relationships for agreed air pollutants;
- Critical loads, levels and limits for agreed air pollutants;

- Interactive effects of air pollution and climate change on forest ecosystems

Moreover, the long-term strategy of WGE specifies the following long-term priorities of special relevance to ICP Forests:

- Derivation of exposure-response functions for chemical and biological effects of air pollutants including investigation of nutrient nitrogen, acidifying compounds and ozone effects on ecosystem functions and on biodiversity, including combinations with other stresses (e.g. climate change and land use practices);
- Further development of models and mapping procedures, particularly for effects of nitrogen and ozone on the environment and for the description of dynamic processes of damage and recovery (acidification, eutrophication, heavy metal accumulation) by including to a larger extent biological effects;
- Evaluation of environmental benefits of air pollution control policies.

The integration of ICP Forests into the structure of CLRTAP is displayed in Figure 2.1-1.

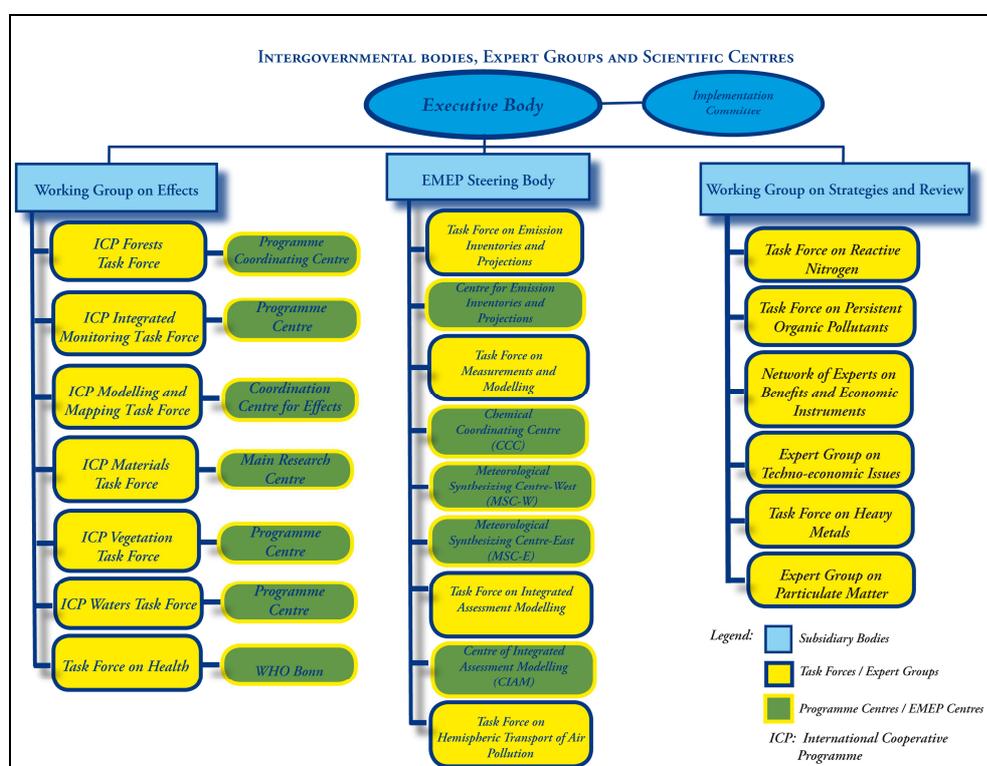


Figure 2.1-1: Organisational chart of CLRTAP (<http://www.unece.org>)

2.2 Objectives of ICP Forests

In order to meet the information needs of WGE, ICP Forests pursues the following two main objectives:

- Objective 1: A periodic overview on the spatial and temporal variation of forest condition in relation to anthropogenic and natural stress factors (in particular air pollution) by means of European-wide and national large-scale representative monitoring on a systematic network.
- Objective 2: A better understanding of the cause-effect relationships between the condition of forest ecosystems and anthropogenic as well as natural stress factors (in

particular air pollution) by means of intensive monitoring on a number of selected permanent observation plots spread over Europe and to study the development of important forest ecosystems in Europe.

These objectives imply in accordance with the long-term priorities of WGE contributions to calculations of critical loads and levels and the assessment of their exceedances. They imply also dynamic modelling of the response of forest ecosystems to deposition scenarios expected for the future. Additional insight is gained by compiling available studies from the National Focal Centres (NFCs) and from related programmes inside and outside CLRTAP. In this respect close cooperation is sought with the other relevant ICPs under WGE.

2.3 Strategy of ICP Forests

2.3.1 Monitoring activities

In order to meet its data generation and reporting obligations, ICP Forests employs data collection at two levels.

- Large-scale monitoring (Level I) provides a periodic overview of the spatial and temporal variation in a range of attributes related to forest condition. Level I plots, national forest inventory (NFI) plots, and other related inventory plots may be combined when appropriate, feasible and necessary, according to defined and agreed procedures.
- Intensive monitoring (Level II) is carried out on plots installed in important forest ecosystems. These plots are dedicated to in-depth investigation of the interactive effects of anthropogenic and natural stress factors on the condition of forest ecosystems.

2.3.2 Quality assurance and control

All monitoring activities are harmonised by ICP Forests among the participating countries and are laid down in this Manual. This ensures a standard approach for data collection and evaluation and can form the nucleus for a future common European forest monitoring programme. A consistent quality assurance approach is applied within the programme covering the set up of methods, data collection, submission and investigation as well as reporting. Quality assurance and control is supervised by the Programme Coordinating Group through its Quality Assurance Committee. A set of Expert Panels cares for data quality assurance within the specific surveys and for the further development of monitoring methods and standards. This includes field checks, intercalibration courses, laboratory ring tests, and data validation.

2.3.3 Data evaluation and reporting

A range of monitoring variables are required to meet the information requirements of CLRTAP and other international institutions. The Programme Coordinating Group and the Expert Panels are responsible for a data evaluation and reporting approach which takes the medium term workplan of WGE into account. International and national data from other programmes and institutions should be included in combined analysis. The main topics for data analysis are

- Forest condition
- Effects on forest ecosystems from
- Acidity and nitrogen
- Ozone

Contributions in the fields of

- Climate change
- Biodiversity

Trends in deposition and their interactive effects on the adaptation and vulnerability of forest ecosystems are evaluated. This includes spatial and temporal changes and cause-effect relationships with special emphasis on critical loads and their exceedances. Dynamic models and transfer functions derived from suitably selected intensive monitoring plots are used to investigate the effects of climatic factors and greenhouse gases on forest ecosystems and applied to the large scale monitoring plots. These models are validated against measured data collected at the plots. Furthermore, data gathered at the plots are used in an integrated manner to investigate the carbon sequestration potential of forests, ozone fluxes to forests and contribute to assess status and trends of forest biodiversity at the pan-European level.

2.3.4 Deliverables

The integrative monitoring approach of ICP Forests using the Level I and Level II networks provides robust data on the health and stability of forests. This facilitates an understanding of the effects of deposition on the role and functioning of forest ecosystems in protecting soils and water. Furthermore the programme surveys can contribute to the understanding and forecast of climate change effects on forests and can be used to supply information on the sequestration of carbon and are going to provide information on forest biodiversity as an integral part of forest ecosystems. Results are published via reports and a website (www.icp-forests.org).

3. Programme Implementation

3.1 Organization of ICP Forests

3.1.1 Overview

The organisation of the bodies of ICP Forests is shown in Figure 3.1-1. The programme is steered by its Task Force. A Programme Co-ordinating Group (PCG) cares for the full programme implementation and is assisted by a Quality Assurance Committee. Programme co-ordination, data base management as well as evaluations and reports are entrusted to the Programme Co-ordinating Centre (PCC). The Forest Soil Coordinating Centre (FSCC) is entrusted with the collection and evaluation of the soil data while the foliar data are managed by the Forest Foliar Coordinating Centre (FFCC).

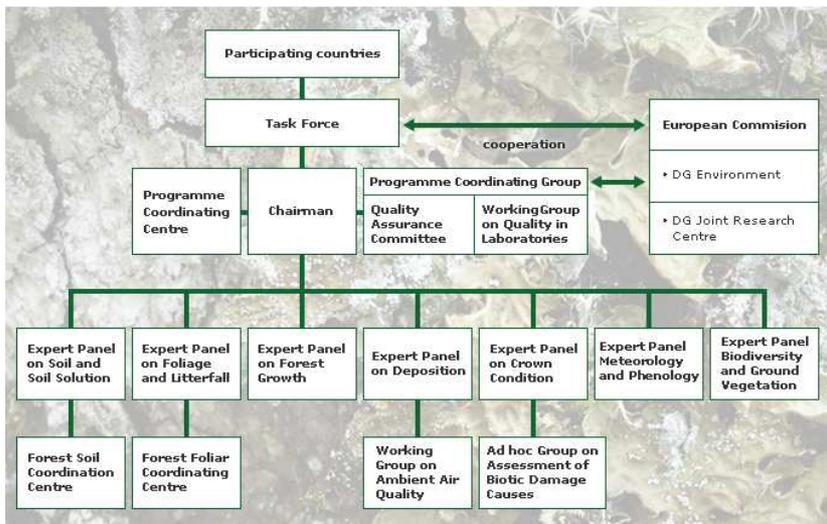


Figure 3.1-1: Bodies of ICP Forests (<http://www.icp-forests.org>)

In response to the demand for harmonised monitoring at both levels, Expert Panels were established which were mandated to develop and maintain suitable and up to date methods, and to support proper data evaluation at the European level. These are the Expert Panel (EP) on Soil and Soil Solution, the EP on Foliage and Litterfall, the EP on Forest Growth, the EP on Deposition with its Working Group on Ambient Air Quality, the EP on Crown Condition with its Working Group on Biotic Damage, the EP on Biodiversity and Ground Vegetation, and the EP on Meteorology and Phenology.

3.1.2 The Task Force

The programme is steered by the Task Force, in which 41 participating countries are represented by their responsible Ministries and their National Focal Centres (NFCs) of ICP Forests. Also represented is the European Commission (EC). The Task Force is the highest body of ICP Forests. All relevant programme issues have to be presented to the Task Force. The Chairman - supported by the Lead Country - prepares, convenes and chairs annual Task Force meetings.

3.1.3 The Lead Country

The Lead Country represents ICP Forests in the Working Group on Effects, maintains a close co-operation with the European Commission and is the contact point with other monitoring programmes within and outside CLRTAP. Additional tasks are supporting the Chairman to prepare, convene and chair the annual meetings of the Task Force. The Lead Country also convenes and chairs meetings of the Programme Co-ordinating Group.

3.1.4 The Programme Co-ordinating Group (PCG)

The Programme Co-ordinating Group has the task to continuously review and further develop the monitoring and to support the Chairman in all issues of relevance for the future of the programme. Recommendations of the PCG are directed to the Task Force of ICP Forests. Members of the PCG are the Chairman, the Lead Country, PCC, the Expert Panel chairpersons, and EC. In order to meet these tasks the PCG needs to convene regularly. A participation of representatives of NFCs in PCG meetings can also be considered.

3.1.5 The Programme Co-ordinating Centre (PCC)

PCC is hosted by the Institute for World Forestry in Hamburg, Germany. It is entrusted with a broad range of tasks including

a.) Assistance to the Chairman, the Task Force, and the PCG in the continuous review, further development, and implementation of the programme. This comprises

- Interface functions between ICP Forests, related ICPs, and WGE;
- Maintenance of a platform for information exchange including the ICP Forests website;
- Preparation and organisation of meetings;
- Editorship of the ICP Forests Manual;
- Management of the budget of ICP Forests and fund raising for the coordinating and monitoring costs;

b.) Data base management including

- Online data acquisition from NFCs;
- Online data validation;
- Data dissemination to third parties, management of the procedures under the Intellectual Property and Publication Policy of ICP Forests;
- Execution and stimulation of data analyses;
- Publication of results in reports of ICP Forests and scientific journals;

3.1.6 The Expert Panels (EPs)

The Expert Panels of ICP Forests have the task to further develop the harmonised methods as laid down in this Manual. This includes the development of methods and standards including data quality assurance, as well as supporting integrative data evaluations. For specific purposes and for a limited period of time, ad hoc working groups may be established consisting of representatives from different EPs. The EPs hold EP and joint-EP meetings.

3.1.7 The National Focal Centres (NFC)

The NFCs are nominated and financed by the participating countries. They are responsible for the collection, validation, evaluation and storage of their monitoring data and aggregation of national data in accordance with the ICP Forests Manual. The NFCs and their responsible agencies have to ensure that the data is collected according to the methods described in the Manual and that the quality assurance programme has been applied. The NFCs evaluate and interpret their national data. In the last years an enormous potential for evaluation and advancement of knowledge of forest ecosystems has been gained at national level. Increasing attention also at national level is paid to integrative data evaluations.

The NFCs have the task to submit the Level I and Level II data and accompanying information to PCC in accordance with the deadlines agreed and the format laid down in this Manual. The NFCs are invited to participate in the evaluation and interpretation of the data at European level. In case that parts of the national responsibilities is delegated to sub-national agencies, PCC needs to be informed accordingly.

Within the procedures under the Intellectual Property and Publication Policy of ICP Forests, NFCs inform PCC on contact details of experts that are interested to participate in specific evaluations.

3.2 Monitoring activities

The methods and standards of the monitoring activities are laid down in the following parts of this Manual. Part II describes the monitoring design at the two monitoring intensity levels (Level I

and Level II) including the monitoring plot selection and the plot design. Also described are the data submission, data base management, as well as principles of data dissemination and acknowledgements in publications. From Part III onwards, data quality assurance and the methods and standards of individual surveys are described in detail.

3.3 Data analyses

Analyses of the monitoring data pursue the objectives of ICP Forests laid down in Chapter 2.2. Both the Level I and in particular the Level II approach ask for an integration of the data from various monitoring surveys. Actually, the possibility for integrating data from different investigations into a cohesive evaluation system is the most important aspect related to the Level II plots. The integration can be achieved at different levels according to data availability in space and time. Forest health in terms of growth, tree condition, plant diversity and soil condition can be impacted by biotic (pests and diseases) and abiotic (e.g. climate, air pollution) factors, the effects and importance of which depends on inherent site properties (e.g. site history and management, topography, soil condition) according to complex and often mutual relationships. These relationships can be fully investigated only if data from all investigations are available. Another option can be to consider modelled data from available and suited models, provided model outputs can be applied with confidence to the situation of the plot being considered. In this respect, the wealth of data collected on Level II sites can be used to establish deterministic relationships that can be useful for deriving estimates of unmeasured variables at given sites.

3.4 Reporting

The ICP Forests reporting system comprises annual Executive Reports which provide a general overview on the monitoring results and their interpretation with respect to relevant results of forest damage research as well as on special topics. The target group for the Executive Report is a broad one, ranging from politicians across NGOs and environmentalists to forest owners and the general public. The scientific and technical basis for the Executive Reports are provided by Technical Reports and data evaluations as carried out by the Expert Panels, the NFCs or PCC. The target group of the Technical Reports are scientists and other experts involved in the work. The responsibility for the Executive and Technical Reports lies with PCC. PCC also provides the latest findings of all surveys on its website www.icp-forests.org.

3.5 Data release and acknowledgement

ICP Forests data are available for use by the wider scientific community. Experts and data providers of the monitoring programme are available to support external data users. Data are made available upon request. External users need to agree to and need to acknowledge the intellectual property policy of the ICP Forests (see Annex).

3.6 Citation of ICP Forests reports and manuals

ICP Forests reports and publications are cited as follows:

Author(s), year: title. editor (publisher) [e.g. UNECE ICP Forests], (title of omnibus volume [e.g. Executive report...]), place, pages or n of pages. In journals the respective rules have to be obeyed.

The recommended form of citation should be included in all ICP Forests publications on the back of the cover page or on a colophon page.

The ICP Forests Manual as a whole must be cited as follows:

ICP Forests, 2010: Manual on methods and criteria for harmonized sampling, assessment, monitoring and analysis of the effects of air pollution on forests. UNECE ICP Forests Programme Co-ordinating Centre, Hamburg [<http://www.icp-forests.org/Manual.htm>]

Individual parts of the ICP Forests Manual must be cited as follows:

Relevant Authors, 2010. [Title of relevant manual part]. In: ICP Forests, 2010: Manual on methods and criteria for harmonized sampling, assessment, monitoring and analysis of the effects of air pollution on forests. UNECE ICP Forests Programme Co-ordinating Centre, Hamburg. number of pages [<http://www.icp-forests.org/Manual.htm>].

Annex: Intellectual Property and Publication Policy

for the ICP Forests PCC Collaborative Database

(Karin Hansen, Richard Fischer, Bruno De Vos, Giorgio Matteucci, Päivi Merilä, Marcus Schaub, Walter Seidling, Peter Waldner)

Introduction

ICP Forests has an extensive collaborative database containing monitoring data from European forest ecosystems, from the 1980s up until today. All data are stored at the European central data storage facility at the ICP Forests Programme Coordinating Centre (ICP Forests PCC) in Hamburg. The database is of great interest to many scientists and data access has often been requested by various EU projects.

Preventive rules are important to avoid misunderstandings concerning intellectual property. Therefore, it is imperative to clearly state the rights and obligations of the *parties submitting* data to the ICP Forests PCC Collaborative Database (ICP Forests PCC CD) in order to assure that their data will not be improperly used. It is of equal importance to clarify and define the rights and obligations of any *party requesting* data from the ICP Forests PCC CD. The respective rules on the Intellectual Property (IP) for both, i.e. the submitting and requesting parties, should guarantee a prominent ICP Forests PCC CD stimulating transparent and efficient collaborative research activities with a clear and concise application, approval, and documentation process.

Objectives

The aims of this IP Policy is to (i) stimulate cooperative studies among internal and between internal and external partners, and to (ii) protect the rights of owner- and authorship, and (iii) to ensure proper co-authorship and acknowledgement for the data that have been submitted to the ICP Forests PCC CD.

Content of this document

This document outlines the IP policies of ICP Forests PCC concerning the access to historical and future data collected during the monitoring activities within the ICP Forests programs conducted by the member countries. This IP policy document covers rules and regulations, rights and obligations to be applied for data-supply, -request, and -use from the ICP Forests PCC CD. This documents seeks to protect the IP of the ICP Forests member countries while providing a prominent and collaborative environment for internal and external users.

These IP policies are based on the Vancouver Protocol¹, which is used as an international standard for ethics of publication. The Vancouver Protocol states three required criteria to be named as a co-author:

¹ Anonymus (2008): Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication. Updated October 2008) International Committee of Medical Journal Editors. <http://www.icmje.org>

- Substantial contribution to idea and design, data provision or data analysis.
- Participation in the writing and revision of the text.
- Reading and endorsing the finalized article.

If all three criteria are fulfilled, any contributing partner may not be excluded from the list of co-authors.

In the following, we refer to the ICP Forests PCC Collaborative Database as "*ICP Forests PCC CD*"; "*the contributor*" refers to National Focal Centres (NFCs) that have provided data to the database; "*the applicant*" refers to a third party, individual, or institution that may apply for access to data from the ICP Forests PCC CD; "*the administrator*" refers to the ICP Forests Programme Coordinating Centre (PCC) currently responsible for the maintenance and management of the Collaborative Database and for processing data requests from applicants.

Rights and obligations of the applicant

The applicant is encouraged to involve data providers into collaborative proposals. In order to receive access to specific data from the ICP Forests PCC CD, the applicant has to submit an application to the administrator of the database using the attached application form, triggering an official application approval process. A response containing the decision over the submitted proposal may be expected from the database administrator within 6 weeks.

The applicant is obliged to offer the possibility to intellectual input to the proposed studies to the involved contributors. Such intellectual input, together with data provision, and points 2. and 3. of the above mentioned Vancouver Protocol will lead to co-authorship as stated above. In case, not all three points of the Vancouver-rules are fulfilled, the applicant may reject contributors from co-authorship but is still obliged to properly acknowledge the administrator and contributors in their final scientific articles. The acknowledgement text is given at the end of this document and will always be attached to the data when delivered. Any produced output must be shared with the administrator for publication on the ICP Forests web site, at least as reference and abstract according to the publisher's rules.

The applicant agrees to present results in a final or intermediary stage at least at one ICP Forests meeting and reports on progress using the Status Report form attached to this IPP.

The applicant is obliged to be honest and open in their disclosure of the intended use of the data requested. Data that are submitted to other parties or used for purposes other than outlined in the application constitutes a breach of the agreement.

Rights and obligations of the contributor

A two-year exclusive right for data evaluation is granted to the contributors and the administrator, starting from the date when the data has been entered into the database. Afterwards, the data may be released for the use by applicants. Data evaluation by the contributors is regarded as the final step of validation and is thus essential to ensure appropriate quality control and quality assurance.

Contributors of data to the database retain the right to be informed by the administrator of any request to use their data. Following the data rules under the Convention on Long-range Transboundary Air Pollution (CLRTAP) data access to external applicants can only be denied or restricted if appropriate reasons are provided.

The administrator is responsible for the application approval process. In cooperation with the administrator, contributors of data to the database are obliged to participate in the application approval process.

Obligations of administrator

The administrator is obliged to ensure that applications are processed within 6 weeks. Furthermore, the administrator is obliged to protect the rights of both parties, the contributors and the applicants, according to this IP Policy document.

All applications are first evaluated by the administrator. Hereafter, the administrator sends out the request for use of data along with the original application to all relevant contributors. For more detailed information, see chapter 'Application and publication process'.

Along with the requested data, the administrator will provide a list of relevant contributors (data providers and relevant expert panel members from the ICP Forests programme) and a specific acknowledgement text to the applicant.

Precision and quality of data

In order to take into account property rights, in general, plot coordinates will be provided at the accuracy of degrees only. A specific explanation must be included in the proposal, in case a higher accuracy for plot coordinates is required.

Neither the administrator nor the contributor is fully responsible for the data quality. In fact, only the close collaboration between contributor and applicant can guarantee for a full understanding of the data, their relevant back-ground information (metadata), and overall quality, including accuracy and applicability.

Application and publication process

In the following, the individual steps of the required application process are described for both, internal (ICP Forests expert groups and relevant bodies under the CLRTAP) or external applicants. Recommended turnaround times are given in parentheses.

1. The applicant decides to apply for certain data that are stored in the ICP Forests PCC CD.
2. The applicant completes the provided application form and submits it to the administrator, hereby accepting and agreeing to the conditions of this IP Policy document.
 - For an internal application by ICP Forests expert groups or by other bodies under the CLRTAP, the application is to be submitted by the chairperson of the respective expert group applying for an internal evaluation.
3. The administrator confirms the receipt of application (2 weeks) and informs the appropriate contributors about the application and the proposed purpose for the provision of data (2 weeks).
4. The contributors consider the application and respond within the following categories (2 weeks):

- Rejection: the contributor is not convinced that the data will be fairly used and duly acknowledged or there is a significant conflict of interest. Following the data rules under the CLRTAP, the National Focal Centre needs to provide a specific reason for rejecting the release of data.
 - Negotiation: the contributor is satisfied with the proposal but would like to be directly involved in the activities. In this case, the contributor informs the administrator on contact details of relevant experts to allow further discussions and negotiations over a possible collaboration.
 - Permission: the contributor is satisfied with the proposal and agrees the respective data to be released and provided to the applicant.
 - In case of an internal evaluation, a rejection by the contributors is not possible. There is no formal reply of the contributors to the applicant. Instead, the contributors that are interested in a direct involvement of the proposed analyses may contact the applicant directly. In case, the contributor does not participate in the application approval process within a predefined period, the final decision over the application is up to the administrator.
5. The administrator compiles the contributors' responses and informs the applicant about the final decision on the approval of the submitted application (2 weeks), including the expected delivery date of the required data. Before the data are released the applicant has to agree to the rules of the Intellectual Property Policy. Hereafter, the data to be released are transferred to the applicant along with the list of contributors and experts to be contacted for collaboration as well as the respective acknowledgement text to be used. The administrator nominates a contact person from the ICP Forests for each specific external study.
 6. Within 6 weeks after the data have been received, the applicant shares the list of intended co-authors with the administrator. Prior to submission of the manuscript, the applicant shares the final list of co-authors with the administrator. The administrator informs the contributors about both lists. The applicant needs to take into consideration the comments given to these lists by the administrator and the data contributors.
 7. After publication, the results from published evaluations of the respective ICP Forests data need to be shared with the administrator as pdf-file. The administrator will make this information available on the ICP Forests web page, either as pdf-file to be downloaded or as reference with abstract to be cited (according to the publisher's rules).

Acknowledgement text

The use of the data must always be acknowledged in peer reviewed (scientific journals) or not peer reviewed (reports) publications. Below please find the acknowledgement text to be used:

"The evaluation was based on data that are part of the UNECE ICP Forests PCC Collaborative Database (see www.icp-forests.org). In particular, data from *Country1 (responsible institution1)*, *Country2 (responsible institution2)*, *Country3 (responsible institution3)*, were part of the analyses. Data collection was co-financed by the European Commission under(the administrator will indicate the specific projects or regulations if appropriate)."

Application Form for the Provision of Data from the UNECE ICP Forests PCC Collaborative Database

The undersigned requests Level I and Level II data from the following UNECE ICP Forests programme(s) (*please tick*):

Visual Assessment of Crown Condition

- Level I
 Level II

Analysis of Soil

- Level I
 Level II

Analysis of Soil Solution

- Level II

Analysis of Needles and Leaves

- Level I
 Level II

Growth and Yield

- Level II

Analysis of Deposition

- Level II

Meteorological Measurements

- Level II

Assessment of Ground Vegetation

- Level II

Phenological Observations

- Level II

Monitoring of Air Quality

- Level II

Assessment of Ozone Injury

- Level II

The requested data shall be evaluated within the following project:

Project title:

Objective(s) of the project:

Scientific background of the project:

Detailed description of the project on a separate sheet, giving evidence of the specific purposes for which the data shall be used, e.g. hypotheses to be tested, statistical methods to be applied, further data involved in the evaluations etc. (*please use a separate sheet*).

Time schedule (beginning and end of the project):

Name and e-mail address of the
responsible scientist:
(project leader)

Name of the institution:

Full address:

Name(s) of Subcontractor(s) (if any)
foreseen to also use the data:

For **internal evaluation** by ICP Forests expert group or body under the Convention on Long-Range Transboundary Air Pollution (LRTAP), submission only through the responsible chairperson
(please tick if appropriate)

Name of ICP Forests expert group or body under the Convention on Long-Range Transboundary Air Pollution _____

We commit ourselves to

- respect the intellectual property policy of ICP Forests
- use the data only for the above project,
- delete the data as soon as the project is completed,
- not to provide the data to third parties (besides to indicated subcontractors),
- **share the results of the data evaluation with ICP Forests (administrator) by the end of the project by means of a hardcopy and digital reprint of the peer reviewed scientific paper or report.**
- **notify ICP Forests (administrator) in case the data were not used nor published and to declare that all the data have been deleted after the end of the evaluation.**

Date: _____ Signature: _____

DECLARATION of ICP Forests data contributor

PCC of ICP Forests is

- authorised to forward the data as requested
- authorised to forward data as requested with the following restrictions

- not authorised to forward any data for the following reason

 to (name and address of applicant)

for the project (name of the project)

- Experts are available for scientific input in the activities and shall be put in touch with the applicant to discuss potential collaboration.

(name and institute of experts, e-mail address)

Data provision is agreed under the condition that the intellectual property policy of ICP Forests is respected

National Focal Centre of

Date:

Signature:

Please return the signed declaration to
 PCC of ICP Forests,
 Leuschnerstr. 91, D-21031 Hamburg, Fax: 0049 – 40 – 739 62 – 299