

# INTRODUCTION

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This introduction is intended to provide background information on the objectives and methods of *Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand* (abbreviated throughout to TBFRA-2000<sup>1</sup>), as well as on the thinking which has been behind its preparation and implementation.

## Objectives

It has been recognized for many years that there is a strong need for a set of recent, internationally comparable data on the extent, location, nature, condition and productivity of the forest resource, at a global and regional level. Such a data set is vital input to any serious discussion of, or decision making for, forest policy, wood supply, industry location, protection of biodiversity, climate change, and a whole host of topics linked in one way or another to the forest resource.

FAO is responsible for leading this work at the global level. However, the coverage of temperate and boreal forests in the UN/ECE region and some other industrialized countries has been entrusted to a team in Geneva formed by UN/ECE and FAO. TBFRA-2000 is the latest in a series of surveys of the temperate and boreal industrialized countries carried out from Geneva, of which the first was published in 1947 and the most recent in 1993.

Since UNCED in 1992 and the second pan-European Ministerial Conference on the Protection of Forests in Europe (Helsinki, 1993), the international forest policy community has repeatedly stressed the need for more and better information on the forest resources of all parts of the world. The enlarged format and higher ambitions of TBFRA-2000, compared to its predecessors, is a response to these demands.

The main objective of TBFRA-2000 is, in simple terms, to collect and make available the best possible information on the forest resources of the fifty-five countries it covers, covering practically all aspects and functions of the forest. It is intended in the first place for the use of governments, in all regions, and the international forest policy community, notably participants in the discussion of how to achieve sustainable forest management at the regional and global level (e.g. participants in the Intergovernmental Forum on Forests and its possible successors, as well as, at the regional level, the pan-European and Montreal processes). However, TBFRA-2000 is also intended to be useful to a wide range of other groups, including the scientific/research community, forest industries and NGOs, the conventions on biodiversity and climate change, teachers and students of forest-related topics and, last but not least, the general public. Many of these groups will very probably use TBFRA-2000 data “second hand” i.e. selected or presented by specialists in a more user-friendly form than the basic data provided by TBFRA-2000 itself.

## Background and process

Like its predecessors, TBFRA-2000 has been carried out under the auspices of two intergovernmental bodies, the UN/ECE Timber Committee and the FAO European Forestry Commission. The work has been guided by another intergovernmental body, reporting to the Committee and the Commission, the Joint FAO/ECE Working Party on Forest Economics and Statistics. A team of specialists, consisting of experts nominated by their governments to advise the secretariat in carrying out TBFRA-2000 was set up in 1995, and has met regularly to consider methods, presentation, and scope of the enquiry and the publication.

TBFRA-2000 is a part of the global Forest Resources Assessment (FRA) process, led by the FAO Forestry Department: data for industrialized countries of the temperate and boreal zone will be taken directly from TBFRA and inserted into the global FRA data base, so that there will be no duplication of data collection.

It is of the utmost importance that the same terms and definitions be used for all countries, world wide, and in all parts of the FRA. The FAO Forestry Department and ECE/FAO in Geneva have attached the highest priority to achieving this. The first step in the preparation of FRA, including TBFRA-2000, was therefore the Expert Consultation on Global Forest Resources Assessment 2000 at Kotka (Finland) in 1996 (the meeting is known as “Kotka III”) which agreed on definitions (notably that of “forest”) to be applied in all parts of the global FRA. Definitions and terms for

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<sup>1</sup> Because, throughout its preparation, the work was referred to as the Temperate and Boreal Forest Resources Assessment 2000.

use only in TBFRA-2000 were developed within the framework of the global terms. All the terms and definitions used in TBFRA-2000 are reproduced in Appendix I.

Data for TBFRA-2000 were collected from officially designated national correspondents by means of a questionnaire (reproduced in Appendix II). However, before the questionnaire was circulated, there was an extensive and detailed process of consultation with national correspondents and the team of specialists on the scope and format of the questionnaire, notably the scientific relevance and correctness of the questions and whether most countries were in a position to answer. This process of consultation is undoubtedly one of the primary reasons for the very high response rate for TBFRA-2000.

After replies were received, the secretariat team undertook a process of in-depth checking and validation of country replies through an intense dialogue with national correspondents. The dialogue was concentrated on checking adherence of replies to the international definitions and on filling in gaps. The data were then entered in the data base. All TBFRA-2000 "outputs", including the present publication, are generated on the basis of this data base, which will be updated as required. Finally consultants, each a high level expert in his or her field, prepared analytical chapters presenting the main issues, problems and results for each major section of TBFRA-2000. These analytical chapters are accompanied by detailed tables with data by country, as well as the notes and comments supplied with the data by National Correspondents.

In addition to the present volume, there will be other publications derived from TBFRA-2000, including the standard tables of "essential data", presented by country, and further background/supplementary papers which will be issued as "working papers". In addition, the electronic data base containing the whole data set in a format facilitating search, extraction and further analysis of the data will be made widely available.

One feature of the TBFRA-2000 "process" has been the desire to work closely together with a wide variety of partners, to avoid duplication and build on the strengths of each organization. In this way some data have been supplied directly by other organizations e.g. the ICP Forest (International Co-operative Programme on the Assessment and Monitoring of Air Pollution Effects on Forests) under the Working Group on Effects of the Convention on Long-Range Transboundary Air Pollution, which provided the results of its annual survey of forest condition. A number of organizations contributed as members of the team of specialists and co-operated in data collection and analysis.

### Source and quality of TBFRA-2000 data

The original data have in all cases been collected at the national level, on the basis of national definitions and measurement and sampling techniques which are in almost all cases different from those agreed internationally for use in FRA and TBFRA-2000. It is thus necessary, in the interests of international comparability, to adjust the national data to fit the international definitions. As a result, data for a country published in TBFRA-2000 will not necessarily correspond to those published in national sources. This is a normal, indeed inevitable, result of adapting national data to improve comparability between countries, and is not a weakness of the TBFRA-2000 data set or of the national data sets. In the TBFRA-2000 process, this adjustment has been carried out by the national correspondents, not by the secretariat team. Inevitably, this adjustment process, while increasing the comparability of and internal consistency of the international data set, has reduced the accuracy of the records, by introducing a supplementary source of error. This problem (inherent in any international data collection effort, in any field) was addressed as follows:

- Correspondents were asked to record how they adjusted the national data to the international definitions and their replies are available in this publication, the data base and the detailed publications. Indeed it has been stressed frequently that the notes and comments are an integral part of the data set, of the same importance as the figures themselves, and should not be separated from those figures;
- They also estimated the range within which the true value is likely to be, which makes it possible to estimate also a range for the regional totals;
- Michael Köhl, leader of the team of specialists, has written an assessment of the reliability and comparability of the TBFRA-2000 results from a scientific perspective.

Thus, the "notes" to the country data, many of which describe the adjustment process and data quality are an essential part of the TBFRA-2000 database, and make it possible for users to make informed judgements about the quality of the data they are using. This transparency on data quality is intended to improve the credibility of the data set as a whole.

All national data in tables or graphs or references to particular countries in the text (except the Executive Summary prepared just before publication) have been submitted to National Correspondents for checking.

It is also evident that there are quite large differences in data quality between different parts of the TBFRA-2000. In general, data quality is highest in the "traditional" areas, such as area of forest, growing stock and increment, and lower in the "newer" parts such as biodiversity, forest condition etc. This is to be expected when the scope of a complex operation like the TBFRA-2000 is widened to include areas not covered beforehand. The secretariat considers that the

data presented in the “newer” parts are highly relevant to the policy debate, and good enough for publication (with explanations of their weak points). In any case, it considers that it is preferable to present data with some documented flaws than to make no information available at all. It also considers that considerable effort should be devoted, at the national and international levels, to refining and standardising concepts and then collecting data in these areas, so that future forest resource assessments can build on the progress made in TBFRA-2000.

### Country groups

All the original data in TBFRA-2000 refer to the national level, and are provided by national correspondents. However, for reasons of presentation and understanding, the secretariat considered it necessary to aggregate these data to larger country groups. In TBFRA-2000, data are often presented by *region* (Europe, North America, CIS, “Other TBFRA”<sup>2</sup>) and in some cases by country groups in the interior of these regions. These groupings are listed at the beginning of the study. It should be borne in mind that several criteria are used to make country groupings, such as political affinities (e.g. membership of regional organisations), geographic closeness, or ecological similarity. Furthermore the groups must be of similar sizes, all countries must be included, and each country only once. It is almost impossible to satisfy all these criteria simultaneously, and some anomalies and paradoxes are inevitable. For instance, Denmark has been included, for TBFRA-2000 purposes, in “North-west Europe” because of its proximity to Germany and Netherlands, and ecological similarity to countries to its south, although it is culturally and politically included in the Nordic countries. Readers are asked to bear these considerations in mind when using the data by country group. It is, of course possible to create at any time ad hoc country groups for special purposes by aggregating the national data according to different criteria.

### Monitoring change

Changes in the forest resource, whether of extent or of quality, are at the heart of many of the recent forest policy debates, and it is a key requirement for all monitoring of the forest resource that it addresses and measures change. However, this ambition immediately poses several severe methodological problems. In particular, change (in any parameter) is not usually measured directly: rather measurements of the same parameter are taken at different time intervals, but with the same methods and definitions, and then compared. It is essential to separate “changes” due to changes in methods or in definitions from those really arising from changes in the parameter measured. Definitions and methods used in the international forest resource assessment programmes have changed, sometimes significantly over the past decade (not to mention the many more changes at the national level), so it is **not** possible to draw any reliable conclusions from a comparison of TBFRA-2000 data with those in earlier international assessments. Conceivably, correspondents could have been requested to create a complete “shadow” data base for, say, 1990, using the TBFRA-2000 definitions, as baseline for the measurement of change. However, the creation of such a comprehensive “virtual” data set would have represented a huge investment of time, to create information of rather doubtful validity. Correspondents were therefore asked to estimate change for only a very small number of key parameters, which are therefore the only ones for which information on change is available. It is hoped that for future TBFRA and FRA work, it will be possible to maintain stability in the definitions of most of the parameters. This will make it possible in the future to monitor change in a much wider range of parameters.

### Next steps

After the publication of this volume in late 1999, the data base will be finalized and a number of detailed follow-up publications prepared. The data for TBFRA-2000 countries will be incorporated into the global FRA data base which will be published in 2000. Then the whole process will be reviewed at the governmental and technical levels and strategic decisions taken as to the direction and methods of future work on forest resource assessment. In any case, FAO, UN/ECE and their many partners will maintain their commitment to providing good quality data on the world's forests to users all over the world.

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<sup>2</sup> i.e. Australia, Japan and New Zealand.