UNITED NATIONS **E**

Economic and Social Council

Distr.
General

TIM/2001/7/Add.3
23 July 2001

Original: English

ECONOMIC COMMISSION FOR EUROPE

TIMBER COMMITTEE
Fifty-ninth session
2-5 October 2001

REVIEW OF ACTIVITIES SINCE THE FIFTY-EIGHT SESSION AND PROGRAMME OF WORK FOR 2002 TO 2006

(Item 8 of the provisional agenda)

TBFRA-2000 Use and Policy Implications Survey: Preliminary Analysis of Users' Feedback And Report

The present document contains the secretariat report with the preliminary analysis of the TBFRA-2000 users' feedback. The decision was taken by the joint session of the UNECE Timber Committee and the FAO European Forestry Committee in October 2000 to provide this analysis in the framework of the TBFRA-2000 follow-up. The secretariat elaborated a use and policy implications survey, which has been widely distributed to current and potential users of TBFRA information. The purpose of the survey was to find out who had made use of the TBFRA, which parts of it have been found most useful, how the information in it has been used, and what are the policy implications of the TBFRA findings. The report presents the information answering these questions. The Timber Committee is invited to take note of the preliminary findings of the survey. The Joint Working party will also take them into account when reviewing the forest resource assessment activities.

GE.01-22737

INTRODUCTION

1. The hard copy version of the TBFRA-2000 was issued in May 2000, and the same material was made available on the UNECE Timber Section's website during the following months. The CD-ROM version was distributed in April 2001, and consequently there has been inadequate time yet for users to appraise its contents.

2. The joint session of the UNECE Timber Committee and the FAO European Forestry Committee in October 2000 reviewed the results of TBFRA-2000 and agreed that follow-up work should take into account the needs of current and future international forestry related processes, including policy implications. To respond to this, the secretariat elaborated a use and policy implications survey, which has been widely distributed to current and potential users of TBFRA information. The purpose of the survey is to find out who has made use of the TBFRA, which parts of it have been found most useful, how the information in it has been used, and what are the policy implications of the TBFRA findings.

3. The present note contains the results of the survey. Preliminary findings were discussed by the Meeting of the UN-ECE/FAO Team of Specialists on Forest Resource Assessment in Victoria, Canada in June 2001, the report of which is being issued separately (TIM/2001/7/Add.2).

RESPONSE TO PART I OF THE SURVEY - GENERAL INFORMATION

a) Who has responded ?

4. The response to the survey was satisfactory in terms of both quality and quantity. Forty replies had been received by 30 June 2001 from respondents in twenty-five countries: Austria, Canada, Cyprus, Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Malta, Netherlands, New Zealand, Poland, Russian Federation, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States of America; and two NGOs. Nearly all replies were completed more or less in full; three were brief, due to shortage of time; one dealt with methodological questions only; and one respondent explained that he was not replying at this stage as he considered it was too soon to make a meaningful response. A list of respondents is available from the secretariat on request.

5. Replies came from respondents working in the following types of organization:

MINISTRIES	28%
FOREST SERVICES	20%
RESEARCH INSTITUTIONS	42%
OTHER	10%

The largest group of replies has come from respondents in research (including teaching) institutions, followed by ministries with responsibilities for forestry and forest services. There were two replies from independent experts and one from an industry NGO. Although the distinction is somewhat artificial, respondents may also be divided between those with responsibilities for collecting and disseminating forest resource information, including experts who were involved in the TBFRA-2000 process (producers) and those who are primarily users of such information (consumers). In several cases, they appear to be both (producer/consumers). The proportions of these three groups were as follows:

Producers	28%
Consumers	55%
Producers/consumers	17%

6. The respondents therefore come from a representative range of countries as well as a reasonably wide variety of institutional backgrounds, with ministries responsible for forestry and forest services in the majority, followed by research institutes. Well over half of the respondents are 'consumers' of forest resource-related information and more than a quarter are 'producers' of such information. There is no evidence that producers have been 'biased' by their earlier involvement in TBFRA. Indeed, they are sometimes critically aware from their 'inside knowledge' of shortcomings in TBFRA.

RESPONSE TO PART II OF THE SURVEY - USERS' POINTS OF VIEW

What type of information on the forest resource at the international level are respondents looking for ?

7. The following are taken from the replies to this question and have been divided somewhat arbitrarily between those looking for general information on the forest resource and those looking for more specific information:

a) General information

- broad quantitative information to enable a picture of how our country's forest resource compares with other developed countries in a range of measures such as those treated in the Main Report
- forest information, wood production, non-wood goods and services for international (European) comparisons, inventory methods, nomenclature
- characteristics of forest resources
- forest resources, use of forest, forest health and condition
- data on forest resources (area, stocks), dynamics, distribution
- international comparisons of percentage forest cover

- national and international data (numeric data, graphical data, reports, etc.) related to forests, forestry and partly wood industry
- all aspects - generally for comparative purposes. In particular, forest cover, protected forest areas, harvest levels
- general forest resource information; wood supply and carbon sequestration functions
- general information on forest resources around the world and Europe
- the whole scope of forest resources
- general information on forest resource, particularly relating to wood supply potential and factors affecting it
- Federal ministry responsible for international forest policy needs a broad overview of quality and quantity of forest resources at national levels as well as global/regional trends. For preparation of own surveys I need metadata and information on survey methods.
- accurate, harmonised regional and country level forest variable estimates
- forest condition, management, production, trade and social, economic and ecological functions of forests; information about the tropical forests should also be included
- our research institute operates on most of the sectors and disciplines within forest research. Most important areas are: area, timber quantity and economic information
- forest land area, growing stock volume, annual increment, annual fellings, forest ownership, deforestation
- in general, all information listed in the TBFRA is used for comparisons with other countries
- most types of information included in TBFRA are relevant to my interest
- usually only the most general information about forest cover. Occasionally, we will have need of forest resource information about a specific country or countries to brief an overseas mission
- all sorts (for use in teaching a course in international forestry)
- the information we are looking for is covered by TBFRA
- given our country's limitations, general information is considered adequate

b) <u>More specific information</u>

- biological diversity, environmental protection
- forest cover, timber production, forest protection
- presence, distribution and management of forests and protected areas in different countries
- area, growing stock, increment, fellings, removals, ratio removals/increment, carbon storage
- mostly area statistics and trends
- to compare sustainable forest management on the world level; to evaluate carbon sequestration in each country
- fibre supply and demand, factors influencing them such as forest certification, renewable energy use, forest set aside and forest utilisation, climate change impacts, forest policy making
- forest area, ownership pattern, standing volume, NAI, non-wood goods and services on country level but also on aggregate level (EU, Europe)

- data on forest area; data on forest quality in relation to sequestration of carbon; data on forest quality in relation to biodiversity
- mainly quantity and value of several wood and non-wood products collected from forest land
- forest area, growing stock, environment protection and biodiversity, forest damage, forest products
- basic forest data, like forest area, volume, increment on comparative data basis.

8. Comment. The above responses indicate that virtually all the areas of information covered by TBFRA are useful to some users, although needs for information vary from a broad range of information on the forest resource to the specific, e.g. forests' role in carbon sequestration, environmental protection, biodiversity or wood supply potential. Generally speaking, respondents' needs are for the more general types of information on the forest resource in other countries. The possibility to make inter-country comparisons is given by several respondents, some indicating the importance of reliability and comparability of the data.

How adequately does TBFRA-2000 meet your information needs?

9. The responses to this question were distributed as follows:

MORE OR LESS IN FULL	70%
PARTLY	25%
NOT ADEQUATELY	5%
NOT AT ALL	0%

10. The replies suggest that, by and large, the TBFRA was able to provide the information needed by respondents on the forest resource at the international level. Those responding PARTLY or NOT ADEQUATELY gave the following explanations:

- information on average tree length volume is lacking
- as TBFRA has different base dates for different countries, (we) would like an additional table to show latest estimated forest area at a common date, as done by FAO for Global FRA
- in most cases data are not actual
- chapters IV, V and VI do not describe relevant areas to a satisfactory extent; presented data are difficult for comparative analysis
- TBFRA has to be used with other sources in order to get a global picture
- information needs on e.g. sustainable forest management and forest biodiversity are not yet adequately covered (but mainly as a result of a lack of good indicators)
- as a research organization, the confidence levels of all the information used for other studies
- many of the areas are rather weak, especially biodiversity and other non-economic values
- I often need modified information based on original data depending on the topic. The most important aspect of TBFRA is that the data are reliable and credible.

11. Comment. It would appear that the more qualitative types of information, e.g. on the environmental and social functions of the forest (chapters IV, V and VI) are those not adequately covered by TBFRA or are not considered to be sufficiently reliable or comparable. The lack of a common base year/period also reduces the comparability of national data.

What are the most useful parts of TBFRA?

12. The following is the number of 'mentions' in respondents' replies:

EXECUTIVE SUMMARY	1
CHAPTER I (Area of FOWL: status and changes)	24
CHAPTER II (Ownership and management status of FOWL)	14
CHAPTER III (Wood supply and carbon sequestration …..)	22
CHAPTER IV (Biological diversity and environmental protection)	12
CHAPTER V (Forest condition and damage to FOWL)	4
CHAPTER VI (Socio-economic functions of FOWL)	5
TERMS AND DEFINITIONS (Appendix I)	2
MAPS	1

In addition to the above scores, four replies said that all parts of TBFRA were useful; one that all except Chapter VI were useful; and one that there were no parts more useful than others. The number of 'mentions', as indicated above, is an over-simplification in that some replies specified particular parts of chapters, e.g. certain Main tables, rather than the chapter as a whole.

13. Comment. Despite the caveat above, it appears that respondents consider that the most useful parts of TBFRA are Chapters I to III, with Chapters II and IV also registering a good number of 'mentions'. The seeming lesser usefulness of chapters V and VI may be linked to the difficulty of compiling reliable data on environmental and social parameters, as mentioned in para. 10 above. The low scores for the Executive Summary and Terms and definitions, and lack of mentions for the chapter on Reliability and comparability, might seem to be in contradiction to the much more positive replies to Question 14, shown in para. 26 below, which deals with the usefulness of different parts of TBFRA in more specific terms. The replies to Question 14 probably give a more reliable impression of the extent to which the various parts of TBFRA are actually being put to use.

In what ways has information in TBFRA been used ?

14. The following are taken from respondents' replies:

- mostly for further research and policy analysis work; sometimes for presentation at relevant meetings
- we used TBFRA data in the publication "Swiss National Forest Inventory, Results of the Second Survey 1993-1995", chapter "Swiss forest in comparison with European countries"
- for analysis, presentations at meetings, as well as for compiling statistical data
- for research and analytical work, compiling statistical material, elaborating forecasts of forest sector development, assessment of prospects of trade in forest products
- for preparing backgrounds for various purposes and presentation of data
- mainly in presentations where overseas visitors are shown the structure of Irish forests in comparison with their own
- it is most often used for widening the professional horizon of colleagues through presentation and education, but also for finding factual base for developing policy decisions, also for lecture material
- for answering questions from politicians, lobbyists, scientists and interested citizens, ….
- preparing internal memoranda, for publications and presentations at meetings, ….
- Input into UNEP's Global Environmental Outlook 3 and for use in presentations in Ireland and Spain; for input into UNECSO's Encyclopedia of Life Support Systems
- compiling statistical material for national reporting, data publication, data analysis
- research, preparation of papers for meetings and publication, writing book
- article on carbon storage; analysis work on French storms 1999; publication of the French indicators for sustainable management of forests
- background data for policy; reporting to Parliament; preparation of policy-decision by scientific advisers; preparation of own national forest inventory
- analysis of wood supply and future availability; briefing on the development of European forest resources; citation for presentations and reports, internal statistics
- for preparing presentations and scripts for students
- preparing internal memoranda, papers for forestry development plans and information for ministry divisions
- mainly internal use, to develop a picture of the situation and developments in European forest area and forest use
- background in articles, statements and source for further scientific calculations
- internal memoranda, papers, comparisons
- compiling statistical information; teaching
- for research; maybe in papers or articles for publication
- the questions tend to be very simple; for example what is the area and area of forest cover and other wooded land in country X compared to Canada
- compiling statistical material and questionnaires, papers for publication and presentation at meetings
- I have used the material for lectures to undergraduates. I have not used the information for research

- to get an idea about the situation in other countries
- research
- for articles and presentations mainly, communication purposes for the public.

15. Comment. Respondents have been using TBFRA mainly as a reference source for compiling statistics, carrying out research and preparing memoranda, papers, statements, lectures, public information material, etc., especially where information on other countries than their own is needed. It is also used as teaching material.

In what ways has the material you have compiled, using TBFRA and other sources, been used?

16. The intention of this question (question 8 in the Survey) was to obtain information, additional to that in the previous question, on the form in which the material is being used. Perhaps because of the way in which the two questions were phrased, the distinction between them was not sufficiently clear, and this is reflected in some of the respondents' replies. The responses set out in para.13 do, however, give a reasonable idea of the form in which TBFRA and other material is being used, e.g. statistical tables and documents of one kind or another.

What other sources of international forest resource-related information are being used ?

17. The following are taken from respondents' replies:

- some material on the FAO Forestry website is consulted as are individual country sites. Some international consultancy material, particularly for wood supply and demand forecasts, has also been used. This was more specific than the TBFRA-2000 material
- EFICS study and other products of the European Forest Institute
- EFI publications, publications on selected countries in journals
- no other source
- WEB forest pages as those provided by EFI, IISD (International Institute for Sustainable Development), EUROSTAT, European Commission, WWF International, etc.
- ICP (Intergovernmental Panel on Forests) Forests annual and overview reports; MCPFE (Ministerial Conference on the Protection of Forests in Europe) Liaison Unit reports; SOFO (State of the World's Forests) and other FAO publications; Geneva Discussion Papers, TCYB (Timber Committee Yearbook), FPAMR (Forest Products Annual Market Review)
- various publications of FAO, some national publications (Unasylva, Mitteilungen de BFH, etc.)
- UNECE Timber Bulletin, FAO forest products statistics, FAO website, etc.
- Eurostat Forestry Statistics; UN Timber Bulletins; FAO reports; national statistical yearbooks
- WCMC (World Conservation Monitoring Centre), World Wildlife Fund,, Global Forest Watch, etc. Our use of third-party information varies depending on the issue/subject at hand
- WRI (World Resources Institute) reports, national reports and data, WCMC
- FAO State of the World's Forests

- other ECE/FAO reports, OECD reports, reports made for UN Climate Change Convention, source data from countries (web pages), if available, reports done for EFICS
- L'Europe et la forêt 1994 and 1997
- reports of governments, own embassies, NGOs, media scientific institutions, inventory instructions for countries
- own statistics, consultancy reports, statistics from other industry federations, Eurostat
- EFI databank, previous ECE/FAO publications on forest resources
- different studies from NGOs (IUCN, WWF, etc.), EU-UN/ECE reports on forest condition, special studies or models for forest development (in different regions of) Europe (.g. development of forest resources in the European part of the Russian Federation by EFI)
- FAO statistics, bilateral contacts especially in Europe, Eurostat statistics and research publications
- Eurostat, national forest statistics publications
- EFI statistics and database; FAO data for tropical regions
- Forestry statistics by Eurostat
- FAO data on trade in forest products
- Different national reports, national data bases
- Several forest journals, USDA Forest Service publications, CDIAC reports, CABI,….
- Finnish statistical yearbook for forestry, original publications, conference reports, COST sector reports, WWF leaflets, CEPI statistics.

18. Comment. Besides TBFRA, there is a wide range of sources, both national and international, of forest resource-related information being used by respondents, which ones depending on the type and detail of information needed. Various FAO publications and its website are the most commonly consulted, while ECE/FAO, Eurostat and EFI are also mentioned by several respondents. It is clear that TBFRA could not possibly provide a 'one-stop' source of information, especially on resources in tropical countries and on questions not related to the resource. The question arises, however, as to whether and how closer coordination might be effected between the various sources of information, e.g. through the development of meta-databases, with a view to achieving greater coverage and consistency in the information provided.

Respondents' opinions on the reliability of the TBFRA material

19. Respondents were asked if they had been able to form an opinion about the reliability of the material in TBFRA, and if YES, to indicate which parts seemed to be **reliable**, **only partly reliable**, and **not sufficiently reliable**. Responses are summarised below under those three headings:

RELIABLE

- tables in chapters I and V
- the data collection and database
- it is necessary to extend information concerning characteristics of forest resources (species mix, age class distribution, average volume of tree length, etc.)
- the data have been used only occasionally; those used were found to be reliable
- chapters I and II
- most
- in our opinion, data published by TBFRA are very reliable. We think that these data are for most cases the best available data
- chapters I to IV
- this is difficult to answer. TBFRA does go to lengths to discuss the problems with the data, so one does get an excellent feel as to how reliable the data are
- chapters I, II, III
- chapter I: tables 1-6; chapter II: tables 9-18; chapter III: tables 25-36 and 42-48; chapter V: 72-75
- chapter I: tables 1 to 8; chapter 2: tables 11 to 13; chapter 3: tables 33 to 35, 35, 44, 48 to 50
- forest land and FOWL areas in most cases
- all information is reliable for us
- chapters I, II, III
- most
- chapters I, II, IIIA, V
- forest area, volume, increment, forest condition

ONLY PARTLY RELIABLE

- some of the tables in chapters II and III. These were tables where not all countries had data
- chapter V
- chapter IV (species, origin of planting material), chapter V (defoliation)
- partly, the data are not actual
- most information/tables in TBFRA are referred to primarily for comparative purposes, and generally not for definitive purposes. The main reason for hesitation in using TBFRA information definitively is, given my awareness of the definition limitations on how information for the TBFRA is reported, particularly from the Canadian perspective, it is assumed that most other countries experience these same reporting limitations. Therefore, information that appears in the TBFRA is often viewed with the overarching question "what is the 'real' situation?" Aside from the reporting limitations imposed by definitions, there is the matter of varying interpretations of the definitions amongst countries. This, too, casts shadows of caution on data presented in the TBFRA

- chapters IV, V, VI
- chapter III: tables 19-24; chapter III: tables 49-52; chapter IV: tables 65-69; chapter V: tables 76-78
- chapter 2: tables 9, 10, 14 to 16; chapter III: tables 46, 47, 51; chapter IV: tables 64 to 66; chapter V: tables 69 to 74; chapter VI: table 80
- increment and drain figures; carbon sequestration
- I am aware of the fact that harmonisation of data collected by national correspondents has certain limitations. I assume that this has been adequately covered by the notes and comments at the end of chapters
- maybe the largest problem is that the reliability should be analysed more on a scientific basis
- not related to publications, but the data delivered by certain countries
- chapters IV, V, VI. We are aware that differing definitions are used in each country, which can render comparisons difficult
- chapters IV, V
- biodiversity

NOT SUFFICIENTLY RELIABLE

- some of the tables in chapter IV and VI
- due to the very different inventory and assessment methods, the comparability of the data is debatable (I think the TBFRA database is the best possible)
- chapters II, IV and V
- chapters IV (naturalness), V (area of damage), most of VI
- chapter I: tables 7-8; chapter III: tables 37-41; chapter IV: tables 53-64, 70-71: chapter VI: tables 79-81
- protective and socio-economic functions
- chapter IIIB
- protected forest areas, classification, socio-economic functions.

20. Comment. So far about half the respondents have formed opinions about the reliability of the TBFRA material. Overall, there is a wide range of views ranging from very positive to doubts about the comparability of national data due to differing interpretations of the definitions. There seemed to be a feeling that the reliability tended to decline from the early chapters to the later ones. The more 'traditional' types of data in chapters I, II and III were generally felt to be more reliable than the sometimes subjectively assessed or qualitative data in chapters IV, V and VI. Despite the limitations, some respondents stated that the TBFRA data were the best available. There is no doubt, however, about the need and possibilities to improve reliability. The challenge is how to do so.

How intensively is the TBFRA being used ?

21. Respondents were asked how intensively they were using TBFRA: regularly and intensively, from time to time, or only occasionally. The replies were divided as follows:

REGULARLY AND INTENSIVELY	24%
FROM TIME TO TIME	47%
ONLY OCCASIONALLY	29%

22. Comment. It is entirely natural that the intensity of use should vary according to the information needs and type of activity of the correspondents. The fact that a quarter of them are using the TBFRA regularly and intensively is gratifying, as is the fact that nearly three quarters make use of it regularly or from time to time as a reference source.

Which of the sources of TBFRA material (publication, website, CD-Rom) have you used ?

23. The publication "Forest resources of Europe, CIS, North America, Australia, Japan and New Zealand: Main report" was issued in English in May 2000, the same material was posted on the UNECE Timber Section's website over the following months, while the CD-Rom version became available only in April 2001. Many respondents had not received, or only recently received, the CD-Rom by the time they replied to the survey, but some indicated that they would use it when they had it. Bearing this in mind, the replies to the question about which sources are being used was as follows:

THE PUBLICATION	57%
TIMBER SECTION WEBSITE	32%
CD-ROM	11%

A quarter of the respondents reported that they were using more than one source, mostly a combination of the publication and the website.

24. Comment. Despite the ever-increasing importance of electronic communication, the printed version of the TBFRA material remains the most commonly used source. But it has become essential to offer users a choice of means of obtaining such material. It is quite conceivable that the CD-Rom version will eventually become the preferred source in the future.

In using TBFRA material, have you had to adapt it to your purposes ?

25. The TBFRA went some way in trying to present material in a 'reader-friendly' form, e.g. by including some 'value-added data' to the basic information provided by countries. This included such things as regional totals, per hectare and per capita data, and so on. Nevertheless, users often

need to adapt the material to specific needs. The proportions of respondents replying to the above question were as follows:

YES	56%
NO	44%

Those replying YES, gave the following explanations:

- we sometimes want to look at countries which form "the umbrella grouping - USA, Canada, Japan, Iceland, Norway, Russian Federation, Ukraine, Australia and New Zealand" in terms of the groupings of countries in Annex I to the Kyoto Protocol and contrast this with the EU grouping
- the sphere of research should be extended to include Asia, Africa, Latin America
- growing stock/biomass/country. Above ground/underground biomass ratio, average size of holdings, occurrence of tree species
- changed basis of percentage forest cover from land area to surface area, and changed scope to exclude Israel from total Europe
- whereas TBFRA definitions require that Canada's forest cover be reported as comprising only 244 million ha (which is only the 'commercially productive' component of our national forest), as opposed to the actual 417 million ha of forest cover in Canada, all other statistics must be adjusted. These definition limitations result in the scope and nature of Canada's forests being very much misrepresented…
- selected countries were grouped for the better perception by the Polish data users, those groups were France (1), Germany, Austria, Switzerland (2), Czech Republic, Slovakia, Hungary, Romania (4), Lithuania, Belarus, Ukraine (5), Finland, Norway, Sweden (6). Constructed groups reflect the mixture of climatic, economic, geographic or even historical and cultural differences: regrouping of countries, making estimates for missing country data, where necessary
- regrouping of countries in chapters IV to VI as done in chapters I to III: Europe, of which EU-15; CIS, North America; Asia Pacific
- grouping in eco-zones as far as possible
- regrouping after CEPI membership or geographical regions
- we established new groups such as Mediterranean countries and Balkan countries
- sub-regional groupings within Europe following ETTS V and EFI classifications
- regrouping of countries and gathering data about a country.

26. Comment. Grouping in different country groups is the most common adaptation mentioned by respondents, but other changes are also mentioned, such as bringing together information on a given country. The use of the CD-Rom will simplify such adaptations.

In terms of usefulness, how do you rate the information in the different parts of TBFRA ?

27. The proportions of respondents' replies according to five degrees of usefulness are given below:

TBFRA components	Very useful	Useful	Useful in parts	Of limited use	Not useful
Main tables 1 to 81	53%	35%	12%	0%	0%
Overviews of chapters I to VI	32%	56%	9%	3%	0%
Chpt. on reliability & compar.	29%	35%	23%	13%	0%
Notes to chapts. I to VI	37%	37%	20%	7%	0%
Executive summary	42%	46%	12%	0%	0%
Terms & definitions	79%	18%	3%	0%	0%
Maps	18%	39%	24%	18%	0%

28. Comment. Perhaps surprisingly, the clear winner in terms of usefulness is 'Terms and definitions': nearly all respondents considered these to be very useful or useful. About nine-tenths of them considered the main tables and the overviews to the chapters to be very useful or useful and nearly as high a proportion (88%) gave the same ratings to the executive summary, followed by the notes to the chapters (74%). In the case of the main tables, overviews to chapters and notes and comments, with their wide variety of subject matter, it would be necessary to ask much more detailed questions to elicit which parts of them rate what degree of usefulness. However, to some extent this can be gauged from the replies to other questions, for example those summarized in para. 11 above. In that connexion, there seems to be some discrepancy between the replies there concerning terms and definitions and those shown in the table above. With regard to maps, the rather general nature of the information shown in them may detract from their usefulness in the eyes of some respondents.

Are you in agreement with the conclusions formulated at the end of chapters I, II, V and VI ?

29. Of the respondents who replied (the majority), most agreed with the conclusions. One felt that they could have gone into more depth.

How user/reader friendly do you find the presentation of TBFRA in the publication, website & CD-Rom?

30. The proportions of respondents' replies to this question were as follows:

	Satisfactory	Unsatisfactory	Not used
PUBLICATION	92%	3%	5%
WEBSITE	52%	6%	42%
CD-ROM	21%	3%	76%

31. Explanations given for 'unsatisfactory' were as follows:

Website

- It would have been useful if the tables could be downloaded as Excel spreadsheets so that calculations of re-groupings of countries were possible without re-entering data. This would allow users to produce their own graphs, etc.
- At present, due to speed problems of our connection to the WWW, finding data via Internet is not satisfying for us

CD-Rom

- For the CD-Rom there are problems to read it easily (different language version?)

32. Comment. A very high proportion of respondents find the presentation of the publication satisfactory, and a majority of those who have used the website are also satisfied. At present too few have used the CD-Rom to be able to judge on this point. For both the web and the CD-Rom there appear to be some downloading problems probably connected with the software available at the users' end.

Supplementary questions concerning the CD-Rom version of TBFRA

33. It will be better to deal with this question at a later date after more experience has been gained with the use of the CD-Rom, i.e. when the survey is carried out again, as recommended by the Team of Specialists.

RESPONSE TO PART III OF THE SURVEY - POLICY IMPLICATIONS

34. This part of the survey was aimed at persons, who have responsibility in their organizations for, or have an influence on the formulation of policy, whether concerned directly with the forest and forest industries sector or in a broader context. It is interesting that as many as 33 (82%) out of the 40 respondents who have replied so far gave information for this part of the survey.

How important is it for your organization to have information with an international perspective on the forest resource for policy formulation purposes ?

35. Respondents' replies to this question were divided as follows:

VERY	52%
QUITE	39%
NOT VERY	6%
HARDLY AT ALL	3%

36. Comment. Forest resource information with an international perspective is important to most respondents dealing with policy issues.

What types of such information are those in your organization concerned with policy issues calling for ?

37. Replies to this question included the following:

- mostly on carbon sequestration and biodiversity
- forest and land use information in the European alpine region (parts of Germany, Austria, France, Italy, Liechtenstein, Monaco, Slovenia, Switzerland)
- assessment of forest reserves
- forest cover, timber production, biodiversity
- complete country reports
- extent and development of protection forests; management of private forests; holding structure of public and private forests; development of inventory and statistical systems
- biodiversity, climate change, ecology
- those related to pan-European criteria and indicators, for discussion in international forums; also some use for background briefing for bilateral discussions
- in general, all data described and used in the pan-European criteria and indicators for SFM
- information on plantation area/species; mean annual increments; protected areas composition (forested and non forested)/categorization and proof of conformation to the IUCN categories; harvest/regeneration data; forest products shipments
- chapters characterizing status and changes of forest resources and their quality
- total FOWL area - naturalness, wood supply aspects - changes over time; ownership and management of forests; protection status/biological diversity protection and other protective functions of forest; forest condition (fire damage, other biotic and non-biotic damage); carbon sequestration functions of forests; wood supply functions of forest; socio-economic functions of forest
- forest area and forest area changes
- general forest resource situation in each country

- health state of forests; protection status; wood resources, CO2 sequestration; ownership structure; biodiversity; logistics in forestry
- general inventory data, including changes over time
- information related to wood and fibre supply and future availability; factors limiting fibre supply for industrial purposes (e.g. forest certification, nature protection, and set aside of forests, renewable energy usage, biodiversity, developments in forest management, changes in perception of forest owners with regard to forest utilization
- the basic information is that which is given in the main report. The marketing, forest industry and timber use information is important in international forest policy
- production, market conditions and prices of forest products
- information on development of forest area and forest quality
- the first three chapters are the most important. We need the information when backing up, for example, Ministries and forest industry and for our own global research topics - it forms the background information
- no additional forest resource-related information with international perspective is required; TBFRA is sufficient
- costs of transformation of even-aged single species plantation forests to mixed, uneven aged forests
- management and environmental protection
- all types, but particularly comparisons with 'similar' areas and competitors. Forest practices and regulations are the most sought after information.

38. Comment. Respondents require a range of forest resource-related information with an international perspective, which varies widely according to their particular needs. However, requirements quite frequently mentioned include aspects related to wood supply, criteria and indicators for SFM, carbon sequestration, environmental protection and biodiversity.

To what extent is the TBFRA-2000 able to provide the information in the answers to the previous question ?

39. Answers to this question were divided as follows:

LARGELY	48%
PARTLY	41%
VERY LITTLE	10%

What other sources (than TBFRA) providing international forest resource-related information are influential in policy formulation processes ?

40. Among respondents' replies to this question were the following:

- ITTO particularly for tropical countries and FAO for developing countries

- wood processing, timber trade
- FAO publications
- international WEB pages listed earlier
- SOFO, SOFE, MCPFE reports
- Material from international conferences, teams of experts on biodiversity, climate change, publications of IUFRO, EFI, IIASA and others
- FAO country facts sheets, and information received directly from individual countries
- EUROSTAT forestry statistics, UN Timber Bulletins, FAO reports, national statistical yearbooks
- WTO, WCMC, individual country sources, etc. It is the circumstances of the matter at hand that dictate possible sources of current information
- results of general studies on dynamics of forest resources and their socio-economic role for country development
- other ECE/FAO reports; OECD reports; reports made for UN Climate Change Convention; reports made for EFICS, and other organizations (PHARE); neighbouring countries' individual data; technical and scientific publications
- FAO forestry database
- industry federations' statistics, other international (research) bodies and organizations, consultants
- UN/ECE Timber Committee publications
- ETTS V
- International Forum on Forests; MCPFE; EFI; European Commission
- Eurostat
- local planning data
- IIASA; EFI
- forest policy processes; certification discussions; EU strategies; Natura 2000 data; country reports to UN & MCPFE; COST actions; conference proceedings.

What types of international forest-related information are other sources providing that TBFRA-2000 does not ?

41. Respondents' replies included the following:

- information about the forestry situation in tropical countries
- MCPFE on criteria and indicators for SFM
- other sources give more detailed information on specific issue
- Global FRA is adjusted to common base year of 2000
- e.g. forest and wood product prices, data about employees in these sectors (forestry, forest industry)
- it is not so much a matter of the 'type' of information as it is the 'currentness' of information, the method(s) used to collect it, and the apparent integrity of it. For example, organizations that collect partial information and then assemble it and report it as a national picture for Canada

(thus inaccurate) do not garner much credibility. The issue then becomes to attempt to correct the misinformation
- economic data, legislative and organizational aspects of forestry, detailed information regarding biotic and abiotic hazards in the countries in the region
- data on other regions
- e.g. more biodiversity / and status of species related information, or more future development oriented information
- really different scopes and for smaller areas sometimes more detailed information
- guidelines to sustainable forest management
- general and specific data on tree species, management and disease
- policy-related information, rather than raw and partly worked statistics
- biodiversity, socio-economic factors, localized data of forest resources, see also IUCN initiative forest conservation atlas (IUCN Canada Office).

42. Comment. The replies reveal the need to define very carefully at the planning stage and to make a clear statement in the publication the scope of a project such as TBFRA with regard to (a) information on the forest resource, (b) the geographical coverage, (c) the depth of detail needed and possible in an international collection of data, and (d) the timeliness of the data. It is beyond the possibilities for a publication such as TBFRA to provide a 'one-stop' source of all information on the forest and forest industries sector. At the same time, thought needs to be given on how to link it more effectively with other sources into some form of a meta-database.

What international forest resource-related information that is needed for policy formulation purposes in your organization is not available from TBFRA-2000 or other sources ?

43. This question is intended to obtain from users some indications of possible additions to future TBFRAs. Respondents' replies are summarized below:

- it seems that socio-economic information needs are increasing in the forest sector, and this forms a new field of research which we have recognized but not tackled much yet
- good (and harmonized) information on the social and ecological functions and forest services is still relatively limited; an important prerequisite to present such information is the availability of accepted sets of indicators for these functions and services
- medium-term fibre supply analysis (up to 5 years ahead), renewable energy sources development, and forecasts and their economics
- forest certification for SFM; data by principal species
- although presented to some extent in TBFRA, more comprehensive (from a greater number of countries and more current) information on the non-timber attributes of forests is required. Forest 'values', internationally, are being measured more and more from the non-timber perspective (i.e. recreation, medicinal products, seasonal products, etc.). It is this so-called 'social indicator' information that is needed
- better harmonized data on biodiversity, socio-economic aspects and non wood forest services
- no major gaps identified
- at present time, the information from TBFRA-2000 is sufficient
- information about forest sector legislation systems

- environmental practices relating to forestry in a concise formulation. Valuation of forest resources for non-timber functions
- systems and levels of financial support for private sector forestry - grants, tax concessions, subsidies
- all information is available - it's just very hard to collect it sometimes
- protected land areas, classification, certification statistics, raw material flows, some biodiversity aspects like forest utilization history data, long-term development, GIS-land information.

44. Comment. Several respondents mention the need for (better) information at the international level on the environmental and social functions of the forest.

OTHER COMMENTS BY RESPONDENTS

45. Respondents were invited to make further comments on the TBFRA. Among those received were:

i) New reporting requirements concerning forests are expected particularly for the UNIFF, CBD and FCCC. For consistency, coherence and efficiency reasons TBFRA should be designed in a way to form the core part also for these reporting mechanisms.
ii) Due to continuity reasons, definitions should not be changed (as far as possible).
iii) We know that there is variation in the quality of data that goes into TBFRA and FRA 2000. Consequently, we really do not know - on a worldwide basis - precisely how much "forest land" we have and what changes are taking place. We do have a good indication of trends.
iv) There is some confusion as to whether TBFRA and FRA 2000 are assessments of forest cover or forest land use. In FRA 2000 the terms are used interchangeably, which is not good. What exactly is a forest use is very confusing…While TBFRA and FRA 2000 both define forest land, the criteria for what is considered "forestry purposes" has not been articulated.
v) I think you will see the remote sensing community taking a more aggressive role in future global assessments of tree cover and changes. I think this is the way UN/ECE and FAO should go also.
vi) Lack of consistency and completeness in the country notes, which often do not explain adequately the reasons for non-comparability, special situations, etc.
vii) Desirability to distinguish FOWL by main eco-climatic zones (boreal, etc., etc.).
viii) Access by Internet is by far the best way to distribute the data. Publications do not always reach the relevant people and in a bigger office like a Ministry they get lost
ix) The last part of the current definition of 'forest' hinders any solid analysis of forest dynamics.
x) The 10% boundary between 'forest' and 'OWL' is questionable. From the ecosystem point of view, woody vegetation with stocking less than 20% is definitely 'not forests', at least for the boreal and temperate zones.

xi) As a whole the system of the TBFRA definitions is rather complete and logically solid. Nevertheless, it requires the system analysis taking into account (future) major applications of data reported. Examples: 1) 'growing stock' includes 'large branches', but the latter are not defined; 2) nor are 'dead wood' and 'coarse woody debris', which are important for carbon evaluation; 3) probably it would be relevant to divide 'plantations' in two different categories: a) stocked forests planted for industrial purpose; b) different sparse plantations (for seeds, fruit production, etc.)

xii) For future assessments it seems important to have an independent system for computer control of data, presented by national correspondents, in particular for those which are not officially defined by national inventories. It would help to avoid a number of mistakes which have been made in TBFRA for Russia …

xiii) The method of carbon sequestration, which has been used in TBFRA-2000, presents a good basis for future developments. In addition it seems relevant if dynamics of dead wood are taken into consideration.

46. Comment. There are several important points here which will need to be taken up in planning future TBFRA activities.

OTHER REACTIONS TO TBFRA

47. Since its publication in spring 2000, TBFRA-2000 has attracted considerable attention through articles in the specialized press, radio reports and presentations at international meetings. The secretariat's attention has been drawn to many cases where TBFRA has been used or referred to as reference source. In addition, it has received numerous requests for copies of the publication (unfortunately the print run of 3,000 copies in English was rapidly exhausted). Among international meetings at which the TBFRA findings were presented and discussed have been the XXI IUFRO World Forestry Congress, the joint UNECE Timber Committee/FAO European Forestry Commission session and the MCPFE Workshop on the "Improvement of Criteria and Indicators for Sustainable Forest Management". Besides articles or notices in a number of commercial journals, information about TBFRA has also been disseminated by governmental and non-governmental organizations through their regular publications, newsletters or websites.

48. Unsolicited comments on the TBFRA from outside sources have been almost without exception positive. One example may be quoted: "... the excellent TBFRA-2000 played a significant role in Climate Change negotiations… Again the TBFRA-2000 is an extremely valuable resource ...". Naturally, a number of reactions ask for clarification or amplification of certain data or details of sources for information not covered by TBFRA, for example data on tropical countries.

DISCUSSION AND CONCLUSIONS

49. According to respondents' replies to the survey, those seeking general information with an international perspective on the forest resources of the temperate and boreal countries were able to find most of their requirements in TBFRA-2000. Several considered that the TBFRA provided the most comprehensive and reliable set of data available. Some found that the degree of reliability and comparability of data, however, varied: it was generally felt to be best for the more 'traditional' and quantitative types of information (area, growing stock, increment, etc.); less so for newer or qualitative types, which often involved an element of subjective assessment, such as the environmental and socio-economic functions (biodiversity, "naturalness", environmental protection, non-wood goods and services, etc.).

50. The TBFRA was recognized as an honest and transparent attempt to present country inventory data, collected under varying conditions and with differing definitions and methodologies, in an as unbiased, neutral and comparable form as possible, based on an internationally agreed set of terms and definitions. The acceptability of the resulting data among the different users of TBFRA was generally good, but a few questioned their reliability and comparability, the doubts seeming to arise from concern over the difficulties encountered by some national correspondents in converting the original country data to conform with the international terms and definitions. This problem arose particularly with some of the basic data for the major forest countries, including Australia, Canada, the Russian Federation and the USA, which between them account for a large part of the total area of forest and other wooded land in the temperate and boreal regions.

51. Information in the TBFRA is expected to meet a wide variety of needs from different users, including to an increasing extent policy makers and their advisers. Such information comprises only a part of users' needs, however, and it is necessary that the scope and limitations of TBFRA be well defined as well as its potentials, and that it be carefully coordinated with other international sources of information in order to provide comprehensive data relating to the forest and forest industries sector and to avoid duplication of effort.

52. Given the time-span until information from the next round of the TBFRA becomes available, TBFRA-2000 is still in the early stages of its usefulness and its full potential has not yet been tapped. The present survey has therefore been carried out before that potential, as well as possible gaps and weaknesses, has been identified. Accordingly, it will be worthwhile to repeat the survey later on, but well before preparations for the next TBFRA get under way, as proposed by the Team of Specialists. In particular, it would then be possible to assess the value of the CD-Rom version.
