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Special topic: Forest Resource Assessment

**Report of the meeting of the team of specialists on
temperate and boreal forest resources assessment 2000**

(Item 7 of the Provisional Agenda)

Secretariat Note

The present document contains the report of the TBFRA-2000 team of specialists (ToS), which held its meeting on 21-22 May 2000 in Joensuu, Finland. The report contains an overview of the results of the TBFRA study, feedback on the Main TBFRA Report from country correspondents and members of the team, proposals and suggestions for the follow-up work. The team's views on the current and future forest resources information needs and some aspects of the preparation for the next round of the temperate/boreal forest resources assessment are also presented. The conclusions and recommendations of the TBFRA team of specialists on the subject have to be taken by delegations into consideration during the discussion on the special topic of the session: "Temperate and Boreal Forest Resources Assessment 2000" (document TIM/2000/5 – FO:EFC/00/6).

The Committee and Commission are invited to review of the conclusions and recommendations of the TBFRA-2000 team of specialists in the framework of the discussion on item 7 of the agenda of the joint session.

Introduction

1. The UN-ECE/FAO Team of Specialists (ToS) on Temperate and Boreal Forest Resources Assessment (TBFRA) held its sixth meeting in Joensuu (Finland), from 21 to 22 May 2000. The meeting was organized at the invitation of the Finnish Forest Authorities and the European Forest Institute in the EFI premises, with the financial and logistic support from the European Forest Institute and Metsäliitto-Group.
2. The meeting was attended by more than 40 participants (TBFRA national correspondents, assessment experts and members of the team) from Austria, Australia, Canada, Czech Republic, Estonia, Finland, Hungary, Japan, Germany, Lithuania, Netherlands, Norway, Poland, Portugal, Sweden, Switzerland and United Kingdom. The representatives from the Food and Agriculture Organisation (FAO), Liaison Unit of the Pan-European Ministerial Conference, Joint Research Centre (EU/JRC) of the European Commission, European Forest Institute, Metsäliitto-Group and Finnish Forest Research Institute took part in the meeting.
3. The opening remarks and welcoming addresses were delivered by Professor Michael Köhl (Dresden University of Technology, Germany), Mr. Fergal Mulloy (EFI Interim Director), Mr. Christopher Prins (chief of the UN/ECE Timber Section), Mr. Robert Davis (co-ordinator of the FAO FRA Programme). Professor Michael Köhl, the leader of the TEAM, chaired the meeting.
4. The meeting nominated the following moderators of the discussion under the main items of the agenda: Mr. Erik Sollander (Sweden), Mr. Jari Varjo (Finland), Mr. Albert Knieling (Austria), Mr. Roman Michalak (Poland) and Mr. Risto Päivinen (EFI). The proposed provisional agenda of the meeting was adjusted and adopted by the participants.

Main TBFRA-2000 Report

5. The general overview of the Main TBFRA-2000 Report "*Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand*" was presented by the UN-ECE/FAO secretariat (Alexander Korotkov). The publication of the Main TBFRA-2000 Report as a hard paper copy and posting it on the UN/ECE Timber Committee web-site << <http://www.unece.org/trade/timber> >>, has opened the way for further analyses and dissemination of the TBFRA information, TBFRA follow-up work, and preparation for the next round of the temperate/boreal assessment. The TBFRA-2000 work has been well received, taking account that the challenging Main Report was issued, and the Internet presentation of the TBFRA results had already been in hand. The TEAM endorsed the approach which had been used in the TBFRA-2000 process, reviewed the strengths, weaknesses and missed opportunities in the project implementation.
6. The status and development of the TBFRA-2000 electronic database were presented in detail by Mr. Peter Csoka (Hungary), who had elaborated the structure of the database and its components. The TEAM noted that the database is close to its final stage, although "easy fixes are not available", especially in the procedure of the Internet presentation of the TBFRA database. For example, "levels of access" of

different potential users to the database still has to be decided, as well as the mode of its publication on CD-Rom. The decision should be taken by the secretariat and the parent bodies of the project on whether the database should be of “an interactive structure”, “read-only” or with any other operational functions. At the later stage, the DB should be transformed into executable stand-alone version, which can be used without Access. The alternative version might include possibilities for users to define queries (the only item missing in existing version). The later version could be distributed together with the Main Report in CD format. The TEAM decided that the database should be sent to some national correspondents (participants of the ToS meeting) for the test use, and made available for all national correspondents after it is finalized.

7. It was proposed that the database should be encrypted to avoid its possible undesired exploitation through a software capable to edit database files. Three levels of rights for the access to the database were proposed in an Access environment:

- The ECE/FAO Timber Section as database administrator should have full access;
- TBFRA national correspondents should have access to all objects in the database, but any modifications are not allowed;
- other end-users may have access to limited number of objects, such as table and query design, in order to allow them developing own applications.

The TBFRA-2000 data-set should not be updated, but updated versions may be compiled at later stages as next generations of the database. They could be labelled as e.g. "Updated TBFRA-2000 data-set as of “date to be specified”.

8. The problems encountered in the process of the TBFRA data collecting and analysis (and their solutions) were discussed on the “issue by issue” (sections/chapters) basis after the brief presentations done by the TBFRA consultants (Erkki Tomppo, Jari Liski) and the secretariat. The written comments on the matter by Messrs. Tim Peck, Nigel Dudley and James Barton were taken in full consideration during the discussion. The following specific points were noted by the participants:

- Chapters I & II “*Area of Forest and OWL: Situation and Changes*” & “*Ownership and Management Status of Forest and OWL*”: The information in these two chapters is quite comprehensive, and the degree of consistency and inter-country comparability is better than achieved in earlier surveys. Still, the problem of different interpretations by national correspondents the definitions like “OWL” (dramatic changes in area reported by Australia compared to earlier surveys), “mixed forests” (Canada and Russian Federation), “forest not available for wood supply” (different concepts in different countries), “holding” or “managed forest” influenced the quality of the data. For example, the introduction of the category “mixed forests” has prevented a calculation of figures of GS and NAI per hectare of coniferous and broadleaved forest respectively, and thus reducing the usefulness of the TBFRA comparative data. The information on “ownership structure” in “countries in transition”, and countries that are in the process of settling land claims by indigenous peoples, has caused a problem for national correspondents. There was an issue relating to the distinction between holdings by individuals who may be resident, or absent from the land. Another problem is the application by countries of the different

reference dates when analysing changes over time. Reducing the number of parameters asked for in the questionnaire would help to improve the reliability of data, and should be considered for future assessments. One of the key points here is to avoid changes in the classification and definitions for the future assessments, unless absolutely unavoidable.

- Chapters IIIa “*Wood Supply: Growing stock, Growth, Drain and Balance*”: The completeness of data compared to the previous assessments has improved. The general comments to the above chapters are relevant to this one. The analysis of the “Forest Balance” needs the complete set of data for all the components from all the countries. Among the missing parameters for some countries were GAI and NAI, fellings on total forests, natural or harvesting losses, specification in the tree species groups, lack of consistency in data on forest not available for wood supply. An overview of the situation at the regional level, or a country group level, was especially difficult in the absence of hard data on some key parameters.

- Chapters IIIb “*Carbon Sequestration: Carbon cycle and Biomass*”: The detailed presentation and discussion of results, and lessons learned from the analysis of the TBFRA data in this particular chapter has proved the importance of inclusion this issue in the study. The majority of the information used in this analysis is based on the calculation of the background data, so some problems and difficulties encountered are similar to the mentioned above. It was noted in particular that the ranges of the “conversion factors” for individual countries used for the calculation of biomass are quite wide, and of course this influences the calculation on carbon stocks and flow. Among possible factors, which have influenced the differences in figures, are different interpretations of definitions by countries. Other specific implications should also be taken into account, for example, the respectively low figure for “carbon” for Russia might be influenced by the age classes distribution (mature and over-mature stands in the Russian forests), and the country’s interpretation of the “forest” definition. More capacities should be put into carbon analysis (and corresponding data collection) in the future assessment.

- Chapters IV “*Biological Diversity and Environmental Protection*”: The main problem areas in this chapter were “naturalness”, “endangered species” and “protected forest areas”. The interpretation of definitions “Plantation” and “Forest undisturbed by man” caused the major challenge to national correspondents. More detailed insight of the forest naturalness would possibly be useful, e.g. the collection of an additional information on “old-growth” forests. Further analysis of the tree species (lists supplied by countries), as well as more “exploitation” of figures, which are relevant to biodiversity, is needed, and the TBFRA satellite discussion paper on the subject would be necessary.

- Chapters V “*Forest Condition and Damage to Forest and OWL*”: The importance of this issue in the TBFRA-2000 was proved once again by the realities of December 1999 storm damage to forests, mainly in France, Germany and Switzerland, where the volume of the wind-throw significantly (2-3 times) exceeded the annual cut. Air pollution, forest fires, insect and diseases, grazing, and other biotic and abiotic factors influencing the forest condition were also analyzed in this chapter. Still, some countries had felt reluctant to report at the international level some sensitive (and possibly controversy) details on damaged forest areas. Despite the different views on the ICP-Forest process expressed by the

participants, the inclusion of the information on defoliation into the TBFRA was found justified, and worth to be repeated in the future, particularly taking account that a “new scheme” of the assessing of forest conditions (covering biodiversity and carbon sequestration) is to be applied. From the practical point of view, the defoliation charts should be accompanied by comments and explanations. The application of “minimum degree of damage for areas to be included” should be foreseen (if possible to define) and the definitions of “area with damage” and “damaged area” should be clarified in the future.

- Chapters VI “*Protective and Socio-Economic Functions*”: This chapter covered the newly identified areas like non-wood forest products (including the information in monetary terms), protection, leisure and access to forests/OWL, and aspects relevant to indigenous and tribal people. Although there is a lot of information in this area at the local level, the situation may differ significantly from country to country, and it has appeared difficult (and sometime impossible) to aggregate the multiplicity of data at the international level. The valuation of NWGS is another difficult area for the assessment. The “soil protection” definition should be discussed more, and some conceptual work still has to be done before compiling the data on “soil protection” in the future assessment. Some participants raised the question of covering by TBFRA “employment in forestry”, as an important socio-economic issue. This, and other questions on what non-wood goods and services should be covered by the assessment, have to be the subject for the discussion in the process of the preparation for the next TBFRA.

9. Mr. Stein Tomter (Norway) presented a brief overview of the interim results of the supplementary survey on the “protected forest areas”, which is being done by the pan-European Ministerial Process in co-operation with the ECE/FAO secretariat. The countries have interpreted differently the IUCN protection categories, their replies to the TBFRA enquiry were not consistent, and the information supplied by national correspondents to TBFRA-2000 appeared to be non-comparable and non-representative (actually IUCN categories had been elaborated for ecosystems, but not for forests). A new more detailed questionnaire was sent to countries, and the information on the “protected forest areas” is being compiled into the electronic database and analyzed. The report will be presented to the next round-table meeting of the pan-European process (autumn 2000), and published as an ECE discussion/study paper later on. This TBFRA follow-up activity was considered as an excellent example of the ECE/FAO co-operation with the regional processes.

10. Mr. Michael Köhl presented the information on the accuracy, comparability, and reliability of TBFRA-2000 data. This information on the quality of data has formed a special section in the Main TBFRA Report, and paved a scientific background for further insight analysis of the compiled forest resources data. This approach is a new important feature of the assessment, and more detailed presentation of findings in this area could be published as an accompanying/satellite TBFRA paper.

11. The feedback from the TBFRA national correspondents has reflected difficulties and problems which countries had encountered when providing the requested information in reply to the enquiry. The views and comments by national correspondents, team members and other participants on the TBFRA-2000 implementation is the most valuable outcome of the meeting. The discussion of the opportunities missed in the process, and lessons learned for the future was very useful. The meeting’s conclusions

(summarized in a condensed form below) will be taken into full consideration during the preparation for the next round of the Assessment. They are the following:

- TBFRA has proved to be a “continuous multi-level and multi-functional complex process”, rather than a “one-time collection/compilation” of the forest resources information;
- many national correspondents underestimated the workload requested to prepare country replies to the TBFRA enquiry, especially when different data sources and partners had to be consulted, and when the difficult process of “trouble-shooting” and checking inconsistencies in the data-sets had been done;
- lack of sufficient information and data at the national level to respond to all the elements of the ambitious TBFRA enquiry, especially on non-traditional parameters; more consultation with other agencies at the national level would be needed and helpful;
- involvement required to provide TBFRA data was not always clear at the beginning and thus resources of national correspondents were sometimes insufficient to provide the best quality information; It is essential to be informed about attributes and their definitions at an early stage;
- more strategic planning, profiling and resources at the national level should originally be anticipated, and must be done for the future assessments, especially taking into account the pressure of “new information demands”; some national correspondent would support a possible expansion of the “data acquisition period” at the national level;
- some TBFRA categories do not exist in national forest inventory and data collection systems of individual countries, e.g. OWL or FAWS in Australia;
- in some cases the national correspondents were reluctant to provide politically sensitive information, e.g. on forest damage;
- difficulties in transferring and adjustment of national data to the TBFRA standard/definitions, especially on “border lines”, e.g. when reporting on “land use” (forest/OWL), “naturalness” (forest undisturbed by man/semi-natural/plantation), “managed forest”, “DBH=0” (not only for small trees 0-7 cm, but also for tops of stems and branches of larger trees);
- special difficulty was noted in providing data for those TBFRA categories/parameters which are not focussed strictly on forest lands, e.g. protected forest areas (IUCN), biodiversity, socio-economic functions;
- more intensive discussion on a number of parameters, including definitions of “OWL”, “forest available for wood supply”, “managed forests”, “plantation” would be necessary for the next assessment; some TBFRA “soft” and not “self-explanatory” definitions have caused problems for national correspondents;
- there is a need to develop some more definitions, e.g. “Forest damage”, “Protection”, “Soil protection”, with special attention to the categories which do not exist in national forest inventory and data collection systems;
- the present set of TBFRA definitions should be maintained and improved (when necessary). In case when the definitions have to be (unavoidably) revised (or modified), the team should make a great effort in explaining urgent needs of those possible changes to country experts taking account that TBFRA is a continuous process;

- there is a need for a specific international forest resources information needs survey, to clarify and up-date the scope and coverage of the future rounds of the assessment;
- more research would be required in such areas as the assessment of biodiversity, biomass, NWGS, protected areas, and inclusion them in TBFRA. For example, in current survey, the NWGS information is more on consumption, than on the actual or potential resources;
- more close links between TBFRA and other international processes, like pan-European and Montreal, would be an advantage;
- the promotion of the TBFRA-2000 results and the TBFRA process itself in the participating countries will be one of the important issues for the national correspondents, and the ECE/FAO secretariat;
- information on the structure of national forest inventory systems should be collected and included in future TBFRA surveys with the purpose to analyze the accuracy of the delivered information (in particular, the number of sample plots (ground and remote sensing) in individual countries, upon which TBFRA data are based);
- advisability of collection of “employment” and other relevant socio-economic data should be considered when discussing the next TBFRA enquiry.

12. The processing and analysis of the TBFRA-2000 data, and the process of the publication of the Main Report have proved to be even more time and labour consuming than it had been expected. The timing for the implementation of the above ToS suggestions and recommendations in the process of follow-up work, and during preparation for the next round of the assessment should be considered specifically, depending on the availability of the secretariat resources.

13. Despite difficulties, missed opportunities and problems listed above, the TBFRA process has created many positive effects at the international and country levels, and was considered as a value in itself. Among these positive moments are:

- TBFRA has had a stimulating role which has helped to improve national and international partnerships;
- elaboration of the internationally agreed set of terms and definitions;
- further development of the national forest inventory and data collection systems;
- increasing application of the internationally standardised definitions at national level;
- countries’ direct and indirect benefits from “newly done assessments of non-traditional parameters”, and bringing more knowledge on this issue within country;
- opportunity to check the integrity and consistency of national data on the basis of the Global FRA platform and TBFRA standards;
- some countries have noted that they will further improve their data collection and reporting capacities to the international level, especially with regards to non-traditional parameters and socio-economic data, and that they will be in a better position to respond to the next TBFRA enquiry.

TBFRA-2000 follow-up work

14. The TEAM noted that it was not possible to include all the scope of the information provided by countries in the Main TBFRA-2000 Report. Further analysis of the collected information, and the publication of a number UN/ECE Timber Committee discussion/study papers on the basis of the information received from countries are desirable and needed. It would also be possible to use in these papers (only for purposes of analysis, or as illustration of specific points) other (non-TBFRA) sources of information. The TEAM reviewed the list of possible TBFRA satellite and accompanying papers that would cover the following themes:

- likely ranges, data quality and reliability, correct use/interpretation, adjustment issue;
- forest damage and forest condition think pieces, and other similar topics;
- set of the latest (1998/1999) data on the forest resources of the Russian Federation;
- analysis of the forest balance (GS/NAI/Fellings) in its dynamic and development;
- synthesis of the TBFRA information by country groups;
- forest Protected Areas (in co-operation with the pan-European process);
- analysis of main TBFRA tree species, their distribution, mapping, biodiversity aspects, etc;
- producing a set of concise country files: essential data, comparative charts, brief overview (3 pages per country; all in all about 170 pages volume).

15. Ms. Pamela Kennedy (EU/JRC) has suggested that it would be interesting to analyse how far the reported parameters in Chapter IV “Biological diversity and environmental protection” actually meet the requirements of the various international and pan-European agreements on this issue. This would provide a very useful overview of the current situation, and will illustrate where the TBFRA-2000 strengths, limitations and gaps lie.

16. The presentation of the TBFRA information by ecological zones, “regionalisation” of the data, i.e. presenting them at sub-national levels, expansion of the TBFRA data-set into the relevant socio-economic areas, including e.g. “employment” data, should also be considered as possibilities of the additional TBFRA “value-adding”, especially when preparing for the future assessments.

17. The TEAM considered the TBFRA and Global FRA publicity and PR work in the different forms an important area of the follow-up process. The “TBFRA-2000 use and policy explanations”, “General presentation of TBFRA on Web”, elaboration of “Template for TBFRA relevant articles and general overviews” to be used for its promotion at national levels, press-releases & flyer, requests for reprints of articles and publications quoting TBFRA, publication of the bibliography sources used by countries for the compilation of the FRA information at the national levels, and other possible forms of the follow-up work were recommended by the participants.

18. All the available instruments and tools for PR and dissemination of the TBFRA information should be used properly. The press releases should be issued by the secretariat in due time, with the aim to facilitate the dissemination of the TBFRA information not only in the international mass-media, but also

at the national and local levels. A colourful information flyer based on the Main TBFRA Report would be useful in PR and publicity work, and would help in the TBFRA promotion in national and local press. The flyer should be available for all national correspondents, so that they could organize its translation and dissemination.

19. The participants discussed the WWW presentation of the TBFRA-2000 information and other aspects of the final results dissemination (CD-Rom contents). The further development of the electronic database will facilitate and strengthen the TBFRA clients' service ("interactive" or "not interactive" DB version with a user-friendly architecture, other modern means). The final TBFRA output will be presented by the secretariat at the joint UN/ECE Timber Committee and FAO European Forestry Commission session (Rome, October 2000), at the IUFRO World Forestry Congress (Malaysia, August 2000), and it should be presented at other relevant fora and meetings.

20. The TEAM decided that the TBFRA-2000 electronic database should be sent to some national correspondents (participants of the ToS meeting) for the test use, and made available for all national correspondents and others after it is finalized. The participants accepted the principles that data should be available in a user-friendly form, but that the raw data should be protected so that they could not be changed and then presented as "TBFRA data". Of course, they can always be exported into other formats and then used in any way, but then it would be the user's responsibility (not TBFRA team). The statements about responsibilities of data providers and data users, which have been developed by EFI, could possibly be used or adopted by the TBFRA for its electronic database product.

Current and future forest resources information needs

21. The ToS meeting discussed the current and future forest resources information needs, as well as the international co-operation in the forest information systems, on the basis of the presentations made by Mr. Robert Davis (FAO), Mr. Risto Päivinen (EFI), Mr. Ewald Rametsteiner (MCPFE), Mr. Michael Köhl and by the ECE/FAO secretariat.

22. Mr. Robert Davis (FAO) presented the methodology, contents and status of the Global FRA, and explained the publication planning from the Global FRA-2000 perspective, the FORIS (source data) design and the FAO Forestry web-site development. The FAO Forest Resources website has been developed significantly, users can browse the information by country, and the country files available on web are being filled in by the up-dated information. The ECE/FAO secretariat has supplied the TBFRA data in the requested format for the incorporation into the Global FRA 2000 data set, the forest cover digital maps are being placed in the FAO web country files, brief introductory texts on forest resources of industrialized countries are being checked by national correspondents. The temperate/boreal country introductions together with maps will timely be sent for posting on FAO Internet page.

23. The TEAM noted the seamless nature of the global FRA data set which brings together the TBFRA data and the data for tropical countries, and which is being collected and validated by a team in Rome, as well as the need for globally co-ordinated planning of next steps. (NB. The country comments and notes

to the TBFRA data should be included also in the Global FRA-2000 publication, as they form an integral part of the data set).

24. Mr. Risto Päivinen (EFI) presented the IUFRO Task Force views and proposals for the development of the Global Forest Information System (GFIS). The participants discussed whether an integrated information system for data collection and dissemination possible/visible, and how to combine Global FIS and other forestry information services with TBFRA data. The TEAM has preliminary agreed that ECE/FAO secretariat would participate in the elaboration of a “*meta-data*” standard/structure for forest resource information, using TBFRA as a “*guinea pig*”, in order to help the Global Forest Information Service. This work is clearly useful for the TBFRA process from the point of view of its promotion, users will know of the TBFRA existence and can find it easily, and the “*meta-data*” standard will be drafted with work like TBFRA in mind.

25. Mr. Ewald Rametsteiner (MCPFE) presented the political background, organizational aspects and activities which were being done within the pan-European Ministerial Conference on the Protection of Forests in Europe. The programme of work of the MCPFE Liaison Unit in Vienna had been developed taking full account of the close co-operation with the UN-ECE/FAO, Geneva, and it had totally relied on the support particularly from the TBFRA process. The TBFRA information covered not only for majority of the pan-European SFM criteria and indicators (21 indicators of 27), but also contributed to the global forest policy dialogue. The Liaison Unit expressed its high satisfaction with the existing co-operation, and would like to maintain and further develop the working contacts.

26. Mr. Fergal Mulloy (EFI) provided information on the COST (Co-operation on Science and Technology) programme in the different scientific and research areas. The co-operation in this programme would also be possible with the TBFRA process, for example on the FRA terms and definitions. The certain financial support from COST might be available if such a co-operation is established. The TEAM will study this opportunity in its further work in the process of the preparation for the future assessments.

27. The merging/bringing together the TBFRA and global FRA data sets, taking account the Kyoto Protocol requirements, co-operation with the pan-European and Montreal processes, and within the Global Forest Information System (elaboration and harmonization of the “*meta-data*” structure), i.e. a global co-ordination of the preparation for the next round of the assessment would be absolutely necessary pre-requisites of the successful implementation of the next TBFRA study.

28. Although the analysis of the FRA information needs was done in the process of the preparation for the TBFRA-2000, and the EU EFICS information needs study was quite comprehensive (and should be fully taken into account), there is still a need to up-date and widen the information on TBFRA data users and present-day users needs. For example, the TBFRA has shown that some new demands for the FRA information (carbon flow and sequestration, biological diversity, NWGS, etc) are emerging or increasing. How could future assessments respond to these needs? A formal user needs/evaluation survey should be carried to serve as guide to future ToS activities. A “make-up” including the most demanded forest

resources parameters would be helpful in the discussion of the information needs with main users groups, as well as an evaluation of number of specific “visitors’ hits” at the TBFRA web-page.

Preparation for the next Temperate/Boreal Forest Resources Assessment

29. The preparation for the next temperate/boreal Forest Resources Assessment requests the discussion on the TBFRA periodicity, geographic coverage, scope, terms and definitions, organizational, financial aspects and methodology to be applied, and other relevant matters. The constructive atmosphere during the meeting helped a lot to assure that all these key elements were covered with a sufficient in-depth analysis. The importance of stability of the internationally agreed set of the FRA terms and definitions in this connection was noted once again specifically.

30. The TEAM proposed several options with regard to the TBFRA periodicity:
- continuous up-date of the collected information (on WEB);
 - the next round of assessment, as TBFRA-2005;
 - the next round of assessment, as TBFRA-2010;
 - “rolling” regional (within temperate/boreal zones) assessments;
 - updating specific “top importance parameters” (to be identified) at shorter periods;
 - periodicity harmonized with dates of important events such as the next pan-European Ministerial Conference on the Protection of Forests in Europe (MCPFE).

31. A major challenge for the future will be providing recent and comprehensive data to the forthcoming major international “events”, such as Rio + 10, the next pan-European Ministerial Conference, etc. The level of such events cannot be expected to schedule their meetings in accordance with the rhythms of forest inventories, or to be satisfied with 10-year periodicity (too old data), but it is technically almost impossible (even with satisfactory funding) to update the FRA information as a whole more than once every 5-10 years. Perhaps the answer lies in more frequent updating of a few key parameters, with periodic in-depth reviews. These points should be discussed by the next ToS meeting.

32. The Team’s discussion of the above options will be the main item on the agenda of the preparation for the next round of the assessment. Some participants noted preferably to keep the 10-year rotation as logical and reasonable period to detect changes in the forest resources of the region, i.e. the next round would be TBFRA-2010. The links with other relevant international processes (events), like global FRA, global forest policy dialogue (CSD, MCPFE, Montreal, etc), co-ordination of the data requests with them, taking account availability of the information after new national inventories, should be taken into full consideration.

33. With respect to the geographical coverage and the TBFRA boundaries, the TEAM should consider the following aspects:

- need to bridge gaps between temperate/boreal countries and regions;

- possibility to expand the TBFRA area to other temperate zone countries (i.e. Argentina, China, Chile, Mongolia, Mexico, etc), taking account capacities of potential TBFRA countries to reply to a detailed enquiry, and their membership in different international organizations and processes;
- alternatively, some TBFRA countries might be better sited to the methods used by the FAO HQ Team because of their insufficient capacity to reply to the ambitious enquiry,
- possibility to expand the TBFRA area to all the Montreal process countries;
- possibility of delineation of temperate and boreal forests, and presentation of the forest resources information separately for each of them;
- possibility, and possible options of the presentation of the FRA sub-national data, by ecological zones, types of forests, other criteria.

34. The ToS should define the scope of the next Assessment taking account a necessity to provide more detailed, reliable and high quality information, first of all on non-traditional parameters and NWGS, i.e. a possible expansion (or decrease) of the TBFRA parameters number. The link to criteria and indicators of SFM defined by the pan-European and Montreal processes should be guaranteed.

35. The TEAM noted the paramount importance of TBFRA terms & definitions and acute need to maintain their continuity and comparability over the time, i.e. the necessity to maintain the global FRA platform which has already been defined in the process (Kotka-III). The definitions should facilitate the adjustment of national data to international TBFRA standards. The TBFRA satellite paper on data quality, which has to be prepared before the next assessment, should pay a special attention to the definitions and adjustment issues. The need to develop national capacities to adopt international definitions was also emphasized.

36. The requirements of the joint UN-ECE/FAO Working Party on Forest Economics and Statistics to the TBFRA (TIM/EFC/WP.2/1999/9), and the view of TBFRA from the pan-European and Global forest policy dialogue perspective, were considered with regards of the next TBFRA round. The TEAM highlighted other important points of the preparation for the next round of the Assessment. In particular, it was noted that such ambitious and costly survey would request (and assume) more financial and logistic support to National Correspondents, and the solution of practical organizational and financial problems in some countries would be necessary in this connection.

37. The following specific points were noted in connection with the methodological aspects of the future assessment:

- the enquiry/questionnaire approach should be maintained;
- the network of TBFRA national correspondents should be maintained and up-dated;
- remote sensing (RS) data should be used and applied (link to global FRA);
- data from different Internet/web and literature sources should be used;
- different auxiliary sources, GIS and other related techniques should be involved;
- ToS should expand and be completed by new experts with the respective expertise and knowledge.

38. The Global Forest Resources Assessment should be maintained and developed as one single project with regional variations (TBFRA-2000). This approach presumes a common planning of the process based on a common global platform with the commonly agreed terms and definitions. The future forest resources assessment should be initiated by an expert consultation with the world-wide participation, i.e. something like "Kotka IV". The consolidation of efforts in the preparation for the next TBFRA round is indispensable for its success. The FAO and UN/ECE should start the preparation of the next FRA consultation after accomplishing and publication of the Global FRA-2000. Pending this Consultation no firm decisions should be taken on implementation of the next TBFRA.

Future activities of the TBFRA Team of Specialists

39. The future activities of the TBFRA Team of Specialists, including its terms of references and mandate, membership, leadership and methods of work were reviewed. The tentative agenda of the next meeting of the team, as well as the date and the ToS meeting place should be based on the key points addressed by this meeting.

40. The TEAM noted that the Joint FAO/ECE Working Party had extended its mandate until the year 2002 taking account that the team had already got a very good "grasp" of the issue and would be helpful in the future TBFRA work. The experience of the team, its "historic memory" and lessons learned from the Assessment 2000 will help to propose optimal solutions for the problem areas in the future. The Terms of Reference for the Team should be adjusted at the next Working Party session.

41. Mr. Brian Haddon and Mr. Roman Michalak invited the TEAM to organize its next meeting either in Warsaw (Poland), or in Ottawa (Canada) in the 2nd half of the Year 2001. Participants with gratitude noted the invitations. The organizational details will be discussed by the secretariat and the team's leader in due time with the host country. As proposed by Mr. Robert Davis (FAO), one of the following future TEAM's meetings could be organized in Rome, which would bring much closer together the temperate/boreal and tropical parts of the Global FRA, and some key players of the tropical FRA could participate in the TBFRA ToS discussion.

42. The TEAM has confirmed the success of the implementation of the TBFRA project, which is the main UN/ECE contribution to the Global Forest Resources Assessment 2000. The ToS meeting appeared to be an important "bench-mark event" in this international forest resources assessment process. The outcome of the meeting is forming the basis for its conclusions and recommendations, which have to be presented to the joint FAO/ECE Working Party at its next session. The ToS suggestions will also be presented to the Joint UN/ECE Timber Committee and FAO European Forestry Commission session in October 2000.

Other business

43. The participants thanked the Finnish Forest Authorities and EFI for the invitation to organize the ToS meeting in Finland, at the EFI premises. The financial and logistics support to the meeting from EFI and Metsäliitto-Group, and the efficient EFI secretariat help during the organization, preparation and running the meeting have significantly contributed to its successful outcome.

44. Many participants noted that the meeting was an excellent opportunity to further develop working contacts between colleagues from many countries, which are the key of the good partnership, especially in this working area. The meeting confirmed the usefulness and efficiency of working through such teams of specialists, especially if it is possible to maintain the relationship over time.

45. The work of the meeting was covered by the Finnish mass-media, the press-release covering the TBFRA results and ToS activities was issued beforehand, some participants were interviewed, and the event was highlighted in the local newspapers.