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TIMBER COMMITTEE

REPORT OF THE COMMITTEE ON ITS FORTY-FOURTH SESSION  
(13 to 17 October 1986)

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### Introduction

1. The Timber Committee held its forty-fourth session at Geneva from 13 to 17 October 1986. The session was attended by representatives from the following countries: Austria; Belgium; Bulgaria; Canada; Czechoslovakia; Finland; France; German Democratic Republic; Germany, Federal Republic of; Greece; Hungary; Ireland; Italy; Luxembourg; the Netherlands; Norway; Poland; Portugal; Romania; Spain; Sweden; Switzerland; Turkey; Ukrainian Soviet Socialist Republic; Union of Soviet Socialist Republics; United Kingdom of Great Britain and Northern Ireland; United States of America; and Yugoslavia.

2. The following United Nations and specialized agencies were represented: United Nations Conference on Trade and Development (UNCTAD); International Labour Organization (ILO); Food and Agriculture Organization of the United Nations (FAO); United Nations Industrial Development Organization (UNIDO).

3. The following intergovernmental organizations participated: General Agreement on Tariffs and Trade (GATT); European Economic Community (EEC).

4. The following non-governmental organizations were represented: European Confederation of Agriculture (CEA); European Confederation of Pulp, Paper and Board Industries (CEPAC); International Federation of Building and Wood Workers (IFBWW); International Technical Association for Tropical Timber (ATIBT); International Organization for Standardization (ISO); Organization of European Sawmilling Industries (OES).

### Adoption of the agenda (Item 1)

5. The provisional agenda (ECE/TIM/29) was adopted.

### Election of officers (Item 2)

6. The Committee re-elected Mr. L. Strång (Sweden) Chairman and Mr. J. Säglitz (German Democratic Republic) Vice-Chairman.

### Matters arising from the forty-first session of the Commission (Item 3) (TIM/R.121)

7. The Committee was informed of the Commission's discussion of its work and the resolution and decisions of the Commission. It agreed to take account of these discussions, resolution and decisions, particularly with regard to its programme of work.

### Activities of teams of specialists (Item 4)

#### (a) Energy derived from wood (TIM/R.122 and Add. 1 and 2)

8. The Committee was informed that a seminar on energy derived from wood was being organized from 28 to 29 October 1986 in conjunction with the Bioenergy 86 Conference and Exhibition in Gothenburg (Sweden), with the participation of members of the Committee's team of specialists. It invited the team to discuss at its meeting in Gothenburg possible future activities in the wood/energy field and to draw up proposals on the basis of TIM/R.122. The Committee would decide on these matters at its forty-fifth session in October 1987. The team should also consider the detailed proposal for a symposium on the application of fluidized bed techniques to the combustion of wood residues (TIM/R.122/Add.1) and, if it considered it appropriate, make more detailed organizational suggestions (programme, location, date, etc.).

9. It was suggested that the team might also consider the use of market models to resolve problems of competition between raw material and energy uses for wood.

- (b) Implications of air pollution damage to forests for roundwood supply and forest products markets (TIM/R.123 and Add.1-3, TIM/R.124 and Add.1)

10. The Committee welcomed the team's activities, presented by Mr. L. Schotte (Sweden), the team's leader. It endorsed its proposals as regards future activities (TIM/R.123, paras. 24-29). In particular it agreed that:

- (a) The reports prepared under the team's auspices should be given wide distribution. The study on the extent of damage, prepared by Mr. S. Nilsson (Sweden) (TIM/R.124 and Add.1), should be updated annually, if resources are available;
- (b) Co-operation should continue with the International Institute for Applied Systems Analysis (IIASA) in this area;
- (c) Full participation in the work by all countries should be encouraged;
- (d) The main function of the team in future should be to review available information on market effects, make recommendations if necessary, and interpret new surveys as they appeared. It would thus be in a position to draw the Timber Committee's attention to any emerging problems. It should report to the Committee annually;
- (e) Mr. Schotte, as leader of the team, should convene the next meeting of the team in consultation with the secretariat, when such a meeting appeared necessary.

11. The Committee agreed that the title of the paper prepared by Messrs. Dykstra (USA) and Kallio (Finland) should be modified to read "Sensitivity analysis of the economic impacts of atmospheric pollution on timber supply and forest products markets in western Europe", thus ensuring that the sensitivity analysis could not be interpreted as a forecast.

12. The Committee was also informed of activities under the auspices of the Executive Body for the Convention on Long-range Transboundary Air Pollution and FAO.

13. The Committee expressed warm thanks to Mr. Schotte and the other team members as well as to Messrs. Dykstra, Kallio and Nilsson.

- (c) Stress grading and finger-jointing of coniferous sawn timber (TIM/R.125)

14. The Committee was informed by Mr. W.E. Townsley (Canada), leader of the team of specialists, of the activities in this field of a number of organizations, including ISO (notably TC 165 - Timber Structures), UNIDO, EEC (notably developments in Eurocode 5), CIB/W18, and North American in-grade testing. The Committee considered there was an urgent need for consultation between these bodies to achieve the best possible form of international co-operation on the standardization of stress grading and finger-jointing. It agreed that the secretariat should convene an informal meeting of representatives of the above organizations, as well as other interested experts, at the national and international level. This meeting should review all relevant activities and plans and make any recommendations necessary to harmonize the methods and objectives of work. In particular, it should decide whether it was appropriate for the Committee's two recommended standards to be transformed to ISO standards at this stage.

Other activities since the Committee's forty-third session (Item 5)

(a) Measures to be taken in the event of sudden and severe damage to forests: progress report (TIM/R.126)

15. The Committee was informed that since the Committee's forty-third session, two countries had reported four instances of sudden and severe damage to forests. It reiterated its invitation to countries which had not yet done so, to provide addresses to which information on sudden and severe damage to forests should be forwarded. The Committee also urged delegations to continue to report on these events, even in cases where there was doubt as to their possible impact on the international market. The Committee further invited countries which had practical experience in the recovery of timber damaged by forest fires and other causes, to provide reports on the measures taken to increase the recovery of raw material for industry and to reforest damaged areas.

(b) Management training in the sawmilling industry (TIM/R.127)

16. The Committee at its forty-third session had invited the secretariat to collect information on activities relating to management techniques being undertaken by other Principal Subsidiary Bodies of ECE. While management techniques were not being dealt with on a continuing basis by most PSBs at present, work had been undertaken by the Committee on the Development of Trade and the Coal Committee.

17. The Committee was also informed of the Commission decision A(41) - Management training for administrations and enterprises. In the operative part of this decision, the Commission decided to convene a Symposium on management training programmes and methods: implications of new technologies, in co-operation with the International Labour Organization. The Symposium will be held in Geneva from 17-19 November 1987.

18. The Committee agreed to consider further activities in the field of management techniques in the wood-working industries at its forty-sixth session, in the light of the outcome of this Symposium.

European Timber Trends and Prospects to the Year 2000 and Beyond: publication of the study and follow-up (Item 6) (ECE/TIM/30, TIM/EFC/AC.3/2, TIM/R.128)

19. The Committee was informed that the study (ETTS IV), revised in accordance with the recommendations of the review meeting, was issued during the session, and heard an oral presentation of its contents. The Committee welcomed the study and warmly thanked all those who had participated in it, notably the national correspondents and the participants at the review meeting as well as those Governments which had contributed financially or in kind to its preparation.

20. It agreed with the proposal that the documentation for the discussion at the Joint Session with the European Forestry Commission in October 1987 of the policy implications of the study should be as follows:

- (a) A secretariat paper, highlighting the policy implications of the study, prepared with the help of a small group of experts;
- (b) National responses to the secretariat paper, to be tabled at the Joint Session.

21. The Committee took note of the activities already in hand under the auspices of the Joint FAO/ECE Working Party on Forest Economics and Statistics.

22. It requested the delegations of Canada, the USSR and the United States to discuss with the secretariat the possibility of preparing a study of the outlook in these three ECE countries, not covered in ETTS IV.

23. The Committee urged delegations to make every effort to ensure that the study was widely disseminated and discussion of its results encouraged.

24. The Committee was informed of the results of national projects on the outlook for the sector in Finland, the Netherlands and Sweden, and of the outlook studies programme of FAO.

#### Market developments in 1986 and prospects for 1987 (Item 7)

25. The Committee's discussion on the forest products markets was based on national reports, countries' estimates for 1986 and 1987, which are summarized in annex I 1/, and the secretariat's Annual Forest Products Market Review (Volume XXXIX, issue No. 6 of the Timber Bulletin).

##### (a) General introduction

26. Since the modest recovery in 1983 from the low point of the early 1980's, consumption of forest products in Europe has fluctuated within fairly narrow limits. In North America, the recovery since 1982 has been more marked. In Europe, consumption levels of most products have remained below those reached in the late 1970s. The background to these trends has been sluggish growth of the economies of western Europe, a somewhat stronger rate of increase in eastern Europe and the USSR and a relatively brisk expansion up to and including 1984 in the United States.

27. For 1986, growth of Gross Domestic Product in western Europe may be estimated at around 2 1/2%, similar to that for 1984 and 1985. A stimulus to the economies from the steep fall in the price of oil has taken longer to appear than expected, but some observers believe that the positive effects could be seen towards the end of the year and be carried over in the form of improved performance in 1987. The slowdown in the North American economy in 1985 and the first half of 1986 could also be reversed. In both western Europe and North America, however, the continued high level of real interest rates and the fragile state of business expectations remain among the constraining factors.

28. Growth of Net Material Product in the centrally planned economies of eastern Europe and the USSR amounted to 3 1/2% in 1985, which was within the range achieved during the early 1980s but below the growth rates of earlier periods. The five-year plan strategies for 1986 to 1990, now being finalized, will provide for faster growth of national outputs, larger structural changes and also possibly greater changes in management and planning and economic policies. More buoyant investment is intended to spur restructuring and reconstruction.

29. In many countries throughout Europe new dwelling construction has remained at low levels, but increased renovation and maintenance have partly offset this trend and helped to support the level of use of sawnwood and wood-based panels. While a number of countries are expecting a higher level of new residential building in 1987, there is no indication of a general revival in this sector in the medium- to long term.

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1/ The estimates are presented in full in Forest Products Markets in 1986 and Prospects for 1987 (Volume XXXIX, issue No. 9 of the Timber Bulletin).

30. During the Committee's discussions of the different sectors of the forest products markets, attention was drawn to the conclusions of European Timber Trends and Prospects to the Year 2000 and Beyond that there will be a generally adequate availability of wood to meet projected demand and hence a continuation of competitive conditions in the market. Under these conditions and recalling the resolution concerned with the development of a prosperous forest economy of the Conference on Trees and Forests, SILVA, in Paris in February 1986, the Committee recommended a much more aggressive attitude to the market on the part of the forest industries and trade. Countries should co-operate in campaigns directed at clearly identified target groups such as architects and specifiers, as well as consumers, with the objective of promoting the merits of wood and wood products. In particular, teaching in wood technology, timber engineering and wood building techniques should be more widely introduced at universities and technical colleges. Efforts should also be made to ensure high standards of building site practice where the use of wood is involved. Governments must be persuaded that measures to create a more dynamic forest and forest industry sector would bring tangible benefits to the national economy.

(b) Sawn softwood and coniferous logs

31. The modest recovery in Europe's consumption of sawn softwood in 1983 and 1984, which was interrupted in 1985, has resumed in 1986 and is expected to continue in 1987. Estimated requirements in 1987 of 75.9 million m<sup>3</sup> are 2.8% above the 1985 level and the highest since 1980. On the other hand, European production in 1986 and 1987 is forecast to remain close to the 1985 volume of 70.2 million m<sup>3</sup>. Production growth over the two-year period to 1987 in France, the Federal Republic of Germany and the United Kingdom, all major importers, is expected to be offset by small declines in a number of exporting countries, including Finland, Poland, Romania and Sweden.

32. European exports are forecast to remain unchanged in 1986 and 1987 at close to the 1985 level of 21.9 million m<sup>3</sup>. A fall in shipments to non-European destinations, notably those in North Africa and west Asia, where import purchasing power has been affected by the fall in oil prices, may be offset by increased sales to Europe. The USSR and Canada predict increased exports in 1986 and 1987 compared with 1985, including higher shipments to Europe. European imports in 1987 are estimated at 26.7 million m<sup>3</sup>, 1.8 million m<sup>3</sup> or more than 7% above the 1985 volume.

33. Production and domestic requirements of sawn softwood in North America are forecast to rise in 1986 for the fourth year in succession before falling back slightly in 1987. The 1987 volume of production of 128.9 million m<sup>3</sup> would still be the second highest ever after 1986 and nearly 50% above the low point of the cycle in 1982. An estimated fall in US production of 2.1 million m<sup>3</sup> between 1986 and 1987 to 73.9 million m<sup>3</sup> may be partly offset by an estimated 1 million m<sup>3</sup> rise in Canada's to 55 million m<sup>3</sup>, an all-time record. United States imports are forecast to fall back in 1987 from their peak levels in 1986, but both Canadian and US exports are expected to rise in 1986 and 1987, partly benefiting from favourable currency exchange rates, to reach in aggregate 45 million m<sup>3</sup> next year.

34. For softwood logs, the downturn in removals and consumption in Europe in 1984 and 1985 is forecast to level out in 1986 and 1987, with removals at 121.9 million m<sup>3</sup> next year. Trade, however, is expected to fall over the two-year period, in particular exports, which are estimated at 2.51 million m<sup>3</sup> in 1987, or 1.24 million m<sup>3</sup> (33%) less than in 1985. Notable falls are foreseen in some countries that have until recently been disposing of storm-damaged timber, including the Federal Republic of Germany and Czechoslovakia. Exports from the USSR, on the other hand, are forecast to rise by 857 000 m<sup>3</sup> or 11% over the two years to 8.6 million m<sup>3</sup> in 1987.



35. During the discussion of the market for sawn softwood and softwood logs, a number of points were highlighted, including the following:

- The difficulties created for many sectors of the trade by the marked changes in exchange rates over the past year or so;
- The high cost of maintaining inventory has led to reluctance by all parties in the supply chain to hold stock. This has caused some imbalance in stocks and low levels of inventory in certain countries;
- The problems of high costs of harvesting sawlogs in some areas and of mobilizing sawlog supply; also the competition with the pulp industry for small-sized sawlogs;
- The changing structure of the sawmilling industry, with the fall in the number of mills not necessarily resulting in reduced capacity. Some cutback in capacity had, however, occurred in Finland.

36. Several delegations from European countries drew attention to the uncertainty created for the international trade in sawn softwood arising from the United States' investigation concerning imports from Canada. The US delegation explained the alternative courses of events that would follow the announcement of the preliminary findings, depending on what those findings were. They were due to be announced while the Committee was still in session.

37. The Committee concluded that sawn softwood supply and demand were generally quite well balanced in most European markets. Imbalances caused in 1985 by disposal of storm damaged timber had now been removed and prices for sawlogs and sawnwood were stabilizing. While a number of uncertainties remained which might unsettle markets, if they materialized, the Committee considered that, on the whole, the prospects were for a reasonable balance between supply and demand in the European and North American markets over the coming year.

(c) Hardwoods (temperate-zone and tropical)

38. The modest recovery in production and consumption of hardwoods recorded in Europe in 1984 and 1985 from the low level of 1983 is expected by the Committee to level out in 1986 and 1987. Between 1985 and 1987 little change is foreseen for sawn hardwood consumption (21.4 million m3 in 1987), and for production (18.5 million m3). This reflects the continued depressed level of activity in important end-use sectors, notably joinery and furniture, and a competitive environment where the producers of alternative products are trying to gain market shares.

39. Europe's trade in sawn hardwood is expected to show a positive development with a small rise in exports over the two years of 1.4% to 2.7 million m3 and a larger one of 4.8% to 5.6 million m3 in imports. Most of the rise in imports in 1986 concerns temperate-zone sawn hardwood, and is accounted for by France, the Federal Republic of Germany, Spain and Switzerland. In 1987, however, tropical hardwoods are expected to account for the bulk of the increase in imports.

40. For Europe's trade in hardwood logs, the Committee expects an unchanged level of exports of 2.6 million m3 in 1986 and 1987 compared with 1985, but a decline of 4.1% in imports to 6.2 million m3. Imports of tropical hardwood logs are estimated to fall by 320 000 m3 over the two-year period, thus continuing their long-term decline. The expected level of tropical log imports in 1987 of 3.3 million m3 is barely a third of the peak levels reached in the early 1970s.

41. The Committee noted the good level of demand for beech logs and sawnwood in Europe, which seemed to reflect, amongst other things, a change in use patterns in the furniture industry in a number of countries. Demand for oak, on the other hand, was more muted, especially for veneer qualities. Reflecting these trends, prices for beech roundwood at recent auction sales in Belgium and France had tended to rise, by 10 to 15%, while those for oak were rather stable, but had declined for the lower qualities.

42. In North America, demand for sawn hardwood has been maintained by steadily rising activity in the furniture industry, while other hardwood-using sectors, notably construction, show diverging trends. Overall consumption of sawn hardwood in North America is expected to vary only slightly in 1986 and 1987 from the 1985 volume of 15.7 million m<sup>3</sup>, while production is forecast to rise by 530 000 m<sup>3</sup> (3.4%) between 1985 and 1987, and exports from both the United States and Canada by as much as 430 000 m<sup>3</sup> (34%).

43. During the discussion, attention was drawn to the trend observed in some countries for tropical hardwoods to be replaced increasingly in certain end-uses by other species or by non-wood materials. In this connection, the point was made that in importing countries wood promotion should not be the task of the importing trade alone, but needed the active participation of the producers. Promotion was also one means of addressing the problems of the market for lower quality hardwoods, both temperate-zone and tropical. Attention was also drawn to the structural changes occurring in the world markets for tropical hardwoods on both the demand and supply sides. The utilization and management of the tropical forests would have to be improved to ensure a continuing supply potential for the long term.

(d) Wood-based panels

44. The Committee forecast that the modest recovery in apparent consumption of wood-based panels in Europe, which began in 1983, would continue in 1986 and 1987. Domestic requirements of wood-based panels in 1986 are estimated at 33.8 million m<sup>3</sup> or 680 000 m<sup>3</sup> (2%) higher than in 1985. A further small increase of 0.9% is expected for 1987. European requirements and production of each of the three main panel products are expected to increase in 1986 and at a slower pace in 1987. Particle board should maintain more than a 70% share of the European wood-based panels market.

45. The recovery of the wood-based panels sector in North America is expected to continue in 1986, with a slight downturn foreseen for 1987. Plywood's share of the North American wood-based panels market should be about 57% in 1987, but particle board, including medium density fibreboard (MDF), oriented strand board (OSB) and waferboard, has been gaining share to reach an estimated 27%.

46. The forecasts for production and exports of particle board for Europe in aggregate show stronger growth between 1985 and 1987 than for domestic requirements, while those for imports show a decline. This is an indication of the continuing oversupply situation that has been a feature of the sector for more than a decade. In the case of plywood, imports are forecast to exceed European production for the first time in 1986, showing the extent to which overseas supplies, notably from south-east Asia and especially Indonesia, but also to some extent the United States, are raising their share of the European market. For fibreboard, some further growth in production and use is foreseen in some eastern European countries. Elsewhere, growth appears to be largely confined to the production and use of MDF.

47. During the discussion, the strategies were mentioned for European plywood producers to meet the growing challenge of imports from other regions, for example by further specialization in value-added products, in producing to precise customer requirements and in using local raw materials. The problem of undertaking market analysis of the wood-based panels sector was noted, because of the continuing diversification of the products, overlapping of end-uses and problems of classification. In this connection, attention was drawn to the plans of FAO to hold an Expert Consultation on the Wood-Based Panels Industries in September 1987. The Committee agreed that it could be a suitable opportunity for a re-examination of the FAO/ECE classification and definitions of these products and invited FAO to consider this possibility.

(e) Pulpwood and roundwood removals

48. Production of pulp and paper in 1985 in both Europe and North America was at or slightly below the record levels achieved in 1984. For 1986 (January-August) pulp production in the United States was 4.6% above that of 1985 and also appreciably higher in Canada; but in western Europe for January-June, it was slightly below that in the same period of 1985. Prices of market pulp have risen quite strongly, although the effect for sellers and buyers has varied in accordance with currency changes.

49. The Committee foresees for 1986 a slight rise (1%) in domestic requirements of pulpwood for Europe, and a rather larger increase in 1987 (2.4%, to reach 178.5 million m<sup>3</sup>), with marked increases in Finland and France. Stronger growth in requirements in 1986 is foreseen by the USA (5%), slowing to 2.2% for 1987.

50. Domestic supply is also expected to rise. It is forecast to increase in Europe by 3.2% in 1986 and 3.4% in 1987, to reach 173.2 million m<sup>3</sup>. Likewise in the USA domestic supply is foreseen to grow to 214.6 million m<sup>3</sup> in 1987 from 200.2 million m<sup>3</sup> in 1985 (7.2% in two years).

51. European exports of pulpwood, principally round pulpwood, are expected to fall in both 1986 (by 4.9%) and 1987 (by 6.5%). European imports are forecast to rise in 1986, but to fall by a similar amount in 1987, largely because of developments forecast for Sweden. North American exports of pulpwood are expected to grow slightly, despite the small drop forecast for 1986 for the main exported assortments, chips and particles.

52. The Committee reviewed, on an experimental basis, forecasts prepared by countries of trends in roundwood removals. Total European removals are expected to rise by 0.9% in 1986, a drop of 1.2% for logs being more than offset by an increase of 3.8% for pulpwood. In 1987, removals are expected to rise again, by 1.8%, with a larger increase for pulpwood than for logs. European fuelwood removals are expected to fall in both years, reversing the upward trend that began around 1978.

53. The Committee's attention was drawn to the increased importance of hardwood pulps, especially eucalyptus, from major new suppliers such as Brazil, Portugal and Spain, as well as of high yield pulps such as thermomechanical (TMP) and chemi-thermomechanical (CTMP).

54. In reviewing the roundwood markets, the Committee noted the difficulties in certain countries of relating roundwood removals data to those of utilization, notably for pulpwood and logs. For this reason the apparent decline in the share of logs in total removals could be misleading. Many roundwood markets were characterized by competition for raw material between sawmillers on the one hand and pulp and panel manufacturers on the other. The dividing line between sawlogs and pulpwood shifted with changing technical and market conditions.

(f) Organization of the market discussion (TIM/R.129)

55. The Committee considered the changes which had been introduced on a trial basis in the organization of the market discussion. It agreed that the analysis of hardwood markets by two separate panels on temperate-zone hardwoods and on tropical hardwoods, as well as the discussion of trends in roundwood production (removals) as a whole and by main assortments had improved the Committee's market discussion. These changes should therefore be retained at future sessions of the Committee.

56. With respect to the markets for tropical hardwoods, in which the ECE region played a relatively minor role compared to Japan and other importing countries in east Asia, the Committee regretted the absence in the discussion of representatives of those major importing countries, as well as of tropical hardwood exporting countries. It requested the secretariat to continue actively to explore the possibilities of attracting the participation of representatives of such countries, possibly through the International Tropical Timber Organization (ITTO) which was becoming operative in January 1987. It emphasized the mutual benefits which could accrue to all parties concerned through closer co-operation.

57. The Committee noted that the statistical basis to identify trends in medium density fibreboard (MDF) was not yet satisfactory and that it was therefore difficult at present to assess to what extent, if any, MDF was replacing other panels. A proposal was made to extend an invitation to the recently created manufacturers' organization, the Euro MDF Board (EMB), to attend future Committee sessions.

Survey of the wood-based panels industries: preliminary results (Item 8)  
(TIM/R.130 and Add.1)

58. The Committee was informed of the situation with regard to countries' replies to the enquiry for the survey and of its preliminary results. It was pointed out that 16 countries had not yet replied. The Committee noted that the new FAO world survey of the wood-based panels industries to be presented to the Expert Consultation on the Wood-Based Panels Industries, scheduled to be held in Rome in autumn 1987, would draw on the results of the survey. The timely completion of the world survey would be jeopardized by late replies to the ECE enquiry.

59. The Committee invited countries to check their data shown in the preliminary tables and strongly urged those countries which had not yet replied to the survey to do so as soon as possible, and in any event not later than 31 December 1986. If problems arose in completing the enquiry in full, countries should make every effort to provide at least the basic information (table 1 of the enquiry). It asked the secretariat to revise and complete the survey of the wood-based panels industries and publish the final results early in 1987.

Production and marketing of products from the forest of special interest to southern European countries (Item 9) (TIM/R.131)

60. The delegations of France, Greece, Italy, Portugal, Spain, Turkey and Yugoslavia presented written national reports on production and marketing of products from the forest of special interest to them. There was a wide variety of these products which were often important at the local level, and sometimes at the national level, although many of them faced severe structural problems of production costs, competitiveness or marketing. The Committee expressed warm thanks to the countries concerned.

61. Mr. A. Froncillo (Italy) confirmed that his country was prepared to act as host to a seminar in 1988 on the production and marketing of products of specific interest to Mediterranean forestry, including cork and resin. The Committee gratefully accepted this invitation. It also agreed to invite the European Forestry Commission to co-sponsor the seminar. It requested the secretariat and the Italian authorities to draw up a programme for the seminar and start preparations. Suggestions for a programme, date, place, and, if possible, authors of basic papers, should be submitted to the office-holders in April 1987 and a final version to the joint session of the Committee and the European Forestry Commission.

Activities of other Principal Subsidiary Bodies of ECE of concern to the Timber Committee (Item 10) (TIM/R.132)

62. The Committee was informed of activities of other Principal Subsidiary Bodies of the ECE dealing with matters of concern to it. It took note of this information and agreed to take it into account when discussing its own programme of work.

Activities of other international bodies relevant to the work of the Committee (Item 11)

63. The representative of the Food and Agriculture Organization (FAO) informed the Committee that the eighth session of the Committee on Forestry (COFO) had been held in Rome in April 1986. Main issues were the role of forest industries and trade in socio-economic development, public and political awareness of the importance of forestry, conservation and the Tropical Forestry Action Plan (TFAP).

64. Under the FAO Advisory Committee of Experts on Pulp and Paper, an Expert Consultation on the Pulp and Paper Demand and Supply Outlook was held at FAO, in September 1986. The Consultation considered the FAO publication: "The Outlook for Pulp and Paper to 1995". In conjunction with the FAO Committee on Wood-Based Panel Products, an Expert Consultation on the Wood-Based Panels Industries will be held at FAO, Rome, from 28 September to 1 October 1987. The agenda will include assessment of current capacity of the wood-based panels industry, and the outlook for demand and supply of its products, properties and uses, technology in production, raw materials and investment, domestic and international markets, as well as the place of wood-based panels in low cost housing. The emphasis will be on these issues in relation to developing countries.

65. The Committee was also informed of the results of the twenty-second session of the FAO European Forestry Commission (EFC) held in Budapest (Hungary) in October-November 1985. The EFC had agreed to hold its twenty-third session jointly with the Timber Committee to discuss policy implications arising from ETTS IV (see paras. 83-87).

66. The representative of the United Nations Conference on Trade and Development (UNCTAD) informed the Committee that the Tropical Timber Council had chosen Yokohama, Japan, as the headquarters and Mr. Freezailah bin Che Yeom of Malaysia as the Director General of the International Tropical Timber Organization (ITTO), which would start its activities in January 1987. Membership of the organization now counted 18 producing countries and 23 consuming countries, 19 of which were members of the Timber Committee. The Committee agreed to invite ITTO to take part in its meetings, notably in its hardwood market discussions.

67. The representative of the International Labour Organization (ILO) informed the Committee on the follow-up work to the first session of the ILO Forestry and Wood Industries Committee.

68. The representative of the United Nations Industrial Development Organization (UNIDO) informed the Committee of the Expert Group meeting on Timber Construction held in Vienna in December 1985. The meeting had made recommendations for the adoption of stress grading rules in developing countries.

69. The representative of the GATT secretariat recalled that the Working Party on Trade in Natural Resource Problems had identified certain problems influencing international trade in forest products. The Working Party had agreed in November 1985 that such problems might best be resolved in the context of a new round of trade negotiations. The Uruguay Round was launched by the GATT Ministerial Meeting in September 1986.

70. The Committee also took note of statements by the following organizations: International Organization for Standardization (ISO); European Confederation of Agriculture (CEA); Organization of European Sawmilling Industries (OES); and International Federation of Building and Wood Workers (IFBWW).

Programme of work for 1987-1991 (Item 12)

(a) Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers, sixteenth session, June 1986 (TIM/EFC/WP.1/16)

71. The Timber Committee was informed of the results of the sixteenth session of the Joint Committee, held in Oosterbeek in June 1986 at the invitation of the Government of the Netherlands. It approved the Joint Committee's report, including its amended terms of reference and its programme of work. It was pointed out that the amendment to the terms of reference reflected more accurately the present scope of the Joint Committee's activities and did not involve any addition to the existing workload. The Timber Committee was also informed of the Seminar on the preparation and implementation of forest management plans, which had preceded the session (report: TIM/EFC/WP.1/SEM.21/2). It warmly thanked the Government of the Netherlands for the excellent organization of the session and the Seminar, as well as the other Governments which had hosted seminars since the Joint Committee's previous session, namely: Austria, Finland, Federal Republic of Germany, Spain, Switzerland and the USSR.

72. The Timber Committee took note of the following seminars to be held in 1987 under the auspices of the Joint Committee, the preparation of which were well in hand:

- Seminar on small-scale logging operations and machines (Garpenberg, Sweden, 15-18 June);
- Seminar on the impact of acute forest damage on harvesting and silvicultural operations (Bonn-Röttgen, Federal Republic of Germany, 7-11 September);
- Seminar and study tour on extension activities for owners of small woodlands (woodlots) (Fredericton, New Brunswick, Canada, 23 September-1 October).

73. The Timber Committee also noted the proposal of the Government of Turkey to organize a Seminar on the use of machines in harvesting operations in Antalya in November 1987. However, in view of the already full meeting schedule for Joint

Committee meetings in 1987 and the difficulty on the part of the host country to provide arrangements for 1988, it agreed that this seminar should be postponed to 1989.

74. The Timber Committee noted that the seventeenth session of the Joint Committee would be held in Geneva in August 1988, combined with a study tour on forest road construction in Switzerland.

75. The representative of the German Democratic Republic confirmed the invitation extended to the Joint Committee to hold a seminar on artificial and natural reforestation methods after harvesting, in Eberswalde in May 1988, and submitted a detailed draft programme. The representative of France confirmed his Government's willingness to organize a seminar on the employment of contractors in forest operations at a suitable date in 1988.

(b) Joint FAO/ECE Working Party on Forest Economics and Statistics (TIM/R.133)

76. The Committee was informed of progress on the follow-up to the fifteenth session and preparations for the sixteenth session. It noted that because of restrictions on the number of meetings, imposed because of the UN financial crisis, it might be necessary to postpone the sixteenth session, scheduled for July 1987, to early 1988.

(c) Availability and use of lower quality hardwoods (TIM/R.134)

77. The Committee approved the proposed programme of the seminar on this subject to be held from 23 to 26 November 1987 in Nancy (France). It agreed that the seminar should cover the hardwood species of the ECE region only. It also approved the term "secondary qualities" for the assortments to be considered by the seminar.

78. There was general agreement that the seminar's aim should be to achieve practical results, including the generation of innovative ideas for the better utilization of these assortments. One means of soliciting such ideas could be the proposed form requesting examples of the imaginative use of hardwoods which countries would circulate widely. These examples would complement the documentation of the seminar which would consist of basic and voluntary papers on the various topics of its provisional agenda. It was suggested that the seminar should not only examine means of developing the utilization of the secondary qualities of hardwood, but also the possibilities of reducing the proportion of such qualities in total removals by appropriate silvicultural procedures. The Committee requested the secretariat and the French authorities to proceed with the preparations for the seminar, along the lines of the proposals put before the Committee. The Committee also agreed with the suggestion of the office-holders that, in view of the importance of the forestry aspect of the question, the European Forestry Commission should co-sponsor the seminar.

79. The Committee was informed of the response to the request for supplementary information to complement the report prepared by Mr. E. Clicheroux (Belgium) on the subject of lower quality hardwoods, which would be one of the basic documents for the seminar. It urged countries which had not yet done so, to comply with the request by providing available information to the secretariat as soon as possible, and in any case not later than 31 December 1986.

80. With respect to the offer of the United States to organize a seminar on a related subject, the Committee agreed to take a decision in the light of the results of the seminar in France.

(d) Proposals for study tours (TIM/R.135 and Add.1)

81. The Committee considered in the light of recent experience, notably the cancellation of the study tour in Sweden scheduled for 1985 because of lack of participation, whether it was appropriate to maintain study tours as a regular item on its programme of work. After discussion, it decided that study tours were a very efficient and valuable method of exchanging scientific and technical information and should be retained in the programme. However, they need not be organized every year, but when countries were interested in hosting a tour. In this connection, the Committee accepted with gratitude Poland's offer to act as host to a study tour in 1988.

82. It was stressed that organizers of study tours should identify visits which would attract the attention of foreign visitors. It was also suggested that, in view of the structural changes in the world forest products sector, tours might be arranged to non-ECE countries. The secretariat agreed to explore this possibility.

(e) Joint Session in 1987 of the Timber Committee and the FAO European Forestry Commission (TIM/R.136)

83. The Committee discussed the proposals of the joint meeting in April 1986 of its office-holders with the Executive Committee of the European Forestry Commission (EFC) for the organization of the Joint Session of the two bodies in October 1987. There was unanimous support for the organizing of special items and events to mark the fortieth anniversary of both bodies as set out in the annex to TIM/R.136. In many countries, national preparations for the Joint Session were already in hand. A number of delegations stated, however, that some aspects of their preparations had still to be worked out, in some cases the arrangements for the national essay competitions for young people, in others the raising of their contribution of \$500 towards special expenses in connection with the Joint Session, but they would make every effort to ensure their full participation.

84. With regard to the programme of the Joint Session, the Committee agreed with the joint meeting that it would be very difficult to arrange it for a period of less than 5 1/2 days, that is from Monday morning, 12 October to Saturday morning, 17 October 1987. It was informed by the secretariat, however, that because of financial constraints the UN administration would almost certainly not be willing to open the Palais des Nations on a Saturday specially for the Joint Session and provide the necessary facilities. It requested the secretariat, therefore, to explore this matter further and, if a Saturday session proved impossible, to work out how the Joint Session could be compressed into five days.

85. The Committee also noted with concern that a probable reduction in the number of meeting days that UN interpreters could be allocated to ECE bodies in 1987 was likely to mean that the proposed meeting of the winners of the national essay competitions for young people could not be held with UN interpreters. It requested the secretariat also to explore this matter further and, if necessary, to try to work out an alternative arrangement.

86. The Committee welcomed the offer of France to organize a one-day excursion to the French Alps during the Joint Session, and invited the French authorities to work out the programme details with the secretariat.

87. The Committee requested the secretariat to present proposals for all the organizational aspects of the Joint Session, including the meeting of winners of the national essay competitions for young people and the excursion to France, to



the joint meeting of the office-holders and the Executive Committee of the EFC next April, which should finalize the arrangements. It invited all member countries to:

- (1) ensure that their national reports were forwarded to the secretariat by 31 December 1986 at the latest;
- (2) transmit the name of the winner of the national essay competition to the secretariat by 31 March 1987, together with a copy of the winning essay in English, French, Russian or Spanish;
- (3) transmit their contributions of US\$500. Details of the bank account to which contributions should be sent would be circulated by the secretariat shortly.

(f) Review and revision of the draft programme of work for 1987-1991 (TIM/R.137)

88. The Committee considered its programme of work on the basis of the draft prepared by the secretariat which took into account the programme adopted at the Committee's forty-third session, the proposals referred to it by the forty-first session of the Commission, as well as the decision taken at that session and the results of the meetings of the Committee's subsidiary bodies.

89. The Committee also took into account its own discussion and decisions under other items of the agenda. It approved its programme of work for 1987-1991 as set out in annexes II, III and IV.

90. In view of the present limitations on resources in the UN system, and the possibility of a reduction in the future resources allocated to servicing the Committee, the Committee agreed that Governments should be asked to indicate to which projects or work areas of the Committee's programme they attached most importance. Their comments should be forwarded to the secretariat by 31 March 1987. The secretariat should present a synthesis of these comments to the Committee's forty-fifth session. It was also suggested that one way of economizing resources would be to hold a full Committee session only every second year. In intermediate years a short (2-3 day) meeting could be devoted exclusively to reviewing the markets. The delegation of the USSR, however, stated that technical issues were also an important part of the Committee's activities and it would be wrong to limit these activities to market issues.

91. The delegation of France presented a proposal for a feasibility study to be undertaken on the use of modern methods of communication and information exchange between trading and industrial partners in the forest products sector. The study would review existing information systems in countries of the ECE region and investigate the possibilities for introducing systems that took full advantage of developments in the field of electronics and telecommunications. It was stressed that the underlying objective of the study was to explore possibilities for extending the use of technology to improve the transparency of the markets and the flow of information and not in any way to regulate the market. Besides the Timber Committee and its secretariat, co-operation should be sought from FAO, the Commission of the European Communities and all member countries of ECE.

92. Several delegations expressed interest in the proposal and the Committee agreed that it deserved careful consideration. It requested the secretariat to circulate the proposal to delegations and invited them to examine it and to transmit their comments to the secretariat by 31 March 1987.

93. These comments should be reviewed by the office-holders at their meeting in April 1987 and forwarded, together with the office-holders' proposals for possible future action, to the forty-fifth session.

94. In view of the importance of wood-based panels and continuing technical developments in this field, the Committee reaffirmed its decision to hold a seminar on new technologies in the wood-based panels sector under project 14.4.1. - Development and introduction of new technologies in the wood-working industries, including furniture. The delegation of Poland offered to examine the possibility of hosting such a seminar in 1989 or 1990. The Committee requested the secretariat, in co-operation with the Polish authorities, to present proposals for the organization of the seminar to its forty-fifth session.

95. Many delegations stated that they considered the Committee's work of great value. The Committee expressed the hope that it would not be necessary to make any reductions in its programme of work, which had been drawn up on the assumption that the resources available would not be reduced. If, because of developments in the UN system as a whole, it became necessary to curtail activities, decisions on priorities for 1987 should be taken by the office-holders in consultation with the secretariat. In the longer term, the Committee would itself make recommendations on priorities based on, among other things, the comments received in accordance with the arrangements set out in para. 90.

Other business (Item 13)

96. None.

Adoption of the report of the Committee's session (Item 14)

97. The Committee adopted the present report of its forty-fourth session.

Date of next session

98. The Committee agreed that its next session should be held in the week of 12 to 16 October 1987, partly in joint session with the FAO European Forestry Commission, subject to the availability of conference services for that period.

Annex I - Annexe I

Europe (excl. USSR) : Summary table of market forecasts for 1986 and 1987  
Europe (moins URSS) : Tableau récapitulatif des prévisions du marché pour 1986 et 1987  
(million m<sup>3</sup>)

	Domestic requirements Besoins nationaux			Production			Imports Importations			Exports Exportations		
	1985 (actual) (réels)	1986 (estimates) (prévisions)	1987 (estimates) (prévisions)	1985 (actual) (réels)	1986 (estimates) (prévisions)	1987 (estimates) (prévisions)	1985 (actual) (réels)	1986 (estimates) (prévisions)	1987 (estimates) (prévisions)	1985 (actual) (réels)	1986 (estimates) (prévisions)	1987 (estimates) (prévisions)
Sawn softwood	73.82	75.41	75.87	70.22	70.00	70.33	24.85	26.54	26.69	21.94	21.58	21.89
Coniferous logs	123.62	123.20	123.47	122.65	121.39	121.85	5.25	4.87	4.64	3.75	2.82	2.51
Sawn hardwood	21.35	21.26	21.44	18.54	18.35	18.45	5.39	5.53	5.64	2.63	2.65	2.66
- temperate zone ‡	..	..	..	..	..	..	2.41	2.54	2.56	2.32	2.33	2.33
- tropical zone ‡	..	..	..	..	..	..	2.98	2.99	3.08	0.31	0.32	0.33
Hardwood logs	38.09	37.38	37.49	34.30	33.66	33.93	6.42	6.26	6.16	2.59	2.59	2.59
- temperate zone ‡	..	..	..	..	..	..	2.80	2.79	2.86	2.52	2.52	2.52
- tropical zone ‡	..	..	..	..	..	..	3.62	3.47	3.30	0.07	0.07	0.07
Particle board	24.02	24.36	24.53	23.52	23.96	24.26	5.28	5.26	5.22	4.81	4.83	4.96
Plywood	4.89	5.09	5.12	3.13	3.18	3.22	3.13	3.35	3.33	1.42	1.44	1.44
Fibreboard	4.19	4.32	4.35	4.08	4.13	4.17	1.45	1.62	1.63	1.36	1.42	1.44
- Hardboard	2.93	3.06	3.09	2.88	2.92	2.95	0.97	1.14	1.14	0.94	1.00	1.01
- Insulating board	1.26	1.26	1.26	1.20	1.21	1.22	0.48	0.48	0.49	0.42	0.42	0.43
Pulpwood	172.63	174.30	178.51	162.37	167.57	173.24	24.57	25.54	24.54	18.36	17.46	16.32
- Roundwood	131.47	132.49	..	120.45	125.04	..	20.34	20.88	..	14.35	13.28	..
- coniferous	89.66	89.08	..	83.09	85.63	..	12.60	12.75	..	9.59	8.84	..
- broadleaved	41.81	43.41	..	37.36	39.41	..	7.74	8.13	..	4.76	4.44	..
- Residues, chips and particles	41.17	41.81	..	41.92	42.53	..	4.23	4.66	..	4.01	4.18	..

North America : Summary table of market forecasts for 1986 and 1987  
Amérique du Nord : Tableau récapitulatif des prévisions du marché pour 1986 et 1987

Annex II

TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991:  
OVERVIEW AT THE 3-DIGIT LEVEL 1/

PROGRAMME 14: TIMBER

Sub-programme 14.1: Medium- and long-term trends, prospects and policies for forestry and forest products

Programme elements

- 14.1.1. Appraisal of medium- and long-term timber trends and prospects
- 14.1.2. Medium-term trends in the structure and capacity of the wood-processing industries
- 14.1.3. Trends, prospects and policies in forestry and forest products in southern Europe

Sub-programme 14.2: Current forest products market developments and short-term prospects, including international trade

Programme elements

- 14.2.1. Review of production, trade, consumption and prices of forest products
- 14.2.2. Standardization in the forest products sector

Sub-programme 14.3: Forest working techniques and training of forest workers

Programme elements

- 14.3.1. Silvicultural operations and general management aspects
- 14.3.2. Wood harvesting and transport
- 14.3.3. Vocational training, applied ergonomics, occupational safety and health

Sub-programme 14.4: Economic, technological and managerial issues for the wood-working industries

Programme elements

- 14.4.1. Development and introduction of new technologies in the wood-working industries, including furniture

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1/ As approved by the forty-fourth session.

- 14.4.2. Development of new products, markets and applications for forest products
- 14.4.3. Energy conservation and self-sufficiency in the mechanical wood-processing industries
- 14.4.4. Management techniques in the wood-working industries

Sub-programme 14.5: Environmental and resource conservation issues

Programme elements

- 14.5.1. Quantification and evaluation of the environmental benefits of forests
- 14.5.2. Rational use of wood biomass and the reduction of losses
- 14.5.3. Implications of air pollution damage to forests for the forestry and forest products sector
- 14.5.4. Measures to be taken in the event of sudden and severe damage to forests

Sub-programme 14.6: Forest and forest products economics and statistics

Programme elements

- 14.6.1. Publication of the Timber Bulletin
- 14.6.2. Selected problems of economics and statistics of forestry and forest products
- 14.6.3. Forest resource analysis
- 14.6.4. Transfer of economic and statistical methods and experience in the forest and forest products sector.

Annex III

TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991:  
DETAILED PRESENTATION AT 4-DIGIT LEVEL

PROGRAMME 14 - TIMBER

This programme is carried out by the Timber Committee and its subsidiary bodies. The Committee meets annually, usually in October. In addition to the activities specified under the individual programme elements or sub-elements, the Committee also furthers the dissemination and exchange of information and experience by organizing study tours at the invitation of the Governments concerned.

SUB-PROGRAMME 14.1: MEDIUM- AND LONG-TERM TRENDS, PROSPECTS AND POLICIES FOR  
FORESTRY AND FOREST PRODUCTS

14.1.1. Appraisal of medium- and long-term timber trends and prospects

14.1.1.1. Appraisal of long-term timber trends and prospects

Description: The Committee will keep under review and up-date projections and forecasts of long-term trends in production, trade, consumption and prices of forest products, comparing them with projections made in previous long-term studies. The studies will provide Governments with the latest projections and forecasts of long-term prospects at the regional and sub-regional level as a framework for national studies and as a basis for drawing up national policies for the forest and forest products sector. Amongst other factors, the Committee's analyses will take into account the impact of air pollution on the forestry and forest products sector, including the prospects for future wood supply.

Work accomplished: An ad hoc meeting was held in November 1985 (jointly with the FAO European Forestry Commission) to review the draft of 'European Timber Trends and Prospects to the Year 2000 and Beyond' (ETTS IV), which was subsequently revised and published in 1986.

Work to be undertaken: The Committee will hold a Joint Session with the European Forestry Commission in October 1987 to consider the policy implications of ETTS IV. Further follow-up activities will be decided in the light of this discussion. The secretariat will explore the possibility of producing studies of the outlook for the forest sectors of the USSR, Canada and the United States with the authorities of these countries.

Duration: Continuing.

14.1.1.2. Medium-term trends in the markets for specific forest products

Description: The Committee will review medium-term (3-5 years) trends in the production, consumption, trade and prices of major forest products so that governments may be continuously informed of structural trends in the forest products markets of the ECE region. The medium-term surveys will allow recent trends to be compared with the projections made in the long-term studies (project 14.1.1.1.) and provide early warning to Governments of deviations from expected developments.

Work to be undertaken: Medium-term surveys will be carried out on a 3-year rotation of the following sectors: sawnwood and sawlogs (1987); pulpwood, wood for energy and miscellaneous roundwood (1988); and wood-based panels (1989).

Duration: Continuing.

14.1.2. Medium-term trends in the structure and capacity of the wood-processing industries

14.1.2.1. The wood-based panels industries

Description: The Committee will keep the structure and capacity of the wood-based panels industries under review in order to enable Governments to form their own industrial policies for the wood-based panels sector in the light of information on international conditions.

Work accomplished: An enquiry was circulated, the preliminary results of which were presented to the forty-fourth session.

Work to be undertaken: The survey, based on the results of the enquiry, will be completed and published. The next survey will be carried out in 1989.

Duration: Continuing.

14.1.2.2. The sawmilling industry

Description: The Committee will keep the structure and capacity of the sawmilling industry under review in order to enable Governments to form their policies for the sawmilling industry in the light of information on international conditions.

Work to be undertaken: The next enquiry on the structure of the sawmilling industry will relate to the year 1988, and be circulated in 1989 for completion and publication in 1990. With assistance from members of the team of specialists on the sawmilling industry, the previous form of enquiry will be revised and submitted for approval to the sixteenth session of the Working Party.

Duration: Five years ending in 1990.

14.1.3. Trends, prospects and policies in forestry and forest products in southern Europe

Description: The forest and forest industry policy and environmental problems facing countries in the Mediterranean area will be reviewed in the light of the long-term outlook for their forest economies (see 14.1.1.1.)

Work accomplished: South European countries prepared reports on the production and marketing of products from the forest of special interest to them. The reports were presented to and discussed by the forty-fourth session.

Work to be undertaken: A seminar will be held in 1988 in Italy, co-sponsored by the FAO European Forestry Commission on a topic related to the production and marketing of products from the forest of special interest to Mediterranean countries.

Duration: Two years ending in 1988.



SUB-PROGRAMME 14.2: CURRENT FOREST PRODUCTS MARKET DEVELOPMENTS AND SHORT-TERM PROSPECTS, INCLUDING INTERNATIONAL TRADE

14.2.1. Review of production, trade, consumption and prices of forest products

Description: The Committee will analyse, on a continuous basis, short-term trends in the production, trade, consumption and prices of forest products and forecast short-term prospects, with a view to providing Governments and the forest products sector with accurate and up-to-date information and assessments, necessary for an orderly development of the supply/demand mechanism.

Work accomplished and to be undertaken: The annual session of the Timber Committee reviews short-term trends and prospects in the production, trade and consumption of coniferous and non-coniferous (including tropical) logs and sawnwood, wood-based panels and pulpwood, on the basis of estimates and other market information prepared by delegations for the year in progress and the forthcoming year. An analysis of market trends, based on the Committee's discussions is published after the session, as well as an Annual Forest Products Market Review based on data supplied by Governments in connection with project 14.6.1.

Duration: Continuing.

14.2.2. Standardization in the forest products sector

14.2.2.1. Review of standardization activities

Description: The Committee will keep under review needs and priorities for standardization in the field of forest products as well as progress in its own standardization project (14.2.2.2.). On the basis of this review, it will decide what activities it should undertake, with a view to facilitating international trade in forest products by removing non-tariff barriers, and to furthering the rational and economic use of wood. The Committee will also keep under review work being undertaken by other organizations, notably ISO, on the reduction of the number of standard dimensions entering international trade, with a view to co-operating in such work as and when it considers it appropriate.

Work to be undertaken: The Timber Committee will review all its standardization activities, when it considers this appropriate in the light of developments, notably progress on project 14.2.2.2. It will also maintain co-operation with ISO and its appropriate technical committees.

Duration: Continuing.

14.2.2.2. Standardization of stress grading and finger-jointing of coniferous sawn timber

Description: The Committee will encourage the incorporation of the provisions of the revised ECE Recommended Standards on stress grading of coniferous sawn timber and on finger-jointing in structural coniferous sawn timber into national standards, and undertake further work to extend their international acceptability and application with a view to ensuring the rational and economic use of, and to facilitating trade in, coniferous sawn timber.

Work to be undertaken: An informal meeting will be convened, to which all bodies engaged in standardization of stress grading and finger-jointing of sawnwood will be invited, to exchange information on activities and to make any recommendations necessary to harmonize methods and objectives of work.

Duration: Two years ending in 1988

#### 14.2.2.3. Problems of classification and definitions

Description: The Joint FAO/ECE Working Party on Forest Economics and Statistics, in co-operation with the Conference of European Statisticians, will keep under review and co-operate in the work of harmonizing multi-sector classifications and definitions (e.g. the CCC Harmonized System, ICGS, SITC, ISIC), with a view to ensuring that they follow developments in technology and in industrial and trade practice, and that the appearance of new products and changes in organizational structures are taken into account.

Work to be undertaken: Comments and suggestions by countries for the revision of the ILO International Standard Classification of Occupations (ISCO), will be analysed and incorporated by a team of specialists into a unified submission to the ILO on behalf of the Working Party.

Duration: One year ending in 1987.

### SUB-PROGRAMME 14.3: FOREST WORKING TECHNIQUES AND TRAINING OF FOREST WORKERS

This sub-programme covers the activities of the Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers, which normally meets biennially (1988, 1990, etc.), with meetings of its Steering Committee in the intervening years. Its task is to foster international collaboration on technical, economic and organizational aspects of forest working techniques and training of forest workers in logging and forest operations. Special attention is given to the development and implementation of forest use planning and general management aspects; increasing the efficiency of labour, the reduction of the physical efforts of the worker and prevention of accidents; the reduction of waste; and the establishment of an adequate balance between technical, social and economic requirements and protection of the environment.

#### 14.3.1. Silvicultural operations and general management aspects

##### 14.3.1.1. Development and use of machinery and methods for stand establishment, including planting stock and equipment

Description: The Joint Committee will promote the exchange of information and further rational regeneration methods which do not damage the forest ecosystem, by regularly reviewing machines, techniques and planting stock applied in afforestation and reforestation, with emphasis on site clearing, soil preparation and planting.

Work accomplished: The proceedings of the seminar on machines and techniques for forest plant production, held in 1983 in Czechoslovakia in collaboration with IUFRO, were published.

Work to be undertaken: Seminars on selected items will be held at intervals; in 1987 in the Federal Republic of Germany on the impact of acute forest damage on harvesting and silvicultural operations; in 1988 in the German Democratic Republic on artificial and natural reforestation methods after harvesting.

Duration: Continuing.

#### 14.3.1.2. Forest fire prevention and control

Description: The Joint Committee will examine techniques and equipment used in forest fire control, as well as preventive measures, with a view to assisting Governments in these fields.

Work accomplished: A seminar on methods and equipment for the prevention of forest fires was held in Spain in 1986 in collaboration with IUFRO. An enquiry was circulated on the basis of which members of the team of specialists prepared basic papers on main items of the agenda. In the field of fire statistics, the team worked in close collaboration with the Joint FAO/ECE Working Party on Forest Economics and Statistics.

Work to be undertaken: Proposals for future work will be drawn up by the eighth session of the Steering Committee on the basis of the results of the seminar in Spain.

Duration: To be decided by the Joint Committee at its seventeenth session.

#### 14.3.1.3. Methods and procedures for the preparation and implementation of working forest management plans

Description: The Joint Committee will survey practical methods and procedures for the preparation and implementation of working forest management plans, with special emphasis on the determination, collection and processing of relevant data with a view to assisting forest managers in the execution of their tasks.

Work accomplished: A seminar was held in 1986 in the Netherlands on the preparation and implementation of forest management plans in conjunction with the sixteenth session of the Joint Committee.

Work to be carried out: Seminars on advanced planning and control techniques will be organized at intervals after 1988, in collaboration with IUFRO; the dates will be decided by the Joint Committee at its seventeenth session.

Duration: To be decided by the Joint Committee at its seventeenth session.

#### 14.3.1.4. Development of methods and equipment for silvicultural operations and multiple use forestry under Mediterranean conditions

Description: The Joint Committee will promote the exchange of information and further the development of methods and techniques applicable to silvicultural operations and multiple use forestry under the particular conditions found in countries in the Mediterranean area, with a view to assisting the countries concerned in these fields.

Work accomplished: (a) A seminar was held in Turkey in 1984 on the rehabilitation of low-productivity forests and the proceedings were published;

(b) The project leader submitted proposals to the sixteenth session on how to reactivate work on a manual on afforestation methods and techniques under Mediterranean conditions.

Work to be undertaken: Subject to the agreement of the Spanish authorities, the publication "Técnicas de forestación, 1975" will be updated and supplemented by readily available data from other Mediterranean countries and submitted in draft form to the eighth session of the Steering Committee and in final form to the seventeenth session of the Joint Committee.

Duration: Two years ending in 1988.

14.3.1.5. Standardization activities in the field of forestry, including  
    . standardization of concepts and terms used by the Joint Committee

Description: The Joint Committee will keep under review standardization activities in the field of forestry, notably for forest machinery, with a view to assisting countries in the development, and safety in use, of equipment and methods; and will establish definitions of currently used technical and economic concepts and terms, in order to facilitate exchange of information during meetings and on other occasions.

Work accomplished and to be undertaken: (a) The Joint Committee keeps close contact with ISO technical committees relevant to its work; and reviews, at each of its sessions, ISO standardization activities carried out over the past 2 years;

(b) The host country of seminars and authors of basic papers are invited, as and when appropriate, to prepare short lists of basic terms and concepts. These are reviewed by an informal group established during the seminar, and a revised glossary in the three working languages is subsequently prepared after the seminar, for incorporation in the proceedings.

Duration: Continuing.

14.3.2. Wood harvesting and transport

14.3.2.1. Development and use of logging machinery

Description: The Joint Committee will keep under review trends and prospects in the development and use of logging machinery, taking into account specific conditions and cost/price relationships so as to encourage rational logging methods in flat, hilly and mountainous regions from the economic, ergonomic and environmental points of view.

Work accomplished: A seminar was held in the USSR in 1985 on mechanization of logging operations in mountainous regions and the proceedings are being prepared by the host country.

Work to be undertaken: Seminars on selected items will be held at intervals: in 1987 in Sweden on small-scale logging operations and machines. A seminar on the use of machines in harvesting operations will take place in Turkey in 1989 (subject to confirmation). The seventeenth session will examine the possibility of organizing, in 1989 or 1991, a seminar related to either the use of multi-functional machines in logging operations or the harvesting and primary conversion of wood.

Duration: Continuing.

#### 14.3.2.2. Forest roads and transport of wood raw material

Description: The Joint Committee will promote the exchange of information on methods of construction of forest roads and on the transport by road or other means of wood raw material, with a view to assisting countries to rationalize their transport systems and reduce costs.

Work to be undertaken: A study tour on methods and techniques of forest road construction will be held in Switzerland in 1988 in conjunction with the seventeenth session of the Joint Committee. The provisional programme will be submitted to the eighth session of the Steering Committee.

Duration: One year ending in 1988.

#### 14.3.2.3. Guidelines for the collection and presentation of data on harvesting and other forest operations

Description: The Joint Committee will prepare internationally acceptable guidelines for the collection and presentation of data on harvesting and other forest operations, with a view to providing Governments and those working in the field with information and management tools, including electronic data processing (EDP), for the assessment and selection of appropriate operational methods and equipment for given site and working conditions.

Work to be undertaken: A team of specialists will be established to consider the available terminology for forest operations and data collection formats at an international level and to determine the feasibility of preparing guidelines for the collection and presentation of data on forest operations. It will report to the eighth session of the Steering Committee which will make proposals on further steps to be taken. The team will work in close collaboration with international bodies such as IUFRO.

Duration: To be decided by the seventeenth session of the Joint Committee.

#### 14.3.2.4. Harvesting of wood for energy purposes

Description: The Joint Committee will review methods and equipment suitable for the production and harvesting of wood specifically destined for energy production, so as to determine the potential of the forest or special plantations to contribute economically to total energy supply.

Work accomplished and to be undertaken: (a) A report will be presented to each session of the Joint Committee on activities in the field of wood harvesting for energy purposes being undertaken by other international organizations, notably the International Energy Agency and the FAO Co-operative Research Network on Rural Energy;

(b) A seminar will be organized in conjunction with the eighteenth session of the Joint Committee and INTERFORST in the Federal Republic of Germany (subject to confirmation) in 1990 in co-operation with IEA and possibly IUFRO.

Duration: (a) Continuing; (b) Two years ending in 1990.

14.3.3. Vocational training, applied ergonomics, occupational safety and health

14.3.3.1. General questions of vocational training in forestry

Description: By keeping under review developments and trends in vocational training in forestry, the Joint Committee will assist Governments in planning their national vocational training policies and raising the efficiency of forest operations and in improving working practices with regard to safety and health.

Work accomplished: The seminars on the transfer of basic technology from the ECE region to other regions, held in Austria, Federal Republic of Germany and Switzerland in 1986 and on small-scale logging operations and machines to be held in Sweden in 1987 both deal with vocational training aspects. Their programmes were submitted to and approved by the sixteenth session.

Work to be undertaken: Seminars will be organized at intervals on selected problems: in 1988 in France concerning the employment of contractors in forest operations. The Steering Committee at its eighth session will discuss the organization of a seminar on vocational training in 1989 or 1990, possibly concerned with training problems of professional forest workers in normal forest operations.

Duration: Continuing.

14.3.3.2. Specific problems of vocational training in forestry

Description: The Joint Committee will provide Governments with guidance in connection with their services dealing with specific problems of vocational training.

Work to be undertaken: A seminar on extension activities for owners of small woodlands (woodlots) will be organized in Canada in 1987 on the basis of the programme which was submitted to and approved by the sixteenth session.

Duration: Two years ending in 1987.

14.3.3.3. General questions of applied ergonomics, safety and health in forest operations

Description: The Joint Committee will help Governments in their national health and employment planning by keeping under review developments and trends in ergonomics applied to forestry, occupational safety and health, with a view to promoting safer working habits, preventing occupational injuries and diseases, increasing work performance and forest workers' satisfaction with their job.

Work accomplished: A seminar on occupational health and rehabilitation of forest workers was held in Finland in 1985 and the proceedings were issued.

Work to be undertaken: The seminar on the employment of contractors in forest operations, to be held in 1988 (project 14.3.3.1.) will deal with both training and safety and health aspects. The eighth session of the Steering Committee will discuss possibilities for organizing a seminar related to applied ergonomics in forestry operations in 1989 or 1990.

Duration: Continuing.

14.3.3.4. Specific problems of applied ergonomics, safety and health in forest operations

Description: The Joint Committee will study specific problems related to ergonomics, safety and health in forest operations with a view to improving working methods and recommending safety standards in various operations.

Work accomplished: A special discussion on the use of chemicals in forestry was held at the sixteenth session. An enquiry was circulated to countries and a synthesis report was submitted to the sixteenth session.

Work to be undertaken: (a) The draft report on the enquiry will be completed and an annex added with information on international recommendations concerning the certification and use of chemicals issued by international organizations such as ISO, WHO, FAO and ILO. Both the completed draft report and the papers presented will be disseminated. A project co-ordinator will be appointed to collect and review further information on the safe use of chemicals in forestry, which will be provided by national correspondents. He will report to the Steering Committee at its eighth session which will propose further action;

(b) An ad hoc group to be formed at the seventeenth session of the Joint Committee will prepare an outline for a seminar on all aspects of the use of chemicals in forestry. Proposals for the organization of the seminar in 1989 or 1990 will be considered by the seventeenth session.

Duration: (a) To be proposed by the eighth session of the Steering Committee;

(b) To be decided by the seventeenth session of the Joint Committee.

14.3.3.5. Transfer of technical information and experience

Description: The Joint Committee will promote the transfer of technical information and experience by the countries of the ECE region to those in other regions, with a view to assisting the latter to develop their forestry capabilities.

Work accomplished: A workshop on the transfer of basic technology in forestry from the ECE region to other regions was held in Austria, Federal Republic of Germany and Switzerland in 1986. The report on the development of forest working techniques and the role played by the Joint Committee was published.

Work to be undertaken: (a) Wherever possible, the proceedings of Joint Committee seminars will be published by the host country or by other means;

(b) Wherever possible, host countries of Joint Committee seminars and other countries will offer fellowships to assist participants from developing countries to attend the seminars of special interest for them;

(c) The enquiry on the transfer of experience, information and know-how from the ECE region to other regions, presented to the fifteenth session, will be up-dated and completed, with the inclusion also of information on teaching aids and training materials, and the results will be submitted to the seventeenth session;

Duration: (a) and (b): Continuing; (c): Two years ending in 1988.

SUB-PROGRAMME 14.4: ECONOMIC, TECHNOLOGICAL AND MANAGERIAL ISSUES FOR THE  
WOOD-WORKING INDUSTRIES

14.4.1. Development and introduction of new technologies in the wood-working industries, including furniture

Description: The Committee will further the exchange of information and experience on technological developments in the wood-working industries including the use of process- and quality-control equipment (electronics, robotics, lasers, etc.), with a view to helping countries to improve efficiency in the production of forest products, including furniture, to the benefit of the national economy and of the users of those products.

Work accomplished: Nominated members of a team of specialists have been invited to draw up proposals for the scope of a seminar.

Work to be undertaken: A seminar will be held on new technologies in the wood-based panels sector, possibly in Poland, in 1989 or 1990. The secretariat, in co-operation with the Polish authorities, will present proposals for the scope, programme, date and organization of the seminar to the Committee's forty-fifth session.

Duration: Three years ending in 1990.

14.4.2. Development of new products, markets and applications for forest products

Description: The Committee will further the exchange of information and experience on new products, markets and applications for forest products, with a view to helping countries to improve efficiency in the use of raw materials and products, and provide technologically and economically better products to the consumer.

Work accomplished: A consultant report on problems relating to the marketing and utilization of low quality hardwoods was circulated for comment. The Committee approved the programme of the Seminar on the valorisation of secondary quality temperate zone hardwoods.

Work to be undertaken: The seminar will be held in France in November 1987. Further activities, including the organization of a workshop in the USA on a topic related to hardwoods, will be decided in the light of the results of the Seminar.

Duration: Two years ending in 1988.

14.4.3. Energy conservation and self-sufficiency in the mechanical wood-processing industries

Description: The Committee will encourage the exchange of information in this field, with a view to furthering the conservation of energy and, where appropriate, the increase of energy self-sufficiency in the mechanical wood-processing industries.

Work to be undertaken: Reports prepared by the members of the team of specialists on energy derived from wood will be presented at an open international seminar on energy derived from wood in Sweden in October 1986, being organized by the Swedish Bioenergy Association (with the co-operation of the Timber Committee). The team of specialists, meeting on the occasion of this seminar will prepare proposals for further work in the wood/energy field, including the possibility of a seminar under the Committee's auspices. The Committee will decide on its future programme at its forty-fifth session.

Duration: Two years ending in 1987.



#### 14.4.4. Management techniques in the wood-working industries

Description: The Committee will assist countries to introduce improved management techniques in the wood-working industries, with a view to raising efficiency and productivity through improved performance at the senior and middle-management levels.

Work to be undertaken: The Committee will decide on possible further activities at its forty-sixth session, in the light of the outcome of the ECE Symposium on management training programmes and methods: implications of new technologies, to be held in November 1987.

Duration: Two years ending in 1988.

#### SUB-PROGRAMME 14.5: ENVIRONMENTAL AND RESOURCE CONSERVATION ISSUES

(All the Committee's activities in this work area will be carried out in co-operation with the Senior Advisers to ECE Governments on Environmental Problems).

##### 14.5.1. Quantification and evaluation of the environmental benefits of forests

Description: The Joint FAO/ECE Working Party on Forest Economics and Statistics will examine methods of quantifying and evaluating the environmental benefits of forests with a view to assessing forests' contribution to society, to calculating compensation for the environmental services of forests and to facilitating comparisons between countries.

Work accomplished: The results of the enquiry on the role of the forest in supplying environmental and other non-wood goods and services were published.

Work to be undertaken: A team of specialists will draw up proposals for follow-up action to the publication of The Forest Resources of the ECE Region (Europe, the USSR, North America) for submission to the sixteenth session of the Working Party. This project is linked with projects 14.6.3. and 14.6.4.

Duration: Two years ending in 1987.

##### 14.5.2. Rational use of wood biomass and the reduction of losses

Description: The Committee will further the exchange of information and experience on the rational use of wood biomass and the reduction of losses, with a view to helping countries to optimize, subject to ecological restrictions, the use of available wood resources, including forest and industry residues and reduce losses, thereby contributing to the conservation of the forest resource. The project will include the use of wood as a feedstock for the production of chemicals.

Work to be undertaken: The Committee will decide at its forty-fifth session, on the basis of the recommendations of the team of specialists on wood energy questions (see project 14.4.3), whether to organize a seminar in this area and, if so, on its programme.

Duration: Four years ending 1989.

14.5.3. Implications of air pollution damage to forests for the forestry and forest products sector

Description: The Committee will examine the implications of air pollution damage to forests for the forestry and forest products sector, taking into account the work being carried out by other competent bodies, notably the Executive Body for the Convention on Long-range Transboundary Air Pollution, the FAO European Forestry Commission, the European Economic Community and IUFRO.

Work accomplished: A team of specialists held its second meeting in February 1986.

Work to be undertaken: The reports prepared under the team's auspices will be given wide distribution. The study on the extent of damage will be updated annually if resources are available. The team will review available information on market effects, make recommendations if necessary, interpret new surveys as they appear, and report annually to the Committee. The team leader will convene meetings of the team, in consultation with the secretariat, when such meetings appear necessary.

Duration: Continuing.

14.5.4. Measures to be taken in the event of sudden and severe damage to forests

Description: The Committee will assist ECE countries faced by sudden and severe damage to their forests, notably that caused by fire, windblow, snow, and insect infestation, by bringing together accounts of relevant experience in other countries and a list of institutions which might be able to provide help and advice. In addition, it will promote the rapid international dissemination of reliable information on these events, in order to reduce disruption of roundwood markets.

Work accomplished: Reports on recent cases of sudden and severe damage to forests were submitted by a number of countries and disseminated by the secretariat.

Work to be undertaken: The mechanism set up by the Committee to exchange information in this field will be put into operation as and when necessary. The Committee will review progress at its forty-fifth session.

Duration: Continuing.

SUB-PROGRAMME 14.6 FOREST AND FOREST PRODUCTS ECONOMICS AND STATISTICS

14.6.1. Publication of the Timber Bulletin

Description: The Committee will collect statistics on production, trade and prices of forest products, with a view to providing Governments and the forest products sector with data on the basis of which to formulate policies and make decisions.

Work accomplished and to be undertaken: The secretariat publishes 10 issues a year of the Timber Bulletin. Of these, two contain annual and quarterly statistics on production and trade of forest products, collected from Governments by means of quarterly questionnaires, and other relevant information, one contains annual data on trade flows collected from the same sources, and three contain monthly and annual prices and price indices of forest products and related data extracted from official national publications. Country forest and forest products profiles are prepared by the secretariat, in collaboration with the Governments of the countries concerned, and published.

Duration: Continuing.

14.6.2. Selected problems of economics and statistics of forestry and forest products

This programme element, together with programme elements 14.6.3. and 14.6.4., is carried out by the Joint FAO/ECE Working Party on Forest Economics and Statistics which normally meets biennially (1987, 1989, etc.). In doing so, it co-operates with the Conference of European Statisticians.

14.6.2.1. Organization and periodicity of statistical data collection and dissemination

Description: The Working Party will review periodically the Committee's programme for the collection and dissemination of statistical data, to ensure that it corresponds with the needs of Governments.

Work accomplished and to be undertaken: The Working Party formulates proposals for improving the Committee's programme of collection and dissemination of statistical data, with regard to its organization, method of collection, periodicity, and the improvement of the accuracy and comparability of data obtained from and used by Governments. Countries will review the procedures for filling in and returning the FAO/ECE Forest Products Questionnaires with a view to improving, where necessary, the punctuality and completeness of their replies.

Duration: Continuing.

14.6.2.2. Conversion factors

Description: The Working Party will review the conversion factors (raw material input/product output) for forest products applicable to individual countries, in order to facilitate international comparison of yields and to ensure that the conversion factors used by the secretariat in its analyses reflect current technology.

Work accomplished: The results of the 1984 enquiry were completed and published.

Work to be undertaken: The Working Party will continue to review at four-yearly intervals (the next in 1989) conversion factors communicated by Governments in reply to a questionnaire.

Duration: Continuing.

14.6.2.3. Productivity in the forest sector

Description: The Working Party will collect statistics on and analyse trends in productivity in the forest sector. The purpose will be to provide information on the inputs of labour, capital, raw materials and energy in relation to outputs in member countries. This will assist Governments and other decision-makers in their policies towards the forest sector and in finding the appropriate solutions to technical and economic problems.

Work to be undertaken: Specialists nominated by countries will prepare reports on productivity questions, the scope of which will be agreed with the co-ordinator of this activity, who will be nominated by Finland, and the secretariat. The reports will be submitted to the sixteenth session of the Working Party.

Duration: Two years ending in 1987.

#### 14.6.2.4. Statistics on forest health and forest damage

Description: The Working Party will assist countries to develop methodologies for the appraisal of forest health and forest damage; and will collect statistics on and analyse these questions. The purpose will be to provide reliable information on the vitality of forests and the extent of damage from such causes as fire, air pollution, storms, game, insects, diseases and so on. This information will assist Governments and other decision-makers in their policies towards forest management and conservation.

Work accomplished: The results of the 1984 enquiry on forest fires were completed and published.

Work to be undertaken: (a) The next enquiry on forest fires will be circulated in 1986 and the preliminary results submitted to the sixteenth session;

(b) A team of specialists will review the methodologies for evaluating forest fire losses in different countries and advise the sixteenth session on the possibility of adopting internationally acceptable guidelines on this question;

(c) Comments by countries on document TIM/EFC/WP.2/R.85 on forest damage statistics will be analysed by Polish specialists, in co-operation with other interested experts, who will submit a report to the sixteenth session.

Duration: (a) and (b): Continuing; (c): Two years ending in 1987.

#### 14.6.2.5. Methodologies and data base for long-term outlook studies for the forest and forest products sector

Description: Methodologies and the data base needed for the analysis of long-term trends and prospects will be refined and strengthened. The purpose will be to prepare for future work that may be undertaken by the European Forestry Commission and the Timber Committee on monitoring developments in relation to forecasts in the latest study and to prepare for an eventual new long-term study. This will help to improve the reliability of information available to Governments and other decision-makers needed for the formulation of policies towards the forest and forest industries sector.

Work to be undertaken: A team of specialists will make recommendations to the Working Party's sixteenth session, taking TIM/EFC/WP.2/R.84 as a starting point and taking into account problem areas identified by the FAO/ECE ad hoc meeting to review the draft of the study.

Duration: Two years ending in 1987.

#### 14.6.2.6. Economic aspects of the fuller use of forest biomass

Description: The Working Party will study the economic aspects of the fuller use of the forest biomass with a view to determining the potential for the forest resource to meet the demand for raw material from the different wood-using industries and consumption sectors.

Work to be undertaken: Further analysis of the issues will be carried out by specialists from the USSR on the basis of material provided by countries.

Duration: Two years ending in 1987.

14.6.2.7. Application of advanced methods of projection and modelling in the forest and forest products sector

Description: The Working Party will review advanced methods of projection and modelling, notably those developed in the context of the IIASA Forest Sector Project, and make recommendations as to methods which should be used in the work programme of the Timber Committee and the European Forestry Commission, notably in the long-term outlook studies. The purpose is to improve further the quality and reliability of such studies used as a decision-making tool by Governments and other policy-makers.

Work to be undertaken: The Secretariat will prepare proposals, based on a consultant's report, which will be reviewed by the team of specialists established for project 14.6.2.5. The team will make recommendations to the Working Party's sixteenth session in 1987. The work will be carried out in co-operation with IUFRO.

Duration: Two years ending in 1987.

14.6.2.8. Roundwood price statistics and specification

Description: The Working Party will improve the coverage of roundwood prices in the Timber Bulletin and other international publications and improve the comparability of series, notably by providing precise specifications for them. The objective is to improve the accuracy of studies by international agencies, Governments or research institutes which use roundwood price series.

• Work to be undertaken: A team of specialists will be convened to review the existing system of publishing roundwood prices and to prepare recommendations for the Working Party's sixteenth session on how their coverage and comparability could be improved.

Duration: Two years ending in 1987.

14.6.3 Forest resource analysis

Description: The Working Party will review methods of forest inventory used by Governments and by the secretariat to ensure that all parameters relevant to measuring actual productive potential of the forest, as well as parameters measuring change, both for wood and non-wood benefits, are taken into account and that the methods adopted correspond as closely as possible to the needs of all users.

Work accomplished: The Forest Resources of the ECE Region (Europe, the USSR, North America) was published.

Work to be undertaken: A team of specialists will draw up proposals for follow-up to the above-mentioned publication for submission to the sixteenth session of the Working Party. This project is linked with projects 14.5.1. and 14.6.4.

Duration: Two years ending in 1987.

14.6.4. Transfer of economic and statistical methods and experience in the forest and forest products sector

Description: The Working Party will contribute to the building up of statistical services in countries inside and outside the ECE region through the transfer of know-how and experience in methods of data collection, assembly and dissemination in the forest and forest products sector.

Work accomplished and to be undertaken: Participation of experts from other regions will be encouraged in further work by the Working Party on classification and definitions (14.2.2.3.); and on forest resource assessment (14.5.1. and 14.6.3.). Countries will be invited to furnish information on their technical assistance programmes which are directed to assisting developing countries in the area of economics and statistics on the forest and forest industries sector. Member countries will be requested to prepare descriptions of standard practices in the production of forestry statistics along the lines of the report on the Scandinavian countries.

Duration: Continuing.

Annex IV  
TABULAR PRESENTATION OF TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991

Programme element	1987	1988	1989	1990	1991
<b>PROGRAMME 14: TIMBER</b>	145th session of the Timber Committee (jointly with FAO European Forestry	146th session of the Timber Committee Study tour in Poland	147th session of the Timber Committee Study tour in .....1/	148th session of the Timber Committee Study tour in .....2/	149th session of the Timber Committee Study tour in .....1/
<b>SUBPROGRAMME 14.1: MEDIUM- AND LONG-TERM TRENDS, PROSPECTS AND POLICIES FOR FORESTRY AND FOREST PRODUCTS</b>					
14.1.1. Appraisal of medium- and long-term timber trends and prospects					
14.1.1.1. Appraisal of long-term timber trends and prospects	Joint Timber Committee/ European Forestry Commission session to discuss policy implications of ETS IV	Further activities as decided by the Committee			
14.1.1.2. Medium-term trends in the markets for specific forest products	Sawnwood and sawlogs	Pulpwood, wood for energy and miscellaneous roundwood	Wood-based panels	Sawnwood and sawlogs	Pulpwood, wood for energy and miscellaneous roundwood
14.1.2. Medium-term trends in the structure and capacity of the wood-processing industries					
14.1.2.1. The wood-based panels industries			Survey of the wood-based panels industries		
14.1.2.2. The sawmilling industry	Revised survey form submitted to Working Party			Survey of the saw-milling industry	
14.1.3. Trends, prospects and policies in forestry and forest products in southern Europe		Seminar in Italy on a topic related to the production and marketing of products from the forest of special interest to Mediterranean countries			
<b>SUB-PROGRAMME 14.2: CURRENT FOREST PRODUCTS MARKET DEVELOPMENTS AND SHORT-TERM PROSPECTS, INCLUDING INTERNATIONAL TRADE</b>					
14.2.1. Review of production, trade, consumption and prices of forest products	Continuing				
14.2.2. Standardization in the forest products sector					
14.2.2.1. Review of standardization activities	Continuing: co-operation maintained with ISO and its appropriate Technical Committees				
14.2.2.2. Standardization of stress-grading and finger-jointing of coniferous sawn timber	Ad hoc meeting on future activities and international co-operation on coniferous sawn timber standardization				
14.2.2.3. Problems of classification and definitions	Preparation and submission of comments on ISCO				

1/ Host country to be decided.

TABULAR PRESENTATION OF TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991 (cont.)

Programme element	1987	1988	1989	1990	1991
<u>SUB-PROGRAMME 14.3: FOREST WORKING TECHNIQUES AND TRAINING OF FOREST WORKERS</u>					
	8th session of the Steering Committee in Sweden	17th session of the Joint Committee in Geneva (Switzerland)	9th session of the Steering Committee	18th session of the Joint Committee in the Federal Republic of Germany 2/	10th session of the Steering Committee
14.3.1. Silvicultural operations and general management aspects				Seminar in ... 1/ on topic to be decided within programme element 14.3.1.	Seminar in ... 1/ on topic to be decided within programme element 14.3.1.
14.3.1.1. Development and use of machinery and methods for stand establishment, including planting stock and equipment	Seminar in the Fed. Rep. of Germany on the impact of acute forest damage on harvesting and silvicultural operations	Seminar in the German Dem. Rep. on artificial and natural reforestation methods after harvesting			
14.3.1.2. Forest fire prevention and control		17th session to decide on future activities			
14.3.1.3. Methods and procedures for the preparation and implementation of working forest management plans			Seminar in ... 1/ on advanced planning and control techniques (1989 or 1990)		
14.3.1.4. Development of methods and equipment for silvicultural operations and multiple use forestry under Mediterranean conditions	Submission of updated study "Técnicas de Forestación" in draft form to 8th session of Steering Committee & in final form to the 17th session				
14.3.1.5. Standardization activities in the field of forestry, including standardization of concepts and terms used by the Joint Committee		Review by the Joint Committee on basis of report from ISO		Review by the Joint Committee on basis of report from ISO	
14.3.2. Wood harvesting and transport					
14.3.2.1. Development and use of logging machinery	Seminar in Sweden on small-scale logging operations and machines		Seminar in Turkey 2/ on use of machines in harvesting		Seminar in ... 1/ on topic to be decided within programme element 14.3.2.
14.3.2.2. Forest roads and transport of wood raw material		Study tour in Switzerland on methods and techniques of forest road construction in conjunction with 17th session			

1/ Host country to be decided.  
2/ Subject to confirmation.



TABULAR PRESENTATION OF TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991 (cont.)

Programme element	1987	1988	1989	1990	1991
14.3.2.3. Guidelines for the collection and presentation of data on harvesting and other forest operations	Report by team of specialists to 8th session	17th session to decide on future activities			
14.3.2.4. Harvesting of wood for energy purposes	Report on new developments to each session of the Joint Committee		Seminar in conjunction with 18th session in the Federal Republic of Germany 2/		
14.3.3. Vocational training, applied ergonomics, occupational safety and health					Seminar in...1/ on topic to be decided within programme element 14.3.3.
14.3.3.1. General questions of vocational training in forestry		Seminar in France on problems concerning the employment of contractors in forest operations	Seminar in...1/ on topic to be decided (1989 or 1990)		
14.3.3.2. Specific problems of vocational training in forestry	Seminar in Canada on extension activities for owners of small woodlots (woodlots)				
14.3.3.3. General questions of applied ergonomics, safety and health in forest operations				Seminar in...1/ on topic to be decided (1989 or 1990)	
14.3.3.4. Specific problems of applied ergonomics, safety and health in forest operations		Discussion at 17th session on use of chemicals in forestry and preparation of guidelines on their use	Further activities on the use of chemicals in forestry as decided by 17th session		
14.3.3.5. Transfer of technical information and experience	Publication of seminar proceedings; provision by seminar host country of fellowships for developing country participant				
	Revision of enquiry on transfer of experience for submission to 17th session				
SUB-PROGRAMME 14.4: ECONOMIC, TECHNOLOGICAL AND MANAGERIAL ISSUES FOR THE WOOD-WORKING INDUSTRIES					
14.4.1. Developments and introduction of new technologies in the wood-working industries, including furniture			Seminar in Poland 2/ on new technologies in the wood-based panels sector (or in 1990)		
14.4.2. Development of new products, markets and applications for forest products	Seminar in France on the valorization of secondary quality temperate zone hardwoods		Workshop in the USA 2/ on hardwood questions, as decided by Committee		

1/ Host country to be decided.  
2/ Subject to confirmation.

TABULAR PRESENTATION OF TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991 (cont.)

Programme element	1987	1988	1989	1990	1991
14.4.3. Energy conservation and self-sufficiency in the mechanical wood-processing industries	Further activities, including the possible holding of a seminar in ... 1/ as decided by the Committee (linked with 14.5.2.)				
14.4.4. Management techniques in the wood-working industries	Further activities as decided by Committee				
<b>SUB-PROGRAMME 14.5: ENVIRONMENTAL AND RESOURCE CONSERVATION ISSUES</b>					
14.5.1. Quantification and evaluation of the environmental benefits of forests	A team of specialists will prepare proposals for follow-up to publication of The Forest Resources of the ECE Region for the sixteenth session of Joint FAO/ECE Working Party on Forest Economics and Statistics (linked with 14.6.3.)				
14.5.2. Rational use of wood biomass and the reduction of losses	Seminar in ... 1/ on a topic to be decided, possibly linked with 14.4.3 (1988 or 1989)				
14.5.3. Implications of air pollution damage to forests for the forestry and forest products sector	Reports will be widely distributed and study on extent of damage updated annually. The team of specialists will review available information, make recommendations, if necessary, and interpret new surveys as they appear				
14.5.4. Measures to be taken in the event of sudden and severe damage to forests	Countries where sudden and severe damage to forests occur should send an assessment of such damage to the secretariat for rapid circulation				
<b>SUB-PROGRAMME 14.6: FOREST AND FOREST PRODUCTS ECONOMICS AND STATISTICS</b>					
14.6.1. Publication of the Timber Bulletin	Sixteenth session of the Working Party Volume XL Ten issues a year, two containing annual and quarterly statistics on production and trade, one containing trade flow data, three containing price data, two containing market reviews, one the Timber Committee Yearbook and one special issue	Seventeenth session of the Working Party Volume XLII Volume XLIII			Eighteenth session of the Working Party Volume XLIV
14.6.2. Selected problems of economics and statistics of forestry and forest products	Together with the programme elements 14.6.3. and 14.6.4., activities of the Joint FAO/ECE Working Party on Forest Economics and Statistics				
14.6.2.1. Organization and periodicity of data collection and dissemination	Continuing review at each session of the Working Party				
14.6.2.2. Conversion factors					Four-yearly survey at seventeenth session and publication
1/ Host country to be decided.					

TABULAR PRESENTATION OF TIMBER COMMITTEE PROGRAMME OF WORK FOR 1987-1991 (cont.)

Programme element	1987	1988	1989	1990	1991
14.6.2.3. Productivity in the forest sector	Reports by specialists on productivity questions to the sixteenth session				
14.6.2.4. Statistics on forest health and forest damage	Biennial survey of forest fire statistics for review at sixteenth session and publication Report by team of specialists on evaluating forest fire losses	Biennial survey of forest fire statistics for review at seventeenth session and publication			Biennial survey of forest fire statistics for review at eighteenth session and publication
14.6.2.5. Methodologies and data base for long-term outlook studies for the forest and forest products sector	Proposals by team of specialists to sixteenth session (linked with 14.6.2.7.)				
14.6.2.6. Economic aspects of the fuller use of forest biomass	Further analysis by USSR experts on basis of material furnished by countries				
14.6.2.7. Application of advanced methods of projection and modelling in the forest and forest products sector	Submission of proposals by team of specialists (linked with 14.6.2.5.)				
14.6.2.8. Roundwood price statistics and specification	Report by team of specialists with recommendations				
14.6.3. Forest resource analysis	A team of specialists will make proposals for follow-up to the publication of The forest Resources of the ECE Region (Europe, the USSR, North America) to the sixteenth session of the Working Party (linked with 14.5.1.)				
14.6.4. Transfer of economic and statistical methods and experience in the forest and forest products sector	Participation of experts from other regions in projects 14.2.2.3, 14.5.1 and 14.6.3 will be encouraged. Countries will be invited to furnish information on technical assistance programmes in the area of economics and statistics. Member countries will be invited to prepare descriptions of standard practices in the production of forestry statistics.				

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Annex VPROVISIONAL LIST OF MEETINGS IN 1987 AND 1988 FALLING WITHIN  
THE TIMBER COMMITTEE PROGRAMME OF WORK

Note: The meetings are sub-divided into two categories, which are shown by (A) or (B) after the title. Meetings marked (A) are open to delegates or approved representatives from all member countries of ECE as well as from other countries that are members of the United Nations and organizations accredited to ECE (or to FAO and ILO, in the case of meetings co-sponsored by them). Meetings marked (B) are those restricted to the countries or individuals nominated by their countries to take part in the activity concerned, e.g. a team of specialists.

1987

<u>Date</u>	<u>Location</u>	<u>Title</u>
(Undecided)	(Undecided)	Team of specialists to draw up proposals for follow-up to <u>The Forest Resources of the ECE Region (Europe, the USSR, North America)</u> (B)
2 April (to be confirmed)	Geneva	Timber Committee office-holders (B) (with Executive Committee of European Forestry Commission)
12-13 June (to be confirmed)	Garpenberg (Sweden)	Steering Committee (8th session) of the Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers (B)
15-18 June	Garpenberg (Sweden)	Seminar on small-scale logging operations and machines (A)
29 June-3 July (to be confirmed)	Geneva	Joint FAO/ECE Working Party on Forest Economics and Statistics (16th session) (A)
(Undecided)	(Undecided)	Team of specialists on the implications of air pollution damage to forests for roundwood supply and forest products markets (B)
7-11 September	Bonn-Röttgen (Germany, Fed.Rep.of)	Seminar on the impact of acute forest damage on harvesting and silvicultural operations (A)
23 September- 1 October	Fredericton (Canada)	Seminar and study tour on extension activities for owners of small woodlands (woodlots) (A)
7-9 October (to be confirmed)	Geneva	Meeting of winners of the national essay competitions for young people (B)

12-16 October	Geneva	ECE TIMBER COMMITTEE (45th session) FAO EUROPEAN FORESTRY COMMISSION (23rd session) joint session (A)
23-26 November	Nancy (France)	Seminar on the valorization of secondary quality temperate zone hardwoods (A)
(Undecided)	Geneva	<u>Ad hoc</u> meeting on future activities and international co-operation on coniferous sawn timber standardization (B)

1988

April (to be confirmed)	Geneva	Timber Committee office-holders (B)
May (to be confirmed)	German Democratic Republic	Seminar on artificial and natural reforestation methods after harvesting (A)
August (to be confirmed)	Geneva	Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers (17th session) (A)
August (to be confirmed)	Switzerland	Joint Committee study tour on methods and techniques of forest road construction (A)
(Undecided)	Italy	Seminar on the production and marketing of products from the forest of special interest to Mediterranean countries (A)
(Undecided)	Poland	Timber Committee study tour (A)
(Undecided)	(Undecided)	Team of specialists on the implications of air pollution damage to forests for roundwood supply and forest products markets (B)
(Undecided)	France	Seminar on the employment of contractors in forest operations (A)
October	Geneva	ECE TIMBER COMMITTEE (46th session) (A)