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REPORT OF THE

TWELFTH SESSION
OF THE NORTH AMERICAN
FORESTRY COMMISSION

Held in El Paso, Texas
21-24 February 1984



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

PREVIOUS SESSIONS OF THE COMMISSION

First Session	Mexico, D.F., Mexico	24-29 July 1961
Second Session	Ottawa, Canada	17-22 June 1963
Third Session	Washington, D.C., U.S.A.	18-22 October 1965
Fourth Session	Mexico, D.F., Mexico	2-7 October 1967
Fifth Session	Ottawa, Canada	15-20 September 1969
Sixth Session	Washington, D.C., U.S.A.	27-31 March 1972
Seventh Session	Mexico, D.F., Mexico	4-8 February 1974
Eighth Session	Ottawa, Canada	23-27 February 1976
Ninth Session	San Juan, Puerto Rico, U.S.A.	13-17 February 1978
Tenth Session	Pátzcuaro, Mich., Mexico	18-22 February 1980
Eleventh Session	Victoria, B.C., Canada	16-19 February 1982

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Rome, 1984

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SUMMARY OF RECOMMENDATIONS

A. ADDRESSED TO MEMBER GOVERNMENTS

The Commission:

1. Endorsed the activities of the Study Group on Fire Management, agreed that it continue for the coming biennium and stressed the value of closer bilateral Mexico/United States co-operation similar to that between the United States and Canada (para. 61).
2. Commended the Study Group on Wildlife on its accomplishments and endorsed the proposed plans, urging that an invitation be extended to the Mexican authorities so that they may play a strong role in future Group activities (para. 73).
3. Having discussed the subject of light-frame structures, and the United States' wish that the existing cooperation agreements with the United States and Canada be extended to include Mexico, decided that the Committee of Alternates investigate the extension of such cooperation (para. 79).

B. ADDRESSED TO FAO

The Commission:

1. Commended the Study Group on Forest Insects and Diseases on its work, requested the Group to make every effort to produce a document on "Tip and Shoot Insects of North American Conifers" and agreed that FAO be approached for help in distributing the document "Scolytidae of the World" (para. 63).
2. Commended the work being done by the Commonwealth Agricultural Bureaux, discussed the implications of the decision to centralize its operations at Reading, which would include forestry abstracts, and suggested that the matter be reviewed by COFO (para. 92).
3. Recognizing the great significance of forest genetic resources to the future of forestry, recommended that the overall question of conserving and utilizing such resources, and possibilities of establishing cooperative arrangements with gene resources in agriculture, be considered by COFO (para. 93).

C. ADDRESSED TO NAFC SUBSIDIARY BODIES

The Commission:

1. Endorsed the activities of the Study Group on Fire Management, agreed that it continue for the coming biennium and stressed the value of closer bilateral Mexico/United States co-operation similar to that between the United States and Canada (para. 61).
2. Commended the Study Group on Forest Insects and Diseases on its work, requested the Group to make every effort to produce a document on "Tip and Shoot Insects of North American Conifers" and agreed that FAO be approached for help in distributing the document "Scolytidae of the World" (para. 63).
3. Agreed that the Study Group on Remote Sensing consider joining in the work of the Study Group on Insects and Diseases, and endorsed the proposal that the Group plan an exhibit for the Ninth World Forestry Congress (para. 66).
4. In discussing the merits of expanding the work programme of the Study Group on Silviculture to include temperate silviculture, decided to refer the matter to the Committee of Alternates for study and report. Noting that the Study Group had not met since 1981, and that the Group needs a chairman, also decided to refer this matter to the Committee of Alternates (para. 68).

5. Having noted that the Study Group on Multiple-Use Forestry had been inactive during the last two biennia, and the Committee of Alternates' recommendation that it be abolished unless a new plan of action were to be developed in 1984, endorsed such recommendation and requested Ing. Juan José Reyes of Mexico to prepare a report for consideration by the other Commission members (para. 69).

6. Having discussed the present and future activities of the Study Group on Forest Engineering, agreed that Canada take over the chairmanship of this Group (para. 76).

7. Having discussed the subject of light-frame structures, and the United States' wish that the existing cooperation agreements with the United States and Canada be extended to include Mexico, decided that the Committee of Alternates investigate the extension of such cooperation (para. 79).

I. OPENING OF THE SESSION

1. The Twelfth Session of the North American Forestry Commission was held in El Paso, Texas, from 21 to 24 February 1984, at the kind invitation of the Government of the United States of America.
2. The session was opened by Mr R. M. Peterson, Chief, US Forest Service, Department of Agriculture, who chaired the session. Mrs Alma Esparza, Director of the US Department of Agriculture, Office of Equal Opportunity, and Mr Bruce Miles, Director of the Texas State Forest Service, welcomed the delegates.
3. Mr L. R. Letourneau, Director, Forest Industries Division, on behalf of the Director-General of FAO, Mr Edouard Saouma, thanked the United States of America for hosting the Twelfth Session of the North American Forestry Commission. Since the Eleventh Session, which was held in Victoria, Canada, there seemed to have been some recovery in the forest sector of the Region which had been feeling the effects of recession. One positive outcome of the recession was the fact that it made people take a close look at the forest situation. A very serious consequence of the recession was the reduction in funds for research and development at a time when answers were needed to raising productivity in the forests and the conversion plants. The planning of forest resource management continued to be a problem inasmuch as it was affected not only by supply and demand factors but also by disease, fire and, now apparently, air pollution. Mr Letourneau observed that recent sessions of the Committee on Forestry (COFO) recommended that forest policies be formulated with emphasis on human resource objectives. At its next session COFO will have "Forestry beyond 2000" as a basic theme. The Ninth World Forestry Congress, to be held in Mexico in July 1985, was another event of great importance to the forestry profession. He wished the organizers every success and assured them of FAO's assistance and support. In concluding, Mr Letourneau stressed that the problems of forestry cannot be solved by foresters acting in isolation and, therefore, means must be sought to influence institutions which formulate policy.
4. The Commission designated the following as members of the Drafting Committee: L. Whitmore (USA), M. Caballero D. (Mexico) and G. A. Stenecker (Canada). A. Polycarpou (FAO) acted as Secretary. The list of participants is given in Appendix B.

II. ADOPTION OF THE AGENDA

5. The Commission approved the Provisional Agenda (Appendix A). The list of documents considered by the Commission is shown in Appendix C.

III. THE STATE OF FORESTRY IN NORTH AMERICA

6. Statements on progress, problems and policies in forestry were given by the heads of delegations.
7. Canada: Mr R. Kerring, Acting Assistant Deputy Minister, Canadian Forestry Service, delivered the report on the status of forestry in Canada. A recent important development in Canada was the "forestry strategy for Canada" approved by Cabinet in 1981. Identified issues were: level of forest productivity; shortage of professional manpower and the inadequacy of research and development. Action to implement the strategy included increased planting of cut-overs through cost-sharing agreements between federal and provincial governments, increased federal support for forestry schools through larger block grants and contract research and some limited increases in research and development by the Canadian Forestry Service.

8. Some special programmes have been initiated also to further help the forestry sector. These included employment support in the forestry sector (e.g. the use of unemployment insurance benefits for job creation - \$140 million in 1982 - and \$35 million to cover overhead costs of projects implemented under the unemployment insurance job creation programme. As of 1 December 1983 the programme had generated 15,000 jobs. The CL-215 water bomber acquisition, new pulp and paper research facilities in Vancouver (\$15 million) and expansion of federal forestry research facilities (about \$60 million) were among other significant developments. Activities to be given attention over the next two years were:

- application of forest renewal strategy in federal/provincial agreements;
- an evaluation of federal forestry research;
- an increased effort in applied forest economics;
- increased emphasis on communication with the forestry sector and general public;
- assessment of the role of pesticides and alternate control measures;
- the development of a Canada Forest Act.

9. The Canadian economy has experienced growth resulting in the recapture of a significant portion of output and employment lost during the recession. Production of solid wood showed an increase over 1982. Lumber and plywood production were up 28 percent and 25 percent respectively over the previous year. Wood pulp shipments were 12.5 percent higher than 1982, while paper and paperboard and newsprint shipments were up 4 percent and 2 percent respectively.

10. Forest biomass provided about 4 percent of the nation's energy budget, but had the potential to provide at least 10 percent of the budget. A national forest biomass inventory was scheduled for completion in 1984.

11. Increasing emphasis was being placed on artificial regeneration in Canada. There were considerable increases in seedling production, totalling about 540 million trees in 1983, of which 55 percent were bare-root and 45 percent containerized. All provinces have adopted strict control over seed collection and distribution and more seed orchards were coming on stream.

12. There was concern that substantial areas of the boreal forests in eastern Canada may have been affected by atmospheric deposition. However, the magnitude of the effect was not known, as precise baseline data were lacking. Effects of atmospheric deposition would have to be isolated from such factors as drought, insect and disease conditions and other adverse effects. Further research was needed to:

- put dimensions on the problem;
- discover the rate of degradation under different soil and forest conditions;
- indicate ceiling deposition levels for different pollutants.

13. Spruce budworm (Choristoneura fumiferana) continued to be the most serious pest in Canada, covering 18.2 million ha of defoliation in 1982. Other serious pests were spruce beetle (Dendroctonus rufipennis), mountain pine beetle (D. ponderosa), tussock moth (Orgyia pseudotsugata) and Scleroderris canker (Gremmeniella abietina).

14. The Canadian Interagency Forest Fire Centre began operations in Winnipeg, Manitoba, in 1982. Its primary role was to collect, analyze and disseminate forest fire management information from participating members to facilitate the sharing of fire fighting resources. Reports from CILFFC showed that in 1982 the total area of forest land burned in Canada was about 1.7 million ha by 8700 fires and in 1983 about 1 million ha by 7100 fires. This compared with a 10-year average of 2.1 million ha from 9200 fires.

15. Mexico: On behalf of Mr León Jorge Castaños, Mr Miguel Caballero, Alternate of the Mexican delegation, reported on this subject. Attention was drawn to Mexico's problems in the field of forestry with emphasis on the deficiencies existing in this area, such as the fact that only 40 percent of the timber-yielding potential was used; the stagnation in the forestry output; the low level of participation of farmers in the benefits from the forest; the inefficiency of the logging operations and the deficit registered in the Mexican balance of trade due in part to its high rate of imports of cellulose and paper products. The strategy adopted for the solution of these problems was based on five substantial objectives: (i) the protection and rational harvesting of forest resources; (ii) the integration of the owners and users of forest resources into the production system; (iii) achievement of self-sufficiency in forest products; (iv) the reduction of the trade balance deficit; and (v) the improvement of the effectiveness of the semi-autonomous forestry organizations.

16. In spite of the problems faced by the Mexican economy in 1983, wood production remained at practically the same level notwithstanding a decrease in the national demand, as a result of an increase in the wood panel exports and the take-over of the bordering areas' market. Employment also remained at a constant level, even though some personnel readjustments were made in certain enterprises which were compensated by the commencement of activities in new plants, especially for wood panels.

17. The change experienced by the public administration was both qualitative and structural. The Under-Secretary's Office of Forestry had undergone an important restructure which was intended to make it more useful and operative. At the same time, work was under way towards achieving a qualitative change in the concept of public service held by the central and regional managers of the Under-Secretary's Office of Forestry. Work was also in progress on a new scheme of forest fire prevention and control, which in 1983 reached one of the most destructive levels in the country's history. In line with these activities a new integrated forest development strategy was initiated for the Mexican tropical wildlands, starting in the State of Quintana Roo. In the same way, important actions have been initiated to increase the participation of owners and users of forestry resources in production, and reduce - on the other hand - the deficit in the balance of trade.

18. Priority actions initiated in 1984 included augmenting forest productivity through regional and massive forest protection and harvesting programmes and the establishment of nurseries and plantations. At the same time, an important process of administrative decentralization had been started with a view to augmenting control of the forests, simplifying the central structure and facilitating the administrative formalities. Another area where work was in progress was that of a greater coordination with other administrative units; seeking and increasing greater funding for the forestry activities; developing arid areas; improving the road and transport infrastructure; and increasing, through a pattern called EMPAC, the national production of cellulose. The main challenge faced by the new administration was that of achieving greater social justice, through more intensive forestry practices.

19. United States of America: Mr R. Max Peterson, Chief of the USDA Forest Service, reported on recent trends and issues concerning forestry. Many of these were influenced by, or factors in, the recovering economic situation.

20. High interest rates, which had been reduced significantly in the past two years, slowed homebuilding in 1983 to its lowest level in 30 years and, because this had long been a major market for wood products, conditions in the forest products industry had been poor for several years. Two years previously nearly two-thirds (63 percent) of the

western sawmill capacity and more than one-half of the southern sawmill capacity had closed or curtailed operations. In 1983 housing rebounded to 1.8 million units and continued strong in 1984.

21. Forestry programmes in most states were also experiencing budget limitations. At the end of 1982 about 40 percent of the states anticipated programme reductions, 40 percent were expecting to hold their own despite inflation and 20 percent reported budget increases.

22. There were extensive discussions concerning the appropriate roles of the federal government and other organizations in securing improved management on non-industrial private forests. These forests constitute 58 percent of all US commercial forest lands and offer significant opportunities for improving management. These discussions centred on two key questions, one pertaining to the appropriate distribution of responsibilities among government and non-government organizations, the other to the appropriate level of expenditure for gaining such improved management.

23. Very soon, for example, a supplement to the 1979 Assessment of Forest and Rangeland Situation in the United States will be published. This was an evaluation of the current condition and long-term demand and supply situation for all public and privately-owned forest and range resources in the United States. This provided a factual and analytical basis for a recommended Forest Service programme to be submitted to Congress next year.

24. This supplement would show that the United States has about 721 million acres of forest land. Of this, 482 million acres is classified as commercial timberland. Though the area of forest land had been declining and was projected to decline further by more than 19 million acres by 2030, the United States will still have a very large forested area in the distant future.

25. A recent report for Congress had concluded that "the United States could greatly expand its role in world forest products trade over the next decade and even become a net exporter of solid wood and paper products before 1990". Though the solid wood products industry had not been overly successful in exports, and though there were significant barriers to wood products trade, both government and industry were working on ways to increase forest product exports.

26. Since April 1982 the Department of Agriculture's Foreign Agriculture Service has had a forest products staff working with the industry associations in an effort to double US exports of solid wood products by 1990. The current efforts are directed at expanding foreign market development for forest products, obtaining access to markets and developing a commodity analysis system. This programme now appeared to be on the threshold of significant increases in export sales of forest products.

27. Though problems remained, significant inroads against forest pests had been made. Foresters in eastern United States were able to greatly reduce applications of chemical insecticides to control gypsy moths in 1983, as the microbial insecticide Bacillus thuringiensis (B.t.) was used on more than one-half of the acreage in the cooperative federal-state control programme. In previous years, B.t. had been used in less than 10 percent of the programme. In 1983 a new method was used in determining gypsy moth defoliation. This system used an optical bar panoramic camera system mounted on a U-2 aircraft which provided a permanent record of the extent of gypsy moth defoliation and was available for other resource purposes as well.

28. The gypsy moths defoliated about 2.6 million acres in 1983, which was less than the 12.8 million acres defoliated in 1981 and the 8.2 million acres in 1982. However, the infestation had spread south into Virginia and westward into Ohio.

29. Fire seasons in the past two years had been relatively mild and this enabled cooperation with other countries in handling difficult fires or improving their fire-control capabilities. For example, three different teams of specialists had been sent to help Portugal's forestry organization to improve its use of hand tools and aircraft in fire suppression and to determine fire causes. Also, a fire specialist had been sent to the Dominican Republic to advise on control, mop-up and rehabilitation of a 6,000-acre wildfire.

30. As a follow-up to that visit to the Dominican Republic, and at the request of the Agency for International Development, a three-week advanced wildland fire management training course was conducted for 61 people from 20 Spanish-speaking countries. The training had been designed and conducted at the Forest Service's National Advanced Resource Technology Center in Marana, Arizona, and was taught entirely in Spanish. The response to this training had been very favourable, and thus similar training programmes in the future may be organized.

31. Foresters in the United States continued to be concerned about the potential long-term effects of acid precipitation on water quality and on forest growth and vigour. Over \$1.6 million per year had been directed into research on this problem and the Forest Service was participating in a national assessment of the effects of acid deposition due to be completed in 1985.

32. Forest Service scientists addressing the acid deposition problem were studying both the aquatic and terrestrial effects and had begun to identify the possible regional sources of acid deposition. Additional research was planned to help put the deposition problem into perspective, and to find ways to mitigate its potential long-term forestry impacts.

33. Volunteers had been helping with a variety of forest management activities and the amount of work accomplished had been increasing. In 1983 45,000 volunteers (the equivalent of about 1,500 full-time workers) were used. Some of these volunteers were students or members of hiking or other user groups, while others were retirees. They brought a variety of useful skills and experiences, and had built and maintained trails, done clerical work, mapped resources, carried out interpretive programmes for visitors and performed other useful tasks. In the national forests alone, these volunteers accomplished work worth about \$21 million in 1983.

34. Turning to the future of research programmes, Mr Peterson stated that the USA will be concentrating more intensively on three major areas of scientific study:

- (1) Acid rain - its causes, effects on forest and range resources and means of ameliorating those effects.
- (2) Old-growth forests - their resource values and possible management systems.
- (3) Genetic engineering - the development of improved trees and organisms useful in forest management.

35. The Commission noted with satisfaction the progress in forestry and forest industries reported by the three countries and agreed that the exchange of such information at regular sessions of the Commission and through its various Study Groups was extremely useful. The Commission sought and received additional information and clarification on the country statements.

IV. REPORT OF THE COMMITTEE OF ALTERNATES

36. The Committee of Alternates met three times during the biennium (February 1982, May 1982 and February 1984). Principal matters of discussion related to programmes of individual study groups and are reflected in Section VII of the Report.

37. The Commission, however, examined under this item four problem areas for which no study groups exist, as follows:

(a) Atmospheric deposition

The Committee of Alternates recommended the establishment of a new Study Group on Atmospheric Deposition, to be chaired by Dr Charles Philpot of the United States. The Group would concern itself with all forms of atmospheric deposition, not only acid rain.

38. The Commission agreed to the formation of this Group and urged that a membership list be drawn up as soon as possible.

(b) Multilingual Vocabulary

39. Mr Bruce Yerke informed the Commission of progress on the trilingual vocabulary. The English is finished, with 12,000 terms, the French is about 70 percent completed, and the Spanish is about to begin.

40. The Commission endorsed the suggestion of the Committee of Alternates that this effort be considered a project for a new study group. It suggested that Mr Yerke plan to confer with Ms Cecilia Nieto of Mexico as soon as possible on the Spanish part of the vocabulary. The Committee of Alternates brought to the attention of the Commission the unresolved matter of funding the final publication.

(c) Housing and light-frame wood construction

41. Based on the paper presented by Mr Bohannon under Technical Items, the Commission agreed on the importance and timeliness of this subject. It noted that the United States will issue an invitation to Mexico and Canada to explore opportunities. A study group will be appointed once a satisfactory plan of work is completed.

(d) NAFC brochure

The Mexican delegation proposed the publication of a popularized brochure to describe the NAFC, its study groups, its membership, its past accomplishments and its current plans. The Commission approved this idea and requested the Committee of Alternates to give further consideration to this proposal.

43. The Commission endorsed the report of the Committee of Alternates and approved the following recommendations of the Committee in respect of the study groups and their activities:

(a) Forest Tree Improvement: Report and plan of work accepted.
Chairman: Dr D. P. Fowler (Canada).

(b) Fire Management: Report and plan of work accepted.
Chairman: Dr Brian Stocks (Canada).

- (c) Forest Insects and Diseases: Report and plan of work accepted.
Chairman: Biol. David Cibrián Tovar (Mexico).
- (d) Remote Sensing: Report and plan of work accepted, with the following cautions:
(i) the Study Group should sharply focus its work on project(s) of mutual interest to the three countries; (ii) the Group should search for projects that will result in concrete products in two years; and (iii) the Group should explore the possibility of a major exhibit at the Ninth World Forestry Congress.
Chairman: Harold Strickland (USA).
- (e) Silviculture: Acceptance of the report and encouragement of continued emphasis on tropical silviculture. However, the Study Group should also explore opportunities for work in temperate and arid zone silviculture. In addition, it should encourage bilateral collaboration in temperate and arid zone silviculture along the lines already under way in northern Mexico and southwest United States. Temporary chair: Dr Frank Wadsworth (USA). Permanent chairman to be elected at the next Study Group meeting.
- (f) Multiple-Use: Continuation of Study Group depends on development of acceptable programme of work. Mexico to take the lead on preparation of work plan. Chairman to be elected upon agreement of work plan by Committee of Alternates.
- (g) Wildlife: Plan of work accepted. Mexico to appoint members from Ministry of Forestry and Wildlife.
Chairman: Dr Tom Hoekstra (USA).
- (h) Engineering: Plan of work accepted. United States to appoint new members.
Chairman: Don Miles (Canada).
- (i) Atmospheric Deposition: Plan of work accepted with understanding that all atmospheric pollutants be included. Study Group to address question of acceptable terminology.
Chairman: Dr Charles Philpot (United States).
- (j) Multilingual Vocabulary: Plan of work accepted. Chairman to contact Mexican member. Budget implications of proposal were noted.
Chairman: Bruce Yerke (United States).
- (k) Other: The Committee of Alternates will reaffirm the plan of work and composition of overall study groups by letter with individual chairmen by 15 April 1984.
- (l) Ninth World Forestry Congress: The study groups be encouraged to participate in a variety of ways in the Ninth World Forestry Congress with an invited or voluntary paper and exhibits.

V. FAO FORESTRY ACTIVITIES

44. Mr Letourneau, Director, Forest Industries Division, referred to document FO:NAFC/84/4 which summarized FAO's activities in forestry for 1982-83 and highlighted the important elements of the Programme of Work for 1984-85 approved by the Twenty-second Session of the FAO Conference in November 1983. The activities in forestry were grouped into four programmes, namely:

- Forest Resources and Environment: to create and maintain forest resources information systems, to improve management of forest and related resources, plantations for both productive and environmental purposes and integrated watershed and forest land development.
- Forest Industries and Trade: to establish and develop viable forest industries for economic and social development.
- Forest Investment and Institutions: to build and strengthen the institutional basis for forest development and to improve national capabilities for preparation and implementation of plans, investment programmes and projects.
- Forestry for Rural Development: to provide a framework of forestry activities at the community level.

45. In all these areas, specific needs of rural people and the need to incorporate energy as an integral part of forestry were emphasized.

46. Mr Letourneau reported that the reorientation of the forestry programmes towards rural development, which was initiated in 1980, continued to be an important aspect of the activities carried out during the 1982-83 biennium.

47. The number of training activities organized and implemented directly from Headquarters and the Regional Offices declined during the period 1981-82, but picked up again in 1983. There was an overall increase of about 20 percent in the provision of direct support to Member Countries. This was as a result of increased assistance given to Member Countries in the areas of forest resources and environment and forestry for rural development. The increasing support to countries was mainly provided through the augmented use of consultant services. Direct support represented about 26 percent of the working time of the technical staff at Headquarters and the Regional Offices.

48. In considering the Director-General's Programme of Work and Budget for 1984-85 and the Medium-Term Objectives, the FAO Conference had supported the selective increase proposed for certain programme priorities, including forestry for rural development. The Conference had also underlined the contribution of forestry to promoting rural development; endorsed the proposed activities and the high priority given to forestry for rural development, fuelwood and the development of forestry institutions; reiterated its serious concern at the accelerated rate of deforestation occurring, especially in tropical areas; stressed that priority should be given to controlled management of the natural forests; recognized the seriousness of fuelwood scarcity in many regions and endorsed the activities related to fuelwood; noted the need to rationalize shifting cultivation to improve forest land use practices; recognized the contributions of the Special Action Programmes on "Forestry Energy" and "Forestry for Local Community Development"; stressed the activities in rural areas which incorporated the fullest participation and involvement of the local people; emphasized the relevance of training and manpower improvement; stressed that the long-term nature of forestry activities should not overshadow immediate contribution to human welfare; and noted the growing awareness about the importance of forestry for its production, protection and social functions.

49. In reviewing FAO's field programmes, the Conference had noted the significance of forestry development which was of crucial importance to many developing countries.

50. The FAO programmes in forestry aimed, primarily, at assisting developing countries to improve the management and utilization of their forest resources for social and

economic growth. These programmes were also stimulating technical cooperation between regions and Member Countries and, as such, they were of great interest to the Commission whose assistance and cooperation were always appreciated and welcome.

51. The Commission commended the clarity of the information provided by document FO:NAFC/84/4 on FAO's programmes in forestry and suggested that more detailed information, particularly on trends by programmes under extra-budgetary resources, be provided, if possible, in the future. While noting with satisfaction that total allocations of resources to forestry were not declining, the Commission expressed concern at the declining share of forestry in the FAO budget and at the small amounts of resources allocated to forestry under multilateral aid arrangements. It agreed that a review of trends in forestry assistance under bilateral aid programmes was necessary in order to permit a fuller appreciation of the total picture.

VI. THE MANAGEMENT OF FOREST COVER ON ARID LANDS

(a) Canada

52. Mr J. A. G. Howe, in introducing document FO:NAFC/84/6(a) "Tree planting on the Canadian prairies - past and present", reviewed briefly past development efforts in tree planting on the Canadian prairies and highlighted the major thrusts of the programmes of the shelterbelt nursery at Indian Head (Saskatchewan) and Edmonton (Alberta). He stressed that in promoting shelterbelt planting major importance had been attached to the selection of suitable species and assistance to farmers in the planning, establishment and maintenance of shelterbelts. He also underlined a number of supporting activities to shelterbelt planting which were recently initiated, including a study on actual benefits of shelterbelt planting to farmers, the development of multipurpose shelterbelts and the evaluation of new species.

(b) Mexico

53. Mr L. J. Maldonado introduced the report of Mexico on "The management of forest cover on arid lands". He particularly stressed the distinguishing features of arid zone vegetations in Mexico, their extent and past and present uses. The abundance of this vegetation in genetic variability was emphasized and its economic importance for food, fodder, wood, industry, pharmaceutical and ornamental purposes was highlighted. Mr Maldonado pointed out that, while demand in the past was in harmony with what these resources could provide, at present increasing pressure was resulting in the disappearance of much of the vegetative cover and the extinction of some species in certain areas. The management of this kind of woody vegetation was not well defined and a great deal of knowledge was still necessary in order to meet the challenge posed by integral management. In this connection, models of multiple use were being applied to areas close to human communities.

(c) United States of America

54. In introducing document FO:NAFC/84/5(c) "The management of forest cover on arid lands in the United States of America", Mr J. Hassell highlighted the past land use in the southwest region and described its life zones and some of its natural facets. These zones are the chapparal, pinyon-juniper, ponderosa pine, mixed conifer forests, sub-alpine forests and alpine tundra. In each zone, he stressed the opportunities and limitations for management to increase forage, wood, water yield and recreation. He drew attention to the harsh environmental conditions prevailing in the region and stressed the need for developing adequate silvicultural methods for pinyon-juniper zones, better ways to manage mixed conifer stands and means of balancing livestock use with wildlife in sub-alpine forests.

55. The Commission noted the efforts being made by the countries of the Region to manage the woody resources of the arid areas. It stressed the economic importance of those species which have potential to provide food, fuelwood, fodder and fibre and recommended that greater efforts be made to develop appropriate management systems for this type of vegetation. Moreover, in view of the enhanced socio-economic benefit derivable from the management of arid land woody vegetation, the Commission urged that available research results be exchanged among the countries of the Region.

VII. REVIEW OF STUDY GROUP ACTIVITIES

(a) Study Group on Forest Tree Improvement

56. The Chairman of the Group, Mr Fowler of Canada, reported that no meetings had been held since the Eleventh Session of the Commission but a meeting was planned to be held in Mexico in October 1984, at which the objectives and functioning of the Study Group will be discussed. In the meantime, work on "A glossary of terms commonly used in forest genetics and tree improvement work", in Spanish, French and English, is nearing completion and will be expanded to include German and Portuguese.

57. The Commission, recognizing the great value of forest genetic resources and the important position of Mexico in this respect, expressed concern at the lack of financial resources for the conservation of Mexico's rich heritage in forest genetic material. It noted with satisfaction Mexico's intention to participate more actively in the work of this Study Group.

(b) Study Group on Fire Management

58. On behalf of the Group Chairman, Ing. Jesús Cardeña reported that this Group had been active since 1962 and continued to be very productive. Meetings were held at Portland (Oregon) in October 1982 and in Valle de Bravo (Mexico) in December 1983.

59. During the past two years, efforts of the Group focused on the exchange of information on technical advances in fire management, technology transfer at the field level, cooperation in fire prevention programmes, exchange of training materials and provision of training opportunities. Some of the more specific accomplishments included:

- laying the groundwork for integrating lightning detection operations along the Canada/US border;
- arranging for technical exchange between the US and Mexico in prescribed burning operations;
- arranging for participation of Canadians at the conference on forest meteorology sponsored by the US Department of Agriculture (USDA) in Denver (Colorado) in the spring of 1982;
- annual updating and exchange of directories of key fire management people for the three member countries;
- promoting a display of fire prevention posters designed by children and exhibited at the NAFC meeting held in Victoria, B.C., in February 1982;
- featuring articles on fire prevention and other fire management topics in each edition of Forest Fire News (published on behalf of the Group twice yearly);

- providing two US fire control training course packages selected by the Mexicans for translation and use in Mexico;
- exchanging schedules of fire control training courses among the three countries.

60. Major recommendations of the 1983 meeting were as follows:

Forest fire prevention

- make prevention a priority programme to combat forest fires, to be included as a part of international programmes;
- adopt an international symbol for prevention of forest fires;
- exchange fire personnel as trainees and trainers at the National Advanced Resource Technology Center (NARTC), Marana (Arizona).

Technology

- carry out research and investigation on fires in relation to their possible beneficial effects on the forest resource, coordinating the actions of the three member countries of the Commission;
- exchange professionals and technicians at various experience levels for training, taking into consideration languages of the country to be visited;
- ensure that the fire management groups of Canada and the United States make available to Mexico technologies related to handtools;
- ensure that literature from Canada and the US on the use of helicopters and water buckets be made available to Mexico;
- that the United States send to Mexico educational materials aimed at education of children about forest fires;
- at the next meeting, to be held in Canada, exhibit handtools for combating forest fires.

Suppression

- that the exchange of fire management professionals and technicians be made during fire seasons for the purpose of observing techniques;
- that a mutual aid or other type agreement be pursued by Mexico and the United States for the purpose of forest fire suppression;
- distribute among the three member countries of the Commission the posters that were approved at the meeting held in Valle de Bravo (Mexico).

61. The Commission endorsed the activities of this Group and agreed that it continue for the coming biennium. It stressed the value of closer bilateral Mexico/United States cooperation, along the lines of current Canada/United States activity.

(c) Study Group on Forest Insects and Diseases

62. The sixteenth and seventeenth meetings of this Study Group were held in Fredericton (New Brunswick) and in Las Cruces (New Mexico) under the chairmanship of Dr T. E. Sterner, Canadian Forestry Service. The feature discussion topics were "Current State of the Art in Pest Management in Seed Orchards and Seed Production Areas" and "The Computer - A Tool for Pest Management". Significant activities of the Group over the past two years included (i) the preparation of the publication "Cone and Seed Diseases of North American Conifers", expected in 1986; (ii) endorsement of the preparation of the biosystematics catalogue "Scolytidae of the World"; (iii) updating the 1972 publication "Quarantine Requirements and Procedures to Prevent Introduction and Spread of Exotic Pests of Mutual Concern to Member Countries of the NAFC"; (iv) promotion of a 'Pest Alert' publication and workshop on European larch canker; and (v) planning for a supplement to, and a third printing of, the very popular handbook "Cone and Seed Insects of North American Conifers". The eighteenth meeting is planned for October 1984 in Mexico City, under the chairmanship of Biol. David Cibrián Tovar; the feature discussion topic will be "Impact of Insects and Diseases in Forests of Urban and Suburban Areas". The Study Group will analyze the proposal for the publication "Tip and Shoot Insects of North American Conifers".

63. The Commission commended the Group for its work and requested the Group to make every effort to produce a document on "Tip and Shoot Insects of North American Conifers". The Commission agreed that FAO be approached for help in distributing the document "Scolytidae of the World".

(d) Study Group on Remote Sensing

64. Group chairman Harold Strickland of the United States reported that in spite of recent inactivity the Group was now fully formed and had an immediate action plan as follows:

- develop a directory of centres of excellence in remote sensing;
- develop an annotated bibliography of short courses on remote sensing for natural resources;
- study the availability of a concise set of terminology for remote sensing and develop, if needed;
- consider developing issue papers on topics such as recommended sensors for satellite systems and on tropical deforestation.

The Study Group's long-range programme included:

- work with the Wildlife Group on habitat mapping;
- sponsoring a North American Remote Sensing Study Tour;
- developing contacts with AID, World and Inter-American Banks, etc., which would involve the Study Group as an interface with the remote sensing community.

65. A meeting for mid-1984, which would further define goals and spell out activities for the coming biennium, was proposed.

66. The Commission agreed that this Group consider joining work with the Insects and Diseases Study Group and with other Groups, and that projects be started that can show end products within two years. It endorsed the proposal that the Group plan an exhibit for the 1985 World Forestry Congress in Mexico.

(e) Study Group on Silviculture

67. Mr F. Wadsworth, Secretary of the Group, reported on progress in several of the tasks taken on by this Group. These included a Directory of North American Tropical Silviculturists and a silvics manual on tropical trees of common interest to member countries. The planned research workshop on tree improvement did not materialize due to lack of financial support.

68. The Commission discussed the merits of expanding the Group's work programme to include temperate silviculture and decided to refer this matter to the Committee of Alternates for study and report. Noting that the Study Group had not met since 1981 and that the Group needs a chairman, the Commission also decided to refer this matter to the Committee of Alternates.

(f) Study Group on Multiple-Use Forestry

69. The Commission noted that this Group had been inactive during the last two biennia and that the Committee of Alternates had recommended that this Group be abolished unless a new and vigorous action plan and slate of members were to be developed during 1984. The Commission endorsed the recommendations of the Committee of Alternates and requested Ing. Juan José Reyes of Mexico to prepare a report on this Group for consideration by the other Commission members.

(g) Study Group on Wildlife

70. In presenting the report of this Group, Dr Tom Hoekstra of the United States stressed the new effort initiated in the 1982-83 biennium. The goal of the Study Group was to improve the information on fauna. The initial objective of the project was to identify standard terms and definitions for faunal habitats. A common classification of faunal habitat is basic to the quantification and exchange of information.

71. Two tasks were undertaken. First, to summarize the characteristics of existing land classifications that are being used to describe faunal habitat. Second, to synthesize and develop a framework of ecological theory that can be used to evaluate the strengths and weaknesses of classifications currently being used. The US technical working group undertook the second item and Canada, Mexico and the United States individually were to carry out the first item and exchange information. The United States has draft reports for both Item 1 and Item 2; Canada has a draft report related to Item 1.

72. Plans are to complete Items 1a and 2 for all three countries in the 1984-85 biennium and to write an overview manuscript for North America. New projects are being explored to further the goal of the Study Group during the 1984-85 biennium.

73. The Commission commended the Study Group for its accomplishments so far and endorsed the plans proposed. It urged that an invitation be extended to the Mexican authorities concerned, including the new Secretary of Urban Development and Ecology, the Secretary for Agriculture and other interested parties, so that Mexico may play a strong future role in the Study Group activities.

(h) Study Group on Forest Engineering

74. The report, prepared by the Chairman of the Study Group, Mr John Erikson of the United States, was presented by Mr Bill Bohannan of the United States. The Study Group had focused its efforts over the past two years on technology transfer to reduce physical effort and improve productivity in forestry operations. A handbook, "Basic Technology in Forestry Operations", was the result. This book, published by FAO in 1982, describes many labour-saving devices developed in various countries.

75. A proposal for a companion handbook "Manual of medium technology mechanisms and tools to improve labour-intensive forestry operations", prepared by Ross Silversides of Canada, had been submitted to FAO for consideration. This handbook contains a series of shop drawings of labour-saving tools, complete with discussions of materials, dimensions and fabrication procedures. Suggested future work for the Group includes (i) schedule a field location seminar on methods for species selection, production, harvesting and conversion of short-rotation forest species - this would be in cooperation with other study groups; (ii) develop a directory of expertise and organizations on the subject of harvesting technologies; (iii) promote the exchange of information, particularly in the area of biomass energy; (iv) continue "Organization of Forest Owners" as a subject matter for the Study Group and exchange available information.

76. The Commission agreed that Canada take over the chairmanship of this Study Group.

VIII. TECHNICAL ITEMS

(a) Light-frame structures

77. In introducing this item, Mr B. Bohannan, Assistant Director, Forest Products Laboratory, US Forest Service, Madison (Wisconsin), defined the term "light-frame system" and the research in the various aspects of home construction being carried out by the USA and Canada through a joint effort to ensure compatibility and decrease the time span involved in such work. The basic object of the research was to find means of using wood more efficiently in the construction of houses which had not changed significantly over the last 140 years. It was noted that existing frame homes may be overdesigned.

78. The Commission noted the new technological approaches being studied, especially with regard to the effects of environmental factors such as fire, earthquake and moisture on the reliability of new housing methods. The Commission particularly noted the work being done on a "truss-framed system" which, if used correctly, can reduce the amount of wood needed per house by up to 25 percent and reduce labour requirements substantially. Although the system was proven and the Forest Products Laboratory at Madison had published a design manual, use of the system was moving slower than had been expected. With the tightening of frame housing to conserve energy, builders were now encountering moisture problems.

79. The United States delegation expressed their wish to broaden the existing cooperation agreements with Canada to include Mexico. The Commission decided that the Committee of Alternates look into ways and means of extending the cooperative scheme to cover all members of the Commission. Mexico would be invited to send a delegate to the next programme review meeting to be held in Madison.

(b) International Union of Forestry Research Organizations (IUFRO) initiatives

80. Mr R. Buckman, Vice-Chairman of IUFRO, informed the Commission that IUFRO had embarked on an initiative to promote forestry research in developing countries. This initiative was in compliance with the decisions reached by the IUFRO Congress at Kyoto.

81. Initially there will be one project in each of the southeast Asia, Africa and Latin America regions, as follows:

- Asia, in July 1984 in Sri Lanka, on fast-growing species for fuelwood production;
- Africa, late in 1984, on species suitable for shelterbelts/soil protection and fuelwood production;
- Latin America, in 1985. The exact theme of the workshop had not been decided but "the use of forests/forestry to rehabilitate degraded sites and watersheds" had been suggested.

82. In each case an assessment will be made of the state of knowledge and, where the facts are known, an action programme will be proposed for implementation. Where further research is needed, the more precise needs and costs for such a programme will be assessed and submitted to donor agencies for consideration.

83. The programme envisaged the establishment of a small research network for each region. National institutions will be strengthened to undertake the research work, through twinning arrangements with other institutions where possible. The IUFRO programme also envisaged a strong element on education/training, particularly through exchanges of scientific personnel.

84. The Commission welcomed this IUFRO initiative, which was long overdue in respect of the tropical regions, and expressed the wish that it be expanded to cover other areas. The Commission noted with satisfaction that various donor agencies were supporting this initiative and expressed the hope that funding and support will be continued and strengthened.

(c) Ninth World Forestry Congress

85. Mr J. Veruette of Mexico reported on the organization of the Ninth World Forestry Congress, which will take place in Mexico from 22 June to 20 July 1985. Outstanding points will be the selected topics for the Congress, including five main themes, 28 sub-themes and 100 divisions and the following principal theme: "Forest resources in the integral development of society".

86. Mr León J. Castaños Martínez, Head of the Mexican Forest Service, had sent to the Chiefs of the US and Canadian Forest Services a document in which he officially asked these governments for their support in the diffusion within the forestry milieu of the information related to the Congress, and requested that both countries consider extensions of Congress study tours in their own forest regions. The Forest Services of these countries will decide if the trips can be made, in which case they will indicate the places, minimum and maximum number of participants and the costs. This information should be made available to the Ninth World Forestry Congress Organizing Committee no later than six months before the Congress in order to be able to promote the tours among those foresters who would be attending the Congress. The Mexican delegation emphasized its intention to give importance and projection to the participation of women and youth in the Congress.

87. Mr Veruette informed the Commission that: a petition had been made to the United States and Canada to provide suggestions and remarks to this point; the Food and Agriculture Organization of the United Nations supported the Congress and was actively working with the Mexican Congress Committee; in one month's time official information concerning

the Congress will be distributed all over the world, to be followed by another two communications providing the programme to be developed; an invitation was made to the United States and Canada to participate in the exhibits on industry, culture, handicrafts, and the use of wood in construction, and also in the films and documentaries to be shown during the Congress.

88. The Commission reviewed several aspects related to the Congress, particularly the question of documentation, and offered suggestions on: invited papers; other kinds of papers (voluntary, etc.); editorial procedures to be used; kind of proceedings and timing of their issuance and related aspects.

89. Ing. Veruette informed the Commission that major segments of Mexican society, in addition to his staff of 50, will be working on the Congress. Invitations for papers will soon be issued and papers would be edited for quality; some would be complete, others abstracted, and others simply listed by title. The proceedings would be out within one or two years following the Congress, due to automated procedures to be employed.

90. Recognizing the magnitude and complexity of the task in relation to the time frame undertaken by Mexico, the Commission commended Ing. Veruette for his work to date and offered to be of assistance in any way possible.

IX. MATTERS TO BE REFERRED TO THE ATTENTION OF THE COMMITTEE ON FORESTRY (COFO)

91. The Commission decided to refer to the attention of COFO the following matters which were considered to be of interest to all regions:

(a) Forestry Abstracts

92. The Commission commended the excellent work carried out by the Commonwealth Agricultural Bureaux (CAB) in compiling forestry abstracts which were made available to forestry institutions throughout the world. The CAB had decided to centralize its operations at Reading, including forestry abstracts hitherto located at Oxford. Although it was too early to judge the implications of centralization on the quality of the services rendered by the CAB, the Commission suggested that this matter be reviewed by COFO.

(b) Forest Genetic Resources

93. Recognizing the great significance of forest genetic resources to the future development of forestry, the Commission recommended that the overall question of conserving and utilizing forest genetic resources, and the possibilities of establishing cooperative arrangements with appropriate international centres dealing with gene resources in agriculture, be considered by COFO.

X. BUSINESS OF THE COMMISSION

(a) Other business: None

(b) Election of Officers

94. The following officers were elected by the Commission to hold office during the forthcoming biennium, the Vice-Chairmen being nominated in accordance with Rule II.1 of the Commission's Rules of Procedure:

Chairman: L. J. Castaños (Mexico)
First Vice-Chairman: R. J. Herring (Canada)
Second Vice-Chairman: R. Max Peterson (USA)

95. The Commission agreed that the Chairman designate a Rapporteur and inform the Secretary and the two Vice-Chairmen.

(c) Date and place of next session

96. Mexico invited the Commission to hold its next session in Chetumal, State of Quintana Roo, Mexico. The Commission thanked Mexico for the kind invitation and agreed that the exact time be determined in consultation with the Director-General.

(d) Adoption of the Report

97. The draft report of the session was adopted by the Commission subject to later minor amendments and editing by the Secretary.

XI. CLOSING OF SESSION

98. The heads of the Canadian and Mexican delegations thanked the Government of the United States of America for the excellent arrangements made for the session, the field trip and hospitality offered. Mr L. R. Letourneau expressed thanks on behalf of the Director-General of FAO.

99. The Chairman thanked FAO, the local authorities and industry, the conference staff and the delegates for their contribution to the success of the Twelfth Session.

AGENDA

1. Opening of the Session
2. Adoption of Agenda
3. The state of forestry in North America
 - (a) Canada
 - (b) Mexico
 - (c) United States of America
4. Report of the Committee of Alternates
5. FAO forestry activities: Review biennium 1982-83 and Programme of Work and Budget for 1984-85
6. The management of forest cover on arid lands
 - (a) Canada
 - (b) Mexico
 - (c) United States of America
7. Review of Study Group activities
 - (a) Study Group on Forest Tree Improvement
 - (b) Study Group on Fire Management
 - (c) Study Group on Forest Insects and Diseases
 - (d) Study Group on Remote Sensing
 - (e) Study Group on Silviculture
 - (f) Study Group on Multiple-Use Forestry
 - (g) Study Group on Wildlife
 - (h) Study Group on Forest Engineering
8. Technical items
 - (a) Light-frame structures
 - (b) International Union of Forestry Research Organizations (IUFRO) initiatives
 - (c) Ninth World Forestry Congress
9. Matters to be referred to the attention of the Committee on Forestry
10. Business of the Commission
 - (a) Other business
 - (b) Election of Officers
 - (c) Date and place of next Session
 - (d) Adoption of the Report
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LIST OF DOCUMENTS

<u>Agenda Item</u>	<u>Title</u>
2	Provisional Agenda
3	State of Forestry in Canada
3	Sectorial Program: Temperate and Tropical Forests; Departure Point; Course; 1983 Results and 1984 Actions - Mexico
3	The Status of Forestry in the United States: 1982-83
4	Report of the Committee of Alternates
5	FAO Forestry Activities: Review Biennium 1982-83 and Programme of Work and Budget for 1984-85
6	Tree Planting on the Canadian Prairies - Past and Present
6	The Management of Forest Cover on Arid Lands - Mexico (and annex)
6	The Management of Forest Cover on Arid Lands in the United States of America
7	Report by Study Group on Forest Tree Improvement
7	Report of the Fire Management Study Group
7	Report by Study Group on Forest Insects and Diseases
7	Report of the Study Group on Remote Sensing
7	Report of the Silviculture Study Group
7	Report of the Study Group on Wildlife
7	Report of the Study Group on Forest Engineering
8	Light-frame Structural Research - Past, Present and Future
8	Ninth World Forestry Congress

Information Documents

FO:NAFC/84/Inf.1 Provisional Timetable
FO:NAFC/84/Inf.2 General Information

Background Documents

A Provisional Program for a Study Group on Atmospheric Deposition
Multilingual Forestry and Forest Products Vocabulary
Report of the Research Committee of the Latin American Forestry Commission

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