



FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS
R o m e

MR/LAFU : 64
January 1966

LATIN AMERICAN FORESTRY COMMISSION
Ninth Session (Curitiba, Brazil, 5-12 November 1964)

R E P O R T

MR/34649/E/1

TABLE OF CONTENTSPage :

Summary of Recommendations :

a) addressed to the Member Countries	(i)
b) addressed to the Director-General of FAO	(iii)
General	1
Election of Officers	1
Report on FAO Activities	2
Progress in Forestry and Forest Industries Development	2
Forestry Aspects of Land Use, Colonization and Agrarian Reform	2
Subsidiary bodies :	
Committee on Forest Research	4
Committee on Forest Products	5
Committee on National Parks and Wildlife	5
Committee on Watershed Management and Torrent Control	5
Trends in Technical Assistance Programs	5
Sixth World Forestry Congress	6
Date and place of the next session	6
Other business	6
<u>Annex 1</u> : List of Participants	9
<u>Annex 2</u> : Agenda	17
<u>Annex 3</u> : List of documents	19
<u>Annex 4</u> : Report of the Committee on Forest Research	21
<u>Annex 4-a</u> : Report of the Plantations Section	25
<u>Annex 5</u> : Report of the Committee on Forest Products	31
<u>Annex 6</u> : Report of the Committee on National Parks and Wildlife	37
<u>Annex 7</u> : Report of the Committee on Watershed Management and Torrent Control	43

SUMMARY OF RECOMMENDATIONSA. ADDRESSED TO MEMBER GOVERNMENTSSection of
the ReportFAO Activities

7. Member Governments are recommended to take appropriate action to ensure that LAFTA and CAIS get increased technical advice from FAO on the development of the manufacturing and marketing of forest products.

Progress in Forestry and Forest Industries Development

8. The rate of progress must be further accelerated, if forestry and forest industries are to make their proper contribution to the economic and social development in which Member Governments are engaged. This development must be carefully planned if it is to succeed. As a complement to the increase in forest industrialization there must be an intensification of forest management with special emphasis on effective forest protection and on plantation forestry. The following recommendations were made :

- (1) Member Governments should adopt necessary measures to encourage social security institutions, insurance companies and other similar organizations to participate more actively, directly or indirectly, in plantation forestry through long-term credits at low rates of interest.
- (2) Governments should improve their forestry statistics to meet the requirements of development planning. FAO should suggest norms for this purpose.
- (3) More attention should in future be paid to forest products research in the compilation and review of National Progress Reports.
- (4) In view of the developing urbanization in the region, Member Governments should ensure that more and better use is made of the forests for recreation.

Forestry Aspects of Land Use, Colonization and Agrarian Reform

9. The Commission recommended:

- (1) To encourage all initiative designed to increase agricultural productivity as a basic means of increasing total production and reducing forest clearing.
- (2) To initiate the planning of land use as an integral part of planning agricultural development, account being taken of the soil capability in order to limit in space and graduate in time the bringing under cultivation of new land.
- (3) To favour the economic development of the forests, not only for the sake of production, but also as a means of protecting them.

Section of
the Report

9.
(cont'd)

- (4) To aim at the gradual elimination of casual colonization and, if necessary, to encourage organized colonization, including where suitable the establishment of forest settlements.
- (5) To include measures for forest development in the application of agrarian reform programs.
- (6) To incorporate in the national forest estate forests which are being expropriated under the agrarian reform program and to place them under the control of the State forest service, provided they are on land which is not destined for sub-division and distribution.
- (7) To recognize forestation and other forestry measures of general interest as infrastructural work in areas of colonization and agrarian reform.
- (8) To take the institutional measures required to secure that the State Forest Services establish close relations at a sufficiently high level with the organizations for colonization and agrarian reform and to arrange in particular that the State forest service attend discussions of these organizations on matters of forestry interest as equal partners.
- (9) To adopt measures directed towards :
 - i) Identifying and rectifying possible deficiencies in forest legislation concerning the effective definition and demarcation of forest land and the role it is to play in colonization and reform.
 - ii) Verifying and correcting, if necessary, any incompatibility or inconsistency between individual forest laws and the general scheme of agrarian legislation.
 - iii) Studying in each country the forestry regulations, which should be contained in agrarian legislation, and promoting, where required, the needed additions or amendments to this legislation.
 - iv) Assuring the handing over of land parcels to casual and nomadic colonists in areas of colonization or land reform.

Trends in Technical Assistance Programs

14. The Commission was especially interested in the provisional agreement between FAO, the IBRD and IDA, the object of which is to increase the availability of long-term loans at low interest for agrarian development projects, including forestry. The Commission thought that this agreement will speed up and facilitate the identification and preparation of projects acceptable to the Bank, particularly those for the financing of forest plantations and forest industry development. The Commission suggested that interested member countries communicate with the Secretariat for further information.

Referring to the future orientation of the technical assistance program in the Region, the Commission recommended to the member countries and to FAO that special importance be given to forestry extension.

Section of
the Report

Sixth World Forestry Congress

15. In recognition of the importance of the Congress, the Commission urged member governments to assure a strong participation from all Latin American countries.

Other Business

17. Member governments should take the necessary steps, budgetary and otherwise, to prepare a suitable forestry atlas, if they have not already done so.

B. ADDRESSED TO THE DIRECTOR-GENERAL OF FAO

FAO Activities

7. The Commission noted with satisfaction the work already accomplished in the region by the Forestry and Forest Products Division of FAO, but also emphasized the urgent need to expand these activities substantially.

Progress in Forestry and Forest Industries Development

8. FAO should make available to member countries a study of legal, financial and other measures to foster afforestation and reforestation.

Governments should improve their forestry statistics so that they meet the requirements of development planning. FAO should suggest norms for this purpose.

Forestry Aspects of Land Use, Colonization and Agrarian Reform

9. The Commission accepted the advisability of FAO publishing in UNASYLVA a declaration of basic principles of forest policy concerning the problems of land use, of agrarian policy and of general development.

FAO should further :

- (1) Continue to assist the governments in the application of the previous recommendations (see recommendations to Member Governments, page (i) and (ii), par. 9).
- (2) Encourage the teaching of land use, colonization and agrarian reform in forestry schools at all levels: the Secretariat is asked to continue the preparation of teaching and extension material.
- (3) Offer fellowships or invitations to professionals to participate in courses or seminars which FAO may organize on colonization or land reform; in particular, it is recommended that technical forestry personnel participate as lecturers and students at the Training and Research Institute on Agrarian Reform in Chile.
- (4) Continue disseminating the basic principles of forest policy to organizations and professional personnel concerned with colonization and agrarian reform.

Section of
the Report

9. (cont'd) (5) Organize a seminar on the forest aspects of agrarian reform for foresters and other interested professionals and authorities. The Commission accepted with thanks the offer of the Chilean delegation that the seminar be held in Santiago, Chile, with the cooperation of the Training and Research Institute on Agrarian Reform.

Trends in Technical Assistance Programs

14. The Commission took note of the increase and diversification of the various technical assistance programs and of their growing importance in relation to all activities of the Organization. A corresponding relative reduction in regular program activities is inevitable. Nevertheless, these latter activities are of great interest and importance for the countries and should be reduced as little as possible, since they contribute to the indispensable infrastructure of the technical assistance program of FAO.

Referring to the future orientation of technical assistance programs in the region, member countries and FAO should give special importance to forestry extension.

Sixth World Forestry Congress

15. The Commission expressed its unanimous desire that the Seventh World Forestry Congress be held in Latin America and the delegate of Argentina informed the Commission that his Government would like to act as host for the Congress.

Finally, it was suggested that the Sixth World Forestry Congress should give due consideration to the development of national parks and wildlife.

Date and place of next session

16. The Director-General of FAO, in consultation with the Chairman of the Commission, will determine the date and place of the Tenth Session, due consideration being given to the forthcoming Sixth World Forestry Congress.

Other Business

20. It was announced that the Swedish Government was prepared to finance an FAO project, aimed at disseminating the experience gained in Scandinavia in the field of public relations work in forestry. The Commission expressed its great interest in the matter and proposed that in doing this work FAO should pay great attention to Latin America and take into due account the conditions prevailing in this region.
21. The Commission recommended that FAO prepare a publication for purposes of general information, giving an economic analysis of capital investment in afforestation and reforestation; this publication should be sent to commercial and industrial associations and to credit institutions of the member countries.

R E P O R T

GENERAL

1. The Latin American Forestry Commission held its Ninth Session in Curitiba, Brazil, from 5 - 12 November 1964, at the kind invitation of the Government of Brazil and with the collaboration of the Government of the State of Paraná.
2. The session was attended by a total of about 200 participants. The following countries and international organizations were represented: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, France, Guatemala, Mexico, Netherlands, Paraguay, Peru, Trinidad and Tobago, Uruguay, United Kingdom, United States of America, Venezuela; Economic Commission for Latin America (ECLA), UN Technical Assistance Board (TAB), Latin American Free Trade Association (LAFTA), Inter-American Institute of Agricultural Sciences (IAIAS), Latin American Forestry Research and Training Institute (IFLA) and International Union of Forest Research Organizations (IUFRO). The names of the official delegates, advisers and observers are listed in Annex 1.
3. The Director-General of FAO was represented by P. Accioly Borges, Deputy Regional Representative, and the Director of FAO's Forestry and Forest Products Division by R.G. Fontaine, Chief of the Forest Policy Branch. H. J. Reichardt, Regional Forestry Officer for Latin America, served as Secretary.
4. At the opening meeting, His Excellency the Minister of Education, F.S. de Lacerda, welcomed the delegates in the name of the host Government. R.G. Fontaine delivered a message of welcome on behalf of the Director-General of FAO and the Director of FAO's Forestry and Forest Products Division. The outgoing Chairman of the Commission, E. Schmeisser (Chile), expressed his thanks on behalf of the delegates for the facilities offered by Brazil and His Excellency the Governor of the State of Paraná, General Ney Braga, welcomed the delegates to Paraná.
5. At the first plenary meeting, J.C. Piffer, Deputy Chief of Cabinet of the Minister of Agriculture, addressed the delegates on behalf of the latter, giving a summary of the present forestry situation in Brazil.

The Provisional Agenda for the session (Annex 2) was adopted with minor changes and the documents listed in Annex 3 were submitted to the delegates for consideration.

ELECTION OF OFFICERS

6. In accordance with Article II of the Commission's Rules of Procedure, V.A. Farah (Brazil), F. Bazán (Peru), E. Dabas (Argentina) and J.M. González (Mexico) were elected as Chairman and First, Second and Third Vice-Chairmen respectively, to serve until the beginning of the Tenth Session. A. de Miranda Bastos (Brazil) and E. Izquierdo (Peru) were appointed Rapporteurs for the Session.

REPORT ON FAO ACTIVITIES

7. The Commission noted with satisfaction the work accomplished by the Forestry and Forest Products Division of FAO, which is described in document FAO/LAFC-64/6; but it emphasized the urgent need for expanding these activities substantially and made a recommendation to this effect to the Director-General of FAO. The member governments were also recommended to take appropriate action to ensure that LAFTA and CAIS get increased technical assistance from FAO in developing the industrialization and marketing of forest products. The Commission supported these requests by stressing the great forest development potential of Latin America and the government's own greatly expanding efforts to realize this potential, with which FAO's activities needed to keep pace.

PROGRESS IN FORESTRY AND FOREST INDUSTRIES DEVELOPMENT

8. The Commission considered that member governments could take pride in the advances made in forestry and forest industries development, described in the National Progress Reports submitted to this session; these reports were supplemented by statements from delegates in which the technical assistance received from FAO was also gratefully acknowledged. The Commission emphasized that the rate of progress must be further accelerated if forestry and forest industries were to make their proper contribution to the economic and social development in which member governments were engaged. The region's great forest wealth permitted a rapid increase in forest industrialization, with its well known and much needed benefits for the national economies. However, this development must be carefully planned if it was to give satisfactory results. Particular emphasis was placed on the role of forestry and forest industries in raising standards of living by creating more and better employment opportunities, especially in rural areas whose development was of such vital importance in the region. As a complement to the justified increase in forest industrialization there must be an intensification of forest management, with special emphasis on effective forest protection and on plantation forestry. In this context, five specific recommendations were made:

- (1) FAO should make available to member countries a study on legal, financial and other measures for fostering reforestation and afforestation.
- (2) Member governments should adopt the necessary measures to encourage social security institutions, insurance companies and other similar organizations to participate more actively, directly or indirectly, in plantation forestry, through long-term credits at low rates of interest.
- (3) Governments should improve their forestry statistics so that they meet the requirements of development planning; FAO should suggest norms for this purpose.
- (4) More attention should be paid to forest products research in the compilation and review of national progress reports.
- (5) In view of the developing urbanization in the region, member governments should ensure that more and better use is made of the forests for recreation.

FORESTRY ASPECTS OF LAND USE, COLONIZATION AND AGRARIAN REFORM

9. The Commission took note of documents FAO/LAFC-64/5, FAO/LAFC-64/5.1 and FAO/LAFC-64/5.2, which provide an overall picture of a subject of vital importance and great current interest to the Region.

The principles and measures stated in the documents were approved by the Commission. Some of the delegates emphasized certain local conditions, such as the grave menace to the forest caused by internal, unplanned migration of peasant populations; the need to reserve protection and production forests in areas of colonization and agrarian reform; and the need to improve agricultural productivity and professional training in this field. Also mentioned was the progress made in certain aspects, especially the classification of forest lands and studies of integral land use in specific areas.

The Commission noted with satisfaction the announcement of the forthcoming publication by IFLA of a study on the phenomenon of shifting cultivation in some countries of the region. This study has been sponsored by FAO; IFLA and other institutions have participated in it.

The Commission agreed to the advisability of FAO publishing in UNASYLVA a declaration on the basic principles of forest policy in relation to land use, agrarian policy and general development.

The Commission confirmed the recommendations made in Add. A) of the Final Report of the 8th Session. In addition, it discussed fully and approved the following recommendations:

A. To the Governments of the member states:

- (1) To encourage all steps designed to increase agricultural productivity as a basic means of raising total production and thus reducing forest clearing.
- (2) To initiate land use planning as an integral part of agricultural development planning, account being taken of soil capability in order to limit in space and graduate in time the bringing under cultivation of new land.
- (3) To favour the economic valorization of the forests, not only for production purposes, but also for their own protection.
- (4) To aim at the gradual elimination of casual land settlement and, if necessary, to encourage organized colonization, including, where suitable, forest colonization schemes.
- (5) To include measures for forest development in agrarian reform activities.
- (6) To incorporate in the national forest estate the forests which are expropriated as a result of agrarian reform and to place them under the control of the State Forest Service, provided they are on land which is not destined for subdivision and distribution.
- (7) To recognize afforestation and other forestry measures of general interest as infrastructural work in areas of colonization and agrarian reform.
- (8) To take the necessary institutional measures to ensure that the State Forest Services establish, at a sufficiently high level, close relations with the organizations for colonization and agrarian reform and to arrange, in particular, that the State Forest Services participate on an equal footing in discussions of these organizations on matters of forestry interest.

- (9) To adopt measures for:
- (i) Identifying and rectifying possible deficiencies in forest legislation as regards the definition and demarcation of forest lands and their role in colonization and reform.
 - (ii) Verifying and correcting, if necessary, any incompatibility or inconsistency between individual forest laws and the general scheme of agrarian legislation.
 - (iii) Studying in each country the forestry regulations which should be contained in agrarian legislation and promoting, where required, the necessary additions or amendments to this legislation.
 - (iv) To ensure the distribution of plots of land, in areas of colonization or land reform, to individual and nomadic colonists.

B. To FAO:

- (1) To continue to assist governments in implementing the above recommendations.
- (2) To encourage the giving of instruction on land use, colonization and agrarian reform in forestry schools at all levels; the Secretariat is asked to continue the preparation of teaching and extension material.
- (3) To offer fellowships or extend invitations to professionals to participate in courses or seminars which FAO may organize on colonization or land reform; in particular, it is recommended that forestry personnel participate as lecturers and students in the activities of the Training and Research Institute on Agrarian Reform situated in Chile.
- (4) To continue disseminating the basic principles of forest policy to the organizations and professional personnel concerned with colonization and agrarian reform.
- (5) To organize a seminar on the forestry aspects of agrarian reform for foresters and other interested professionals and authorities. The Commission accepted with thanks the invitation of the Chilean Delegation to hold the seminar in Santiago, Chile, with the cooperation of the Training and Research Institute on Agrarian Reform.

SUBSIDIARY BODIES

10. The Commission approved the report of the Fourth Session of the Forest Research Committee (Annex 4) with the following observations:
- a) It was recommended that a meeting of forest inventory professionals be organized in connection with the proposed inventory seminar (recommendation No. 9 of the Committee) to pursue the topic of standardization in forest inventory.
 - b) The Commission welcomed the reiteration by the Mexican delegate of the invitation issued by his country at the seventh session of the Commission to hold the requested forest inventory seminar in Mexico.

- c) In view of the very satisfactory report by the Governing Board of IFLA on the work done by that institute and on its future programme, and bearing in mind that this future work may be prejudiced if there is a delay in the payment of contributions, the Commission urged member countries of the Institute to contribute to the development of its activities in accordance with the financial commitments to it, while the non-member countries were recommended to take the necessary measures to subscribe to the basic agreement establishing the Institute.
 - d) Latin American countries should make more use of the services and educational facilities available at IFLA.
 - e) Institutions and organizations in the region should provide IFLA with their publications so as to enable the latter to improve its services of disseminating forestry information in Latin American countries.
 - f) The Commission recommended that FAO's program for a Centre for Forest Tree Seed Exchange in Rome should not duplicate the efforts made in the region by IFLA and the Mexican Government in this field and that the Rome Centre should cooperate with other organizations to improve the availability and exchange of forest tree seed.
 - g) Member governments were recommended to increase their efforts to promote forest research.
 - h) Research in forest protection should be intensified in view of the great damage that has recently been caused by insect attacks.
11. The Commission approved the report of the First Session of the Forest Products Committee (Annex 5) and emphasized that all forest utilization should be based on the principle of sustained yield. It also recommended that member governments submit to FAO within six months, the information required for the proposed revision of the study on Latin American Timber Trends and Prospects.
12. The Commission approved the report of the First Session of the National Parks and Wildlife Committee (Annex 6).
13. The Commission approved the report of the First Session of the Watershed Management and Torrent Control Committee (Annex 7).

TRENDS IN TECHNICAL ASSISTANCE PROGRAMS

14. The Commission was informed of developments in the FAO Technical Assistance Programs (Document FAO/LAFC-64/3) with special reference to those of interest to the region. The Commission took note of the increase and diversification of the various technical assistance programs and of their growing importance in relation to the activities of the Organization as a whole. A corresponding relative reduction in activities under the regular program was inevitable. Nevertheless, these latter activities were of great interest and importance for the countries and should be reduced as little as possible, since they constitute the indispensable foundation for FAO's technical assistance program.

The Commission took note that the volume of assistance provided by EPTA (Expanded Program of Technical Assistance) had levelled off, on a world wide basis as well as in the Region; however, assistance in forestry from the U.N. Special Fund had reached a considerable volume and showed a tendency to increase further. This favourable development, together with the greater flexibility that the U.N. Special Fund had recently shown in accepting a wider range of new projects, demonstrated the improved possibilities of obtaining assistance in new fields of activity.

The Commission considered the more recent and lesser known programs of technical assistance, such as the Freedom from Hunger Campaign and the World Food Program, of which several countries of the region have already availed themselves for the development of forestry projects.

The Commission was satisfied with the coordination between FAO and bilateral technical assistance programs on matters such as associate experts, many of whom were rendering valuable service in the Region.

The Commission was especially interested in the provisional agreement between FAO, IBRD (The International Bank for Reconstruction and Development), and IDA (International Development Agency); the object being to increase the availability of long-term loans at low interest for agrarian development projects, including forestry. The Commission thought that this agreement would speed up and facilitate the identification and preparation of projects acceptable to the Bank, particularly those for the financing of plantation establishment and forest industry development. The Commission suggested that interested member countries communicate with the Secretariat for further information.

As regards the future orientation of the technical assistance program in the Region, the Commission recommended to the member countries and to the Director-General of FAO that special importance be given to forestry extension.

SIXTH WORLD FORESTRY CONGRESS

15. The Commission took note of the information on the next World Forestry Congress set out in document FAO/LAFC-64/2.

Recognizing the importance of the Congress, the Commission urged member governments to assure a strong participation from all Latin American countries. It further expressed its unanimous desire that the Seventh World Forestry Congress be held in Latin America and the delegate of Argentina informed the Commission that his Government would like to act as host for that Congress. Finally, it was suggested that the Sixth World Forestry Congress give due consideration to the development of national parks and wildlife.

DATE AND PLACE OF THE NEXT SESSION

16. The Commission decided that the Director-General of FAO, in consultation with the Chairman of the Commission, would determine the date and place of the Tenth Session, due consideration being given to the forthcoming Sixth World Forestry Congress.

OTHER BUSINESS

17. The Brazilian delegate offered to supply all delegates with a copy of the recently prepared forestry atlas of Brazil and the Commission agreed to recommend that member governments take the necessary steps, budgetary and otherwise, to prepare a suitable forestry atlas if they had not already done so.
18. The Commission decided that the present Committee structure was a satisfactory way of facilitating its work and directed its Executive Committee to ensure proper coordination between the functions and work of the various committees.
19. The Commission invited the forestry associations of Argentina, Brazil, Chile, Mexico and Venezuela to form a working group to draft statutes for a Latin American Federation of Forestry Associations; the Chilean Association was asked to make itself responsible for undertaking the necessary consultations and for the submission of the draft statutes to the Commission at its Tenth Session.

20. Mr. E. von Hofsten, an FAO Consultant, announced to the Commission that the Swedish Government was prepared to finance an FAO project, aimed at disseminating the experience gained in Scandinavia in the field of public relations work in forestry. The Commission expressed its great interest in the matter and proposed that in carrying out this task FAO should pay great attention to Latin America and take due account of the conditions prevailing in this region.
21. The Commission recommended that FAO prepare a publication, for purposes of general information, giving an economic analysis of capital investment in afforestation and reforestation; this publication should be sent to commercial and industrial associations and to credit institutions in the member countries.
22. The Commission was informed by its Chairman of the letter from the delegate of France complaining that no interpretation facilities had been provided for the use of French as a working language at the session.
23. The session was closed by His Excellency the Minister of Agriculture, Dr. Hugo de Almeida, in the presence of His Excellency the Governor of the State of Paraná, General Ney Braga.

The Chairman of the Commission and the Representative of the Director-General of FAO and the Director of FAO's Forestry and Forest Products Division summarized in their farewell addresses the work accomplished during the session; the delegate of Uruguay in the name of all the delegations then proposed a vote of thanks to the Government of Brazil, to the State of Paraná and to the Secretariat. Finally, the Minister congratulated the Commission on its achievements and underlined the important role that forests must play in land use and in general economic progress in Latin America.

LIST OF PARTICIPANTS

Officers

Chairman : V.A. Farah (Brazil)
First Vice-Chairman : F. Bazán (Peru)
Second Vice-Chairman : E. Dabas (Argentina)
Third Vice-Chairman : J.M. González (Mexico)
Secretary : H.J. Reichardt (FAO)

P. Accioly Borges, Deputy Regional Representative for Latin America,
represented the Director-General of FAO

-oOo-

A) DELEGATIONS

Argentina : - A.E. Alonso
Instituto Nacional de Tecnología Agropecuaria
Buenos Aires

- O. Arce
Dirección General de Parques Nacionales
Buenos Aires

- J. Castellanos
Administración Nacional de Bosques
Buenos Aires

- I.N. Constantino, Sub-Administrador de Bosques
Administración Nacional de Bosques
Buenos Aires

- E. Dabas, Administrador General de Bosques
Administración Nacional de Bosques
Buenos Aires

- L. Goltari
Celulosa Argentina, S.A.
Buenos Aires

- E. Kutyn
"Los Eucaliptos y TIA", S.A.
Buenos Aires

- I. Malamud
Fundación Elías y Ethel Malamud
Buenos Aires

- Bolivia : - G. Bejarano
Corporación Boliviana de Fomento
La Paz
- B.A. Marcus, Asesor Forestal del Gobierno
Ministerio de Agricultura
La Paz
- E. Quintanilla
Ministerio de Agricultura
La Paz
- Brazil : - J. Amaral Gurgel
School of Agriculture "Luis de Queiroz"
Sao Paulo
- H. Amaral Mello
School of Agriculture "Luis de Queiroz"
Sao Paulo
- W.X. Andrade
Director of the Division of Agriculture
Ministry of Agriculture
Curitiba (Paraná)
- J.M. Belo Lisboa
Director-General, Department of Natural Renewable Resources
Brasilia D.F.
- Beneval de Oliveira
National Pine Institute
Rio de Janeiro
- L. Carvalho de Araujo
Ministry of Agriculture
Rio de Janeiro
- P.J. da Costa Muniz
Agronomy and Veterinary School of the University of Paraná
Curitiba
- V.A. Farak
Chairman of the Federal Council of Foreste
Rio de Janeiro
- P. Ferreira de Souza
Ministry of Agriculture
Brasilia, D.F.
- A. Gonzalves, Director
Higher School of Forestry
Viçosa
- E. Guillard
Institute of Technological Research
University of Sao Paulo
Sao Paulo

- L.A. Langer
National Pine Institute
Paraná
- E. Lins de Barros
National Pine Institute
Rio de Janeiro
- P. Maluf
"Eucatex"
Sao Paulo
- T.G. Martins Costa
Director of the Forest Service of the
"Estrada de Ferro Central de Brazil"
Rio de Janeiro
- R. Mello Alvarenga
Director of Forest Service
Sao Paulo
- A. Miranda Bastos, Chief Forest Inventories Service
Department of Natural Renewable Resources
Rio de Janeiro
- M. Miró Vernalha
Agronomy and Veterinary School of the University of Paraná
Curitiba
- A. Navarro Sampaio
Cia. Paulista de Estradas de Ferro
Sao Paulo
- L. Osse
Cia. Ciderurgica Belgo Mineira
Belo Horizonte
- S. Pinto da Luz
Chairman of the National Pine Institute
Rio de Janeiro
- A. Silveira Alves
Champion Celulosa, S.A.
Sao Paulo
- L.G.C. Vellozo
Director of the National Forestry School
Paraná
- J. Vieira Pinheiro
Industrias Klabin Papél e Celulosa, S.A., of Paraná
Monte Alegre
- H. Weiszflog
Cia. Melhoramentos de São Paulo Ind. Papél, S.A.
Sao Paulo

- Chile : - H. Albala
Instituto de Investigaciones y Ensayos de Materiales
Universidad de Chile
Santiago
- F. Léniz, Presidente
Corporación Chilena de la Madera
Santiago
- E. Schmeisser
Instituto Forestal
Santiago
- E. Susaeta
Industrias Forestales S.A.
Santiago
- Colombia : - C.A. Lopez Ibañez
Corporación Autónoma Regional
Bogotá
- G. Rosselli Quijano
Corporación Autónoma Regional
Bogotá
- G. Sicco Smit
Universidad Distrital
Bogotá
- Costa Rica : - E.J. Schreuder
Instituto Interamericano de Ciencias Agrícolas
Turrialba
- Dominican Republic : - J.I. Conzález Vazquez, Director General Forestal
Dirección General Forestal
Santo Domingo
- France : - P.J. Genty, Conservateur des Eaux et Forêts
Conservation des Antilles
Basse-Terre, Guadeloupe, Antilles
- Guatemala : - R. Lavagnino Girón
Director del Proyecto de Evaluación Forestal FAO/FYDEP
Guatemala
- Mexico : - A. Escárpita Herrera, Director Técnico de la Unidad Industrial
de Explotación Forestal de Bosques Mexicanos
Subsecretaría Forestal y de la Fauna
México
- J.M. González, Asesor Técnico de la
Subsecretaría Forestal y de la Fauna
México
- G. Salgado Gómez
Jefe del Departamento de Supervisión Técnica y Vigilancia
Subsecretaría Forestal y de la Fauna
México

- Netherlands : - T. van den Berg
Consul of the Netherlands in Curitiba
Curitiba, Brazil
- W. Costerberg
Agricultural Attaché, Embassy of the Netherlands in Brazil
Rio de Janeiro
- Paraguay : - J.R. Peña
Instituto de Bienestar Rural
Asunción
- D. Perez Chena
Ministerio de Agricultura
Asunción
- M. Sanjurjo
Banco Nacional de Fomento
Asunción
- Peru : - F. Bazán
Director del Servicio Forestal y de Caza
Ministerio de Agricultura
Lima
- E. Izquierdo
Servicio Forestal y de Caza
Ministerio de Agricultura
Lima
- Trinidad
and Tobago : - W.S. Chalmers
Government Forest Department
Port-of-Spain
- United
Kingdom : - C. Swabey, Forestry Adviser
Department of Technical Cooperation
Ministry of Overseas Development
London, S.W.1, England
- United States: - R.J. Costley
Forest Service
Department of Agriculture
Washington 20250, D.C.
- H.B. Donaldson
Forest Service
Department of Agriculture
Washington 20250, D.C.
- C.G. Fredine
National Parks Service
Department of Interior
Washington 20250, D.C.
- V.L. Harper, Deputy Chief, Forest Service
Department of Agriculture
Washington 20250, D.C.

- P. Negron Ramos, Assistant Secretary of Agriculture
Department of Agriculture
San Juan, Puerto Rico

- F.H. Wadsworth
Forest Service
US Department of Agriculture
Rio Piedras, Puerto Rico

Uruguay : - J.C. Lafitte
Ministerio de Ganadería y Agricultura
Montevideo

- A. Larrobla
Ministerio de Ganadería y Agricultura
Montevideo

Venezuela : - M.E. Hurtado
Dirección de Recursos Naturales Renovables
Caracas

- E.R. Orta, Asesor Forestal de la Comandancia de la
Fuerza Armada de Cooperación
Caracas

- R. Viloría Díaz
Presidente, Instituto Forestal Latinoamericano de Investigación
y Capacitación, Mérida

B) INTERNATIONAL ORGANIZATIONS

Latin-American Free Trade Association :

- A. Shaw
Asociación Latinoamericana de Libre Comercio
Montevideo, Uruguay

Economic Commission for Latin America :

- A. Dorfman
Comisión Económica para América Latina
Santiago, Chile

Latin American Forestry Research and Training Institute :

- R. Viloría Díaz
Presidente del Instituto Forestal Latinoamericano de Investiga-
ción y Capacitación, Mérida

Inter-American Institute of Agricultural Sciences :

- E.J. Schreuder
Instituto Interamericano de Ciencias Agrícolas
Turrialba, Costa Rica

International Union of Forest Research Organizations :

- V.L. Harper, Vice-President of IUFRO
US Forest Service, Department of Agriculture
Washington 20250, D.C. , USA

United Nations Technical Assistance Board :

- D.A. Pires, Assistant Resident Representative
UNTAB
Rio de Janeiro, Brazil

C) FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS :

- P. Accioly Borges, Deputy Regional Representative
FAO Regional Office for Latin America, Eastern Zone
Rio de Janeiro, Brazil
- F. Barrientos, Forestry Officer
FAO Regional Office for Latin America
Santiago, Chile
- A.L. Best, Regional Forestry Officer
FAO Regional Office for Latin America, Northern Zone
México, México
- R.G. Fontaine, Chief, Forest Policy Branch
Forestry and Forest Products Division
FAO, Rome, Italy
- C.H.P. Formari, Information Officer
FAO Regional Office for Latin America, Eastern Zone
Rio de Janeiro, Brazil
- P. Grijpma,
FAO Regional Office for Latin America
Santiago, Chile
- S. Haugaard, FAO/ECLA Advisory Group on Forest Industries
FAO Regional Office for Latin America
Santiago, Chile
- D. Heinsdijk, Forestry Expert
FAO Regional Office for Latin America, Eastern Zone
Rio de Janeiro, Brazil
- B. Husch , Forest Economics Branch
Forestry and Forest Products Division
FAO, Rome, Italy
- F.C. Hummel
Co-Director of the Inventory Project
Mexico, Mexico
- M. Navarro Garnica
Director of the Project "Forestry Institute"
Santiago, Chile

- C. Petriñ, Regional Forestry Adviser
FAO Regional Office for Latin America
Santiago, Chile
- J. Prats Llauredó, Forest Policy Branch
Forestry and Forest Products Division
FAO, Rome, Italy
- H.J. Reichardt, Regional Forestry Officer
FAO Regional Office for Latin America
Santiago, Chile
- H. Schmidt
FAO/ECLA Advisory Group for Forest Industries
Santiago, Chile
- L.A. Tortorelli, Forestry Expert
UNTAD
Asunción, Paraguay

LATIN AMERICAN FORESTRY COMMISSION
Ninth Session

AGENDA

1. Adoption of Agenda
2. Election of Officers
3. Report on FAO Activities
4. Review of National Progress Reports on Forestry and Forest Industries Development
5. Forestry Aspects of Land Utilization, Colonization and Agrarian Reform
6. Work of subsidiary bodies :
 - a) Committee on Forest Research
 - b) Committee on Forest Products
 - c) Committee on National Parks and Wildlife
 - d) Committee on Watershed Management and Torrent Control
7. Trends in FAO field programs and orientation of FAO's future activities in the Region in the field of Forestry
8. Sixth World Forestry Congress
9. Date and Place of next session
10. Other business
11. Adoption of Report.

LIST OF DOCUMENTS

Item 1 of the Agenda :

- FAO/LAFC-64/1 : Provisional Agenda
- FAO/LAFC-64/1 Add.1 : Provisional Timetable

Item 3 of the Agenda :

- FAO/LAFC-64/6 : Progress Report from Forestry and Forest Products Division - Secretariat Note
- FAO/LAFC-64/6.1 : FAO Activities in Forestry Education in Latin America - Secretariat Note

Item 4 of the Agenda :

- FAO/LAFC-64/4 : Some Aspects of Progress on Forestry and Forest Industries Development - Secretariat Note

National Progress Reports :

- Argentina (Spanish only)
- Bolivia "
- Brazil
- Chile (Spanish only)
- Cuba "
- Ecuador "
- France (French Guiana and Antilles) (French only)
- Guatemala (Spanish only)
- Haiti (French only)
- Mexico (Spanish only)
- Netherlands (Surinam)
- Panama (Spanish only)
- Peru "
- United Kingdom (British Guiana)
- U.S.A. (Puerto Rico)
- Uruguay (Spanish only)
- Venezuela "

Item 5 of the Agenda :

- FAO/LAFC-64/5 : Forestry Aspects on Land Use, Land Settlement and Land Reform in Latin America - Secretariat Note
- FAO/LAFC-65/5.1 : Forestry Aspects of Land Use, Land Settlement and Land Reform in Latin America, by C. Petrin
- FAO/LAFC-64/5.2 : Implications of Land Settlement and Land Reform for Latin American Law - Secretariat Note

Item 6 of the Agenda :

Committee on Forest Research :

- FAO/LAFRC-64/1 : Provisional Agenda (Spanish only)
- Report of the Plantations Section, by L. Golfari (Reproduced as Annex 4-a of the Report of the Commission)
- Report of the Section on Utilization of Tropical Hardwoods, by P. Martinez (Spanish only)
- Report of the Executive Council of the Latin American Forestry Research and Training Institute (Curitiba, Brazil, 30-31 October 1964) (Spanish only)

Committee on Forest Products :

- FAO/LAFPC-64/1 : Provisional Agenda (Spanish only)
- FAO/LAFPC-64/2 : Terms of reference of the Committee (Spanish only)
- FAO/LAFPC-64/3 : Program of Work of the Committee (Spanish only)
- FAO/LAFPC-64/4 : Timber Grading Rules (Spanish only)
- Prospects for Expanding Forest Products Exports from Developing Countries (Spanish only)

Committee on National Parks and Wildlife :

- FAO/LAFWC-64/1 : Provisional Agenda (Spanish only)
- FAO/LAFWC-64/2 : Terms of reference of the Committee (Spanish only)
- FAO/LAFWC-64/3 : National Parks and Wildlife in Latin America (Spanish only)
- FAO/LAFWC-64/3 : Questionnaire on National Parks (Spanish only)

Annex 1

Committee on Watershed Management and Torrent Control :

- FAO/LAWTC-64/1 : Provisional Agenda (Spanish only)
- FAO/LAWTC-64/2 : The Problem of Torrents in Latin America (Spanish only)
- Terms of Reference of the Committee (Spanish only)
- Program of Work of the Committee (Spanish only)

Item 7 of the Agenda :

- FAO/LAFG-64/3 : Trends in Technical Assistance Programs - Secretariat Note

Item 8 of the Agenda :

- FAO/LAFG-64/2 : General Information on the Sixth World Congress - Secretariat Note
- FAO/LAFG-64/7 : The Need for a Review of Regional Timber Trends and Prospects Secretariat Note.

MR/LAFC:64
Annex 4

COMMITTEE ON FOREST RESEARCH

Fourth Session (Curitiba, Brazil, 3-4 November 1964)

R E P O R T

General

1. The Committee on Forest Research held its Fourth Session on 3 and 4 November 1964 in Curitiba, Brazil.
2. The Committee was attended by representatives from Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Peru, the United States of America and Venezuela. The FAO Forestry and Forest Products Division was represented by L. Tortorelli and B. Husch.
3. The officers elected were : F. Wadsworth (USA), Chairman, L. Golfari (Argentina), First Vice-Chairman, and W. X. Andrade (Brazil), Second Vice-Chairman. L. Tortorelli acted as Secretary for the session.
4. The Provisional Agenda (document FAO/LAFRC-64/1) was approved by the Committee. It included the review of the work of the sections of the Committee and of the report of the Latin American Forestry Institute at Merida (Venezuela), which are commented hereafter.

Plantations Section

5. L. Golfari, Chief of the Section, reported new information concerning the best sites for pine plantations in Latin America. The report of this section has been reproduced as Annex 4-a, as recommended by the Committee. The Committee recommended also that the activities of the Section in collecting such information be broadened to include other tree species of regional interest, such as eucalyptus and tropical hardwoods. To this end, it was recommended that, with the assistance of FAO representatives, members of the section be elected in each of the countries of the region.

Terminology Section

6. In the absence of a report or representative of this Section, the Committee asked that a new Section Chief be appointed by the Chairman and that the work of the section be expedited in order to provide regional liaison with the Director of a FAO/IUFRO Project on Spanish Forestry Terminology, Mr. M. Neira.

Section on Evaluation of Research

7. F. Wadsworth, Chief of the Section, reported information collected on the institutions conducting forest research, their facilities and personnel, technical journals, and the fields of investigation most commonly under way at these institutions. The Committee asked the Section to continue its collection of data regarding research in progress in the region until lists of institutions engaged in closely related investigations can be published. The Committee also asked the Section to collect information on research institutions relative to the permanence of their financing, the degree to which their programs are broadly problem-oriented, the training of their research personnel, and the adequacy of their libraries and other facilities.

Section on Utilization of Tropical Hardwoods.

8. P. Martínez (Venezuela), Chief of the Section, was not present but sent a report which was reviewed by the Committee. The Committee concluded that the Section, in orienting its activities toward the standardization of the techniques of wood testing in the region, has undertaken a task of great current importance. It was recommended that the Section transmit its proposals for such standards to the research institutions of the region for comment preliminary to a specific proposal for adoption. The Committee also recommended that the Section, in view of the general applicability of its current activities, consider broadening its scope to include the utilization of all woods of Latin America.

Inventory Section

9. A. Escárpita Herrera (Mexico), Chief of the Section, reported on incomplete returns from a questionnaire sent throughout the region to determine the current status of forest inventory work. He described for comment the techniques now being used in Mexico. The Committee recommended that the Section continue its efforts to determine current inventory practices and the possibilities and desirability of uniformity or standardization of techniques for greater efficiency and comparability of results.

The Merida Institute

10. R. Viloría Díaz (Venezuela), President of the Latin American Forestry Institute, read to the Committee the report of the Executive Council on its meeting held on 2 November 1964. In the absence of advance information, the Committee was unable to appraise the current program of the Institute. From the report presented, however, it was concluded that the work under way and the recommendations of the Council all lie within the scope of the objectives for which the Institute was established. The comments of the Committee laid stress on the importance of high quality research work using standards of technique regionally acceptable. The Committee expressed the hope that the financial problems which have plagued the Institute for many years and seriously limited its activities, might be solved in the near future.

Other business

11. The Committee considered a number of other matters. The proposal for a Latin American Federation of Associations of Forestry Professionals, considered at the 1962 session, was considered in need for reconsideration by the Commission. A number of additional recommendations to the Commission were formulated. Nine technical papers were received by the Committee but the agenda and time limitations did not permit their presentation or review.

Recommendations to the Commission

12. The Committee made the following recommendations to the Commission:

- (a) In view of the recent expansion of forest inventories in the region, the lack of trained personnel and the prospects of greater comparability of results which might come from centralized training of personnel, it is recommended that the Commission request FAO assistance in organizing and presenting a training course on the techniques of forest inventory in the near future. A suggested location for such a course is Mexico.
- (b) In order to make more effective the program of research and training of the Latin American Forestry Institute at Merida, Venezuela, it is recommended that the Commission renew its efforts to improve the adequacy and stability of the financial base of this institute.

- (c) To encourage the international exchange of forest tree seeds and other propagating materials so important to expanding research and planting programs in Latin America, it is recommended that the Commission urge the governments of all member countries to facilitate the import and export of such material, without relaxing necessary quarantine regulations.
- (d) In recognition of the bright prospects for greatly increased productivity of forest land by the use of genetically improved trees, it is recommended that the Commission bring to the attention of member governments the desirability of giving tree improvement a prominent place in the programs of national research institutions.
- (e) In the absence of evidence as to progress toward the establishment of the Latin American Federation of Associations of Forestry Professionals proposed by an ad hoc working group of this Committee in 1962 (see Doc. FSO/CRIF-62/11.1), the Committee again recommended that the Commission take steps to implement the organization of this Federation.
- (f) The Committee recommended to the Commission that it be authorized to hold its next session during a two-day period immediately preceding and at the same location as the next session of the Commission.

o

o o

The Ninth Session of the Latin American Forestry Commission has approved the above report with the following observations:

- (a) It was recommended that a meeting of forestry inventory workers be organized in connection with the proposed inventory seminar (recommendation No. 7 of the Committee) to pursue the topic of standardization in forest inventory.
- (b) The Commission welcomed the reiteration by the Mexican delegate of the invitation issued by his country at the seventh session of the Commission to hold the requested forest inventory seminar in Mexico.
- (c) In view of the very satisfactory report by the Governing Board of IFLA on the work done by that institute and on its future program, and bearing in mind that this future work may be prejudiced if there is a delay in the payment of contributions, the Commission urged member countries of the Institute to contribute to the development of its activities in accordance with the financial commitments to it, while the non-member countries were recommended to take the necessary measures to subscribe to the basic agreement establishing the Institute.
- (d) Latin American countries should make more use of the services and educational facilities available at IFLA.
- (e) Institutions and organizations in the region should provide IFLA with their publications so as to enable the latter to improve its services of disseminating forestry information in Latin American countries.
- (f) The Commission recommended that FAO's program for a Centre for Forest Tree Seed Exchange in Rome should not duplicate the efforts made in the region by IFLA and the Mexican Government in this field and that the Rome Centre should cooperate with other organizations to improve the availability and exchange of forest tree seed.

- (g) Member governments were recommended to increase their efforts to promote forest research.
- (h) Research in forest protection should be intensified in view of the great damage that has recently been caused by insect attacks.

REPORT OF THE PLANTATIONS SECTION

The work of the section at the last meeting consisted mainly in bringing up to date and amplifying the report submitted at Santiago de Chile in November 1962; this has been done by incorporating fresh information received from several Latin American countries. The purpose of this report is to indicate the Latin American regions that have the most favorable ecological conditions for restocking with conifers, taking into account climate and interrelated factors such as temperature, rainfall and rainfall pattern as well as the requirements of the various species. To each region have been indicated conifers already successfully established there together with other species which appear most promising in the experiments underway. This report may be published soon in Turrialba.

As this report gives only a general outline of the question and, logically, cannot go into details, comprehensive regional studies should be made in each country, State, province or department to locate and delimit the areas most suitable for conifer restocking because of their climatic, soil and economic conditions and geographic features. These studies which the forest services are urged to undertake might well be supplemented by maps showing an ecological classification of the regions according to degree of suitability for forest-bearing (optimum, good, marginal or poor) together with an inventory of established experiment plantations or plots, giving the name of the species grown and their behavior in comparison with control species. Those areas where afforestation is risky and the economic viability of new stands is doubtful because of the unfavorable ecological conditions or geographic features should be clearly delimited.

In the last few decades pine growing has aroused great interest in Latin America as practically all the countries south of Nicaragua, with the exception of Brazil, lack natural forests of this species. The country with the highest restocking rate is Chile with 250,000 ha of P. radiata distributed over a large area around Concepción. Several pulp mills and sawmills are now using pinewood while larger capacity mills are being set up. There are very good prospects for making use of this important timber reserve for the future Latin American common market. In south Chile, in the vicinity of Valdivia, the forest area could well be extended by planting Pseudotsuga menziesii.

In Brazil there are about 80,000 ha under Araucaria and Pinus; the trend at present is to give preference to pines because of their greater hardiness, adaptability and cheapness in growing. P. elliotii offers very good prospects for the area southwest of Sao Paulo and Minas Geraes would be eminently suitable for P. caribaea and P. caribaea var. hondurensis, although seed is hard to get especially for the first species. Cunninghamia lanceolata and P. elliotii have been established in the low mountain ranges of these two States. The largest area planted with Araucaria is in Paraná; in this State, as well as in Santa Catarina and Rio Grande, there are excellent possibilities for P. elliotii.

In Argentina so far about 40,000 ha, primarily in Misiones along the Paraná river, have been afforested with conifers, mainly Araucaria, and P. elliotii to a lesser extent; P. elliotii is grown around Concordia, Entre Rios province. Although planting costs are rather high, a considerable impetus has been given to afforestation in recent years by tax exemption for forest owners and liberal credit granted by the Administración Nacional de Bosques (National Forest Service).

In Uruguay, while at one time P. pinaster and to a lesser extent P. radiata were used to fix the coastal dunes in the south, the present tendency is to afforest the western, central and northwest sector with P. elliottii and P. taeda.

In the mountains of Peru, at Huancayo, P. montozumae and P. michoacana appear to be the most promising of the species tried.

P. patula appears to be well suited to the Cundinamarca department in Colombia and the lake Neusa area, while P. caribaea var. hondurensis shows good prospects for the Cali area at a lower elevation. In Venezuela, especially on the foothills and high ranges near Mérida, an extensive project is being undertaken to try out a large number of species.

For some years Mexico, Guatemala, British Honduras and Honduras have been supplying interested neighboring countries with increasingly larger quantities of seed obtained from their multi-species pine groves.

At the same time new prospects are opened up with the future free trade area (ALALC)* which will come into being within eight years. Within this area, when import duties and restrictions of all kinds which now protect the national pulp and sawwood industries in some countries are done away with, these same industries, in order to continue to operate, will have to find the cheapest way of putting out their products in order to be able to compete with those in neighboring countries. This means that the price of locally produced pulp or sawwood for building put on the market at the large consumer centers such as Buenos Aires, Montevideo, Sao Paulo, Rio de Janeiro, Caracas, Lima and Bogotá will have to be cheaper than similar products from Chile or Brazil, as the case may be. In this respect, there is no doubt that the Chilean industry, especially for pine pulp and newsprint, is in a privileged position as it can draw on abundant cheap raw materials obtainable from nearby plantations. Furthermore, the species utilized, Pinus radiata, has found in the Concepción area exceptionally favorable conditions due to a climate ideally suited to its requirements with the result that naked-root planting stock can be used without any soil preparation and practically no tending; also the land put under this species is cheap as it is not suitable for farming or pasture.

For afforestation to be successful and give good financial returns, several categorical rules and principles have to be observed.

1. Suitable climate

It is beyond all question that it is the climate, with its two main components, rainfall and temperature, that determines whether or not a specific region can be restocked with trees. Leaving out of account non-financial projects, such as the establishment of protection forests or windbreaks, reclamation of barren land and production of fuelwood for local use, stands should be planted only in areas suited to forest-bearing where the rainfall is abundant but not excessive. If the rainfall is scanty, increment will, logically, be small; also it is a well known fact that under dry conditions many tree species are more susceptible to disease, fungi or pests. When, however, the rainfall is excessive, other problems, particularly from the economic standpoint, arise as the luxuriant growth of weeds, especially climbers, entails the necessity for constant clearing and weeding to make the plantation a success.

* Asociación Latino-Americana de Libre Comercio
(Latin American Free Trade Association - LAFTA)

A well defined regular dry season is no obstacle to restocking. The important point is to use suitable species of the Mediterranean type when the dry season occurs in the summer, or species of the monsoon type for a winter dry season, or again species which need no rest period when there is no dry season. When the rainfall is seasonal, the seed should be sown in the nursery at the beginning of the dry season while planting out should be done in the wet season. In the areas with a regular rainfall sowing will be done in the nursery in the autumn or early spring and planting in autumn or winter.

The use of a particular species also depends on temperature according to latitude and elevation. Low winter temperatures also have to be taken into account as they are a limiting factor for some species and therefore the minimum absolute temperatures at the selected sites must be ascertained. In general, species from subtropical or tropical latitudes cannot withstand temperatures below -4°C .

2. Suitable soil conditions

Experience in Australia, Chile, New Zealand, South Africa and other countries has shown that the most successful restocking has been obtained with pines on deep, sandy soil on cheap land unsuited to farming and stockraising. The fact that pines grow satisfactorily on low-fertility soil is undoubtedly a point in their favor since it is universal practice to avoid afforesting cropland. Also, weeds do not flourish on such poor soil - an advantage for the trees. Nearly all conifers are hardy and can therefore be grown on depleted or degraded soil considered wasteland.

It should be emphasized that the best textured soils [for this purpose] are sand or sandy loam, while compact heavy clay is the least suited. Another very important characteristic is soil depth, which determines root penetration. Trees develop a surface root system when hardpan or plastic and impermeable subsoil occurs at a shallow depth or where drainage conditions are poor. Most conifers are adversely affected by slow or very poor drainage, though some valuable species like P. elliotii, P. taeda and the Taxodium will grow well in soil with a high moisture content.

3. Suitable species

For an afforestation scheme in a specific area to be successful, preliminary trials have to be made for at least 15 or 20 years to find one or more species suited to the environmental conditions of the area in question. When no experiments have been made or when the species have not been tried out for a long enough period, afforestation is risky, even when the species planted have given good results on other sites. In the last few decades many foresters, especially in Brazil, Argentina and Uruguay, attracted by the success obtained in Chile with P. radiata and the easily procured seed, utilized this species for restocking in their respective countries without adequate preliminary trials. As a rule the results were negative as the ecological habitat was not as favorable as it is in Chile. These mistakes, besides entailing a loss in time and money, discouraged foresters.

In certain special cases when there is a demand for a specific type of wood, for instance for pulping, and there are no stands locally for the purpose nor adequate experiments to provide information, the initial phase of preliminary trials can be dispensed with. In such case the forest ecologist has to show beforehand that the species selected is likely to thrive because its ecological requirements are satisfied by local environmental conditions.

The present world trend in wood is toward conifers as they are the best for strong-fibre pulp, building timber and resin. For this reason, unless afforestation is planned for other uses, conifers should be given absolute preference.

In general, the conifer species most used in restocking belong to the genus Pinus, although in some countries species of the following genera are chosen: Araucaria (Brazil, Argentina and Australia), Cupressus (Kenya and Brazil), Cunninghamia (Brazil), Pseudotsuga (New Zealand and Argentina). Although the genus Pinus comprises a large number of known species, amounting to 125 throughout the world according to Gausson, barely a dozen have been utilized so far for forest restocking in the Southern Hemisphere.

Fortunately many Latin American countries have valuable experiment plots and stands and it would be worthwhile analyzing the results obtained in order to draw conclusions. Certainly, forest experimentation is still handicapped in many ways. For example, it is still difficult to obtain on a commercial scale the seed of certain Central American or Asiatic conifer species. Also the information available on the climatic and soil requirements of many important species is still incomplete. Furthermore, the present classification of tropical or subtropical conifers is somewhat confused. At the same time little is known about the ecotypes or geographic races of some species with a wide natural range or about the suitability of any individual type for a specific site.

4. Location close to the wood-processing centers

Once the suitable ecological site has been found, the next step is to ascertain that other requirements are met, that is, location of the plantation near the consumer industry; in fact, profitable logging is possible only when the pulp and particle board mills which use the wood are fairly close to the plantation. When these mills are over 60 km away, an economic cost/benefit study should be made to determine the profit-earning capacity of the future stand, especially haulage costs which have to be added to the price paid for the wood.

It frequently happens that a paper industry is set up in a region once plenty of wood is available and future supplies are assured, as has happened in Chile. A mill can be installed within one or two years while a plantation takes six to twelve years to mature.

A paper mill requires, in addition to a good supply of wood, plenty of water, fuel and electric power and must have an outlet to dispose of its waste water. It also must be located near good roads, a railway or navigable waterways and be able to procure near at hand other important raw materials such as sodium sulphate and chloride, calcium carbonate, sulphur, etc.

Where there is no consumer center, even though there is likely to be one later, the forester will find it advisable to adopt wide spacing, 3 x 3 m or 3 x 4 m, so that competition between the trees for light and nutrients will be delayed as long as possible.

Then again efforts should not be wasted on isolated or fragmentary restocking which may create serious problems later either in marketing the products or over-costly freightage.

Plantations and their management

When all the foregoing conditions are favorable, the forester may start on his project. Usually it is preferable, especially where there is little experience to go by, to start by restocking only a small area in the first year. Contrary to general opinion it is not the planting which is difficult but the proper tending of the trees during the initial years to avoid failures.

Once a stand is well established, planned management of the growing trees is important in order to obtain the highest possible output of wood. Therefore, when competition starts among the trees, which under Latin American conditions occurs after six years, thinnings must be made to avoid checking growth.

After the third year it will be advisable to start pruning the trees with the best habit and increment which are to be logged to provide wood for the sawmill or for veneering, and which will yield the highest profit.

COMMITTEE ON FOREST PRODUCTS

First Session (Curitiba, Brazil, 3-4 November 1964)

R E P O R T

1. The Forest Products Committee held its first session on 3 and 4 November 1964 in Curitiba, Brazil, at the kind invitation of the Government of Brazil.
2. The delegates, advisers and observers who attended the session are listed in Annex 5-a. FAO was represented by H. J. Reichardt, C. Petrin, S. Haugaard, P. Grijpma and H. Schmidt.
3. The Provisional Agenda (Document FAO/LAFC-64/1) was approved and the following documents were submitted to the delegates for consideration:
 - a) Terms of Reference of the Committee (Document FAO/LAFC-64/2)
 - b) Program of Work of the Committee (Document FAO/LAFC-64/3)
 - c) Timber Grading Rules (Document FAO/LAFC-64/4)
 - d) Prospects for Expanding Forest Products Exports from Developing Countries.
4. In accordance with Article II-1 of the Rules of Procedure of the Latin American Forestry Commission, the Committee elected F. Léniz (Chile), J.M. González (Mexico), C. Tinto (Argentina), S. Pinto da Luz (Brazil), as Chairman and first, second and third Vice-Chairmen, respectively. P. Grijpma acted as Secretary to the Committee.
5. It was decided to recommend to the Latin American Forestry Commission that all member states may become members of the Committee, in accordance with article IX-2 of the Rules of Procedure of this Commission.
6. It was recommended, in conformity with Article IX-5 of the Rules of Procedure of the Latin American Forestry Commission, that the reports of the Committee be presented to the Commission.
7. It was recommended to the Latin American Forestry Commission that the Committee should have the following terms of reference:
 - The Committee will examine periodically the trends in the production, consumption and trade of forest products in Latin America, with special reference to the role of these products in the development of the region.
 - The Committee will coordinate and promote studies on the technical, economic and legal problems concerning the production, trade and consumption of forest products and will consider ways and means to overcome the obstacles that impede development.
 - The Committee will also have to examine the corresponding national trends within the context of the sub-regional economic groupings and external trade and will submit its recommendations to the Latin American Forestry Commission in the form decided upon, in order to help the Commission to promote a well-defined and balanced policy with respect to forest products within the framework of overall development programs.
 - The Committee will cooperate closely with the national and international agencies concerned with forest products, especially the United Nations Economic Commission for Latin America, the Latin American Institute for Economic and Social Planning, the Latin American Free Trade Association, the Central

American Integration Scheme (CAIS), the International Standards Organization and the Pan-American Standards Committee.

8. The following Program of Work for the Committee was recommended to the Latin American Forestry Commission:

- A) Promotion and analysis of studies and of information and background concerning the market:
 - a) Conversion factors.
 - b) Revision of the Study on Trends and Prospects for Forest Products in Latin America.
 - c) The improvement of forest products statistics, especially those relating to trade in a form which will permit annual revisions of the reports on markets.
- B) Promotion of the efficiency of the forest industries:
 - a) Standardization of measuring systems, sizes, nomenclature and methods of control.
 - b) Grading Rules.
 - c) Rationalization of transport.
 - d) Studies of costs and prices.
 - e) Training of personnel.

9. The Committee took note of document FAO/LAFFC-64/4 "Normas de Clasificación de la Madera" (Timber grading rules) and with respect to this, agreed:

- a) the advisability of entrusting to only one institution or organization in each country the application of the grading rules and to give it the appropriate legal status;
- b) the need to organize training courses in order to ensure that the grading rules are properly understood and interpreted uniformly;
- c) to collaborate with the secretariat of CPANT (Pan-American Standards Committee) in the formulation of grading rules, requesting the responsible national institutions to provide all the necessary facts;
- d) to request the delegates to revise and complement the lists of commercial species and to send them to the secretariat of CPANT.

10. The Committee has had the following document brought to its notice: "Prospects for Expanding Forest Products Exports from Developing Countries" and has taken note of the international market possibilities for forest products and Latin America's possible participation in them. With regard to this, the Committee agreed to put forward the following resolutions:

- a) In order that Latin America may play the part that it could play in the development of the international market for forest products, a great increase in its reforestation programs is essential.

- b) In order to achieve these aims it will be useful to be able to count on foreign and internal credits, both private and governmental, adequate technical assistance, a policy of forest extension and tax incentives, in order to encourage private capital in long-term investments.
- c) The help of the more developed countries should be obtained through technical assistance and agreements which avoid the competition of a production surplus of the developed countries with the new Latin American industry.
- d) Forest industries must be carefully planned, due account being taken of the availability of raw material and the regional situation; it must not be based exclusively on high import tariffs aimed solely at import substitution. The point should be considered that, in the long run, Latin American industry will have to operate under conditions which make it competitive, in efficiency and quality, with the industries of the more developed countries.
- e) Taking into account the enormous investments which will have to be made in the next ten years in order to bring about the progress that will enable Latin America to become self-sufficient in forest products and participate substantially in the international market, the Committee considers it desirable that the Latin American countries should create conditions of security and taxation which do not demand from the foreign investor much more than would be expected of him in his own country for a given investment. This should result in an important flow of capital which, apart from helping to finance the investments, could also create important additional markets in the developed countries.
- f) The Committee considers it of great interest to the region to avoid wherever possible the export of round wood, with the aim of exporting products with a higher degree of conversion, and also considers that an interesting possibility of foreign help would consist of agreements by which developed countries would reduce their import tariffs thereby increasing their consumption and permitting the importation of manufactured products instead of raw material.
- g) In order to help in the proper planning of industrial projects, the Committee considers it of great interest to promote the establishment of regional associations in the field of forestry which would facilitate the exchange of information on developed plans, and on the institutions and industries concerned. The Committee welcomes the initiative taken by FAO in the training of forestry personnel and the feasibility studies for certain new industrial projects; the Committee agreed that FAO continue these efforts.
- h) To request FAO to undertake a study, similar to the one the Committee had seen, but exclusively for Latin America and taking into account the special conditions of the region.
- i) In view of the precarious conditions under which the sawmilling industry operates in Latin America nowadays the Committee regards as particularly urgent a study which describes the present situation of the sawmill industry and could serve as a basis for obtaining international financial help for its improvement. It is suggested that this study be undertaken by FAO with the collaboration of IDB (Inter-American Development Bank).

11. Taking into consideration the program of work approved by the Committee, it is agreed:

- a) To request collaboration of member governments to carry out a revision of the study concerning Trends and Prospects for Forest Products in Latin America.
 - b) In order to provide promptly annual reports concerning production and markets, both national and international, it was judged indispensable that urgent action be taken by individual governments to improve their forest statistics.
12. Considering the terms of reference of the Committee, it was recommended that its title be changed to the "Committee on Forest Products".
 13. The Committee recommended to the Commission that the Secretariat be requested to distribute well in advance the working documents to be discussed in the next sessions.
 14. It is recommended that the officers of the Committee meet at the end of 1965, in order to review the progress achieved in its program of work. The exact date and place of the meeting will be determined by agreement among the countries represented by the officers of the Committee.
 15. The Committee expressed its thanks to the Chairman and Secretary for the accomplishment of their task.

0
0 0

This Report has been approved by the Ninth Session
of the
Latin American Forestry Commission.

COMMITTEE ON FOREST PRODUCTS
First Session

LIST OF PARTICIPANTS

A) Member Countries:

- | | |
|-------------------------|----------------------|
| - J. Castellanos | (Argentina) |
| - E. Dabas | " |
| - C. Tinto | " |
|
 | |
| - G. Bejarano B. | (Bolivia) |
| - E. Quintanilla | " |
|
 | |
| - Beneval de Oliveira | (Brazil) |
| - V.C. Hasek | " |
| - L.A. Langer | " |
| - E. Lins de Barros | " |
| - Suavita Martino | " |
| - S. Pinto da Luz | " |
|
 | |
| - F. Léniz | (Chile) |
| - E. Schmeisser | " |
|
 | |
| - J.I. González Vazquez | (Dominican Republic) |
|
 | |
| - J.M. González | (Mexico) |
| - G. Salgado Gómez | " |
|
 | |
| - F. Bazán | (Peru) |
|
 | |
| - J.C. Lafitte | (Uruguay) |
| - A. Larrobla | " |
|
 | |
| - M.E. Hurtado | (Venezuela) |

B) International Organizations:

- | | |
|--------------|---------|
| - A. Dorfman | (ECLA) |
| - A. Shaw | (ALALC) |

C) F.A.O.

- P. Grijpma, FAO Regional Office for Latin America, Santiago, Chile
- S. Haugeard, FAO Regional Office for Latin America, Santiago, Chile
- C. Petrin, FAO Regional Office for Latin America, Santiago, Chile
- H.J. Reichardt, FAO Regional Office for Latin America, Santiago, Chile
- E. Schmidt, FAO/ECLA, Santiago, Chile

COMMITTEE ON NATIONAL PARKS AND WILDLIFE
First Session (Curitiba, Brazil, 4 November 1964)

R E P O R T

1. The First Session of the Committee on National Parks and Wildlife was held in Curitiba on 4 November 1964 at the kind invitation of the Brazilian Government.
2. The delegates, advisers and observers, listed in Annex 6-a, participated in this Session. The Food and Agriculture Organization of the United Nations was represented by F. Barrientos.
3. The Provisional Agenda (Document FAO/LAPWC-64/1) was approved and the following documents were submitted for the consideration of the delegates:

Terms of reference of the Committee - (Document FAO/LAPWC-64/2)
Report on National Parks and Wildlife in Latin America, presented by the Committee's Chairman - (Document FAO/LAPWC-64/3)
4. In accordance with Article II-1 of the Rules of Procedure of the Latin American Forestry Commission, I.N. Constantino was re-elected by the Committee as its Chairman, and J. Belo Lisboa (Brazil), J. C. Lafitte (Uruguay) and J.I. González Vazquez (Dominican Republic) were elected as first, second and third vice-chairmen, respectively. F. Barrientos acted as Secretary of the Committee.
5. It was decided to recommend to the Commission that all the member countries be allowed to participate in the Committee, in accordance with Article IX-2 of the Commission's Rules of Procedure.
6. It was decided to recommend to the Commission that, in accordance with Article IX-5 of its Rules of Procedure, the Committee's reports be submitted to it.
7. It was agreed to recommend to the Commission the acceptance of the following terms of reference of the Committee:
 - The Committee will examine periodically the place and importance of national parks and wildlife in Latin America with due consideration for policies on land use and for economic and social development. In particular it will evaluate the scientific, cultural and economic value of national parks and wildlife and their role in relation to recreation, tourism, conservation and research under the specific conditions prevailing in the various countries of Latin America.
 - The Committee will examine and promote extension programs and the appropriate training of professionals and workers in national parks and wildlife, and study the legal, institutional, administrative, social, economic and ecological aspects of national parks and wildlife.
 - The Committee will formulate recommendations to the Latin American Forestry Commission on the planning and coordinated development of national parks and wildlife, so that the Commission can recommend and promote a balanced and well-defined policy for the development of national parks and wildlife, integrated with general development programs.

- The Committee will collaborate closely with national and international agencies interested in national parks and wildlife, in particular with the International Union for the Conservation of Nature and Natural Resources, the International Council for Hunting, and UNESCO.

8. The Chairman read and commented on Document FAO/LAPWC-64/3, "The National Parks and Wildlife of Latin America", which was subjected to careful examination. The document was approved and the Committee made the following recommendations to the Commission:

A. Directed to member countries:

- (a) Those Latin American countries which have not already done so, should ratify the Convention for the Protection of Flora, Fauna and Natural Scenic Beauties (Washington, D.C., 1940), as recommended by the First World Conference on National Parks (Seattle, USA).
- (b) An adequate nomenclature for the protection and conservation of renewable natural resources should be promoted, more suited to the particular conditions of the Latin American region than the one included in the Convention for the Protection of Flora, Fauna and Natural Scenic Beauties (Washington, D.C., 1940).
- (c) Within each country, those natural features which have particular scientific, cultural or recreative importance and which have not yet been considered for complete conservation, should be determined and studied, so that they can be brought into the system of national parks and/or equivalent areas. In order to overcome the existing threat of destruction, the Committee recommended that the governments should, by legislation, declare as national parks the natural features thus determined and studied.
- (d) Although the majority of the countries have set up, or are planning to set up, national parks and/or equivalent areas, it is obvious that not all of them have been able to devote to these reserves the attention necessary to ensure their fullest protection and development, owing to lack of financial means and of sufficient technical, administrative and field personnel. Bearing in mind the fact that the creation of these reserves is a basic necessity and their protection and organization is essential, it is indispensable that governments grant to the services responsible, budgets adequate to the duties imposed on them, so that the purpose for which these areas have been established can be achieved in actual practice.
- (e) Educational and extension services should be intensified, or in some cases initiated, in order to inculcate in the population the fundamentals of national parks and the importance of their conservation. It is essential to spread such ideas and concepts, especially in the primary and secondary schools, and even to include them at the university level.
- (f) Every means possible should be used to eliminate from national parks those features which impede the achievement of their objectives, such as exploitation of the resources which characterize them, private ownership, grazing, the existence of exotic flora or fauna, etc.
- (g) In addition to the wildlife contained in the national parks, it is of great importance also to protect wildlife in other areas, which is, according to the survey carried out, in danger of extinction. It is therefore recommended that member countries adopt all the measures necessary for greater and better protection of the indigenous fauna, promulgating the necessary laws and at the same time organizing and coordinating the services charged

with enforcing them, by means of effective supervision. In order to achieve these aims, extension programs should be prepared and the training of specialists increased. Measures should also be taken at a regional level and agreements reached between adjacent countries, special attention being devoted to commercial aspects, so that collaboration can be established for the protection of wildlife based on a clear knowledge of the species to be protected.

- (h) It is essential that those countries which have not yet undertaken inventory studies and research programs on wildlife, should devote attention to this matter, since with the results they can plan the most advisable measures for the management of their wildlife resources.
- (i) A meeting of specialists should be held for the purpose of drawing up a plan for banding, marking the routes and assembling general statistics on migratory birds, in order to gain more extensive knowledge of 'fly-ways'.
- (j) As recommended by the Latin American Commission on National Parks (IUCN, Quito, March 1964), the countries of the region should establish close collaboration in order to set up international parks between neighbouring countries, when such measures are essential for the fulfilment of the aims pursued, particularly in cases where adjacent national parks already exist in neighbouring countries.

B. Directed to the Food and Agriculture Organization of the United Nations and other international organizations (IUCN, UNESCO, IBP, PAU, OAS, etc.)

- (a) Cooperate and contribute with technical and financial assistance to member countries, providing advice and educational material needed to ensure better education and extension services in the conservation of natural, renewable resources.
- (b) Offer and provide scientists to cooperate with specialists in the countries concerned in pursuing the studies required to draw up a preliminary list of the most important habitats in each bioclimatic region, for the purpose of determining their correct place in the classification approved by the Convention for the Protection of Flora, Fauna and Natural Scenic Beauties.
- (c) Special attention should be paid to providing all possible technical and scientific international assistance for the purpose of acquiring thorough knowledge of the flora and fauna in the countries of the Region.

9. The Committee agreed to recommend to the Commission that the following Program of Work be approved:

- (a) The Committee will ask that FAO, alone or with the cooperation of other international organizations, and with its own active participation, prepare a national parks handbook, giving special attention to the following points:
 - (i) Legal Aspects;
 - (ii) Institutional Aspects;
 - (iii) Technical and Scientific Aspects;
 - (iv) Administrative Aspects.
- (b) The Committee will continue the enquiry on national parks already initiated, asking for replies from those countries which have not yet replied, and enlarging the questionnaire with other points connected with national parks and wildlife.

- (c) The Committee will undertake, for presentation at its next session, an analysis and critical study of the situation regarding national parks and wildlife in Latin America. For this purpose, it will request the collaboration of all the member countries.
 - (d) The Committee will prepare a specific report on the research programs which are being undertaken or planned in the different national parks and also those related to wildlife.
 - (e) It will undertake a bibliographic compilation of all the studies published on national parks and wildlife.
 - (f) The Committee will collaborate with the responsible organization in preparing a nomenclature on the conservation of natural resources.
10. It was proposed that the next session of the Committee be held in the same place as the Tenth Session of the Latin American Forestry Commission, two days before the start of this Session.
11. Finally, the Committee expressed its appreciation to the Chairman for the work done and its appreciation of the documents presented.

0
0 0

This Report has been approved by the Ninth Session
of the
Latin American Forestry Commission

COMMITTEE ON NATIONAL PARKS AND WILDLIFE
First Session

LIST OF PARTICIPANTS

A) Member Countries:

- | | |
|-------------------------|----------------------|
| - O. Arce | (Argentina) |
| - I.N. Constantino | " |
| - G. Bejarano | (Bolivia) |
| - E. Quintanilla | " |
| - J.M. Belo Lisboa | (Brazil) |
| - E. Schmeisser | (Chile) |
| - J.L. González Vazquez | (Dominican Republic) |
| - R. Lavagnino | (Guatemala) |
| - F. Bazán | (Peru) |
| - R. Costley | (United States) |
| - C.G. Fredine | " |
| - V.L. Harper | " |
| - J.C. Lafitte | (Uruguay) |
| - M.E. Hurtado | (Venezuela) |

B) F.A.O.:

- F. Barrientos, Regional Office for Latin America, Santiago, Chile
- J. Lagrifa Mendes, National Forestry School, Curitiba, Brazil

COMMITTEE ON WATERSHED MANAGEMENT AND TORRENT CONTROL
First Session (Curitiba, Brazil, 4 November 1964)

R E P O R T

1. The Committee on Watershed Management and Torrent Control held its first session on 4 November 1964 in Curitiba, Paraná, at the kind invitation of the Government of Brazil.
2. The delegates, advisers and observers indicated in Annex 7-a participated in this session. FAO was represented by C. Petrin.
3. The provisional agenda (Document FAO/LAWMC-64/1) was approved and the following documents were presented to the delegates for their consideration:
 - Terms of reference of the Committee
 - Program of Work of the Committee
 - The Problem of Torrents in Latin America (Document FAO/LAWMC-64/2)
4. In conformity with Article II-1 of the Rules of Procedure of the Latin American Forestry Commission, the Committee elected as its officers the following:

Chairman	:	J. Castellanos	(Argentina) (re-elected)
1st Vice-Chairman	:	F. Bazán	(Peru)
2nd Vice-Chairman	:	C. López Ibáñez	(Colombia)
3rd Vice-Chairman	:	G. Salgado Gómez	(Mexico)
- C. Petrin acted as Secretary of the Committee.
5. It was decided to recommend to the Latin American Forestry Commission that all the member countries be allowed to participate in the Committee, in agreement with Article IX-2 of the Rules of Procedure of the Commission.
6. It was recommended to the Latin American Forestry Commission that, in accordance with Article IX-5 of its Rules of Procedure, the reports of the Committee be submitted to it.
7. It was recommended to the Latin American Forestry Commission that the Committee perform the following Terms of Reference:
 - The Committee will formulate recommendations to the Latin American Forestry Commission on the basis of national progress and international experience, bearing in mind the advisability of obtaining regional coordination, so that the Commission can recommend and foster a well-defined and balanced forest policy in watershed management and torrent control, integrated with overall economic and social development.
 - The Committee will periodically review the role and importance of forestry aspects in watershed management and torrent control in Latin America.
 - The Committee will coordinate and promote studies on the technical, economic, institutional and social aspects and related problems of watershed management and torrent control, in particular within high catchment areas, giving special attention to the use and conservation of interrelated resources in the integrated development of watersheds.

- The Committee will encourage: research on forest hydrology; the exchange between countries of working methods and experience; extension work, education and professional training in this field.
 - The Committee will cooperate closely with national and international agencies interested in watershed management, torrent control, and the integrated management and development of river basins, particularly with the UN Economic Commission for Latin America.
8. For the next two years, the following program of work was recommended to the Latin American Forestry Commission:
- Stimulate international technical assistance in the region to obtain an evaluation of torrent incidence and damages.
 - Promote interest among the countries of the region in the establishment of pilot watershed management units with a view to proposing to the next session of the Committee an organic plan in this field.
 - Prepare the basis for legislation on watershed management and torrent control suited to Latin American conditions.
 - Undertake an analysis of the relations between the use of forest land and watershed management.
 - Encourage the introduction of the subject of watershed management and torrent control in the curricula of the Forest Engineering Schools at a uniform level and also at the Schools of Agronomy.
 - Disseminate information among the countries on institutional aspects, bibliography, international meetings, opportunities for professional improvement, etc.
9. Document FAO/LAWMC-64/2 was read and the Chairman commented on its conclusions which met with the general approval of the Committee.
10. After a prolonged and critical review of the recommendations proposed in the above mentioned document, the Committee accepted them unanimously, with a few additions and modifications. The final text is shown below:
- A. Recommendations directed to the Member Governments
- (a) Special attention should be paid to the degradation of catchment basins resulting from the elimination of protective forests, owing to the unfavourable consequences that this situation has in the social sphere, the general economy, and particularly the development of hydrological and agricultural resources.
 - (b) Taking into account the high costs involved in all reforestation work in catchment basins, efforts should be made to introduce and apply measures designed to prevent torrential phenomena and to reconcile the various opposing interests in the management of watershed resources to delimit the protection forests and to establish special measures for their management.
 - (c) Forest administrations should be economically and technically strengthened, in order to facilitate the effective management of hydrologically valuable lands, specialized services being incorporated in their structures for this purpose. Since similar problems occur in various countries, it would be

extremely advantageous to standardize research methods and to exchange information on experiments and techniques. In the case of international watersheds, it would be of the greatest value if interested countries cooperated in such an undertaking.

- (d) When formulating requests for international and bilateral assistance, priority should be given to the strengthening of national services until a sufficient number of specialists is attained.
- (e) Efforts should be made to speedily resolve all land tenancy problems in the mountainous zones and the problem of granting technical assistance to the inhabitants.
- (f) The necessary priority should be given by the Forest Services of the Region to torrent control work within the overall responsibilities of the organization.
- (g) Basic research on the influence of the forest on soil and water conservation and on the best method of restoring degraded land should be stimulated by introducing appropriate silvicultural measures and torrent control techniques which have been so successfully applied in other regions.
- (h) National universities should be requested to make greater efforts to train forest and agricultural engineers in watershed management and torrent control. At the same time, importance should be given to the training of medium-level technicians and to extension work.

B. Recommendations directed to FAO

- (a) The Organization should continue to pay attention to the serious problems in Latin America caused by torrents and intensify its program of work, particularly as regards basic research and training in forest hydrology, and the study of the legislation best able to ensure that the forests make an effective contribution to the watershed management in the region.
- (b) The organization should maintain contacts with CEPAL to improve the existing cooperation between the two international organizations with regard to the study and development of watersheds in the region, putting such cooperation, as far as possible, on an official basis.
- (c) The organization should establish contacts with similar committees, functioning in other regions, and with IUFRO in order to exchange information.
- (d) In view of the activities to be carried out by the Committee, the cooperation given so far by the Secretariat should be strengthened.
- (e) It is particularly recommended to the Director-General of FAO that the necessary priority be given to the establishment in Argentina of a Regional Training Centre on Watershed Management for Latin America with a view to include it in the next technical assistance program. The cooperation of CEPAL in this Centre should also be requested.

11. It was proposed that the next session of the Committee take place in connection with the 10th Session of the Latin American Forestry Commission and begin two days before the opening of the latter. In view of the interest shown by the members of the Committee in treating as urgent some of the problems afflicting the countries they represent, the Chairman will try to arrange an interim meeting.

12. In view of the Terms of reference of the Committee described under paragraph 7, it was recommended to the Latin American Forestry Commission that the name of the Committee be changed to "Committee on Watershed Management and Torrent Control".
13. The Committee expressed its thanks to the Chairman for the successful manner in which the work had been carried out and its appreciation of the documents submitted.

0
0 0

This Report has been approved by the
Ninth Session of the Latin American Forestry Commission

COMMITTEE ON WATERSHED MANAGEMENT AND TORRENT CONTROL
First Session

LIST OF PARTICIPANTS

A) Member Countries:

- | | |
|-----------------------|-------------|
| - A. Alonso | (Argentina) |
| - J. Castellanos | " |
| - I. Constantino | " |
| - E. Dabas | " |
| - L. Golfari | " |
|
 | |
| - B.A. Marcus | (Bolivia) |
|
 | |
| - W.X. Andrade | (Brazil) |
| - J.M. Belo Lisboa | " |
| - Beneval de Oliveira | " |
| - T.G. Martins Costa | " |
|
 | |
| - E. Schmeisser | (Chile) |
|
 | |
| - C. López Ibañez | (Colombia) |
|
 | |
| - A. Escárpita | (Mexico) |
| - J.M. González | " |
| - G. Salgado Gómez | " |
|
 | |
| - F. Bazán | (Peru) |
| - E. Izquierdo | " |
|
 | |
| - H.B. Donaldsen | (USA) |
| - F. Wadsworth | " |
|
 | |
| - J.C. Lafitte | (Uruguay) |
|
 | |
| - M.E. Hurtado | (Venezuela) |

B) International Organizations:

- | | |
|-------------------|--------|
| - R. Vilorio Díaz | (IFLA) |
| - A. Dorfman | (ECLA) |

C) F.A.O.:

- | |
|---|
| - C. Petrin, FAO Regional Office for Latin America, Santiago, Chile |
| - L. Tortorelli, UNTAB Asunción, Paraguay |

