

EUROPEAN FORESTRY COMMISSION

R E P O R T
of the
SEVENTH SESSION

Geneva, 8-13 November 1954

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I. The European Forestry Commission held its Seventh Session at the Palais des Nations, Geneva, from 8 to 13 November 1954.

The following countries were represented: AUSTRIA, BELGIUM, DENMARK, FINLAND, FRANCE, FEDERAL REPUBLIC OF GERMANY, ITALY, NETHERLANDS, NORWAY, SPAIN, SWEDEN, SWITZERLAND, UNITED KINGDOM and YUGOSLAVIA. Messages regretting their inability to send representatives were received from Canada, Iceland, Ireland and Turkey.

The following countries sent observers: BULGARIA, CZECHOSLOVAKIA, Eastern Zone of GERMANY, HUNGARY, POLAND, RUMANIA and U.S.S.R. The following international organizations also sent observers: the European Confederation of Agriculture, the International Commission for Agricultural Industries, the Organization for European Economic Co-operation, the International Union for the Protection of Nature, the International Union of Forest Research Organizations, the International Poplar Commission and the International Chestnut Commission. Messages regretting their inability to send observers were received from UNESCO, the Commonwealth Forestry Bureau and the International Bank for Reconstruction and Development. A list of the participants appears in Annex 1.

Mr. E. SAARI (Finland), Chairman, opened the session, with Mr. S. DUSCHEK (Austria) as Vice-Chairman. Mr. J. KELLER (Switzerland) was elected Rapporteur-General.

Mr. M. LELOUP, Director of the Forestry Division of the FAO, represented the Director-General of that Organization. Mr. G. MYRDAL, Executive Secretary of the Economic Commission for Europe, attended the Commission's opening meeting.

In his opening speech, Mr. SAARI welcomed the observers from the Soviet Union and the Eastern European countries, and stressed the importance of their collaboration for the Commission's work. Mr. LELOUP referred to the Commission's role as pilot for the other regional forestry commissions and for the preparation of the Division's programme of work; and Mr. MYRDAL spoke of the close collaboration between the Food and Agriculture Organization and the Economic Commission for Europe, and emphasised the part that forestry could play in the economic development of the Mediterranean countries.

II. ADOPTION OF THE AGENDA

The Commission adopted the provisional agenda prepared by the Secretariat, specifying that under item 7 the report of the Pilot Committee on Logging Techniques and Training of Forest Workers would also be examined, while under "Other Business" the Secretariat would report on the preliminary findings of the world forest inventory and the work done in compliance with the recommendations of the Joint Meeting of the ECE Timber Committee and the FAO European Forestry Commission.

III. PRINCIPLES FOR THE ELECTION OF OFFICERS

1. In accordance with a decision taken at the last session, the Commission discussed the principles to be adopted for the election of the Chairman,

and decided in the first place to adopt the following two resolutions:

"It is the policy of the Commission that the office of Chairman should circulate as freely as possible among the Member countries, subject to the eligibility and qualifications of their delegates".

"The Commission accepts the principle that its Vice-Chairmen do not automatically succeed to the Chairmanship".

The Commission also decided to amend Rule 10 of its Rules of Procedure to read as follows:

"The Commission shall elect, from among the delegates, a Chairman and Vice-Chairman who shall hold office concurrently for a period of two years. The office of Chairman shall not normally be held for consecutive periods by a delegate of the same country".

2. The Commission further decided to discuss in the course of its next session the proposal concerning the election of a second Vice-Chairman.

3. Finally, the Commission requested the Secretariat to prepare proposals for all amendments to its Rules of Procedure required by the decisions and suggestions mentioned above, and by the transfer of FAO Headquarters to Rome, these to be discussed at the next session.

IV. FOREST POLICY

1. Annual reports

The Commission examined the reports on forest policy submitted by each delegation and took note with appreciation of the note on the subject prepared by the Secretariat (FAO/BFC/69). It also took note of the comments, additions and amendments to annual reports submitted during the session by the delegations of the member countries, and of the statements on forest policy of the observers of Czechoslovakia, Eastern Zone of Germany, Hungary, Rumania and U.S.S.R.

The Commission found that the trend already observed in past reports on forestry activities was confirmed, and that important measures had been taken for the implementation of a sound forest policy: clear definition of the policy to be followed or adoption of new laws to implement it, adjustment of management to economic conditions, integration and rationalization in the wood-using industries, intensification of research and wide dissemination of the results, measures for guaranteeing workers a certain stability of employment and improving their living and working conditions, quicker vocational training and development of information and advisory work.

The Commission also noted that Member Governments attached particular importance to social questions and research.

The Commission decided not to ask Member Governments to furnish an annex on a special subject for the next session in addition to the usual annexes to the annual report, but recommended them to devote special attention to the section on labour questions.

2. Felling statistics and forecasts

In compliance with a recommendation made by the joint meeting of the ECH Timber Committee and the FAO European Forestry Commission, Member Governments communicated to the Secretariat their felling forecasts for 1953, 1954 and 1955, and their figures for actual cut in 1953 and probable cut in 1954. These figures are given in document FAO/EFC/69 Add.1 and examined in document FAO/EFC/69 Add.2.

After examining the figures submitted the Commission felt that the following provisional conclusions might be drawn:

- only a few Member countries have short-term felling programmes covering the whole forest area;
- for the region as a whole, actual fellings do not differ much from

the felling programme, but fluctuations in individual countries may be

- substantial, owing to local disasters or special market conditions;
- probable cut for the region as a whole will be higher in 1954 than actual cut in 1953 and may reach the 1952 level;
- the percentage of industrial timber is slightly increasing.

With regard to the annual questionnaire adopted at the previous joint meeting, the Commission decided to delete the final column reading "Probable modifications of programmes for the coming years" and to replace the words "Volume estimated in programmes" by the words "Volume (in programmes or forecasts)".

The Commission further recommended that the Secretariat, in their future notes on felling statistics and forecasts, include a short analysis of the national felling forecasts and national allowable cuts, as the latter figure is assembled every five years.

3. Afforestation and reforestation operations carried out in 1953

The Commission took note of the information submitted by Member Governments on the operations carried out in 1953 as summarized in the Secretariat Note FAO/EFC/AF/4. It also reviewed the chapters of the progress reports on forest policy concerning afforestation and reforestation.

The Commission agreed that, according to the information received from Member Governments, the rate of development of afforestation, planting outside the forest, forest improvement and reforestation operations carried out in 1953 may be regarded as satisfactory: 241,458 ha. afforested in 1953, for example, as against 223,459 ha. in 1952. It was felt that this satisfactory rate of development was to be ascribed to the existence of long-term programmes based on social, economic and technical factors, and recommended therefore that the present policies be continued.

The Commission suggested that if the present programmes appear to be inadequate to meet future needs of the timber market, the situation should be remedied by making the fullest possible use of available facilities for the implementation of forest restoration programmes, especially through the allocation of the necessary funds, development of mechanization, research and application of new techniques.

V. FOREST FIRES

1. The Commission took note of the forest fires statistics compiled by the Secretariat in document FAO/EFC/72 and of the analysis made of them; it approved the Secretariat's account of the present situation.

2. With regard to the annual questionnaire on forest fires, the Commission recommended Member Governments:

(a) to give short explanations of any unusual figures and to mention any special climatic and topographical features which affected either the incidence or the control of forest fires during the year in question;

(b) to counter, as far as possible, the natural tendency to classify as "unknown" many fires of which the origin is doubtful or difficult to ascertain. If the actual cause cannot be discovered, forest fires should generally be classified according to their most probable origin, the category of "unknown causes" being reserved for a small number of fires concerning the origin of which no information whatsoever is obtainable.

3. As the voting was equally divided on suggestions that future questionnaires should provide for particulars of the quantity of wood burnt, an assessment of the damage caused and the cost of extinguishing fires, the Commission decided in accordance with Rule 38 of its Rules of Procedure to examine the question at its next session. The Commission noted a statement by the Director of the

Forestry Division of FAO that the Organization might undertake appropriate enquiries if they were necessary for its work.

VI. PESTS AND DISEASES

1. The Commission examined the present situation as presented in document FAO/EFC/74, in which the information submitted in the general and special reports by Member Governments in 1954 had been summarized by the Secretariat, and considered that the situation, although requiring constant and careful review, did not call this year for the recommendation of any specific measure.

The setting up of a Forest Protection Service in two member countries was noted with satisfaction by the Commission.

2. The Commission also heard with interest the statement made by the observer from the Soviet Union that Endothia parasitica is at present attacking oak and elm in that country as well as chestnut, and that two experimental stations are actively engaged in investigating methods of controlling its spread.

3. It was decided that those taking part in the session, and the Secretariat, should approach the forestry correspondents of the Plant Protection Bulletin appointed by Member Governments and ask them for contributions.

VII. FORESTRY FILMS

1. The Commission took note of the Secretariat Note FAO/EFC/73 and wished to congratulate the Secretariat on the work so far accomplished in this field. It was felt that in order to make the existing list of forestry films practical and useful, the information still missing should be obtained from Member Governments. The Commission therefore decided to recommend again that a specialist in forestry films be appointed in each member country to correspond with the

Secretariat on all related questions, this method offering, in the opinion of the Commission, the best promise of achievement.

2. With regard to the annual questionnaire, it was decided that the heading "Suggested Use" should from now on be sub-divided as follows:

- (i) for propaganda and general education
 - (a) for the general public, including youth
 - (b) for private owners
- (ii) for professional training (specifying category of workers or specialists most interested)
- (iii) for technical documentation

3. The Commission also recommended that a new heading be added to the annual questionnaire to enable reporting countries to indicate whether a film has been cleared for television, and in this case the name of the company or organisation to which the television rights have been assigned. In this connection the Commission recognised that television is becoming an increasingly efficient means of general propaganda, and Member Governments were therefore requested to envisage the possibility of producing forestry films of a nature especially suited for television.

4. The usefulness of having films classified according to subject was again recognised by the Commission, which was also informed of the draft "International Standard System for the Cataloguing of Educational, Scientific and Cultural Films and Filmstrips" prepared by UNESCO and at present under consideration by some UNESCO National Commissions. The Commission considered it advisable to wait until the final version is available before deciding whether forestry films also should be classified according to that system. In the meantime the Commission recommended that in submitting information on forestry

films Member Governments classify them, using the first three figures of the Oxford system.

5. As for the simplification of despatch and exchange of films, the Commission took note of the UNESCO-sponsored "Agreement on the Importation of Educational, Scientific and Cultural Materials" to which 10 Member Governments are already contracting states (Israel, Sweden, Switzerland, United Kingdom and Yugoslavia) or have signed it (Belgium, France, Greece, Luxembourg, and the Netherlands), and recommended that the other Member Governments also become parties to this agreement as soon as possible.

VIII. LOGGING TECHNIQUES AND TRAINING OF FOREST WORKERS

1. Mr. H.G. Winkelmann, Chairman of the Pilot Committee and of the Joint Working Party, introduced the reports of the two bodies which met in Geneva in June 1954 (documents FAO/EFC/LOG/38 and FAC/EFC/LOG/37, TIM/LOG/16) and informed the Commission of the developments since the last session of the European Forestry Commission in Rome in October 1953.

The Commission took note of the report made by Mr. Winkelmann and wished to record sincere thanks to the Chairman, members, study groups and the Secretariat of the Pilot Committee for the excellent work carried out over the past three years. It was decided that the list of publications of the Committee should be annexed to the present report (Annex 2).

2. The Commission adopted the report of the Joint Working Party containing inter alia the programme of work, and decided:

- to set up a joint committee of the FAC European Forestry Commission and the ECE Timber Committee, to meet every year or two years as required;

- to request the joint committee to set up study groups to examine technical questions, which would meet as required and work mainly by correspondence or personal contacts, and also to call on research institutes to study certain specific projects. If necessary, the joint committee may instruct a small group to draft the general conclusions which it considers that it should draw from the work of the different study groups as a whole. These conclusions as well as the results achieved by the study groups should be made available to the ECE Timber Committee and to the FAO European Forestry Commission.
- that the name of the committee be "Joint Committee of FAO/ECE on Forest Working Techniques and the Training of Forest Workers";
- that the terms of reference of the committee be as follows: to foster international collaboration with regard to improvement of forest working techniques and training of forest workers in logging and other forest operations in order to support national efforts aimed at increasing productivity and improving the standard of living of the forest workers; special attention to be given to increasing the efficiency of labour reducing at the same time the efforts required by the workers, prevention of accidents, and reduction of waste.

The Joint Committee will be convened by the Secretariat, in consultation with the officers of the Joint Committee. Its main business will be to review the activities and reports of the study groups and of the Secretariat on specific questions, to discuss technical matters within its terms of reference, to establish a programme of work for the ensuing period, to appoint study groups and their chairmen, rapporteurs, and any other working organs

needed for the implementation of the programme.

Between meetings the Chairmen and officers of the study groups together with the Secretariat will settle any questions that may arise in connection with the programme of work and preparation of documents.

3. Finally, the Commission wished to record its gratitude to the Italian Government for the organization of the study tour that followed the two meetings mentioned above.

IX. SMALL WOODS

1. The Commission took note of the reports submitted by Member Governments and of the Secretariat Note on the subject. The Commission wished to congratulate the Secretariat on the excellent analysis made of the reports submitted by Member Governments, an analysis which greatly facilitated its task (FAO/EFC/70).

2. It considered that the documentation assembled on the basis of the questionnaire the Secretariat had been requested to draft is already sufficient to indicate the main lines and direction of its work on "Small Woods", adopted as a subject of study at its last session.

The Commission felt that "small woods" must not be treated as distinct from the forest as a whole, and that the principles of general policy applied to them as well. Since, however, certain demands are made on small woods that are peculiar to them and dictated not merely by their size but also by economic and social necessity, their yield is lower than that of larger forests.

As small woods can be defined according to a variety of criteria, the Commission considered it advisable to distinguish various categories, which will make it easier to estimate their present condition and to indicate ways in

which such small woods can be developed in the direction of intensive silviculture, in cases where this is desirable and possible.

A) Definitions

The categories are as follows:

- a) Farm woodlands: wooded portions of farms whose production is mainly used for the needs of the farm (rural and domestic consumption). Some of them are also put to subsidiary uses, depending on the farm's particular requirements, e.g. grazing, extraction of litter, harvesting of fodder, fruits, leaves, etc.
- b) Small forest properties: Woodlands of an area within the limit adopted in each particular country, the products of which are mainly destined for the market.
- c) Economic plantations: Plantations designed to provide products for the timber market, in particular with a view to increasing the money income from the farms and meet equipment costs: small plantations in stands or clumps of trees (poplar, eucalypt, black locust, etc.).

B) Present condition and development

- a) Farm woodlands and small forest properties: The means of ensuring conservation and improvement of farm woodlands and small forest properties will differ according to whether the property consists of:

- (i) isolated plots; or
- (ii) plots forming part of a larger stand.

Naturally in the case of farm woodlands, the necessary steps can only be taken gradually, as the agricultural demands on the land

in question decrease and make it possible to develop this category of forests and sell all or part of their product (improvement of agricultural land and grassland, use of fuel other than wood, replacement of wood by more appropriate substitutes - slates, posts for fencing, etc. - and the provision of electric power supplies). In small forest properties, on the other hand, conservation and improvement measures can be applied sooner.

- (i) Isolated plots: The direction of this development to be towards providing products necessary to economy, in particular by introducing rapid-growing species (economic plantations). Such a development can be facilitated by consolidation.
- (ii) Small plots forming parts of a larger stand: The direction of development in this case should be towards integration in a larger management unit by encouraging the formation of owners' associations (pooling of administration and equipment). The impossibility of recruiting certain owners, either because they are not legally eligible or because their identity is unknown, may cause difficulties that can be overcome only by legislative measures.

The constitution of sales cooperatives in both cases, and particularly in the case of farm woodlands, should make it easier to cater for both farming needs and the marketing of part of the products.

- b) Economic plantations: The limits of economic plantations are determined by agricultural necessities, and legislative provisions may be indicated to prevent the disorderly development of small

plantations to the detriment of agriculture, as being an obstacle to cultivation and consolidation. The development of economic plantations is governed by improvements in techniques and by the timber market situation.

C) Means for action

The conservation and increase of the productivity of farm woodlands and small forest properties, and the establishment of economic plantations are closely bound up with

- technical assistance (education of the owners) ;
- financial assistance in executing initial establishment, in carrying out improvement work and in purchasing equipment;
- tax relief where the owner makes a financial sacrifice, either by a long wait before taking his first cut, or by taking measures calculated to meet the ends in view (e.g. formation of owners' associations);
- legislative measures to define the aids and advantages mentioned above and to achieve certain ends such as consolidation and association of owners.

3. When discussing small woods the Commission also stressed the importance of individual trees, plantations outside the forest, windbreaks, fruit-producing forests (chestnut groves) and cork-oak woods, in conjunction with agricultural crops - a condition which, in many cases, raises problems similar to and connected with those of small woods. However, it felt that that was a problem of wide scope which is being considered by the Joint Sub-Commission on Mediterranean Forestry Problems for the Mediterranean region, and which should be the subject of separate study.

4. In conclusion, the Commission considered:

- (i) that the statistical information collected in the first enquiry is sufficient for the time being;
 - (ii) that it is necessary, in the light of the above considerations, to determine the present condition of small woods and their trends.
- The enquiry to be undertaken should relate to consolidation, formation of owners' associations, technical assistance, financial help, tax relief, etc., which are factors likely to improve the productivity of small woods.

The Commission therefore requested the Secretariat to prepare a new questionnaire covering the points enumerated above, on which Member Governments would be invited to reply for the next session, separating if possible small woods which are, or which are not, worked under the supervision of a trained forester.

X. AFFORESTATION AND REFORESTATION

1. The Commission adopted the report of the Standing Working Party on Afforestation and Reforestation (FAO/EFC/AF/6 Rev.1), which was introduced by its rapporteur, Mr. J. de VAISSIERE, and congratulated the Working Party and the Secretariat on the work accomplished.

2. The Commission noted with appreciation the project of the Forestry Division to undertake a study on afforestation and reforestation policies.

3. It was felt that the work of the Working Party had already made it possible to ascertain the main principles governing afforestation and reforestation policies in member countries. Consequently, the Working Party was requested to carry on with its activities on the same lines, and it will therefore follow up with the implementation of programmes and assist national admin-

istrations in this respect; for instance, if special difficulties arise in this field, the Working Party will see to it that appropriate recommendations are addressed to Member Governments.

The Commission stressed, however, that the work undertaken can be successful only if afforestation and reforestation techniques are improved, mainly by developing mechanization of operations and the wide dissemination of technical information. Accordingly, the Working Party was requested to pay particular attention to these matters.

Finally, the Commission felt that the organization of working sessions and study tours in certain member countries might make it easier for the Working Party to fulfil its task.

XI. TORRENT CONTROL AND PROTECTION FROM AVALANCHES

1. The report of the Working Party on Torrent Control and Protection from Avalanches was introduced by Mr. KELLER and approved by the Commission, which wished to congratulate the Working Party and the Secretariat on the work accomplished.

2. The Commission also expressed its gratitude to the Swiss Government and the various Cantons that offered their kind hospitality to the participants in the study tour organized on the occasion of the Working Party's Second Session.

XII. MEDITERRANEAN FORESTRY PROBLEMS

1. The Commission approved the report of the Fourth Session of the Joint Sub-Commission on Mediterranean Forestry Problems, which was introduced by its Chairman, Mr. A. PAVARI. The Sub-Commission and its Secretariat were congratulated on their activities.

2. The Commission was informed by the Secretariat of the Eucalypt Study Tour, which took place in Morocco, and of the wish expressed by participants to set up a Standing Working Party on Eucalypts. It was therefore decided that a Working Party on Eucalypts be established within the Joint Sub-Commission on Mediterranean Forestry Problems.

3. The Commission also took note with much satisfaction of a statement of the Executive Secretary of the Economic Commission for Europe, Mr. G.MYRDAL, on the role of forestry in the economic development of the Mediterranean countries, and suggested that the Sub-Commission pursue its collaboration with ECE to the full, as indicated in Chapter II of its report.

4. The Commission finally wished to thank the Government of Greece for the arrangements made on the occasion of the Sub-Commission's Fourth Session, which was held at Athens, and of the subsequent study tour.

XIII. 4th WORLD FORESTRY CONGRESS

The Commission heard a statement of the Secretariat on the 4th World Forestry Congress, which will take place at Dehra Dun, in December 1954.

XIV. WORLD FOREST INVENTORY

The Commission heard with great interest a statement of the Secretariat on the outcome of the World Forest Inventory and decided that the statement should be appended to this report (Annex 3).

XV. ACTION TAKEN IN COMPLIANCE WITH THE RECOMMENDATIONS OF THE JOINT MEETING OF THE ECE TIMBER COMMITTEE AND THE FAO EUROPEAN FORESTRY COMMISSION

The Commission took note of a statement of the Secretariat on the action taken in compliance with the recommendations of the Joint Meeting of the ECE Timber Committee and the FAO European Forestry Commission.

XVI. FIELD EXCURSION

Participants in the session took part in an excursion to the forests of the Geneva Canton, organized by the authorities and forest service of that Canton. The theme was: "Private Forest Property and its Improvement".

The Commission expressed its gratitude to the Republic and Canton of Geneva.

XVII. ELECTION OF OFFICERS

Sir Henry BERESFORD-PEIRSE (United Kingdom) and Mr. J. KELLER (Switzerland) were unanimously elected Chairman and Vice-Chairman respectively for a period of two years, in accordance with the Commission's Rules of Procedure.

XVIII. DATE AND PLACE OF NEXT MEETING

It was decided that the Chairman, in consultation with the Secretariat, should determine the date and place for the next session.

LIST OF PARTICIPANTS

Chairman : E.A. SAARI (Finland)
Vice-Chairman : S. DUSCHEK (Austria)
Secretary : R.G. FONTAINE (FAO)

Mr. M. LÉLOUP, Director of the Forestry Division, represented
the Director-General of FAO

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A. DELEGATES

AUSTRIA: S. DUSCHEK, Director of Forestry
R. ENDER, Ministry of Agriculture and Forestry

BELGIUM: H. COLLEAUX, Inspecteur Principal des Eaux et Forêts.

DENMARK: H. FRØLUND, Senior Forestry Inspector.

FINLAND: E. SAARI, Professor of Forest Economics,
University of Helsinki
J.O. SODERHJELM, General Manager, Central Association
of the Finnish Woodworking Industries.
P.K. PULKKINEN, Délégué permanent de la Finlande à Genève.

FRANCE: F. MERVEILLEUX du VIGNAUX, Directeur Général des Eaux
et Forêts.
J. de VAISSIERE, Conservateur des Eaux et Forêts,
Chef du Service de la Forêt Privée, Direction Générale
des Eaux et Forêts.
A. DUBOIS, Président de la Fédération Nationale des
Syndicats de Propriétaires forestiers.

GERMANY (Federal Republic):

W. MANN, Ministerialdirektor, Chief of the Forestry and
Timber Division, Ministry of Food, Agriculture and Forestry.
K. OEDEKOVEN, Forstmeister, Federal Ministry of Food,
Agriculture and Forestry.
J. SPEER, Professor of University.

ITALY: G. SACCHI, Directeur Général des Forêts et de l'Economie de
la Montagne.
A. PAVARI, Directeur de la Station de Recherches Forestières
de Florence.
L. FUNICIELLO, Inspecteur supérieur des Forêts, Direction
Générale des Forêts et de l'Economie de la Montagne.

NETHERLANDS: F.W. MALSCH, Director of the State Forest Service.
P. de FREMERY, Président de l'Organisation
professionnelle forestière de Droit Public
(Chambre forestière).

NORWAY : A. LANGSAETER, Director of Forestry

SPAIN : E. GONZALEZ-VAZQUEZ, Direction Générale des Forêts
L. SAINZ SANGUINO, Ingeniero del Servicio de La
Madera.

SWEDEN : W. PLYM FORSHELL, Deputy Chief of the Royal Board
of Private Forestry.

SWITZERLAND: J. KELLER, Inspecteur fédéral des Forêts, Inspection
fédérale des Forêts, Chasse et Pêche.
H.G. WINKELMANN, Directeur de l'Office Forestier
Central Suisse
J.L. BIOLLEY, Ingénieur forestier, Inspection
fédérale des Forêts, Chasse et Pêche.

UNITED KINGDOM: E. BERESFORD-PEIRSE, Deputy Director, Forestry
Commission.
J.A.B. MACDONALD, Conservator of Forests,
South Scotland.

YUGOSLAVIA: L. MARKOVIC, Directeur de recherches forestières,
Institut de Recherches forestières de Serbie.
S. SURIC, Fonctionnaire d'Etat, Institut fédéral du
Plan.
D. DJAPIC, Docent de l'Université de Belgrade,
Faculté des Forêts.
A. URBANOVSKI, Assistant à l'Université de Belgrade,
Faculté des Forêts.

B. OBSERVERS

a) Non-member countries

BULGARIA: J.A. PETKOV, Vice-Président de l'Administration
d'économie forestière du Conseil des Ministres.

CZECHOSLOVAKIA: J. JINDRA,
L. KOSTRON, Ingénieur-Chef.

GERMANY (Eastern Zone):

G. RITTNER, Directeur de Division, Ministère de
l'Industrie légère.
W. ERTELD, Professeur d'Université.

HUNGARY : A. MADAS, Ingénieur-Chef à l'Office National de
Planification.
L. TUSKO, Directeur de l'Ecole professionnelle
d'Economie forestière.

POLAND : J. KACZERGINSKI, Managing Director of "Paged"
Z. KULCZYCKI, Director, Ministry of Forests.

RUMANIA : S. GAL, Directeur au Ministère du Commerce Extérieur.

U.S.S.R. : A.D. BUKSHYNOV, Chief of Forestry Division,
Ministry of Agriculture.
N.A. NAGOVSKIN, Chief of Association "Agro-Timber-
Project", Ministry of Agriculture.
A.N. PAVLOV, Deputy-Chief of the Division of Forests,
Cultures and Forest Amelioration of the
Administration of Forestry.
A.N. ROGOSKIN, Chief of Technical Administration,
Ministry of the Timber Industry.
K.I. VOROMTSIN, Director of the Central Scientific
Research Institute of the Timber Industry.

b) International organizations :

O.E.E.C. (Organization for European Economic Cooperation) :

R. FEVRIER

I.U.F.R.O. (International Union of Forest Research Organizations) :

A. PAVARI

C.E.A. (European Confederation of Agriculture) :

S. DUSCHEK
P. de FREMERY
A. DUBOIS

International Commission for Agricultural Industries :

Ch. BERNARD

U.I.P.N. (International Union for the Protection of Nature) :

Ch. BERNARD

International Poplar Commission :

R.G. FONTAINE

International Chestnut Commission :

R.G. FONTAINE

C. F.A.O. (Food and Agriculture Organization of the United Nations)

H. TROMP, Economics Branch, Forestry Division
P. SARTORIUS, Economics Branch, Forestry Division
O. FUGALLI, Policy Branch, Forestry Division.

List of Publications
of the
Pilot Committee on Logging Techniques and
Training of Forest Workers

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A European Directory of Research and Training Institutes concerned with the rationalisation of forestry work in the field of felling, logging and transport of timber (FAO/EFC/LOG/14 Rev.1, September 1953)

The Use of Power Saws in Forestry Operations, by U. Sundberg (FAO/EFC/LOG/19, September 1953)

Criteria for Correct Logging Techniques and Best Methods of Work in European countries, by H. Gläser (FAO/EFC/LOG/23, TIM/LOG/2, March 1954)

Vocational Training of Forest Workers - prepared by ILO (FAO/EFC/LOG/15 Rev.1, March 1954)

The Loading of Coniferous Sawlogs on Trucks, by M. Kantola (FAO/EFC/LOG/20, March 1954)

International Performance Comparison in the Field of Logging- by H.H. Hilf (FAO/EFC/LOG 31, TIM LOG 10, April 1954)

Bibliography on Work Science in Forests, by H. Gläser (MEFAO/3/54, April 1954)

On the Choice of Tractors for Hauling, by X. de Mégille (FAO Forestry Development paper No.1, Rome, March 1954).

Report on Forestry Criteria and Equipment of Tractors, by X. de Mégille (FAO/EFC/LOG/28, TIM/LOG/7, April 1954)

Forest Resources of the World

The Sixth Session of the FAO Conference in 1951 recommended that the Organization should, at five-yearly intervals, collect and publish available information on the forest resources of the world, the next inventory to be undertaken in 1953. Following this recommendation experts met in Geneva to consider definitions and determine the scope of the new inventory. Forms were agreed and despatched to all member countries, including dependent territories. At the same time FAO staff gathered information from both official and unofficial sources concerning the resources of non-member countries. Responses to the 1953 questionnaire, together with the results of FAO's first inventory (1947), supplemented by data collected with the aid of authorities in member countries, official reports, and FAO technical assistance field experts, have made it possible to assemble data in respect of about two hundred countries. It may therefore be said that the new enquiry into world forest resources provides the most comprehensive picture of the extent of the world's forests which has so far been published.

Such a world forest inventory cannot of course provide answers to all the questions which a national inventory must pose. It can afford indications of the extent of the world's forests, and of the wealth of resources they contain. It cannot, however, ascertain whether the forests are well distributed for fulfilling their productive and protective role; it cannot hope to afford a comprehensive picture of age and species distribution, or to reflect the effects of silviculture on the quality of output. These, and many other questions, a national inventory will seek to answer. They are not appropriate to a world inventory, which must confine itself to listing a limited range of salient facts.

The 1953 inventory includes information falling into the following main groups:

- 1) forest area in relation to other land categories;
- 2) accessible forests: yield and ownership;
- 3) forests in use: management, standing timber, growth, fellings and removals;
- 4) other roundwood sources;
- 5) changes in forest resources.

All the information sought in this second world forest inventory of FAO consisted of data which may be regarded as essential for the formulation of national forest policies. As compared with the response to the first enquiry this inventory records encouraging, even striking progress. Nevertheless, the material assembled does not yet enable us to build up a complete and comprehensive picture of the world's forest resources. First, because in spite of the considerable progress made in the direction of international comparability, national statistics still differ widely in scope, content and reliability. Secondly, because many countries do not as yet collect all the

data necessary for the formulation of forest policy. Thus, while this inventory tells us a great deal, it also represents a progress report which indicates the advances which have been made in recent years in forest consciousness, forest management and forest statistics.

The results of the enquiry can be summarised as follows:

1. Forest areas

Nearly 30% of the earth's land surface is under forests; a further 22% is devoted to agriculture. The rest, or nearly half, consists of natural grasslands, brushlands and unproductive areas. Forests cover over two-fifths of the land area in Latin-America, one-third in the U.S.S.R. and North America, slightly less in Europe and Africa and less than one-tenth in the Pacific area. The forest area per inhabitant ranges from $6\frac{1}{2}$ ha. in the Pacific area to one-third of a ha. in Europe. The fact that woodlands (including brushlands) cover rather more than one-third of the land area of the world, might lead us to suppose that their extent is amply sufficient both to fulfill their protective role and to ensure that the world's need of forest products is satisfied. Nevertheless, there are large areas within the main regions where there is a serious lack of forests; and within individual countries there are areas of scarcity amidst apparent plenty.

55% of the world's forest area or about 2,100 million ha. are today classified as inaccessible. Only two-thirds of the accessible forests, or some 29% of all forests, are today in use. The immensity of the resources yet untouched may be understood if we appreciate that, leaving aside the 1,100 million ha. today exploited, there is a first reserve of about 600 million ha. accessible, but not as yet exploited, and a second reserve of about 2,000 million ha. not yet accessible.

2. Composition of the forests in use

For the world as a whole just over half of the forest area today exploited consists of coniferous species. They are, however, unevenly distributed, more than half the stands being found in the U.S.S.R. and less than one-tenth in the southern hemisphere. Conifers account for 53% of all the forests today exploited. Out of about 1,300 million ha. of coniferous stands, some 610 million are today utilised, whereas from the same 2,600 million broadleaved stands only 500 millions or less than one-fifth are in use. These figures reflect the fact that so far the coniferous forests have been better suited, either for their quality or for their location, to satisfying the demand for forest products. Hitherto broadleaved species, save for temperate hardwoods and some precious tropical species, have been used mainly as fuel and for charcoal; conifers have served a much wider purpose in meeting human needs.

3. Growing stock in forests in use

It may be estimated that total growing stock in all the world's forests in use amounts to 96,000 million cu.m., of which 59% consists of conifers. Over all the world's exploited forests, standing timber per ha. averages 95 cu.m.

for coniferous forests and 75 cu.m. for broadleaved stands, a world average for all stands of 85 cu.m. per ha. In tropical rain forests it may reach 400 cu.m., in temperate zones 200 cu.m.; 50 to 60 cu.m. per ha. is typical for Scandinavia; whereas in the savanna forests of Central Africa the figure falls as low as 20 to 30 cu.m.

4. Growth and allowable cut in the forests in use

The reported data for gross increment related to about three-quarters of the world's exploited forests. It may be estimated that for the world's forests in use as a whole, gross increment will probably be 2,300 million cu.m., of which 46% consist of coniferous species. Growth per ha. is about 1.8 cu.m. for coniferous and 2.4 for broadleaved species, averaging 2.1 cu.m. for all species.

So little information was received for annual losses, and consequently for net growth, that it was for the moment not possible to estimate net growth in the world as a whole; it can only be stated that in Europe natural losses amount to about 5% of gross increment.

Data related to allowable cut cover only about 18% of the total area of the world's forests in use; they are not representative for the world as a whole and the fact that allowable cut and net growth, two key figures for forest management and sound forest policy, are not available for most of the forests of the world, shows that much remains to be done before each country has the elements necessary for a formulation of policy.

5. Fellings and removals

Information relating to fellings and to logging and floating losses is limited and of uncertain accuracy; it covers less than two-fifths of the world's exploited forests. It may, however, be suggested that these losses will be about 10% of fellings.

Removals (excluding, however, unrecorded and illicit removals) are about 1,400 million cu.m. The share of industrial wood, roughly half for the world as a whole, varies from region to region in accordance with the species distribution and with the wood fuel needs of the local populations.

A fundamental question is whether natural losses and fellings exceed the rate at which wood is being produced. In other words: are the forests being overcut? Here again, the present inventory does not admit of firm and precise answers. As a very rough estimate, based on reported removals and making various assumptions concerning bark proportion, logging and floating losses, natural losses and gross increment, we can perhaps say that in the world's 600 million ha. of exploited coniferous forests, growth and drain are just about in balance, at around 1,100 million cu.m. with bark. In the 500 million ha. of exploited broadleaved forests, gross increment may be reckoned at about 1,300 million cu.m., of which perhaps three-quarters is drained off by fellings or natural losses.

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The response to the 1953 inventory is at once an encouragement and a challenge: an encouragement since it demonstrates the important advances which have been made in recent years; a challenge since it emphasizes how much remains to be done if the world forest resources are to be utilised rationally.

