

<b>COUNCIL</b>	FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS	CL 59/10 June 1972
<b>CONSEIL</b>	ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE	
<b>CONSEJO</b>	ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y LA ALIMENTACION	

Item 11(a) of the  
Provisional Agenda

Fifty-Ninth Session

Rome, 20 November - 1 December 1972

REPORT OF THE FIRST SESSION  
OF THE COMMITTEE ON FORESTRY (COFO)

Rome, 8-13 May 1972

Summary

The attached Report of the First Session of the Committee on Forestry (COFO) to the Council invites the particular attention of the Council to

- (a) Forestry and the environment (paras. 18 and 19 of the Report).  
The outcome of the UN Conference on the Human Environment will have a bearing on policies and priorities and also an impact on the current work programme and the medium-term plan of the Forestry Department.
- (b) Programme of Work and Medium-Term Plan (paras, 39, 40, 42, 45, 46, 54 and 63).  
The sharpening of the titles of sub-programmes and the priorities accorded them will reflect their relative merits within any area of concentration. The integration of the activities under the Regular Programme and the field programme leads to complementarity and gains in strength. A recommendation is made to strengthen the membership of the Technical Advisory Committee (TAC) of the Consultative Group on International Agricultural Research by the inclusion of foresters.
- (c) World Forestry Day (para. 67).  
To be further discussed at the Seventh World Forestry Congress in October 1972.
- (d) Rules of Procedure (para. 72).  
Member Governments are invited, in the light of experience gained at the First Session of COFO, to comment on its draft Rules of Procedure. The revised draft Rules will be further discussed and adopted at the Second Session of the Committee.



MATTERS REQUIRING THE ATTENTION OF THE COUNCIL

The following excerpts from the report of the First Session of the Committee on Forestry are presented in compliance with the instructions contained in para 162 of the report of the 55th Session of the Council:

Forestry and the environment

Para. 18 - The Committee noted that the outcome of the UN Conference (on the Human Environment being held at Stockholm in June 1972) would be reported to the FAO Council at its next session which would then in turn decide how policies and priorities were affected and also the impact on the current work programme and the medium-term plan of the Forestry Department.

Para. 19 - The Committee expressed the view that consideration of the environment should enter into every forestry decision and in fact permeate everything that is done. It sounded a note of caution against separating the organisms and mechanisms dealing with protection and conservation of natural resources from those involved in the development and utilization of those resources. The two are complementary. This applies at the national as well as the international level ..... As far as action at the international level is concerned, FAO is the body to assure coordination.

Programme of Work and Medium-term Plan (see report of Programme Committee paras. 37-54)

Para. 39 - The Committee suggested that the sub-programmes of all the segments of the Organization should be presented in a uniform and systematic format so that the relative merits of all the sub-programmes within any area of concentration and the state of progress towards the achievement of objectives could be more readily assessed.

Para. 40 - .....the Committee felt that there was still room for sharpening of the titles of some sub-programmes, a better description of their purposes, and clearer accordance of priorities within sub-programmes.

Para. 42 - The implementation of the approved regular programme of work, especially in the matter of studies, meetings, seminars and training centres, was dependent to a quite considerable degree on the availability of extra-budgetary funds, provided mainly by national bilateral aid agencies. The Committee felt that this inter-relationship had complex and far-reaching implications which deserved to be looked into more closely at its next session.

Para. 45 - The Committee commended the way in which activities under the regular programme and the field programme continued to be integrated in the Forestry Department.. ... both programmes complemented one another, each gaining in strength from being over- seen together, with an organizational structure designed to handle this integration.

Para. 46 - ..... this was the only realistic way to conduct these closely interwoven activities. The Committee should continue to be given the opportunity of reviewing all programmes together as had been provided at this first session.

Para. 54 - The Committee felt that the views on priorities which had been expressed by delegates and had been recorded by the Secretariat would give sufficient opportunity to the Forestry Department to have a satisfactory blend of selectivity and flexibility in meeting the desires and needs of Member Governments, and to measure and balance the next medium-term plan for forestry activities.

### Research

Para. 63 - ..... the Committee noted that the Technical Advisory Committee (TAC) of the Consultative Group (on International Agricultural Research) is now composed exclusively of agricultural scientists. As the Consultative Group has intimated its intention to encompass forestry research activities within its terms of reference - which decision the Committee on Forestry welcomed - the membership of TAC should be strengthened by the addition of one or two foresters of world repute.

### World Forestry Day

Para. 67 - ..... the Committee felt that further preparatory work and consultations were necessary in order to obtain the full benefits behind the idea of a "World Forestry Day" and requested the Secretariat to arrange with the Organizing Committee for the Seventh World Forestry Congress to have the matter discussed during that Congress (October 1972).

### Rules of Procedure

Para. 72 - The Committee decided to discuss its Rules of Procedure at its next session, in the light of the experience gained during this First Session ..... it requested the Secretariat to distribute a draft of the Rules to the Member Governments of the Committee, inviting their comments. The Secretariat was also requested to invite comments and suggestions on the Committee's methods of work.

ORGANISATION DES NATIONS UNIES POUR  
L'ALIMENTATION ET L'AGRICULTURE



ORGANIZACION DE LAS NACIONES UNIDAS  
PARA LA AGRICULTURA Y LA ALIMENTACION

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19 May 1972

Dear Sir,

... In accordance with the instructions of the FAO Council,  
I have the honour to transmit herewith the Report of the  
First Session of the Committee on Forestry which was held at  
Rome from 8 to 13 May 1972.

Yours sincerely,

H.K. Seip  
Chairman  
Committee on Forestry

Mr. M. Cépède  
Chairman  
FAO Council



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REPORT

I. INTRODUCTION

1. The First Session of the Committee on Forestry of the FAO Council was held at FAO Headquarters, Rome, Italy, from 8 to 13 May 1972.
2. The session was attended by delegations from 55 Member Nations and representatives of the United Nations, the Economic Commission for Africa, the Economic Commission for Europe, the United Nations Development Programme, UNESCO and the World Food Programme. Observers were present from Iceland, Uruguay and the Holy See as well as from the following non-governmental organizations: the European Confederation of Woodworking Industries, the European Confederation of Agriculture, the International Technical Tropical Timber Association, the International Union for the Conservation of Nature and Natural Resources and the International Union of Forestry Research Organizations. A full list of the participants is given in Annex I.
3. The Director-General of FAO was represented by Roy L. Jackson, Deputy Director-General, and the Forestry Department by B.K. Steenberg, Assistant Director-General.

Address by the Deputy Director-General

4. After welcoming the delegates on behalf of the Director-General of FAO, the Deputy Director-General stated that the establishment of the Committee on Forestry was a significant indication of the important place that forestry and forest industry problems occupied in FAO's activities. The Committee was intended essentially to fulfil two functions: to provide a forum for the periodic review and appraisal of forestry problems of international significance, with a view to ascertaining the main lines along which forest policies should develop; and to advise on the preparation of FAO's future programmes of work. The three policy questions being brought to the attention of the Committee at this first session were connected with particular issues - international trade, conservation of the environment and the employment problem - now in the forefront of current preoccupations, and showing the importance attached to social considerations by foresters today. The Committee's discussions on these questions should be instrumental in identifying international action that could and should be taken, and in defining the contribution to be made by both FAO and member countries. As regards FAO's programme of work in the forestry sector, Mr. Jackson stressed that delegates should concentrate their attention on the medium-term plan, which they should consider in the light of three factors: the financial situation confronting FAO; the trends in the field programme; and the demands likely to be made on FAO as a result of discussions held in other inter-governmental forums. Mr. Jackson outlined the present financial situation and the trends in FAO's field programme, referred to the implications of the Action Plan to be considered at the UN Conference on the Human Environment, and stressed the necessity for FAO's future programmes to be formulated in a rather austere way, with sufficient flexibility to allow for modifications in the pattern of activities and modes of action.

### Election of Officers

5. The Committee unanimously elected as

Chairman: H.K. Seip (Norway)  
First Vice-Chairman: E.A. Takacs (Argentina)

6. As Vice-Chairmen representing the remaining FAO Regions (Africa, Asia and the Far East, the Near East, North America and South-West Pacific) the following were elected:

B. Dioum (Senegal)  
T.N. Srivastava (India)  
M.A. Shirazi (Iran)  
G.P. Thomas (Canada)  
D.A.N. Cromer (Australia)

7. The Chairman, in consultation with the Vice-Chairmen, appointed the following to the Drafting Sub-Committee:

R.K. Arnold (U.S.A.)  
Y. Betolaud (France)  
J.R. Gómez Ricano (Cuba)  
H. Hafsia (Tunisia)  
A. Halasz (Hungary)  
K.D. Menon (Malaysia)

The Drafting Sub-Committee elected K.D. Menon as its Chairman.

### Inaugural Lecture

8. An inaugural lecture on the theme "The Concept of Limits in the Renewal of Natural Resources as a Part of Development Dynamics" was given by Paul-Marc Henry, until recently Assistant Administrator of the United Nations Development Programme and now Director of the Development Centre, OECD, Paris. A full text of this lecture is given in Annex II.

### Adoption of the Agenda

9. The Provisional Agenda (Document COFO-72/1) was adopted without comment. It is given in Annex III. The List of Documents (Document COFO-72/INF.1) is given in Annex IV.

## II. FOREST POLICY ISSUES

### Forestry and the Environment: action proposals on forestry, conservation of genetic resources, national parks and wildlife for the 1972 UN Conference on the Human Environment

10. The Committee was informed about the Forestry Department's preparations for the UN Conference on the Human Environment to be held in Stockholm in June 1972. This involvement included participating in meetings of the Preparatory Committee and compiling two background papers on environmental aspects of natural resources management, FO:HE/72/1

on forestry to which UNESCO and WHO contributed, and FO:HE/72/2 on wildlife, national parks and recreational resources, drafted in collaboration with IUCN, UNESCO and WHO. The UN Secretariat of the Stockholm conference had drawn on these papers and other submissions from governments to establish its final document A/Conf.48/7 (COFO-72/3 Sup.1). The Committee on Forestry was able to examine pertinent extracts from this document dealing with recommendations for international action.

11. The Committee noted that several propositions made by FAO to the Secretariat of the UN Conference had not been accepted for incorporation into the final document for the Stockholm meeting. One of these was, for instance, for new international studies on the indirect benefits of forests, which, it seemed, had been proposed only for national action. Others, including consideration of marginal lands, had been incorporated into other sectoral chapters, for example the chapter on land use.

12. The consensus of a lengthy discussion was that foresters all over the world must readily accept the challenge to play an active part in securing a balance between man's needs and his environment. Forestry had been a part of environmental reasoning for decades if not centuries. Forest services had long assumed environmental responsibilities and should continue to carry out dynamic policies, rousing public opinion to go along with them.

13. It has to be considered, however, what kind of environment was wanted and what could be afforded. Forest production and protection of the environment were not necessarily incompatible but complementary, and there was a great need for foresters to communicate with the public so that the latter, who were sometimes misled by erroneous or emotional propaganda that forestry activities were contrary to the interests of environment, could be kept properly informed about such matters. Possibly the best way to merge and link the social and productive functions of forests was to make forestry a profitable undertaking. Forest authorities should campaign to demonstrate the part played by forest industries in national economic development. The Committee stressed that, although foresters could not perform all these functions by themselves, there was no need for them to be defensive.

14. Recommendations looking towards conservation of the environment must be feasible, easy to put into action, and not over-sophisticated. Forest management must be adapted at times, but it needs to be conceded that some forestry practices, for instance clearfelling, opening of the canopy of natural forests to secure regeneration, or the establishment of man-made forests, while affecting ecosystems, do not need to spoil the environment.

15. Several delegates described the latest advances made in their countries in respect to environmental conservation, for example the establishment of networks of national parks and nature reserves, alleviation of damage caused by obnoxious fumes from industries, conservation of genetic resources, agreement between countries on the protection of migratory birds. The representative of IUCN stressed the role of national parks in this respect, a matter that would be studied in depth at the Second World Conference on National Parks which was to be held in the U.S.A. in September 1972, sponsored by FAO and UNESCO.

16. The Committee concurred with the sectoral recommendations being placed before the Stockholm conference and requested the Director-General of FAO to advise the Secretariat of the UN Conference accordingly. Members were asked to convey this support to their national delegations going to Stockholm. The Committee agreed that, additionally, a recommendation should call for studies on the consequence for forests of urbanization, industrialization and excessive recreational use by the public and of the critical

thresholds beyond which the forest environment will decline. It was noted that a proposal for studies on ecosystem deterioration was included in relation to pollutants of international significance, but this seemed too general.

17. Some delegates expressed the view that, if FAO were given the responsibility by the UN Conference for coordinating an international programme for research and exchange of information on forest fires, pests and diseases, this should not necessitate the creation of any new unit within the Organization. Some other delegates did not share this view. Similarly, some delegates believed that FAO already had the means within its present regular and field programmes to assume new activities for the surveillance and monitoring of the world's forest cover. The Committee was informed, however, that under the Organization's present financial circumstances there would be no chance of FAO undertaking new activities of this kind without additional extra-budgetary financing. The Committee expected that the discussions at Stockholm would help to clarify this matter.

18. The Committee noted that the outcome of the Stockholm conference would be reported to the FAO Council at its next session, which would then in turn decide how policies and priorities were affected, and also the impact on the current work programme and the medium-term plans of the Forestry Department.

19. The Committee expressed the view that consideration of the environment should enter into every forestry decision and in fact permeate everything that is done. It sounded a note of caution to avoid a separation between the organisms and mechanisms dealing with protection and conservation of natural resources and those involved in the development and utilization of those resources. The two are complementary. This applies at the national as well as the international level, and in regard to the private as well as the public sector of the economy. As far as action at the international level is concerned, FAO was the body to assure coordination.

#### Man in the Technology of Forestry

20. The Committee considered Document COFO-72/2 and was informed that this item was a continuation of the discussion on "The Evolving Responsibilities of National Forest Services in the Light of Increasing and Changing Social and Economic Demands" at the last meeting of the ad hoc Committee on Forestry.

21. Several delegates stressed that the national forest policy should be an integral part of the social and economic development plan of the country. Efforts should be made to formulate clearcut objectives for the forestry sector, but each country must decide its own method, as there is no common answer because of widely varying conditions. Not only the concept of financial profitability, but also social benefits should play an important role in setting priorities. The high multiplier and self-generating effects of forestry investments on national economies were emphasized.

22. It was suggested that forestry undertakings could sometimes be combined with agricultural developments in order to include provision of other work opportunities and social services on a local level.

23. The need for integration of the different phases of forestry and forest industries would sometimes call for a restructuring of responsibilities concerning the planning, execution and control of these phases. In order to improve stability of employment, it would be necessary to increase financing and make budgeting more flexible.

24. With regard to mechanization, different policies could be envisaged. In countries with a high rate of economic development, machines must substitute for labour to retain competitiveness, whereas in those countries with a low rate this need is less acute. However, in both cases labour productivity must be increased and this can be achieved by mechanization, improved training of labour, and by providing all-year employment for forest workers. Developing countries are often faced with a scarcity of capital and foreign exchange and, therefore, have interest in an intermediate technology, cutting out arduous and taxing work elements, but retaining labour intensive working methods.

25. Some delegates stressed that public participation in forestry ventures is important and better information to the public is required. Training at all levels is necessary, but up to now such training, in particular of forest workers, has often been carried out on an ad hoc basis. This should be rectified, as vocational training is essential for making use of technology. Work motivation should be stimulated by recognizing the basic demands for satisfying man's attitudes to work - security, health and safety in the occupation, promotion, leisure and earnings at least equal to other employment groups. Incentive systems in the payment of workers could be increasingly employed as a means of increasing productivity. Reluctance towards manual work was often found in the younger generation with good education, but with insufficient practical experience, and this attitude constitutes a recruitment problem in developing as well as in developed countries.

26. The Committee considered that FAO should serve as a catalyst and executor in the transfer of knowledge. Regional groups, like the Joint FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers, should be considered in order to stimulate exchange of experiences and research activities.

27. The Committee stressed that, whereas in the past the economic aspects of forestry have been of prime importance, more emphasis should now be given to human and social criteria in the evolution of forestry. This is also expressed in the main theme chosen for the Seventh World Forestry Congress in October 1972 "Forest and Social-Economic Development" at which occasion "Man in the Technology of Forestry" will be further elaborated.

#### The Implications for Forest Policies of Recent Developments in Trade of Wood Chips

28. The Committee considered Document COFO-72/7 which deals with the rapidly increasing long-distance trade in wood chips and its implications for forestry. Though delegates were satisfied with the analysis in the paper, they were concerned to obtain further detailed information on costs of production, shipping costs, markets and market prices.

29. The Committee was informed of details of the institutional organization for and development of the export trade from Australia and New Zealand and of the special situation of the export of chips of rubber wood from West Malaysia, which had become an integral part of the process of renewing rubber plantation with new high-yielding stock.

30. The Japanese delegate informed the Committee that his country, presently the major market outlet for chips, was prepared to provide information on technology and markets for wood chips, as well as to collaborate in the establishment of feasible wood chip industry in the resource country, through technical aid and financing.

31. The possibility of taking advantage of the long-distance movement of chips to solve the problems of fuller utilization of the mixed tropical forest was considered. Although it had been demonstrated that there was no major technical problem in pulping mixed tropical hardwoods, some delegates felt that the economics and financing of this possibility still presented difficulties. Nevertheless, shipments of mixed tropical hardwood chips for this purpose had been successfully made from favoured locations. There remains the need to improve knowledge on harvesting techniques and on storage.
32. The Committee recognized that, although ships of 100,000 ton capacity or larger for moving wood chips might be favoured for economies of scale, smaller ships would be more adaptable to restricted port facilities and use of more limited forest areas. It was proposed that efforts to design smaller ships to make them more suitable for this purpose could be fruitful in the further development of the wood chip industry.
33. Several delegates stressed the importance of the integration of the mechanized forest industries and the use of wood chips for fibreboard and particleboard. In this context, there was consideration of the break-even distance in costs and returns of moving chips both from residues and roundwood.
34. Reference was made to instances of the prohibition of export of unprocessed wood including chips and attention was drawn to the fact that several industrialized countries found it advantageous, under various conditions, to export chips, often as part of a range of forest products. Despite the obvious advantages of this low capital cost industry in the development of infrastructure and skills, most countries considered it important to regard the export of chips as only the first stage in the development of a local pulp and paper industry to serve domestic or export markets.
35. The Norwegian delegate outlined plans for the FAO/NORAD Symposium on Production, Handling and Transport of Wood Chips, to be held at Hurdal, Norway, from 13 August to 9 September 1972. The symposium aims at reviewing the possibilities and limitations, from both the economic and technological standpoint, of wood chip processing in the forest and long-distance transport, and their effect on forest management and policy. Financial support will be available for 40 participants from developing countries.
36. The Committee expressed its continuing interest in following the developments of this important sector of the forest economy.

### III. REVIEW OF FAO'S PROGRAMME OF WORK IN THE FORESTRY SECTOR

#### FAO Medium-Term Plan 1974-77 and Field Programmes

##### (a) General considerations

37. The main task given to the Committee by the FAO Council was to examine the Organization's Medium-Term Plan 1974-77 (Document C 71/15) and (a) express its views on the gradings A to D accorded to the various forestry sub-programmes within this plan; (b) give guidance to the Forestry Department in determining the priorities which should inspire the preparation of the Programme of Work and Budget for 1974-75; and (c) advise on the trend indicators to be assigned to the forestry sub-programmes for the period 1978-79.

38. To facilitate this work, a procedure was followed of dealing concurrently with both the Regular Programme and field programmes, since the two were strongly inter-related. The Committee was given information on how the 1972-73 approved programme of work was progressing and also some information on earlier years' work. In this connection, many delegates requested that fuller information should in the future be given on past trends.

39. Most of the delegates commended the manner of presentation of the preliminary sub-programme proposals used by the Forestry Department in Document COFO-72/8. The Committee suggested that the sub-programmes of all the segments of the Organization should be presented in a uniform and systematic format, so that the relative merits of all the sub-programmes within any area of concentration and the state of progress towards the achievement of objectives could be more readily assessed. The medium-term plan had substantial value as an indication of the future, reflecting the needs and desires of member countries, but it could not, of course, reflect future budget levels.

40. The Committee recognised that the adoption by the FAO Conference of areas of concentration and programme budgeting as the way to present the FAO programme of work resulted in a distribution of forestry sub-programmes over the areas of concentration in what sometimes appeared to be an anomalous manner. While realizing the reason for this, the Committee felt that there was still room for sharpening of the titles of some sub-programmes, a better description of their purposes, and clearer accordance of priorities within sub-programmes.

41. The Committee was informed about the financial difficulties now confronting the Organization because of currency fluctuations and other factors. Savings were having to be effected by, for example, phasing over a long period recruitment to new or vacated posts and restricting travel. Certain delegates suggested in addition that necessary programme increases should be balanced by reductions in lower priority sub-programmes. The Forestry Department had not yet felt compelled to make significant cuts or reductions in its 1972-73 approved regular programme of work on the grounds of financial restrictions. If any cuts occurred, they were likely to be due to failure to find extra-budgetary sources of funds.

42. The implementation of the full regular programme of work, especially in the matter of studies, meetings, seminars and training centres, was dependent to a quite considerable degree on the availability of extra-budgetary funds, provided mainly by national bilateral aid agencies. The Committee felt that this inter-relationship had complex and far-reaching implications which deserved to be looked into more closely at its next session.

43. Taking up the question of the resumption of the publication of Unasylva, the Committee appreciated that a special consultant was now reviewing the Organization's policy concerning the publication of periodicals. It expressed the firm wish, however, that Unasylva continue to exist.

44. Some delegates expressed the wish that the working means of the Regional Forestry Offices be improved. The Committee was advised that the whole regional structure of the Organization was under review by a consultant appointed by the Director-General.

(b) Field programmes

45. The Committee commended the way in which activities under the Regular Programme and the Field Programmes continued to be integrated in the Forestry Department, as was done within the former Division of Forestry and Forest Industries. The Committee

appreciated that in this way both programmes complemented one another, each gaining in strength from being overseen together, with an organizational structure designed to handle this integration.

46. The Committee expressed the view that this was the only realistic way to conduct these closely interwoven activities. Moreover, the Committee should continue to be given the opportunity of reviewing all programmes together, as had been provided at this first session.

47. The Committee was informed about the new Country Programming procedures under the UNDP. It took note of the considerable growth expected in forestry field operations financed from extra-budgetary resources, mainly UNDP, but also Trust Funds. So-called large-scale projects (worth more than \$ 100,000) would come to represent 85 per cent of the UNDP funds administered by the Forestry Department. It was anticipated that annual expenditure would jump from \$ 11 million in 1971 to approximately \$ 15 million in 1974 or 1975. This latter sum would be at least seven times as much as the present annual budget furnished for the regular programme. In terms of number of projects, large-scale projects in operation were likely to rise from 53 in 1971 to 79 in 1974. This possibility was based on what is known of the Country Programmes either already approved or in draft.

(c) Constructive scrutiny of sub-programmes

48. The Committee endorsed in general the sub-programme proposals for 1974-75 set out in Document COFO-72/8. The matter of priorities as between sub-programmes, and between elements inside sub-programmes, is dealt with later, but the following are some considerations put forward by delegates as they reviewed each sub-programme in turn.

2.1.2.6 - Strengthening of forestry institutions and services

The Committee clearly expressed the belief that the strengthening and modernization of institutions and services were, together with education and training, the very foundations for progress towards the sound development of the forestry and forest industries sectors. The linkages of this sub-programme with sub-programmes concerned directly with conservation of the environment were underlined. Emphasis was laid on the value of organization and method studies and of comparative studies of national forest administrations, including staffing patterns, as a means of assisting developing countries to compose their institutional structures.

2.1.3.6 - Forestry education

The Committee underlined the basic importance of FAO's work related to forestry education and training. The Committee took into account that FAO's past and current activities tended to lean heavily towards forestry education at the university level, and therefore supported the reorientation of the sub-programme in the future to place greater emphasis on the quality of education, on educating for environmental forestry, on vocational-level training in cooperation with ILO; and on education and training for forest industries, to which special stress was given. This reorientation was in fact recommended by the World Consultation on Forestry Education and Training held in Stockholm in 1971. In this connection, some delegates suggested that the designation of this sub-programme be changed to "Forestry and Forest Industries Education and Training".

#### 2.2.1.4 - Forest resources surveys

The Committee questioned the relatively low priority rating given to this sub-programme in the FAO Medium-Term Plan. It would only be justified if related efforts were also undertaken under sub-programme 2.1.2.6, 2.5.3.2 and 2.6.2.4. It was explained that any action programme for the monitoring of forest resources which might emerge from the UN Environment Conference would affect the status of this sub-programme.

The Committee doubted that past FAO work in this field had generated sufficient self-sustaining momentum in developing countries to permit FAO to relax its efforts. Resource survey is a recurrent operation and techniques are evolving continuously. Work in this field would be called for in connection with the operations of the proposed Tropical Timber Bureau.

The Committee considered that study of the integration of logging parameters into forest inventories was a point of importance and should include not only factors of terrain classification, but also the grading of the quality of standing trees. Surveys of minor forest products should not be neglected, since in some countries they form a substantial part of the output from the forest resources.

The Committee took note that the value of the imagery to be obtained by remote sensing from satellites had still to be properly evaluated for forestry purposes, and cautioned against over-haste in abandoning traditional methods of survey until the newer ones had been proven.

#### 2.2.2.5 - Afforestation and reforestation

The Committee noted that this sub-programme was closely dependent on activities under sub-programme 2.2.3.2. on forest tree improvement. Both placed emphasis on the tropics. FAO had in the past been involved in much work leading towards evolving efficient techniques for afforestation and reforestation on arid or degraded land, particularly in the Near East. In this respect, this sub-programme was closely linked with the marginal land activities proposed under sub-programme 2.4.1.3. In addition to its value in the creation of a new resource, afforestation was important for the employment opportunities which it presented. Hence the many projects that had been developed under the World Food Programme.

The Committee welcomed the major projects proposed under this sub-programme. It suggested that financing agencies be invited to the proposed conference on the integration of man-made forests and wood-using industries, since afforestation programmes required a high initial capital input. In assessing the profitability of afforestation projects, due weight should be given to employment and other social benefits.

In the technical field, the various options available should be continually reviewed, e.g. direct seeding or use of bare root plants or container plants. In some cases, conventional methods may need to be modified or abandoned in favour of newer techniques.

The growing and marketing of poplars was becoming of increasing interest to a number of developing countries in addition to the traditional poplar-growing countries in Europe. The membership of the International Poplar Commission now extends to countries in all regions of the world.

#### 2.2.3.2 - Forest tree improvement

Particularly in relation to the whole field of forest gene resources, the Committee recognized that this sub-programme formed the basis on which many other sub-programmes depended and therefore assumed high importance. Improvement of certain forest trees has the potential for raising yields by the same order of magnitude as has already been achieved with other tree crops, for instance rubber, but it is a comparatively long-term process and therefore needs a powerful effort now.

A proposal by the Secretariat for the revision of the FAO Forest Tree Seed Directory was accepted.

The Committee noted the very substantial contributions being made by bilateral aid in this field, and the importance attached to germ plasm conservation by the North American Forestry Commission at its last session. It recognized that FAO's recent financial contribution to known provenance seed procurement in the important coniferous areas in Mexico did not in fact establish the seed bank as originally planned, and hoped that FAO's financial contribution could be further increased.

#### 2.2.4.4 - Silviculture and management

The Committee regarded forest management as being concerned not only with the subjects mentioned in the text under this heading, but also with subjects grouped under a number of other sub-programmes, for instance watershed management, protection and logging.

The Committee laid emphasis on the importance of environment in planning forest management, and noted its many economic and social implications at various levels of decision-making. It welcomed the initial positive reaction of UNDP in regard to financing a training centre on the silviculture and management of tropical high forest.

#### 2.2.4.5 - Forest logging, transport and equipment

The Committee underlined the importance of FAO's work related to logging, transport and equipment. The Committee welcomed the proposed study on the accessibility of forests and forest land, which is linked to the study of the integration of logging parameters into forest inventories under sub-programme 2.2.1.4, and stressed its importance for resource development and utilization.

The Committee stressed that training and improved working methods and techniques give rapid economic and social returns, which should be recognized and reflected in the educational activities of FAO.

The Committee gave recognition to the great value of the work of the FAO/ECE/ILO Committee on Forest Working Techniques and Training of Forest Workers. Work under sub-programme 2.2.4.5 should be carefully coordinated with the activities of the Joint Committee. FAO should examine the possibilities of extending similar facilities to other regions, although the Committee appreciated the difficulties involved.

The Committee supported the convening of the proposed worldwide Conference on Logging and Wood Transport.

#### 2.4.1.3 - Forest and wildlife conservation

Taking into account the accumulated experience of FAO and its various studies and work under this heading, the Committee approved the new approach of pooling a series of these elements under the umbrella of a marginal land programme aimed at preventing further land degradation and rehabilitating it for its potential of goods and services. This would provide protection to down-stream development and/or adjacent land as well. The Committee requested the Forestry Department to go ahead with the work planned under the 1972-73 programme without waiting for the outcome of the UN Conference on the Human Environment, as far as the financial resources permitted. The Committee was informed that a first move in this direction was being taken shortly in the Near East Region. Similar activities for other regions were recommended.

In view of increasing attention to integrated land use and environmental quality, the Committee emphasized the importance of this sub-programme, together with 2.5.2.3, in FAO's whole work on the human environment.

The Committee expressed its concern about watershed management problems and requested the Forestry Department to pay due attention to them within the scope of this sub-programme. Attention was drawn to the conclusions of the Latin American Watershed Management Seminar, held at La Plata, Argentina, from 22 November to 16 December 1971, which outlined useful courses of action to help solve watershed management problems in Latin America.

#### 2.4.2.3 - Forest protection

The Committee stressed the importance of protection, especially from fire which in the absence of thorough protective measures may destroy bigger areas of forest in a year than are being regenerated under afforestation and reforestation schemes. Forest fire risks are common to almost all countries, and the Committee felt that FAO should put more effort into this field. IUFRO should be closely involved in the common effort.

The Committee also supported the need for continuing work on the problems of losses from pests and diseases, which in some countries are estimated to consume more wood than is utilized for the benefit of man. It supported the proposal to hold another world symposium on this subject, but recommended that integrated pest control should be the theme, not just biological methods. Damage by grazing was also cited as a cause of serious losses in some countries, and should receive increased attention under the appropriate sub-programme (2.4.1.3). Harmful effects on the environment of the excessive use of chemicals for forest protection must be taken into account and studied.

#### 2.4.3.2 - Timber treatment, storage and distribution

The Committee was in agreement on the importance of seasoning and wood preservation activities, especially in regard to widening the utilization of lesser used species in the developing countries and competing with substitute materials such as concrete for railway sleepers. There was promotional activity, of course, by the chemical and preservative industries all over the world, and FAO's action was in the main related to providing advice to member countries and to supporting field projects.

#### 2.5.1.5 - Studies of forestry markets

The Committee expressed the view that activities under this sub-programme provided useful assistance to member countries in identifying and appraising markets for their forest products. It recognized that rapid changes are occurring in the forestry sector markets, with traditional materials being supplemented by newly-developed products made of wood or other materials. The geographic distribution of production, particularly for certain sizes and qualities, is shifting to new areas, particularly in tropical regions, and to a broader base of wood assortments as conventional supplies become too limited to

meet growing demands. In this context, the Committee noted that the preparation of analytical studies was to be intensified, such as new appraisals of timber trends and prospects for developing regions, and a revised and updated study of timber trends for Europe.

#### 2.5.2.2 - Forest products marketing and trade promotion

Marketing and trade promotion are key considerations for many countries trying to develop domestic and export markets, and FAO could usefully help with advice and guidance. The Committee was informed of a UNDP-assisted inter-regional project presently in pre-project activities in close association with UNCTAD, intended to explore the possibilities of establishing a Tropical Timber Bureau. The Committee, in taking note of this important initiative to service developing countries, felt strongly that this project should be kept under the aegis of FAO and its Committee on Forestry. The possibility of having regional centres under the central bureau should be examined at an early stage.

#### 2.5.2.3 - National parks and wildlife management

The Committee recognized that national parks can be an important element in environmental protection and that this sub-programme was one of the most effective means of demonstrating FAO's activities in environmental forestry.

Tourism based on visits to national parks and wildlife viewing was becoming an important economic asset to many developing countries. An approach whereby a complete spectrum of parks and reserves can develop was necessary rather than narrowly defining national parks to include only completely protected areas.

Several delegates indicated that FAO should help develop suitable inventory methods for wildlife resources. Reference was made to using remote sensing for this purpose.

#### 2.5.3.2 - Forest industries

The Committee noted that field projects under this sub-programme were increasing and stressed the importance of FAO activities related to forest industries.

The Committee expressed support for the further international consultations which were planned on wood-based panels and pulp and paper.

The Committee supported projects aimed at increasing the utilization of mixed tropical hardwoods, but urged that side by side with these efforts action be taken towards utilizing the substantial volumes of so far little-used hardwood species occurring in many temperate zone areas.

Attention was drawn to the effective role the Joint ECA/FAO Forest Industries Advisory Group was playing in Africa and the Committee expressed the hope that this group and its activities could be expanded. The World Consultation on the Use of Wood in Housing, held in Canada in 1971, was cited as a useful contribution towards promoting wood use.

#### 2.6.2.4 - Forestry statistics, analysis and planning

The Committee welcomed the intention to computerize the statistical data base for the Forestry Department's work in economic analysis and planning.

The Committee commended the wide application and usefulness of the detailed programme outlined under this sub-programme. In particular it stressed the need to assist governments in redefining or updating their national forest policies and plans, as national planning becomes more and more elaborate and integrated.

The Committee recommended that funds should be earmarked at an early stage to publish the proposed manual on forestry development planning.

(d) Priorities of sub-programmes

49. The comments by delegates in the course of the review of the sub-programmes clearly revealed the difficulty in arriving at a consensus on the relative priorities to be accorded to the sub-programmes. Priorities inevitably varied from country to country and from region to region. There was even greater difficulty in reaching agreement on what were the lowest priority sub-programmes or which should be wholly eliminated. Several delegates pointed out that FAO's programme had to cover the whole spectrum, although with varying intensities. Moreover, the Committee noted that uncertainties such as the increased interest in environmental problems and the growing concern with employment would certainly lead to modifications in priorities in the medium term. Delegates expressed the view that there should be no suggestion of an inward-looking approach. The approach must be multidisciplinary.

50. Many delegates stressed the need for flexibility, and suggestions were made to increase the use of consultants and sub-contracts. A suggestion was also made to limit appointments to three years for apportion or percentage of the regular staff. These suggestions, it was felt, would provide greater flexibility in administering the programme of work of the Department.

51. In view of the close relation between certain sub-programmes, some suggestions were made that these could be amalgamated, for instance 2.4.1.3 - Forest and wildlife conservation with 2.5.2.3 - National parks and wildlife management; 2.5.1.5 - Studies of forestry markets with 2.5.2.2 - Forest products marketing and trade promotion; and 2.4.3.2 - Timber treatment, storage and distribution with 2.5.3.2 - Forest industries. These suggestions were not pressed, it being noted that part of the difficulty arose as a result of the classification of details within the Department's programme according to the areas of concentration.

52. Some delegates queried the disparity between the importance of the subject matter and the growth or decline indicator given in Document COFO-72/8. It was explained that, even if expenditure were decreased from one biennium to another, that did not mean that FAO's concern for the subject matter was diminished. If there was a matter of particular importance to a specific country, the Committee was advised that steps should be taken to include that matter in the UNDP Country Programming system. Member countries were advised to submit their requests immediately or it would be necessary to await the next programming cycle, which might be as long as five years.

53. Certain sub-programmes can be identified as having received almost general assent as being of the highest priority. These are: 2.1.2.6 - Strengthening of forestry institutions and services, and 2.1.3.6 - Forestry education. Following closely in numerical order are:

- 2.2.3.2 - Forest tree improvement
- 2.2.4.4 - Silviculture and management (linked with protection)
- 2.2.4.5 - Logging, transport and equipment
- 2.5.1.5 - Studies of forestry markets
- 2.5.3.2 - Forest industries
- 2.6.2.4 - Forestry statistics, analysis and planning

Some delegates identified low priority sub-programmes, but there was no consensus. In fact, some other delegates indicated that these sub-programmes were in their priority list.

54. The Committee felt that the views on priorities which had been expressed by delegates and were taken note of by the Secretariat would give sufficient opportunity to the Forestry Department to have a satisfactory blend of selectivity and flexibility in meeting the desires and needs of Member Governments, and to measure and balance the next medium-term plan for forestry activities.

#### IV. MATTERS ARISING FROM THE 16TH SESSION OF THE FAO CONFERENCE

##### Needs and Priorities in Forestry Research for Development Purposes

55. The Secretariat Note COFO-72/5 and its presentation were received by the Committee as a contribution to the discussion of this item. Numerous interventions were made which can be grouped under the following items: problems, needs and priority areas, policy formulation. In addition, the representative of UNESCO and the IUFRO observer gave useful information on the work programme of their respective Organizations and underlined the potential for cooperation. As for the UNESCO Man and Biosphere Programme, the possibility was mentioned of marginal overlapping of subject-matter, but this was justified by the difference in approach. The Committee heard of the recent reorganization carried out by IUFRO to make it more responsive to rapidly-changing needs and to facilitate a multidisciplinary approach wherever needed. The importance of close collaboration between FAO and IUFRO was stressed.

##### (a) Problems

56. As for the failures to develop, the Committee agreed that in the case of generation of knowledge the reason is the limited availability of research staff and research facilities, and in the case of utilization of knowledge the fault lies in the limited absorptive capacity of existing research institutes. The latter is characterized by a series of problems such as quantity (information explosion), quality, accessibility and relevance. There was consensus that FAO has an important role to play in order to mitigate these shortcomings, or to help certain member countries to tackle these problems. Above all, it should develop overall attitudes favourable to research; train personnel in research techniques; assist and guide in the establishment and growth of research institutions; disseminate technical information derived from research, preferably in cooperation with UNESCO; and develop manuals and guidebooks.

57. The Committee recommended that FAO should give consideration, funds permitting, to the issuance of a revised version of the list of forestry periodicals. It also welcomed the establishment by FAO of an International Information System on Agriculture and Related Fields (AGRIS) and of a Computerized Agricultural Research Information System (CARIS), because of their potential relevance to the promotion and furtherance of forestry and forestry research, respectively.

##### (b) Needs and priority areas

58. There was general agreement with the selection of priority areas for forestry research made by the UN Advisory Committee on the Application of Science and Technology (UNACAST) in its World Plan of Action, and more recently by a select group of European scientists and directors of research and members of UNACAST. The Committee wished, however, to lay particular emphasis on all research related to applied forest production in tropical and sub-tropical areas, including the protection of soil and water resources, and the replacement of complex tropical forests with man-made forests better suited to productive use. The need to halt and reverse the present trend of forest destruction in the tropics was stressed, together with its implications on the orientation of forestry research. Other suggestions made related to investigations into the influence of industrial development on forest ecosystems under various environmental conditions, and

into the inter-relationship between forest management, mechanization of forest operations, and the integrated utilization of the forest resource.

(c) Policy formulation

59. Development means change of existing conditions towards desired goals: such change must be based on knowledge, knowledge is expanded by research; research must be directed, therefore, towards those fields where development priorities are. Such directed research is regarded by another school of thought not only as the most expensive, but also as the slowest and most uncertain of research methods; research development, therefore, should continue to be essentially dependent upon empirical approaches, serendipity, and the brilliance of too few gifted individuals. The Committee recommended that between these two extremes there must be intermediate courses capable of reconciling sense of purpose with imagination, and this course of action should be sought as the most appropriate for forestry research. The approach will vary in accordance with the peculiar conditions prevailing in any given country, within any given region. Any attempt at generalization would be fatal to forestry research development. It was suggested that the possibility should be explored of convening a joint FAO/IUFRO meeting in order to identify research needs for the speedier implementation of the objectives of the sub-programmes of FAO and medium-term plans, and to obtain indications as to who could most appropriately carry out such research.

60. Criteria were mentioned for the selection of projects as part of a national forestry research policy, such as the need for the problem to be real and requiring research attention; the certainty that a gap in knowledge really exists; the estimation that the probability of research success is fairly reasonable; the assurance that research findings can be transferred into practice by the action agency. As the last criterion remains valid only if the action agency (normally the forestry administration) is involved in the choice of research projects and the formulation of relevant research programmes from the very beginning, the Committee recommended that member countries should be encouraged to set up structures whereby researchers and policy makers could meet and agree on a research action programme reconciling to the extent possible the aspirations of one group with the needs of the other group.

61. The Committee recommended that an item should be placed on the agenda of a future session enabling a discussion to be held on the trends in the administration of forestry research, including the role of motivation of research workers. The organization of a seminar was also recommended to discuss the best methods for the swift transfer of research results into practice, with particular attention to the case of private forest owners.

62. It was recognized that forestry research will continue to be done mainly in national institutions and at a few international centres. As forestry practice and relevant research are largely governed by ecology, international activities should be conceived for, and executed within, major ecological zones. The Committee also stressed the importance of simple comparative field observations which, in many cases, can provide useful guidance without requiring heavy financial inputs.

63. Stronger forestry research efforts are undoubtedly needed in the tropics, especially with regard to methods and equipment for harvesting and utilizing existing forests, including more extensive utilization of minor species; protection and management of tropical forest soils and watersheds; selection of species and provenances for introduction; establishment, tending, and protection of man-made forests; use of wood in housing; effectiveness of alternative institutional arrangements for forest development. The possibility could be explored of obtaining assistance from the Consultative Group on International Agricultural Research. In this connection, the Committee noted that the Consultative Group's Technical Advisory Committee (TAC) is now composed exclusively of

agricultural scientists. As the Consultative Group has intimated its intention to encompass forestry research activities within its terms of reference, which decision the Committee welcomed, the membership of its TAC should be strengthened by the addition of one or two foresters of world repute.

#### Establishment of a World Forestry Day

64. The Delegate-General of the European Confederation of Agriculture for the World Forestry Day referred to the various steps which led to the inclusion in the report of the 16th Session of the FAO Conference of a paragraph recommending that "FAO should support the establishment of a World Forestry Day and cooperate in an appropriate manner to this end with Member Nations".

65. The Committee heard with satisfaction that many countries had already proclaimed a World Forestry Day while others were taking steps to celebrate it in future. The Committee endorsed the general objectives underlying the World Forestry Day celebration, understood as a means of bringing to the attention of public opinion the broad justification and meaning of forest policies with all their production, protection, recreational and environmental connotations.

66. It was stated by many delegates that a World Forestry Day could normally be coordinated with, and broaden the scope of, the many comparable activities, such as "Arbor Day", and "Green Week" celebrations which already existed, sometimes with a long tradition, and which were adapted to each country's circumstances. On the other hand it was noted that introducing a World Forestry Day might in certain countries interfere with the work being done on a continuous basis to improve the general public's awareness about forestry problems. It was also stated by some delegates that, due to the considerable effort and careful preparation required, the World Forestry Day celebration might lose momentum and effectiveness if repeated every year.

67. For all these reasons, the Committee felt that further preparatory work and consultations were necessary in order to obtain the full benefits behind the idea of the "World Forestry Day" and requested the Secretariat to make arrangements with the Organizing Committee for the Seventh World Forestry Congress with a view to discussing the matter during the Congress.

68. Some delegates also supported the view that, in order to get broader support from other sectors interested in environment preservation, a proposal for the establishment of a World Forestry Day be brought to the attention of the UN Conference on the Human Environment through the initiative of governmental delegations to the Conference.

#### V. OTHER MATTERS

##### World Forestry Congress

69. The Argentine delegate and President of the Organizing Committee made a statement on the status of the arrangements for the Seventh World Forestry Congress to take place from 4 - 18 October 1972 in Buenos Aires.

70. On documentation he indicated that more than 250 distinguished specialists in the world had been invited to prepare general papers, many of which had already been received and processed; on Secretariat arrangements he indicated that seven world-known professional foresters had been invited to act as discussion leaders. For Plenaries, 24 panellists will coordinate and direct the discussions. The delegate expressed his gratitude to FAO and other national and international organizations which have been assisting the organization of the Congress, with specific mention of SIDA (Sweden) which

has made available a number of fellowships to help participation from developing countries. He stated that already 16 countries, with over 50 films, have registered for the Film Festival. On the International Exhibit of Forestry Equipment he pointed out that some countries have already reserved space and that it was very interesting that at the same time the Second World Aeronautical Exposition will take place bringing together equipment of joint interest. On the Study Tours, the fact that the Congress will take place in October will permit visits both to cold and sub-tropical areas in a very good season.

71. The Chairman expressed in the name of the Committee his gratitude to the Argentine Government for hosting the Congress and for the promising progress of arrangements, with the confidence that this Congress will be very successful.

#### Rules of Procedure

72. The Committee decided to discuss its Rules of Procedure at its next session, in the light of the experience gained during this First Session. To this effect it requested the Secretariat to circulate a draft of the Rules to the Member Nations of the Committee, inviting their comments. A revised version of the Rules would then be prepared, for consideration by the Committee at its next session. The Secretariat was also requested, at the same time, to invite comments and suggestions on the Committee's methods of work: duration of the sessions, procedure for the election of officers, preparation of the documentation, procedure for the preparation of the final report, etc. The Secretariat would report to the Committee on the suggestions received.

#### Date and Place of Next Session

73. In accordance with General Rule No. XXXI of FAO, the Committee agreed that its next session be held in Rome early in 1974, the exact date to be established by the Director-General in consultation with the Chairman of the Committee.



COMMITTEE ON FORESTRY  
COMITE DES FORETS  
COMITE DE MONTES

First Session  
Première session  
Primer Periodo de Sesiones

(8-13/V/1972)

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LISTE DES PARTICIPANTS  
LISTA DE PARTICIPANTES

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ANNEX II

COMMITTEE ON FORESTRY

First Session

(Rome, Italy, 8-13 May 1972)

THE CONCEPT OF LIMITS  
IN THE RENEWAL OF NATURAL RESOURCES  
AS A PART OF DEVELOPMENT DYNAMICS

by

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1. I suggest that it is only proper in the city of Rome to allude to the activities of the Club of Rome and the recent publication "The limits to growth" put out recently in the United States (Universe Books, New York).

You are by now familiar with the concept of exponential growth within a finite system. You are also aware of the rather gloomy projections resulting from the utilization of the world-wide model based essentially on the combination and extrapolation over a period of about 100 years of the fundamental parameters of population growth, growth of GNP in real terms, growth of industrial production, food production and, finally, pollution. I do not intend to deal with this challenging analysis as such. I intend rather to concentrate on the concept of limit as a constraint or as an incentive in the formulation and application of a development policy in the field of utilization of renewable natural resources.

2. I selected this topic not with any intention of lecturing the highly professional audience which I have the honour to address today, but rather to stimulate discussion, taking advantage of the very fact that your own profession and field of activities provided us with one of the best type of problem of exploitation and development over the longest period of time in history, and affected more countries than any other natural resource, with the obvious exception of water.

When Colbert prepared what I believe is the first legislation on the use of forest resources in the Kingdom of France, in 1669, he was in fact initiating a most fundamental approach to the use of a renewable natural resource with a view to ensuring a sustained yield of timber and fuel for the future generation. Could it be said that he was echoing somewhat belatedly the poetic complaint of Ronsard on the Forêt de Gâtines? Was he in fact more concerned as a good mercantilist with ensuring that France should husband carefully her forest resources in order to build a powerful fleet for trade and war? This was barely 300 years ago. Since then the pattern of accelerated consumption of raw materials and of natural resources has extended from the western part of Europe to the whole world. It can be said that for the purpose of exploitation the world is indeed one.

No part of the world, as remote as it can be, is inaccessible to the miner, the forester or the developer. It is a question of cost and alternative choices, obviously not one of physical capacity.

3. It would be interesting to reinterpret the various theories of imperialism which were flourishing at the end of the 19th century and the beginning of the 20th in the light of the disproportionate use of natural resources by the West expanding their network of physical exploitation and commercial transactions to embrace the whole world from the point of view of the competitive eagerness of the most advanced European industrialised nations to ensure the very basis of their competitive growth. It would be revealing to contrast the historical behaviour of the North American nations which found within their own territory what seem to be inexhaustible natural resources in mining, forestry and water, as well as space. In this perspective, we could probably understand better the desperate claim put by the so-called axis powers between the two world wars looking for space and direct access to raw materials, forest and mining resources and tropical soil to produce edible oil.

It is a tribute to work done by international agencies such as FAO in the field of natural resources that no country would claim now to have the exclusive and so to speak monopolistic access to natural resources. True enough, the vast advance taken by the most developed countries in western Europe and North America has resulted in a situation of quasi-monopoly through international trade and various devices of the international credit system. No nation seems to have been paralysed in its expansion by its inability to have access to the basic raw materials. Somehow the problem has become one of relative cost rather than physical access to resources. A kind of international code of behaviour in this respect has prevailed. Nobody is suggesting, for instance, that to slow down the expansion of Japanese production, Japan should be directly or indirectly prevented from getting the raw materials it desperately needs and yet does not produce.

4. The situation seems to be ripe for a global inventory of renewable and non-renewable natural resources. In fact, this world inventory is already taking place in the field of forestry, in the field of water resources and in the field of mining. Work is being undertaken in the same direction for the resources of the sea, animal and mineral. The instrumentalities and the modalities of these inventories are not clear as yet nor are they uniform. Their use to guide national policy has not been fully examined, nor their implications fully understood. There is a kind of woolliness in the prevailing views on the subject, and yet conclusions are already derived, most of them of a pessimistic nature, on the "rapid exhaustion" of the world's natural resources. To put it differently, the finity of the world resources is accepted as a postulate of a semi-philosophical nature but this finity cannot possibly be put at this stage with any amount of precision in quantified form.

5. Let us turn for one moment to the question of forestry resources as an illustration. We should note first that the improvement of the techniques of surveying the world forestry resources has been continuous, in direct relation with the progress made in aerial photography, the use of the computer, the improved sampling techniques and the new instruments for tree measurements (as mentioned in the 1963 FAO World Forestry Inventory). The 1963 figures showed that for the world as a whole, the forest land represented over 4,000 million hectares, that is, 29% of the land area of the world. From this forest land the area of forest proper was probably about 3,800 million hectares. As to the world consumption of forest products, it was estimated by FAO in 1967 (Study No. 16), including wood use for fuel, to be 2,692 million m<sup>3</sup> by 1975. It is universally acknowledged that forest products represent one of the most important raw materials in the world economy and that their consumption and trade will increase at least as fast as the growth of GNP in the world as a whole. This makes any methodology and conclusion reached by the specialists on the optimum rate of exploitation of this natural resource (as an integral part of the parameter of world consumption in relation to objective limits in time and space) extremely significant. For instance, if you were to tell us that the

time had come for a systematic rationing of forestry products for certain types of use and decide to put in reserve, let us say, half of the forest land, this would have immediate and as a whole catastrophic effect on many sectors of the world economy and on many regions of the world. Let us suppose that, as in war time, newsprint for instance was rationed as a scarce commodity. Who would decide the allocation by continent of the available material? Who would decide that the United States should consume more than Dahomey on a per capita basis? Should we take the average consumption of the past 50 years as a guide or should we, on the contrary, decide, for some good reasons, that the United States have too many newspapers and Dahomey not enough? This illustrates the first point I wish to emphasize. Any global diagnosis of the availability of resources and any recommendation as to the exploitation and access to these resources from one central point, outside the market forces, would imply highly explosive judgement of values or exercise of supreme power.

6. Fortunately, this is not the message we receive from the foresters. We are told that we are still very far away from an absolute ceiling as to the rate of exploitation of known forestry resources. We are told that within the framework of a permanent monitoring and updating of data collected for the purpose of the world inventory, at least three approaches are at our disposal to redefining what could be an optimum rhythm of exploitation:

- (a) An improved technology which will give us the possibility of using different varieties and use better sorts which are already under extensive exploitation;
- (b) man-made forests are being established in certain areas with a very high rate of productivity;
- (c) the vast forested areas which can be made accessible or wide-accessible are not yet rationally exploited.

7. The progress in technology is obvious in many fields, one of them is in the field of pulp and paper which consumes at least a quarter of forest products other than fuel. Technological improvements are also feasible in many other industrial uses. This illustrates the second point which can be made for any natural resource. There is always a vast margin for technological improvement resulting in a better product produced at a lesser cost of raw material per unit of production.

8. The second point relates to what we could call man-made natural resources. Over a period of 5,000 years, or possibly more, man has reshaped his environment by clearing forests, putting land into permanent agricultural use, using surface ground water to correct the uncertainties and irregularities of climatological conditions. In this respect it seems that an undue pessimism dominates the thinking of futurologists when they use the criteria of unit of cultivable land in relation to world population. Not only the productivity of land can be improved enormously. (It is considered reasonable that an increase of 5% yearly could be expected in agricultural production taking the world as a whole). It is also true that food can be produced without soil under certain conditions and it is finally obvious that vast areas of land in the world, including forest land, can be put to much better use than at present.

9. We note with encouragement that the yield of man-made forests is much higher on a self-sustained basis than the yield of natural forests. I am told that it is possible to obtain from 25 to 50 cubic metres per hectare and per year of wood from man-made forests, for instance in Chile, as compared with 5 cubic metres for natural pine forests. Let us not extrapolate too soon on this point. Let us be as cautious as we are in the face of the so-called green revolution with a possible doubling of yield in rice and wheat for instance, but at least let us be hopeful. Let us note that new avenues are open for spectacular development. We have a right to expect that "man-made forests"

will make an increased and sizeable contribution to cover the increased needs for mankind. I have always been impressed by the history of natural rubber which, after all, is produced by a tree. I have read with great trepidation the history of *hevea brasiliensis* - the radical transformation of what used to be a back-breaking job of collecting the latex looking for one tree among thousands of others in the perpetual half-light of the forest jungle into a clean and civilising business of managing man-made plantations in another part of the world. This, after a transfer and transplantation which reads like a detective novel. Rubber plantation gives us another proof of marriage between man and nature, with a direct gearing in the industrial development.

10. Having noted that technology and continuous research are fundamental factors in raising the ceiling of available natural resources, we should also issue a sobering note. It is only through a high level of discipline and organised action that these improvements have been made possible. Whenever similar operations were rushed in with insufficient preparation and insufficient study of the basic factors, such as soil and water resources, and generally speaking, ecological factors, failures have been spectacular. Also the operation on an insufficient scale and improvement with limited means without sufficient emphasis on extension services and marketing factors has led to disappointment and discouragement.

11. A specific aspect of the work of reforestation and of management of existing resources is that it can be based and coupled with the mobilisation of human resources. All over the world governments have mobilised their youth in one form or another to deal with reforestation. From the individual schoolboy planting on "tree-day" a symbolic tree to the most advanced research worker in the technological use of the wood, there is a continuous chain of mutually supporting and complementary activities where the consumer is made aware of his responsibility as a protector and an investor in the common treasury of mankind. This world-wide awareness of the problem is a result of your persistent work as foresters and of the policy of your country as a member of the FAO. Let us express the wish that a similar awareness of the problem of limit of exploitation and of the necessity for a rational policy of reinvestment on a world-wide basis, and of the world-wide concept, as far as access to a raw material of fundamental importance is concerned, could be extended to other natural resources such as water, soil and mineral resources.

12. The belief in the advancing frontier of technology and in the capacity of human groups on a national, regional and world-wide basis to organise themselves for the common good, must be balanced by a clear appreciation of the many obstacles on the road to human solidarity. (i) No policy of conservation and reinvestment (covering recycling in the industrial field) can be implemented without a systematic and continuous inventory of the resources concerned through the use of the most advanced technology; (ii) any projection or pattern of use of the resources concerned, should be qualified through a systematic study of alternative strategies using not only simulation by mathematical models but simulation by analogous models (as now being done in the field of ground water); (iii) no long-term decision on a given resource should be made without simultaneous evaluation of the prospects or the corresponding man-made synthetic raw material. On the last point, one should not confuse the projection of the existing "state of affairs" with the projection of a desirable state of affairs which, in turn, would imply alternative strategy now rather than a passive attitude of "letting the matter follow its course". (iv) The notion of "elastic limitation and rational use" including the corresponding investment policy should be made quite distinct from any decision involving the stock-piling of basic raw materials for strategic purposes. In other words, the guideline for a world-wide policy in this field of natural resources should be based on an open world economy where market forces (within legislative regulation, international or national) would play their role rather than arbitrary decisions by uncontrolled blocks or groups of interest; (v) the idea of limit should not be confused with a notion of scarcity.

Conversely, artificial scarcity or rationing which may result from unequal distribution of income, should progressively be eliminated within a dynamic programme of development of natural resources on a world-wide basis.

13. The subject that I have selected for this opening session may have sounded slightly restrictive. Even as a layman I should probably have made clear that I was also aware of the fact that forests have not to be considered only from the point of view of their potential production of raw material for direct human use. We know that forests play the most important role in "conserving and enhancing environmental quality at both the global and local level" (FAO paper presented for Stockholm). From the angle of environmental policy, FAO is presenting basic proposals to the Member Governments. I note with great interest, among others, the creation of a world forest appraisal programme to monitor continuously the world forest cover. These proposals will certainly fit in harmoniously with a general earth-watching programme proposed by the Secretariat of the Conference and will no doubt be inspired by the remarkable precedent of the world weather watch to which it is closely related through ecological parameters. I would certainly suggest that foresters should not be shy in spreading their gospel of rational conservation through rational exploitation. I would like to ask them not to be shy in spreading their dynamic optimism as to the future of planet earth provided man uses his reason as well as the much needed self-discipline without which the threatening catastrophe could not be avoided.



COMMITTEE ON FORESTRY

First Session

(Rome, Italy, 8-13 May 1972)

AGENDA

1. Address by the Director-General
2. Election of Officers
3. Adoption of Agenda

FOREST POLICY ISSUES

4. Forestry and the environment (action proposals on forestry, national parks and wildlife for 1972 UN Conference on the Human Environment)
5. Man in the technology of forestry
6. Implication for forest policies of recent developments in trade of wood chips

REVIEW OF FAO'S PROGRAMME OF WORK FOR THE FORESTRY SECTOR

7. The FAO Medium-Term Plan 1972-77
  - (a) Programme of Work 1972-73 - Implementation to date
  - (b) Programme trends for 1974-77 and indications for 1978-79
8. Field programmes - Policy and operational aspects

MATTERS ARISING FROM THE 16TH SESSION OF THE FAO CONFERENCE

9. Needs and priorities in research for development purposes
10. Establishment of a World Forestry Day

OTHER MATTERS

11. Seventh World Forestry Congress
12. Other business
13. Date and place of next session

REPORT

14. Adoption of Report



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LIST OF DOCUMENTS

<u>Item of Provisional Agenda</u>	<u>Code Number of Document</u>	<u>Title of Document</u>
3	COFO-72/1	: - Provisional Agenda
4	COFO-72/3	: - Forestry and the Environment (Action Proposals on Forestry, National Parks and Wildlife for 1972 UN Conference on the Human Environment) (Secretariat Note)
"	COFO-72/3 Sup. 1	: - United Nations Conference on the Human Environment (Extracts from the Conference documentation)
5	COFO-72/2	: - Man in the Technology of Forestry (Secretariat Note)
6	COFO-72/7	: - The Implications for Forestry of Recent Developments in Long-Distance Trade in Wood Chips (Secretariat Note)
7(a)	C 71/3	: - The Director-General's Programme of Work and Budget for 1972-73 (Reference Document)
"	C 71/4	: - The Work of FAO 1970-71 (Reference Document)
7(b)	COFO-72/8	: - Programme Trends for 1974-77 and Indications for 1978-79 (Secretariat Note)
"	C 71/15	: - The FAO Medium-Term Plan 1972-77 (Reference Document)
8	COFO-72/6	: - FAO Forestry Field Operations (Secretariat Note)
9	COFO-72/5	: - Needs and Priorities in Forestry Research for Development Purposes (Secretariat Note)
10	COFO-72/4	: - Establishment of a World Forestry Day (Secretariat Note)
"	COFO-72/4 Sup. 1	: - Information Note on the Establishment of a World Forestry Day (submitted by the Delegate-General for the World Forestry Day of the European Confederation of Agriculture)

INFORMATION SERIES

- COFO-72/INF. 1 : Provisional List of Documents
- COFO-72/INF. 2 : Information for Participants
- COFO-72/INF. 3 : Provisional List of Participants
- COFO-72/INF. 4 : Provisional Time-Table
- COFO-72/INF. 5 : Membership for the Period 1972/73

