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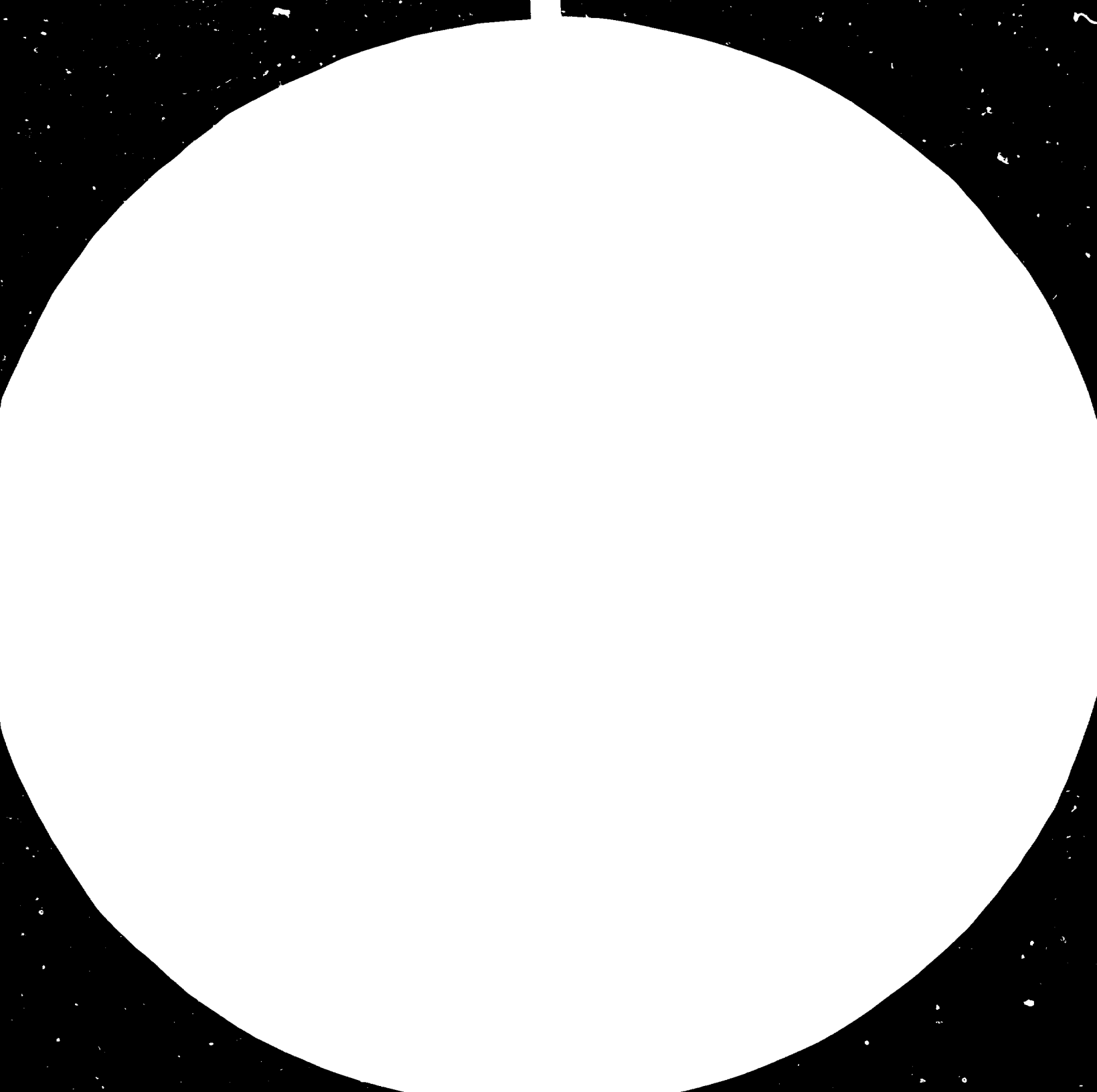
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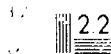
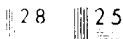
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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION  
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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# FIRST CONSULTATION ON THE WOOD AND WOOD PRODUCTS INDUSTRY

Helsinki, Finland, 19–23 September 1983

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REPORT

(Consultation on wood and  
wood products industry).

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PREFACE

The Second General Conference of the United Nations Industrial Development Organization (UNIDO), held at Lima, Peru, in March 1975, recommended that UNIDO should include among its activities a system of continuing consultations between developed and developing countries with the object of raising the share of the developing countries in world industrial output through increased international co-operation.<sup>1/</sup> The General Assembly, at its seventh special session in September 1975, endorsed the recommendation and requested UNIDO to implement it under the guidance of the Industrial Development Board.

Eighteen Consultations have been convened since 1977 covering the following industries: capital goods, agricultural machinery, iron and steel, fertilizer, petrochemical, pharmaceutical, leather and leather products, vegetable oils and fats, food-processing, industrial financing, and training of industrial manpower.

In May 1980, the Industrial Development Board decided to place the System of Consultations on a permanent basis, and in May 1982 it adopted the rules of procedure <sup>2/</sup> according to which the System of Consultations was to operate, including its principles, objectives and characteristics, notably:

The System of Consultations shall be an instrument through which the United Nations Industrial Development Organization (UNIDO) is to serve as a forum for developed and developing countries in their contacts and consultations directed towards the industrialization of developing countries;<sup>3/</sup>

The System of Consultations would also permit negotiations among interested parties at their request, at the same time as or after consultations;<sup>4/</sup>

Participants of each member country should include officials of governments as well as representatives of industry, labour, consumer groups and others, as deemed appropriate by each Government;<sup>5/</sup>

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<sup>1/</sup> Report of the Second General Conference of the United Nations Industrial Development Organization (ID/CONF.3/31), chapter IV, "The Lima Declaration and Plan of Action on Industrial Development and Co-operation", para. 66.

<sup>2/</sup> The System of Consultations (PI/84).

<sup>3/</sup> Ibid., para. 1.

<sup>4/</sup> Ibid., para. 3.

<sup>5/</sup> Ibid., para. 23.

Each Consultation shall formulate a report, which shall include conclusions and recommendations agreed upon by consensus and also other significant views expressed during the discussion.<sup>6/</sup>

The Industrial Development Board, at its fifteenth session in May 1981,<sup>7/</sup> decided to include the First Consultation on the Wood and Wood Products Industry in the programme of Consultations for the biennium 1982-1983.

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<sup>6/</sup> Ibid., para. 46.

<sup>7/</sup> Official Records of the General Assembly, Thirty-sixth Session, Supplement No. 16 (A/36/16), para. 171.

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## INTRODUCTION

### First Consultation

1. The First Consultation on the Wood and Wood Products Industry was held at Helsinki, Finland, from 19 to 23 September 1983. The First Consultation was attended by 165 participants from 54 countries and 18 international organizations (see annex I).

### Background to the First Consultation

2. In October 1981, an ad hoc expert group meeting was held to advise upon the subjects and methodology of regional surveys to be carried out in Africa, Asia and Latin America of the performance of developing countries in the wood and wood products industry and the obstacles they faced in increasing their share in world industrial output in that sector.

3. Those surveys were used as background material for three regional meetings held in 1982:

- (a) To discuss the current situation in each region;
- (b) To identify constraints to the development of primary and secondary wood processing in each region;
- (c) To make proposals to improve international co-operation so as to overcome the identified constraints;
- (d) To select issues for discussion at a global preparatory meeting.

4. The Global Preparatory Meeting was held at Vienna, from 24 to 26 January 1983, to select the priority issues to be considered at the First Consultation. Discussion papers for that Meeting were prepared by UNIDO and FAO. The Meeting recommended:

Issue No. 1: The development of primary and secondary wood-processing industries

Issue No. 2: Measures to promote the use of wood and wood products.

AGREED CONCLUSIONS AND RECOMMENDATIONS

Issue No. 1: The development of primary and secondary wood-processing industries

Conclusions

5. The wood sector is important for the economy of the developing countries and their current share in total world production is not commensurate with national resources.
6. There are advantages to processing raw material close to its source, and developing countries should increasingly engage in primary and secondary wood processing activities.
7. Among the constraints faced by the developing countries, obtaining finance for the establishment of processing plants is a major difficulty.
8. Other constraints encountered by partners are the frequent lack of transportation infrastructure and managerial and skilled labour at all levels, as well as conditions for project identification and implementation, which affect the development of the sector.
9. The establishment of the wood-processing industries in developing countries could be accelerated through innovative forms of international co-operation.
10. Training programmes should be aimed at satisfying the precise needs of industry at all levels. Such training should be given as close as possible to the raw material source and should take into account the level of knowledge of the trainees and of the technology in the country concerned. Furthermore, industry-oriented training increases job safety and productivity of the operation.
11. Whereas a considerable number of research and development institutes in both developing and developed countries are active in the wood sector, there is considerable scope for enhancing collaboration to ensure the fuller use of existing facilities and resources at all levels.
12. Although a considerable amount of information resulting from research, technological developments etc. exists, there are serious shortcomings in its format and dissemination to potential users.

Recommendations

13. The Consultation recommended that UNIDO should:

(a) Develop, in co-operation with a panel of international experts, taking into account the work of international organizations such as UNCITRAL, UNCTAD and ATIBT (Association technique internationale des bois tropicaux), contractual checklists for the elaboration of long-term collaboration arrangements in joint ventures, provision of know-how, training, management, marketing etc.;

(b) Identify, in collaboration with other international bodies, the existing facilities and availability of specialized research and development institutions in both developed and developing countries and identify areas of existing and potential co-operation between them, for example, through twinning arrangements, to ensure a full utilization of natural resources in the developing countries;

(c) Give priority to an in-depth study of shipping and transport in view of the high impact that these costs have on the price of the products in the domestic market and on the export earnings derived from wood products; the results of that study should be presented to a second consultation on the wood and wood products industry;

(d) Promote co-operation between member States and in particular between developing countries in the preparation of training manuals that could be translated into vernacular tongues, suitable to the needs and educational level of the developing countries concerned;

(e) Direct its activities, in collaboration with FAO and UNCTAD, to develop the regional and global information base necessary for the development of the wood and wood processing industries, particularly in developing countries.

Issue No. 2: Measures to promote the use of wood and wood products

Conclusions

14. Based on a sustained and increased resource base the development of primary and secondary wood processing industries could promote many important national objectives such as economic growth, balance of payments, rural development, employment, ecological balance, regional balance and improved standard of living.

15. A substantial increase of the utilization of the resource base and a better timber economy can be achieved by the promotion of commercially less accepted species, in particular for use in construction and housing.

16. To promote commercially less accepted species the available information on them should be disseminated. Research on the species composition of the forests as well as on the properties of the species should be increased.

17. The greater use of the commercially less accepted species for structural purposes could be encouraged by further consideration of methods of selection of species according to strength properties and durability.

18. The greater use of wood can contribute to national housing programmes in two main ways: the use of prefabricated components by builders and the supply of materials suitable for self-build techniques. In some countries codes and regulations hinder the use of wood for housing. In many cases there is no justification for this if proper specifications and construction methods are employed.

19. Psychological prejudice against wooden houses exists in many developing countries through the association of the use of wood with poverty and improvised shelter and through fear of fire and decay. Such prejudice could be overcome by development of suitable designs minimizing fire risks and improving durability, and promotion through demonstration projects.

20. Developing countries encounter difficulties in enlarging their share of world trade in wood and wood products due to, among other factors, tariff and non-tariff barriers, the lack of adequate marketing information, high freight rates and lack of standardization.

#### Recommendations

21. The Consultation recommended that:

(a) UNIDO, in co-operation with appropriate international organizations, should examine the possibility of developing an internationally acceptable strength-grading system for tropical timber and other species from developing countries used for structural purposes and of stress-grading rules. These results to be presented to national bodies as soon as possible and to a possible second consultation on the wood and wood products industry;

(b) FAO, in co-operation with appropriate international organizations, should increase the dissemination of available information and results of research on technical properties of commercially less accepted species and provide the necessary assistance in preparation of forest inventories to determine the available volume of these species;

(c) UNIDO should compile and disseminate information on existing and new uses of wood in construction, especially those suited to the needs and conditions of developing countries and promote demonstration projects for that purpose;

(d) UNIDO should promote education and training at all levels related to wood technology and the use of wood in construction, in particular training courses for architects and structural engineers from developing countries in order to familiarize them with design practices suitable to their needs in the use of wood for construction;

(e) UNIDO, in co-operation with the appropriate United Nations bodies, should initiate specific studies related to the participation of developing countries in the world trade of wood and wood products on the technical requirements that affect the import of wood and wood products; and UNIDO should request ITC-UNCTAD/GATT to provide and disseminate market information to increase the sale of wood and wood products;

(f) UNIDO, in co-operation with appropriate bodies, should promote the dissemination of information on the environmental aspects of the wood and wood processing industry, especially with regard to the development of rural areas.

#### General

22. Finally, in the light of the above recommendations, the Consultation recommended that the Industrial Development Board of UNIDO should consider the convening of a second consultation on the wood and wood products industry that would, without neglecting the primary industry, emphasize the secondary wood processing industry because (a) it is far less developed than the primary wood processing industry in developing countries; (b) it can provide for the improvement of living conditions; and (c) it is labour intensive.

## I. ORGANIZATION OF THE CONSULTATION

### Opening of the Consultation

23. The First Consultation on the Wood and Wood Products Industry was opened by the Minister of Trade and Industry, Mr. Seppo Lindblom, of the Government of Finland.

24. On behalf of his Government, the Minister welcomed the participants of the Consultation to Finland. He said that as UNIDO had an important role to play in industrialization, which was a catalyst of the development process in the developing countries, and FAO had knowledge and experience in questions related to wood and primary wood products, it was natural that close co-operation had been established between them for the Consultation. A key element in his Government's foreign policy was support of the United Nations system, whose role was crucial to solve certain current problems.

25. The Director of the Division of Industrial Operations of UNIDO, representing the Executive Director of UNIDO, addressed the Consultation. He thanked the Government of Finland for hosting the Consultation, and praised the active role played by Finland in furthering the development and industrial objectives of the developing countries. He also thanked FAO for its co-operation, the Consultation being the first such meeting co-sponsored by two bodies of the United Nations system.

26. He noted the current unfavourable position of the developing countries, and the influence it would have on their future industrialization strategies and policies, and said their most important need was for increased self-reliance. Half the world's closed forest and other woodlands were in the developing countries, but their share in world manufacturing of wood products was small. In recent years, traditional log-exporting countries had started to implement policies aimed at increasing their value added, which, he said, was a welcome trend.

27. The Consultation should identify the key problems faced by developing countries in the wood and wood products industry and propose possible solutions by international action. The various obstacles - tariff and non-tariff barriers, lack of marketing channels for processed products, the need to standardize products - to exporting from developing countries should be discussed.

28. Although the irrational felling of primary species and the neglect of commercially less accepted ones were not new problems, they were raised at the Consultation in connection with the industrial use of the commercially less accepted species.

29. The Director of the Forest Industries Division of FAO addressed the Consultation on behalf of the Director General of FAO, and said he appreciated the co-operation between FAO and UNIDO. The FAO input to the Consultation had been according to an agreement between the two organizations that FAO would be responsible for the resource-linked primary industries, including mechanical wood industries and pulp and paper, and UNIDO would cover secondary wood industries and paper conversion.

30. According to FAO statistics, a change was taking place in developing country exports. Although hardwood logs were still the largest single item of forest product exports, sleepers, sawnwood, plywood and veneer exports were increasing. Some developing countries were moving from log exports to wood processing, and some of that was for the domestic market. Although it was desirable that primary processing for export be carried out within the countries themselves, there were many obstacles to such an approach.

31. He pointed out that the utilization of lesser known species was one of the major subjects for discussion at the Consultation, and that approach could result in a more efficient use of tropical forest resources. However, both the advantages and disadvantages of such utilization must be considered.

32. He stated that appropriate technology for developing countries had often been discussed, but FAO had become aware that not only had technology to be appropriate, but also the whole concept of industry had to be appropriate and must be adapted to local technical, managerial and financial capabilities and to take into account the requirements of the local population. He concluded by asking the participants to give attention to appropriate forest industries in their deliberations.

33. The Deputy Director of the Policy Co-ordination Division and Head of the Negotiations Branch of UNIDO addressed the Consultation in order to provide guidance on the objectives of the System of Consultations.

34. Recalling that the Industrial Development Board had adopted the rules of procedure for the System of Consultations, he stressed some of its characteristics, namely: (a) Consultations took place between member

countries and included representatives of Government, industry and labour; (b) decisions were taken by consensus both at the level of participants and the Bureau of the Consultation; (c) the System of Consultations involved activities preceding and following a series of meetings programmed in advance. He stressed that the continuity of consultations was the key to their effectiveness.

35. He named the industrial sectors that had already been the subject of one or more consultations and described how they had led to a better understanding of the changing patterns of each sector within the framework of the world economy. In that way the provision of assessed information that was discussed and verified by participants had already proven to be a useful exercise. The System of Consultations also permitted the consideration of new forms of industrial co-operation and of contractual arrangements that might better balance the interests of the parties involved. That had been the case in various sectors such as fertilizers, petrochemicals, pharmaceuticals, agricultural machinery, leather and leather products, and the training of industrial manpower.

36. Since the establishment of the System of Consultations, considerable experience had been acquired. He stressed the need to go progressively into depth in a variety of subjects in order to arrive at concrete results.

37. He concluded by informing participants that the final report to be adopted at the end of the current Consultation would include two main parts: the first being a summary of the main points discussed, including those on which divergent opinions were expressed, and the second being the conclusions and recommendations of the Consultation. The latter were particularly important in order to further the discussions initiated at the Consultation and should be as practical as possible and directly related to the issues submitted for discussion.

#### Election of officers

38. Tuija Vihavainen (Finland) of the Technical Research Centre was elected Chairwoman.

39. Jan Bim (Czechoslovakia), Directorate General of Wood Industries, Prague, was elected Rapporteur.



40. Four Vice-Chairmen were elected as follows:

S. Keramane (Algeria), Directeur général, Société nationale du liège et du bois

Max Meulenhoff (Indonesia), Director, Forest Product Processing, Ministry of Forestry

Mario Gonzalez Muzquiz (Mexico), Director General, Duraplay-Parral

Carol Colloton (USA), Alternate Permanent Representative, Permanent Mission of the United States to UNIDO

Adoption of the agenda

41. The following agenda was adopted:

1. Opening of the Consultation
2. Election of Chairman, Vice-Chairmen and Rapporteur
3. Adoption of the agenda
4. Discussion of the issues
5. Other business
6. Adoption of the report of the Consultation

Establishment of working groups

42. The Consultation established two working groups to discuss the following issues, and to prepare conclusions and recommendations for consideration at the plenary session:

1. The development of primary and secondary wood-processing industries.
2. Measures to promote the use of wood and wood products.

43. Amantino Ramos de Freitas (Brazil), Instituto de Pesquisas Tecnológicas do Estado de Sao Paulo, was elected Chairman of Working Group 1; and Nils-Erik Nilsson (Sweden), National Board of Forestry, was elected Chairman of Working Group 2.

Adoption of the report

44. The report, including the reports of the working groups, was adopted by consensus on Friday, 23 September 1983, at the final plenary session of the First Consultation.

Documentation

45. Documents issued for the Consultation are listed in annex II.

## II. REPORT OF THE PLENARY SESSIONS

### Presentation of the issues by the UNIDO secretariat

#### Issue 1: The development of primary and secondary wood-processing industries

46. A representative of the UNIDO secretariat presented issue 1 (ID/WG.395/7). He said that in 1980 the developing countries had 52.4 per cent of world forest resources by area, and 62.7 per cent of the total standing volume was in exploitable forests. Between 1969 and 1979 their production of sawnwood and plywood increased by an average of 5 per cent and 13 per cent respectively each year.

47. While in 1975 47 per cent of world roundwood was industrial roundwood (the balance being fuelwood), it was forecast that that percentage would increase to 53.4 by the year 2000. It was anticipated by FAO that the timber deficit in the developed market economy countries would increase from 75 million m<sup>3</sup> (roundwood equivalent) in 1975, to 130 million m<sup>3</sup> in 2000. The surplus of the developing countries would increase from 41 million to 80 million m<sup>3</sup>, and the centrally planned economies from 34 million to 50 million m<sup>3</sup> respectively.

48. He concluded by stressing the importance of recent technological developments and the need to integrate processing activities and increase training, research and development. He invited participants to focus on the points for discussion covering questions related to increased domestic processing of wood, collaboration arrangements to stimulate mechanical processing in developing countries and co-operation between developed and developing countries in the field of research and development.

#### Issue 2: Measures to promote the use of wood and wood products

49. In introducing issue 2 (ID/WG.395/8), the representative of UNIDO pointed out four main problems: (a) development of local markets; (b) promotion of wood in construction; (c) promotion of commercially less accepted species; and (d) trade promotion measures and marketing.

50. He stated that even considering the differences in per capita income, the consumption of wood in developing countries was remarkably low, for example, their annual consumption of sawnwood was only 20 m<sup>3</sup>/1,000 persons whereas in developed countries it was 300 m<sup>3</sup>/1,000 persons. The difference was even greater for wood-based panels, annual consumption being 2 m<sup>3</sup>/1,000 persons

in developing countries and 100 m<sup>3</sup>/1,000 persons in developed countries. He indicated that given the current trends in world consumption, by the year 2000 developing market economies would only be consuming 14.5 per cent of world production of sawnwood and 11.9 per cent of wood-based panels.

51. He stressed that many developing countries with important forest resources and increasing housing deficits could increase the use of wood as a building material. Many developing countries seemed to be unaware of the advantages of wood, such as fire resistance, easiness to work and low cost. Hindering an expanded use of wood was the lack of (a) technical research and design; (b) acceptability of wood in housing; and (c) codes and regulations to promote the use of timber in construction.

52. On the subject of lesser-known species, he stated that in many tropical forests the volume of commercial species was only a small proportion of the standing volume. An increase in the use of commercially less accepted species might reduce pressure on existing forest resources. In that respect, he indicated that research was needed on the properties of the commercially less accepted species as well as inventories of them. Grouping of species seemed to be one solution that many developing countries were trying to promote.

53. Finally, he stated that in order to increase the export of wood products with higher added value, several problems had to be dealt with such as the need to increase market intelligence, general promotional activities and establishment of adequate distribution channels.

#### Summary of discussion

54. It was pointed out that the two issues were closely interrelated. One participant stressed the need to consider the wood and wood products industry within the framework of rural development as a whole, which requires the adoption of an integrated approach at the national level. He noted the important role that could be played by multi-purpose production units and their impact on rural development; he suggested that pilot projects on appropriate wood industries might be useful.

55. The crucial role of training at all levels was highlighted, particularly with regard to forest management and management of small- and medium-scale enterprises. One participant stressed the importance of the exchange of information on training possibilities. He stated that as a follow-up to the

First Consultation on the Training of Industrial Manpower and in recognition of that need, his country had prepared a qualitative inventory of institutions concerned with training for the wood and wood products industry. An illustration of the inventory was made available at the Consultation.

56. The areas in which international co-operation was available and beneficial to developing countries were pointed out by several participants; those included: training, industrial and forest management, processing techniques, research and development, and the use of residues and waste. In connection with exports of tropical timber, one participant noted that prices were largely determined by the high cost of sea transport. He further noted that developing countries should give priority to increasing the efficiency of primary wood processing, to ensure production of wood products in the qualities required by the international market.

57. It was noted that the successful exploitation of forests depended on the development of an adequate road network.

58. Another participant, while praising co-operation with FAO, suggested that UNIDO also collaborate with other international organizations, such as UNCTAD, in the area of international trade, and with institutions concerned with international contractual arrangements.

59. Finally, it was appreciated that working documents presented to the Consultation were concise. Supporting documentation was considered most useful.

III. REPORT OF THE WORKING GROUP ON ISSUE NO. 1:  
THE DEVELOPMENT OF PRIMARY AND SECONDARY WOOD-PROCESSING INDUSTRIES

Summary of discussion

Establishment of wood-processing industries

60. It was felt that the wood sector was important for the economy of the developing countries because of their large share of the world's forest resources. In addition, several participants agreed that the wood sector could be an important factor in rural development, in raising the standard of living, creating employment, and earning foreign exchange. However, it was vital to ensure the continued availability of forest resources, and in that regard it was necessary to focus on forest management and tree plantations.

61. In that connection, the need was stressed for more up-to-date data on the availability of traditional species. Information on the employment effects of the wood and wood processing industries would facilitate the determination of the role of wood processing in the overall development strategies of developing countries.

62. It was stated that there was a need for guidelines for the setting up of small- and medium-scale wood processing facilities in developing countries. Many participants felt that special attention should be paid to the development of transportation infrastructure.

63. Many participants felt that the development of the domestic market was a prerequisite for the establishment of processing facilities, and that export markets could not be considered a replacement for domestic ones. Many participants welcomed the recent increase in wood-processing in developing countries, although they felt that log exports remained too high. They considered that log exports did not make a significant contribution to overall economic development, which should be based rather on the processing of those logs at least to meet domestic needs. Other participants pointed out that where domestic markets were limited, the establishment of an export oriented industry was justified.

64. Several participants pointed out a number of constraints faced by the developing countries in establishing processing facilities, one of the major ones being lack of finance. Other participants stressed that while difficulty in obtaining finance was a problem, there were other factors that often kept projects from going forward, even when finance was available.

65. Several participants stressed the need to strengthen co-operation between timber-deficit countries and timber-producing countries. In that regard, it was mentioned that long-term collaboration arrangements would be required in order to stimulate processing in developing countries and to assure the supply of timber and timber products to the importing countries. Such long-term arrangements, which may include joint ventures, could provide for know-how, marketing, management, and training of required skilled personnel.

66. It was widely agreed that there was a need to increase the use of residues, either for the generation of energy or as raw material for further processing.

#### Technology choice and adaptation

67. Several participants stressed the need for developing countries to adapt existing technologies and to develop new ones to suit their needs and conditions, possibly with guidance from UNIDO. In that connection, it was observed that many manufacturers in developing countries were producing equipment that was well suited to conditions in their own, and other, developing countries. One participant stressed the need to strengthen communication between equipment producers and purchasers.

68. There was a need for pilot projects to develop management systems and technology for small-scale units engaged in forestry and wood processing with integrated waste utilization for fuel. It was suggested that FAO and UNIDO could assist developing countries by evaluating and disseminating the results of those projects.

69. It was observed by some participants that there was often a need to use a step-by-step approach in moving from simple artisan methods to sophisticated processing, using complex tools and equipment, but both low and high technology options needed to be considered in the developing countries.

70. Considering the large amount of waste wood materials available in developing countries, the benefits of integrated operations were stressed.

71. Several participants referred to the need for international standardization and quality control.

#### Training

72. Most participants stated that there was a great need for training at all levels and particularly of managers for small- and medium-sized enterprises,

artisans and skilled workers. The importance of training people in repair and maintenance of equipment was also agreed upon. They stated that the training programme might be conducted within the developing country where the training was needed to make it more applicable to local conditions.

73. The need for increased communication between training centres in developing and developed countries was stressed by some of the participants.

74. It was further stated that the training of trainers must be given a high priority, both by international organizations and developing countries.

75. Some participants pointed out that industry in their countries had been inhibited from spending on training by their difficulties in retaining employees. Several participants then emphasized the role that Governments must play in the provision of training.

76. More emphasis should be given in the curricula of architectural and engineering schools to the use of wood as a building material. It was also mentioned by one participant that special attention should be given to the acquisition or preparation of relevant training materials, such as the translation of technical books into the local language. Another participant stressed the need to strengthen and create schools specialized in the design and production of furniture and other manufactured products of high value.

77. The representative of ILO emphasized the importance of taking into account the problems of accidents and occupational health hazards and pointed out the role that training could have in helping to improve safety conditions and reduce health hazards, while at the same time increasing the efficiency of operations.

#### Research and development

78. Some participants stressed that research needed to be more industry-oriented, brought closer to where it will be applied, and be of a practical nature. They also stressed the need for a technical and scientific infrastructure to be established in the developing countries.

79. Some participants pointed out that a great deal of research focused on the best ways to use residues for energy production; that research was very applicable to the needs of developing countries. Several participants noted that research facilities in the developed countries continued to address the needs of the developing countries.

80. Research was necessary on the properties of various species including structural aspects and durability, which needed to be directed towards their end-use. It was pointed out that the role of UNIDO and other international organizations and institutes would be of great assistance in collecting, and disseminating information, creating research-oriented training centres and making better use of existing facilities.

81. It was also pointed out that research on ergonomics would be needed by the wood industry of the developing countries.



IV. REPORT OF THE WORKING GROUP ON ISSUE NO. 2:  
MEASURES TO PROMOTE THE USE OF WOOD AND WOOD PRODUCTS

Summary of discussion

Wood industry and national objectives

82. The Chairman of the Working Group suggested that the Group, before discussing the points raised in issue 2, should devote some time to the discussion of the national objectives that would be promoted by the development of the wood-processing industry. Those were: economic growth, balance of payments, rural development, employment, ecological balance and raising the standard of living. That proposal was accepted by the participants who also considered that regional development and energy self-sufficiency of the sector should be added.

83. One participant felt that the discussion of objectives was unnecessary, and each country should decide its strategy for the wood industry and range of products according to its resources and needs. He suggested that the wood-processing industry should be integrated into rural development.

84. Several participants emphasized the desire of developing producing countries to limit the export of logs and undertake domestic wood-processing. A few participants stressed the importance of employment because wood-processing could be labour intensive.

Promotion of commercially less accepted species

85. A short presentation was made on commercially less accepted species, as detailed in a paper (ID/WG.395/1) on that subject.

86. Some participants pointed out that a broader acceptance of commercially less accepted species would be to the advantage of developed and developing countries. It would reduce the cost of the extraction of logs from heterogeneous forests, optimize harvesting and thus bring down the unit cost of timber.

87. Another participant noted that in his country those species were used, but not for products requiring specific stress resistance.

88. One participant mentioned the need to define the criteria for grouping of species, which could be according to botanical classification, properties, end uses, or other means. He stressed the importance of quality control in view of the increasingly exacting conditions required by some developed countries.

89. One participant stressed that grouping of species for structural purposes in housing and construction might probably contribute most to the promotion of the commercially less accepted species.

90. It was suggested by one participant that a higher stumpage fee for primary species might be a way for Governments to induce exports of commercially less accepted species. He emphasized the need for forest inventories in order to obtain knowledge of their existing volume. Another participant mentioned the experience of the promotion of some commercially less accepted species in a group of developing countries in co-operation with some developed countries. He regretted, however, that in spite of adequate technical information on the species, the inventories had not been effective and the end use knowledge of the raw material had been insufficient.

91. One participant said that among the commercially less accepted species growing in his country, a significant number had been found to be suitable for use in construction. He urged the consumer countries to broaden the acceptance of those species and called for international co-operation to achieve that objective. That would free primary species for higher value uses such as furniture. He also said that the use of commercially less accepted species was particularly well suited for the production of particle and other boards, but that his country was concerned about the market acceptance of such products. Another participant spoke of the need to overcome the psychological barriers to the use of such species.

92. Some participants mentioned the difficulties regarding assured supply and consistent quality of raw materials and processed products from some developing countries. One participant felt that the felling of commercially less accepted species might have an adverse effect on the regrowth of the natural forest. Several other participants disagreed.

93. The competition faced by tropical hardwood from local and imported softwood and hardwood from developed countries was emphasized by one participant. He added that probably the most important possible outlet for tropical timber, including commercially less accepted species, was construction and housing in developing countries. For that purpose, Governments from developed countries would probably be willing to co-operate with developing countries through the provision of resources.

94. One participant described the advances being made by international organizations in research on load-bearing structures, roof trusses, and strength grouping. He indicated that work was being done in developed countries on testing methods for timber and other wood-based products. He voiced the need to disseminate the available information in developing countries.

95. Another participant expressed concern at the lack of knowledge in importing countries on the technological properties of certain species, which inhibited their marketing. To overcome that, it was necessary to have a network to disseminate systematically the results of technical research. He suggested that UNIDO should play a co-ordinating role in that endeavour and compile a list of specialized institutes preparing specific studies.

96. One participant, referring to the efforts undertaken by UNIDO on the establishment of guidelines for strength-grading and grouping, cited experience of assembling information on that field in developing countries; he suggested that UNIDO not only collect information on existing standards, but also produce guidelines to be used at a subregional, regional or international level.

#### Promotion of wood in construction

97. Several participants proposed demonstration projects to promote the use of wood in housing. One participant said that such projects would be suitable for international co-operation, in which the Government, being a big contractor in many countries, could play a significant role. Participants considered the minimum market size for the production of prefabricated wooden houses: some spoke of 300-500 houses whereas others mentioned 800-1,000.

98. There was a divergence of views as to the cost of wooden prefabricated houses compared to those constructed from conventional materials. In that regard, one participant felt that the life-span and maintenance costs of wooden houses in the developing countries should be taken into account.

99. One participant said that standardization and modularization of housing construction was necessary to bring down costs. Standardization was supported by some participants, but one pointed out that standards and classifications had to be considered together with building regulations. Several participants felt that current building codes were often a hindrance to the use of wood in construction. However, the revision of building codes must not take place at

the expense of safety, especially since safety factors were among the concerns expressed by potential users of wooden dwellings. It was suggested that such regulations and codes should be formulated on a national or even regional level.

100. With regard to prefabricated housing, it was pointed out that even a small pilot project entailed complete logistics that were vital for its success. A prefabricated system based essentially on cement required a great deal of water that was not always available. The advantage of a wood-based system was that the raw materials were often available locally. Several participants pointed out that the use of simple, good designs for timber structures, whether for prefabricated or conventionally built houses, would do much to promote the use of wood in construction.

101. One participant said that prefabricated houses and prefabricated elements were two different things. Another participant added that in his country it had been found that significant cost savings in housing construction could be achieved by the use of prefabricated wooden components in self-help schemes.

102. Several participants mentioned that it would be beneficial to use demonstration projects to reduce the prejudice against wooden houses that existed in many developing countries. One participant added that low cost had been found to be the most important factor in overcoming such prejudice in his country. Some participants felt that UNIDO should undertake demonstration projects and disseminate information on them.

103. One participant thought that it would be advantageous for the promotion of the use of wood in construction to let demand dictate supply. To further that, architects and engineers in his country were informed of the technical properties of available wood suitable for construction in the hope that they would demand wooden components from the suppliers of construction material. He therefore stressed the need for dissemination of information, perhaps through special centres, as well as the need to train scientists in wood technology and engineering, with the assistance of UNIDO.

104. One participant raised the issue of income distribution and pointed out that low purchasing power coupled with high interest rates were constraints to the wider access to housing. He therefore called for housing programmes for the low- and middle-income classes, and for the promotion of the use of wood in such programmes.

105. Wood could be used in many ways, not only in housing, but also in the whole construction sector. However, the question of the proper impregnation of wood had to be addressed first. In so doing, specific attention had to be paid to the safety of workers as impregnation and preservation materials were often toxic. The participant raising that issue felt that it was an appropriate area for international co-operation.

106. One participant spoke of mobile sawmills that would enable sawnwood to be produced even in villages where the otherwise necessary infrastructure was not present. Another participant mentioned that his Government was currently contemplating making provisions in their five-year plan for setting up such sawmills in remote places; their advantages were easy maintenance and low skill requirements. A few participants mentioned that they would like further information on mobile sawmills. The representative of FAO said that such sawmills were operating in a number of developing countries, and that FAO had additional information available. One participant maintained that some Governments did not like portable sawmills because they made the control of tree felling difficult. That was disputed by a few participants.

107. One participant mentioned that although the chemical treatment of wood for preservation was often necessary, it was becoming problematic because of increasing environmental concerns. Research into that matter was called for by a few participants. But another participant pointed out that many tropical hardwood species were naturally durable and therefore did not require chemical preservation.

Measures to increase the share of processed products from the developing countries in the international market

108. One participant noted that in order to assess the long-term marketing prospects in international trade much more and better data on end uses were needed than were currently available. For the short-term, he thought that the annual meetings of the Joint FAO/ECE Timber Committee had proven useful.

109. One participant felt that international trade should not be the main concern of the developing countries. Rather, the developed countries ought to assist the developing countries to expand their domestic markets thereby furthering their industrialization process. Several participants stated the opposite view to the effect that there were problems in the marketing of wood

and wood products and suggested that the relevant bodies of the United Nations should take steps to provide studies for the developing countries on that matter.

110. One participant mentioned the problem of the high tariff and non-tariff barriers facing wood and wood products and their detrimental effects on international trade. In his view, by addressing measures for increased transparency in the area of trade barriers the Consultations could usefully contribute to efforts to lessen the negative effects of protectionism.

111. One participant spoke of the measures to reduce labour's resistance to increased imports of manufactured wood products from developing countries. Those measures included adjustment programmes to protect the security of employment and income of workers and respect for basic ILO standards in international trade. The participant also called for the organization, by the appropriate international bodies, of an annual meeting to review world market trends of the major wood products.

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Annex II

LIST OF DOCUMENTS

Provisional agenda

Issue papers

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| <u>Issue No.1:</u> The development of primary and secondary wood-processing industries | ID/WG.395/7 |
| <u>Issue No.2:</u> Measures to promote the use of wood and wood products               | ID/WG.395/8 |

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| Promotion of commercially less accepted species   | ID/WG.395/1  |
| Promoting the use of wood in construction   | ID/WG.395/2  |
| Current status and future development of the secondary wood-processing industry of developing countries | ID/WG.395/4  |
| Mechanical wood-processing industries in developing countries   | ID/WG.395/5  |
| Balancing supply and demand worldwide by the year 2000 through resource management                      | ID/WG.395/6  |
| First world-wide study of the wood and wood processing industries                                       | UNIDO/IS.398 |

Information papers

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| Wood and related engineering industries in Finland   | ID/WG.395/3  |
| Wood resources and their use as raw material   | UNIDO/IS.399 |
| Report of the Global Preparatory Meeting for the First Consultation on the Wood and Wood Products Industry, Vienna, 24-26 January 1983 | ID/WG.387/10 |
| Report of the Regional Preparatory Meeting for Asia, Manila, 22-26 March 1982  | ID/WG.371/16 |
| Report of the Regional Preparatory Meeting for Africa, Vienna, 21-25 June 1982   | ID/WG.373/12 |
| Report of the Regional Preparatory Meeting for Latin America, São Paulo, 4-8 October 1982  | ID/WG.380/13 |



