Preface

The years from 1991-1995 were significant ones for the development of the Union. Undoubtedly, the highlight of the period was the Centenary celebration of the Union at its birthplace in Eberswalde in August 1992. One hundred years is indeed a singularly auspicious occasion for any organisation and IUFRO must be proud that since its inception in 1892, the organisation has grown from strength to strength, not only in terms of numbers but in terms of activities and contributions to the global understanding of forestry and the development of forestry sciences in the world.

The celebrations in Eberswalde were full of nostalgia as we celebrated at the birthplace of the Union, and the sights and sounds of the Chorine monastery are still as fresh in my mind today as when we celebrated that historical occasion. Over 1,000 members of the Union attended. An historical brochure documenting the development of IUFRO was published for the occasion, and still remains as a reference for the organisation. After the celebration, a week long technical meeting was held in Berlin, and Division 5 had held its centennial meeting at Nancy, France, just before the centenarian celebrations.

Global Initiatives

While the Centenary was an occasion for reminiscence and review, the fast changing forestry issues being discussed as world leaders met at the United Nations Conference on Environment and Development (UNCED) in Rio in June 1992, added a very important element to the task and functions of IUFRO as we respond to the political concerns as expressed in UNCED. It is my contention that forestry globally and especially in the tropical countries, is at a cross-roads of both challenges and opportunities. It is obvious that the global concerns about environment have a very close and distinct relationship to forestry, and that as an organisation involved in forestry research, IUFRO has to respond to these opportunities. The question arises as to whether we can respond effectively to the challenges. With Target 2000 around the corner, a year when all timbers traded on the international market must be labelled as produced from sustainably managed forests, many issues must be addressed. The scientific basis of eco-labelling for such diverse ecosystems and predicting their long term sustainability at a point in time when the demands upon forests are heavy and controversial, are not easy. The technical challenges for forestry scientists are tremendous and this is where IUFRO as a research organisation can play an important and critical role in supporting the implementation of political decisions. However, because of the structure and form of IUFRO, being a network of scientists working informally together and being loosely linked to one another by a willingness to share and exchange ideas and by virtue of its distribution and limited resources, it is extremely difficult for IUFRO to respond effectively to the demands of the international agenda. One has only to see the vast number of meetings held at different locations in the world to understand the complexity of this system, but also how difficult it is for any

non-governmental organisation to respond effectively while at the same time minimising the economic burden upon the organisation. IUFRO did present a proposal for funding to enable IUFRO to play a more pro-active and leadership role in the technical discussions but unfortunately, this was not taken up by a donor. However, there are many members of IUFRO who attend these international discussions in their other capacities representing their own countries, and it is through such members that we have had the ability to be sensitive to as well as try to be responsive to the many issues currently being discussed. A session was held during the IUFRO World Congress in Tampere to discuss how IUFRO could respond to these international issues. This is one area where the IC members can support IUFRO by representing IUFRO or by keeping IUFRO informed of the developments in the international arena.

SPDC

One of the major activities of IUFRO has been the "Special Programme for Developing Countries" (SPDC). The SPDC was created in 1983 to provide assistance to forestry research in the less developed countries and has now been recognised globally. It is now an active programme which tries to fill a niche to support forestry research, particularly for the less developed countries. Despite the prominent role of forestry at the highest international political level, the status of forestry research globally remains at a low ebb particularly in many developing countries. It is therefore with the objective of uplifting the status of forestry research that IUFRO through its members actively pursued the formation of an international organisation which ultimately was born as the Centre for International Forestry Research (CIFOR). The SPDC will attempt to complement and supplement CIFOR and the International Centre for Agroforestry (ICRAF), the two forestry related organisations within the CGIAR family. During my Presidency, the SPDC saw a change in leadership from Lorne Riley who took over the role of SPDC Coordinator from Oscar Fugalli in early 1991 and the handing over of the baton of SPDC Coordinator in October 1993 to Brian Payne. Through this period the SPDC has matured but it was only possible through the support of various donors especially Canada and the United States who supported the salaries of the coordinators, and especially Japan and UNDP which supported the various programmes of the SPDC. The SPDC has been active in publishing documents and holding various courses. An important publication was the development of FORSTAT, which is a self-learning course in basic statistics for forestry researchers. It has now been translated into Spanish and French. Another major accomplishment was the completion of a self-learning course in 12 modules which is available in three languages: "Planning and Managing Forestry Research". This effort was funded by the UNDP through the World Bank. A major subprogramme of the SPDC had been the management of a IUFRO Development Fund which was launched during the centennial celebrations of IUFRO. This fund was created to support travel of scientists from less developed countries to enhance their research capacity. While the quantum of the

funds has been somewhat limited, nevertheless the Board authorised the first disbursements from the funds in December 1993 and a modest sum is now available from interest earnings to support travel of young forestry scientists. We do hope that members will contribute to enlarge and expand the Development Fund in order to make it more effective in its implementation and activities.

Agreement with Austria

Another highlight of this period was the signing of an Agreement with the Austrian Government for the continued location of IUFRO at the Federal Forestry Research Institute in Vienna. This successful cementing of relationship between the Austrian Government and IUFRO was the culmination of a continuous effort by the IUFRO Secretariat to strengthen its effectiveness in Austria. The Agreement provides for an expansion of facilities as well as support from the Austrian Government, and ensures the continued location of IUFRO at the Federal Research Institute in Vienna. On behalf of IUFRO, I would like to thank the Austrian Government for its support.

IUFRO on Internet

One of the highlights of the Secretariat is to put IUFRO on the international information superhighway. IUFRO now has a homepage on the Internet which has made IUFRO and the Secretariat more accessible to those with this electronic communication system. IUFRO is therefore one of the few international NGOs to have its own homepage on the Internet, which provides quick and efficient information facility to its members.

Executive Board Meetings

The IUFRO Executive Board continues to meet every year. During the first year of my Presidency, the Executive Board met in Australia, which was followed by meetings in Chile in 1992; Warsaw and Kornick, Poland in 1992; Ouagadougou, Burkina Faso in 1993; Beijing, China, in 1994; and in Madrid, Spain, 1995. These Executive Board meetings were the main forum for managing the activities of the Union. Besides that, the Policy and Planning Committee (PPC) and the Programme Committee held separate meetings in Vienna in 1991 and in Oxford in 1993 to discuss certain specific issues of the Union. These meetings provide a continuous link between the Secretariat and the Executive Board.

IUFRO World Series

IUFRO continues to publish the World Series which is now being recognised amongst the forestry research family as an authoritative publication. IUFRO hopes to continue to do so in the future. At the same time however, IUFRO recognised the difficulty of continued publications as members work within the ambit of their own national organisations. Nevertheless IUFRO welcomes contributions to enable the Union to be proactive in the production of such publications.

Task Force on "Forests, Climate Change and Air Pollution"

An important activity of the Union is undertaken by the IUFRO Task Force on Forests, Climate Change and Air Pollution chaired by Prof. Rodolphe Schlaepfer from Switzerland. Under the leadership of Prof. Schlaepfer, the Task Force has been able to keep abreast of the discussions on Global Climate Change and related issues, and has produced publications which update members on the status of scientific knowledge in this field. It is hoped that this activity will continue as the negotiations in the international fora on climate change will continue to increase.

Strategic Plan

The Executive Board has begun initial discussions on the development of a IUFRO Strategic Plan that would describe key opportunities and mechanisms for the Union's long term goals. This effort is continuing and considered a high priority by the Executive Board. It is the desire of the EB that the International Council provide a formal charge for the completion of this task. This is requested, recognising the many benefits that will be gained from review and comment of future drafts by the International Council.

International Relations

Our international relations continued to be good with strong linkages with ICSU (International Council for Scientific Union) and strengthening our long established relationship with FAO in Rome. We continue to develop relations with CIFOR, ICRAF and other international organisations and programmes. IUFRO held discussions with FAO, the African Academy of Science and the International Foundation for Sciences on the development of a special forestry research support programme for Africa, but this has yet to materialise.

Financial Report

While the financial report will be presented by the Treasurer, we recognise that global funds for forestry and environment have not been freely available. Therefore, funding for some proposed projects has not yet materialised. However, IUFRO is optimistic on financial support towards forestry and hopes that planned programmes will not be sacrificed due to lack of funds. IUFRO funds continue to be managed by the Federal Institute for Forests, Snow and Landscape in Birmensdorf, Switzerland. We thank them for their contribution.

IUFRO Membership and Organisation

Our membership has increased to 719 member institutions in 115 countries but the number of delinquent members is increasing and memberships from developing countries need to be increased. This is one area where IC members can assist. A measure of IUFRO's success is the number of meetings held, as IUFRO's mission is to promote exchange of scientific knowledge. During the period 1991 to 1995, IUFRO sponsored 287 meetings in 51 countries, including 29 developing countries. The ultimate strength of IUFRO is our members who have been loyal to the spirit of IUFRO and supported IUFRO in developing the programmes of IUFRO through its technical structure or via organising meetings. It is the task of the six divisions with their Subject and Project Groups and Working Parties to promote the technical activities of IUFRO. In order to enhance the effectiveness of this structure, the organisation will be expanded from six to eight divisions as of January 1996.

Discussions are also ongoing to review the status of the Subject and Project Groups and Working Parties with a view of increasing the efficiency of the organisation.

Finally I wish to record my sincere appreciation to the members of the Executive Board, the IUFRO Secretariat in Vienna, the Austrian, Canadian, USA Swiss and Japanese Gov ernments, FAO, CIFOR, ICRAF and all other countries, organisations and individuals who have helped IUFRO over the period of my Presidency. A sincere "thank you" is also directed to all IUFRO members and IUFRO member institutions for your support.

M.N.Salleh President of IUFRO (1991-1995)

Sylvavoc- IUFRO's Initiative in Forest Terminology

According to its long tradition in terminology work and recognizing the actual and continuing need for high quality terminology work in forestry, the Executive Board of IUFRO agreed to start a pilot project on multilingual terminology. Thus, the youngest child of the IUFRO family - a second project in the Secretariat besides the SPDC - started its activities in February 1995.

The intention of the Sylvavoc projet (sylva=forest, and voc=vocabulary) was to re-open the way for terminological work in IUFRO and to make possible all kind of activities in this field, from global projects like a revision of the Ford-Robertson terminology to small projects like definitions of a small number of terms, or small glossaries, in one or more languages. In particular, the idea was to include not only pure terminology work on terms and definitions but to create a whole framework for a terminology clearing house comprising documentation, forest term databank and information services.

FAO was one of the first IUFRO partners to support this project, both financially and intellectually. With respect to Forest Ressources Assessment 2000, FAO and IUFRO agreed on a terminological study to be undertaken at the request and in cooperation with FAO to assess the divergences in the meaning of some important forestry concepts in the different countries of the world.

Support came also from IUFRO member organizations, who responded to the calls in IUFRO News for terminological publications. More than 90 references in 20 languages are stored in the terminology library and will be the basis for an International Bibliography of dictionaries and terminologies in forestry and related subjects.

During the year the acceptance of the project within and outside of IUFRO grew continuously. One of the highlights was the IUFRO World Congress, the first official chance to present the ongoing work to a large audience. The Congress resolutions made reference to the importance of terminology work for mutual understanding in research. In Finland, the Executive Board decided to continue the project to the end of the year and to help with fund raising for the project.

The energetic spirit of the Congress lead to the realisation of some programmed activities. First, a group of people started work on definitions for the Vocabulary of Forest Management. Second, towards the end of the year, the European Commission in Luxemburg decided to finance the work on definitions to be entered into the European term databank Eurodicautom. In the background of all activities, the necessary efforts are taken to set up a multilingual forest term databank.

Sylvavoc has three main areas of activities: i) information and documentation; ii) editorial activities; and iii) computerization. The first results in 1995 can be summarized as follows:

- a collection of more than 90 references to terminologies
- the confirmation of interest of a number of IUFRO officers to participate in the editorial work;
- a comparative study on selected forestry terms at the request and in cooperation with FAO;
- work on terminological entries into Eurodicautom for the European Commission; and
- development of a database.)

When the pilot project started the problem was to understand and to get a grasp of the real requests and aspirations. There was no doubt that IUFRO, as a kind of umbrella organisation for activities in forest science and by its network of scientists, is the ideal location to host a terminology clearinghouse. Therefore it was important in the first year to establish the necessary broad base and environment for the multiple aspects of the project. With the support of the Japanese government for terminology cooperation, it is guaranteed that the financial situation of the project will be ensured in the future.

DIVISION 1 - FOREST ENVIRONMENT AND SILVICULTURE

Divisional Organisation

(as of 12/31/1995)

The Division currently consists of 8 Subject Groups with 43 Working Parties, and 10 Project Groups with 10 Working Parties, for a total of 71 units. Division 1 officers total about 165, with an additional 15 or so vacancies. These officers represent (reside in) 45 nations. Several groups have been given new names, new officers, or have been eliminated, while new ones have been formed, during the 1991-1995 period.

Division 1 will soon change considerably with the establishment of Division 8, "Forest Environment", effective 1/1/96. Note also, that the Executive Board met at Tampere and decided to remove the distinction between Project Groups and Subject Groups. Starting next year we will only have Research Groups and Working Parties. The Secretariat will inform us of progress on this transition.

Purpose and Goals

Division 1 includes the study of forest and ecosystem management; stand establishment and treatment (including fertilisation); agroforestry; biomass for energy; restoration of degraded sites; mountain zone and arid zone silviculture; tropical, boreal and temperate zone silviculture; and natural (extensive) and artificial (intensive) silvicultural systems.

It also includes the study of forest ecosystems (including biogeocoenosis); protected natural areas; site research and site classification; environmental influences (including water management and forest hydrology); natural disasters (including avalanche, torrent and erosion control); wildlife habitat management; biodiversity; forest fire prevention and control; and the use of fire as a cultural tool.

Accomplishments

Division 1 and its Subject Groups (SG), Project Groups (PG) and Working Parties (WP) have sponsored 69 symposia, workshops, conferences and study tours during the 1991-1995 period. Of these, 31 were held in Europe, 14 in North America, 13 in Asia/Oceania, 5 in Africa and Middle East, and 3 in South & Central America. Several were held jointly, co-sponsored by other national or international organisations. Not included in the above are the 16 technical sessions, including three interdivisional ones for a total of 242 papers and 80 posters, organised for the 20th IUFRO World Congress, and the 13 technical sessions, with 169 papers and 36 posters, organised for the IUFRO Centennial in Berlin. Division 1 activities for 1991-1995 have been documented in a wide variety of proceedings, books, technical journal articles, newsletters and other outlets. At least a dozen meetings are currently announced for the 1996-1998 period, with many others in the planning stages.

The important contributions by Deputy Coordinators Dr. Kikkawa, Dr. Paavilainen, and Dr. Salazar, and by all SG/PG/WP officers, need to be recognised here. D1 activities and accomplishments would have been impossible without their participation and effort.

Recommendations

- a) with the establishment of two new divisions, extra effort must be made to assure an integrated approach to IUFRO activities, and to avoid subject matter rigidity and isolation.
- b) review inactive SG/PG/WPs; drop them or find dynamic new leadership.
- c) keep membership lists current for all SG/PG/WPs.
- d) improve communication among D1 officers via e-mail or other means, recognising that not all have e-mail capacity.

Divisional Activities

Division 1 scientists were active in a wide variety of events not listed elsewhere in this report. These include far too many to mention here, but examples are:

- heavy involvement in CIFOR, the new international forestry research centre in Bogor, Indonesia
- drafting of a discussion paper on Management of Temperate Forests, and another on Management of Tropical Forests
- revision of IUFRO's booklet by R. Z. Callaham, "Preparing a Conference"
- active in the planning and preparation of an Information Network for Forestry Researchers in Latin America
- active in promoting the reorganisation of D1 & D2, resulting in the establishment of D7 & D8.

Division 1 is proud to see several of its members receive recognition through the Honours and Awards Committee of IUFRO, including:

- Distinguished Service Awards presented to Helge Bryndum, Hannes Mayer, Kurth Perttu and Gustaf Siren.
- The Honorary Membership Award presented to Richard K. Hermann, former Division 1 Coordinator, and organiser of the Division 1 Centennial Programme in Berlin.
- Also, several of the recipients of the Scientific Achievement Award at the XX Congress were heavily supported by Division 1.

Division 1 Centennial Programme -169 papers

- Division 1 XX World Congress Programme 242 papers, 80 posters
- Division 1 XIX World Congress Programme 172 papers, 65 posters

Division 1, co-sponsored with the Tropical Forest Foundation: Workshop on Forest Ecology of Southeast Asia: Present and Future. Kuching, Sarawak, Malaysia. October 12-16, 1992.

Activities of Research Groups

With a few exceptions, the Division 1 SG, PG and WPs have shown vigorous activity during this five-year period. Much of that activity has indicated collaboration within the Division, and among the divisions, as well as with professional groups outside of IUFRO. This is to be encouraged.

Also, Division 1 leadership and meeting locations show a greater involvement of nations not heavily active in IUFRO previously. This was one of the D1 goals five years ago, and has been partially accomplished.

In the list of activities below, some events may have been overlooked. Occasionally the Division Coordinator is not kept well-informed, which makes a complete list more difficult. Please send corrections both to the D1 Coordinator and to the appropriate SG or PG Leader.

S1.01-00 Ecosystems28 papers at Centennial20 papers & 12 posters at XX Congress

S1.01-01: Methodology of Forest Reserves Research. Meeting co-sponsored with the Dutch Forest Reserve Group. Wageningen, May 1992.

S1.01-05: Meeting on the Role of Landscape Ecology in Forestry. Netherlands, September 1992.

S1.01-05: Published Proceedings, The Role of Landscape Ecology in Forestry. Working Party Conference, Ljubljana, Slovenia. Sept. 13-17, 1993.

S1.01-05: Workshop on Methods of Landscape Ecological Analysis. Ljubljana, Slovenia. Sept. 11-16, 1995.

S1.01-06: Meeting on the Application of Science to Forest Conservation. Paris, France, Sept. 25, 1991. Held as a satellite session of the World Forestry Congress. Dr. J. Sayer, Organiser/Contact.

S1.01-06: Workshop on Recent Research on Tropical Tree Seedlings in America. Sept. 11-15, 1995. Belem & Santarem, Brazil. Co-hosted by EMBRAPA/CPATU & ODA.

S1.01-08: Ecology & Silviculture of European Silver Fir. Altensteig, Germany. 31 Oct. - 4 Nov. 1994.

S1.01-09: Forest Ecosystem Development on Degraded and Reclaimed Sites. Conference held at the IUFRO Centennial, Berlin, 1992. Published 7 papers in: Ecological Engineering (The Journal of Ecotechnology) 3(1):1-69.

S1.02-00: Site-6 papers at Centennial17 papers & 12 posters at XX Congress

S1.02-00: Symposium on Nutrient Uptake and Cycling in Forest Ecosystems. Halmstead, Sweden. July 7-10, 1993. Co-sponsored with Division 2 and S1.03.

S1.02-01: Symposium on Nutrition Management of Forest Plantations, Valdivia, Chile. April 25-30, 1995. Proceedings publ. by Universidad Austral de Chile, Valdivia. 393 p.

S1.02-05: Meeting on Recycling of Organic Wastes in Forests: a Pacific Northwest Perspective. Seattle, Washington, USA. July 1993.

S1.02-06: Technical Meeting on Site Classification and Evaluation. Joint with CEMAGREF. Clermont-Ferrand, France. Oct. 19-22, 1993.

S1.02-06: Conference on Global to Local: Ecological Land Classification. Thunder Bay, Ontario, Canada. 15-17 August 1994.

S1.02-08: Seven plant sample exchanges were run for interlab calibration.

S1.02-09: Symposium on Planted Forests: Contributions to Sustainable Societies. Portland, Oregon USA. 28 June - 1 July, 1995. Co-sponsored by S1.02-09 and Oregon State University (Contacts: James Boyle and Kathleen Kavanagh).

S1.02-10: no activity—group merged with S1.02-08.

S1.03-00 Environmental Influences 19 papers at Centennial 38 papers & 12 posters at XX Congress

S1.03-00: Conference on Wind and Wind-related Damage to Trees. Edinburgh, Scotland. July 18-23, 1993. Proceedings published as a book, "Wind and Trees". M. Coutts and J. Grace, eds. 1995. Cambridge University Press. 485 p.

S1.03-01: no activity

S1.03-02: Second International Conference on Headwater Control: Environmental Regeneration of Headwaters. Prague, Czechoslovakia. Nov. 2-6, 1992.

S1.03-02: International Symposium on Forest Hydrology: Water Issues in Forests Today. Canberra, Australia. Nov. 22-26, 1993. (Co-sponsored with the Australian Forestry Council).

S1.03-03/S2.01-00: Workshop on Interscale Relationships in Forest - Atmosphere Processes. St. Johns, Newfoundland, Canada. 25-26 August 1994. Proceedings published.

S1.03-03: no activity: close the working party

S1.04-00 Natural Disasters12 papers at Centennial23 papers & 3 posters at XX Congress

S1.04-00: Joint Meeting of S1.04-00 and the Austrian Society for Geomechanics. Salzburg, Austria, May 29, 1991.

S1.04-00: Symposium and Field Workshop on Natural Disasters. Shanghai and Lanzhou, China, an Alma-Ata andDushanbe, USSR. Sept.3-17, 1991, Dr.K.Sassa, Organiser/Contact.

S1.04-00: Symposium on Snow Avalanche Management, Landslide Prediction and Control. Tsukuba, Japan, Sept. 30-Oct. 5, 1991. Dr. K. Sassa, Organiser/Contact.

S1.04-00: 18th Session of the FAO/EFC Working Party on the Management of Mountain Watersheds, and Joint FAO/ IUFRO Symposium on New Progress in Torrent Hydraulics. Oberstdorf, Germany. June 15-27, 1992.

S1.04-00: International Symposium on Erosion, Debris Flows and Environment in Mountain Regions. Joint Symposium, International Association of Hydrological Sciences, Institute of Mountain Disasters and Environment, Chinese Academy of Sciences, IUFRO and UNESCO. Chengdu, China, July 5-9, 1992.

S1.04-00: An International Conference on Inventory and Monitoring Techniques in the Context of Catastrophic Events, University Park, Pennsylvania USA, June 21-24, 1993. Cosponsored with S4.02-00. S1.04-00: International Workshop on Developing a Large Environmental Data Base for Sustainable Development. Nairobi, Kenya. 14-16 July 1993

S1.04-00: Workshop and Study Tour: Protection of Mountain Watersheds in Central and East Europe. Charley Vary Spa., Czech Republic. Nov. 15-27, 1993.

S1.04-00: 19th Session of the FAO/EFC Working Party on the Management of Mountain Watersheds, and Joint FAO/ IUFRO Symposium on Prevention of Natural Disasters, Research and Technical Aspects. Jaca, Spain. July 4-8, 1994.

S1.04-00: Natural Disasters in Mountainous Areas. K. Sassa (ed.). Proceedings, S1.04-00 Technical Session, XX IUFRO World Congress, Tampere. 1995. 250 p.

S1.04-00: Several "IUFRO S1.04-00 Natural Disasters" Newsletters (No. 1-No. 3) published, with official support of the International Newsletter, "Landslide News" (No. 5 - No. 8).

S1.04-01: see joint activities with S1.04-03, below.

S1.04-02: IAHS Symposium "Snow, Hydrology and Forests in High Alpine Areas". Vienna, Austria, August 11-24, 1991.

S1.04-02/S1.04-00/S1.05-14: Excursion—Prevention of Natural Disasters and Mountain Silviculture. Switzerland and Austria. July 31-August 4, 1995.

S1.04-03, -01: The Pierre Beghin International Workshop on Rapid Gravitational Mass Movements. Grenoble, France. 6-10 Dec. 1993. (Co-sponsor).

S1.04-03, -01: Northeast Asia Symposium and Field Workshop on Landslides and Debris Flows in the Baikal Lake area, Russia, in NE China, and in Korea. 27 June - 16 July, 1994 (Co-sponsor).

S1.04-03, -02: Meeting on Prediction of Rapid Landslide Motion, Kyoto, Japan. 25 July - 8 Aug. 1994.

S1.04-04: International Symposium on Forest Hydrology. Tokyo, Japan. 24-28 Oct. 1994. (Co-sponsor).

S1.04-04, -01: International Sabo Symposium: Hydrology & Sediment Problems in Volcanoes and Steeplands. Tokyo, Japan. 28-30 Aug. 1995. (Co-sponsor).

S1.05-00 Stand Establishment/Treatment/Amelioration—26 papers at Centennial 18 papers & 18 posters at XX Congress

S1.05-00/S1.05-06/S1.05-03/S2.02-07: International Larix Symposium. Whitefish, Montana USA. Oct. 5-9, 1992. Proc., USDA-Forest Service, GTR-INT-319. 521 p. S1.05-01: Workshop on Carbon Cycling in Boreal Peatlands and Climatic Change. Hyytiala, Finland. Sept. 29-Oct. 1, 1992. S1.05-01: International Symposium on the Ecology and Management of Northern Forested Wetlands. Cochrane, Ontario, Canada and Traverse City, Michigan, USA. 24-28 August 1994.

S1.05-03: see joint activity with S1.05-00, above

S1.05-04: Making the Grade: A Symposium on Planting Stock Performance and Quality Assessment. Sault Ste. Marie, Ontario, Canada. 11-15 Sept. 1994. (Co-sponsored with S3.02-03 and S2.01-00).

S1.05-04/S3.02-00: Afforestation of First-rotation Sites. Garpenberg, Sweden and Helsinki, Finland. August 1-6, 1995.

S1.05-05: no activity S1.05-06: no activity (closed, then reactivated just before the Tampere Congress).

S1.05-08: no activity

S1.05-11: Symposium on Atlantic Cedar. Rabat, Morocco. May 31 - June 4, 1993.

S1.05-11: International Symposium on Pinus brutia Ten., Marmaris, Turkey. Oct. 18-23, 1993.

S1.05-12: "Intensive Conifer Management - Pines and Spruces". Northern Minnesota, USA, 18-24 August, 1991. Drs. E. Packee & A. Alm, in charge.

S1.05-12: Symposium on Ecosystem Management: the Scientific Alternative to New Forestry. Sept. 11-19, 1992. Ft. Nelson, British Columbia, Canada and Fairbanks, Alaska, USA.

S1.05-12: Conference on Innovative Silviculture Systems in Boreal Forests. Edmonton, Alberta, Canada. 2-7 Oct., 1994.

S1.05-13: no activity

S1.05-14/S1.05-08: Mountain Silviculture in Central Spain. Madrid. Sept. 27 - Oct. 1, 1993.

S1.05-15: no activity (name change, to "Silviculture & Management of Pines").

S1.05-16: activities listed under S1.01-08 (WP was transferred from S1.01-00 to S1.05-00).

S1.07-00: Support by S1.07 leaders for the Conference des Responsables de la Recherche Agronomique Africains (CORAF), and the promotion of regional cooperation through networks. Due to Subject Group S1.07, CORAF has extended its networking activities to forestry research. Two workshop s were held in Ivory Coast, February 5-8, 1991 on Natural Forest Management and on Tree Improvement. Also involved were the SPDC and E.Bonkoungu.

S1.07-00 (co-sponsor with Division 3): International Symposium on Harvesting and Silviculture for Sustainable Forestry in the Tropics, Kuala Lumpur, Malaysia, October 5-9 1992

S1.07-05: Networking in Tropical Forest Management, for research, R&D, and managers. Held at Paris, France (World Forestry Congress), September 23, 1991. H.F.Maitre, organiser/contact.

S1.07-09: Symposium on the Challenge of Neotropical Forests, Curitiba, Brazil, April 7-12, 1991. Rudi Seitz, organiser/ contact.

S1.07-09: Fifth Symposium of the Silviculture in Latin America Working Party: Silviculture and Sustainable Development in Tropical America. Cali, Colombia, September 20-24, 1993

S1.07-15: Siviculture of Protection Forestry in Arid Regions and the Agroforestry Potential, Alexandria, Egypt. March 21-24, 1994

S1.07-17: 5th Roundtable Conference on Dipterocarps: Recente Advances in Dipterocarp Research for Sustainable Foreset Management. Chiang Mai, Thailand, 7-9 March, 1994

S1.09-00: Conference on Fire in the Environment, Berlin S1.09-00: The Biswell Symposium: Fire Issues & Solutions in Urban Interface & Wildland Ecosystems. Walnut Creek, California, USA, 15-17 Feb, 1994

S.1.09-00: Symposium on Fire Management and Natural Resource Development, Guadalajara, Mexico, 5-11 Nov, 1994

P1.06-00: Symposium on Environmental Constraints and Oaks-Ecological and Physiological Aspects. Nancy, France, Aug 29 - Sept 1, 1994 (Co-sponsored by P1.06-00, Division 2, and INRA).

P1.07-00: Workshop on Management of Structure and Productivity of Boreal and Subalpine Forests. Held in Sweden and Finland, August 4-12, 1991. Linder and Kellomaki, organisers/contacts.

P1.09-02: Barriers to Integration of Cross-disciplinary Research and Technology Transfer in Wood for Energy in the Tropics: an electronic workshop through ECOTECH '94. Sept 1994

P1.10-00 Fifth Beech Symposium. Denmark. 19-24 Sept 1994

P1.13-00: International Conference on Forest Vegetation Management: Ecology, Practice and Policy. Auburn, Alabama, USA, April 27 - May 1, 1992 P1.15-00: International Agroforestry Symposium. Nanjing, China, April 28 - May 5 1992. Co-sponsored by P1.15-00

P1.15-00: Conference on Agroforestry and Land Use in Industrialized Nations, Berlin, May 30 - June 2, 1994 (Co-sponsor)

P1.16-00: Biodiversity in Managed Landscapes, Sacramento, California, USA, July 13-17, 1992

P1.16-00: Symposium on Measuring and Monitoring Biodiversity in Tropical and Temperate Forests, Chiang Mai, Thailand, Aug 28 - Sept 8, 1994

P1.16-00: Workshop on Measuring and Monitoring Forest Diversity. Washington, DC, USA, May 23-25, 1995.

P1.17-00: Restoration of Degraded Sites— 13 papers at XX Congress

This PG was established in 1993

P1.17-01, -02, -04: no activities yet (new WPs)

P1.17-03: Newsletter published March 1995, including list of members and their recent, selected activities.

Division 1 Structure

(as of Dic. 12/31/95)

S1.01-00	Ecosystems
	S1.01-01 Old Growth Forests & Forest Reserves
	S1.01-05 Landscape Ecology
	S1.01-06 Tropical & Subtropical Forest Ecosys-
	tems
	S1.01-09 Forest Dynamics

S1.02-00	Site
	S1.02-01 Fertilisation of Forest Land
	S1.02-05 Recycling of Waste on Forest Lands
	S1.02-06 Site Classification & Evaluation
	S1.02-08 Soil and Plant Tissue Analysis
	S1.02-09 Maintenance & Improvement of Plan-
	tation Productivity
	•

- \$1.03-00Environmental Influences\$1.03-01Meteorology and Climatology\$1.03-02Forest Hydrology\$1.03-04Impact of Wind on Forests
- S1.04-00 Natural Disasters
 S1.04-01 Torrent Erosion & Control
 S1.04-02 Snow and Avalanches
 S1.04-03 Landslides & Stabilisation
 S1.04-04 Erosion Control by Watershed Management

S1.05-00 Stand Establishment, Treatment & Amelioration S1.05-01 Peatland Forestry S1.05-03 Treatment of Young Stands S1.05-04 Characterisation of Plant Material S1.05-05 European Norway Spruce Thinning Experiment S1.05-06 Multiple-use Silviculture S1.05-08 Natural Stand Regeneration S1.05-11 Intensification of Cedar Silviculture S1.05-12 Northern Forest Silviculture & Management S1.05-13 Shelterbelts S1.05-14 Silvicultural Problems in Mountain Regions S1.05-15 Silviculture & Management of Pines S1.05-16 Ecology & Silviculture of European Silver Fir S1.07-00 **Tropical Silviculture** S1.07-05 Natural Regeneration of Tropical Rainforests S1.07-08 Ecology & Silviculture of Tropical Forested Wetlands S1.07-09 Silviculture in Latin America S1.07-13 Silviculture of Plantations in Asia & Pacific Region S1.07-14 Silviculture in Africa S1.07-15 Silviculture & Management in Arid & Semi-arid Regions S1.07-16 Managing for Tropical Non-timber Forest Products S1.07-17 Biology & Silviculture of Dipterocarps S1.07-18 Silviculture & Management of Acacias S1.08-00 Wildlife & its Habitats S1.08-02 Wildlife Management S1.08-03 Wildlife Values & Traditional Uses S1.09-00 Forest Fire Research S1.09-01 Prescribed Burning Research S1.09-02 Fire Prevention Research S1.09-03 Fire Fighting Methods & Equipment Research S1.09-04 International Fire Glossary P1.06-00 Improvement & Silviculture of Oaks P1.07-00 Ecological Basis for Forest Management in Harsh Environments P1.09-00 Short Rotation Forestry for Biomass Production P1.09-01 Integrated Research in Temperate Short-Rotation Energy Plantations P1.09-02 Integrated Research in Tropical Bioenergy Systems P1.10-00 Improvement & Silviculture of Beech

P1.11-00	Mediterranean Shrub Ecosystems
P1.13-00	Forest Vegetation Management
P1.14-00	Unevenaged Silviculture
P1.15-00	Agroforestry P1.15-01 Temperate Agroforestry P1.15-02 Agroforestry in the Tropics P1.15-03 Fundamental Research and Modelling in Agroforestry
P1.15-04	Adaptive and Social Research in Agroforestry

P1.16-00 Biodiversity

P1.17-00 Restoration of Degraded Sites
 P1.17-01 Reclamation of Mining Lands
 P1.17-02 Restoration Ecology
 P1.17-03 Rehabilitation of Degraded and Secondary Tropical Forests
 P1.17-04 Arid and Semi-arid Zones Rehabilitation 12/31/95

Jacob L.Whitmore

DIVISION 2 - PHYSIOLOGY, GENETICS AND PROTECTION

I. FIVE YEAR REPORT -1991-1995

At the end of the 1991-1995 term, the six Subject Groups and three Project Groups of Division 2 included 75 research units with 202 officers, including the Coordinator and Deputy Coordinators. This was 20 more officers than Division 2 had at the beginning of the term. Although there were a few additions and deletions to the complement of Working Parties, there was no change in the Subject or Project Group structure. The value of IUFRO to the scientists is shown by the extent of international activity organised by the scientists themselves. Excluding the Centennial and Congress programmes, 82 meetings were held during the period, 91 publications were produced, and there were 24 other activities. Fourteen of the meetings were held in developing countries and there was an increase in the number of meetings held in Russia, China and Eastern Europe.

Awards were made by IUFRO to several persons currently or formerly active in Division 2. Jim Cayford, Deputy Leader of P2.0200 from 1977 to 1981 and eventually a Vice-President, was elected an Honorary Member of IUFRO; Antoine Kremer and Connie Millar received the Scientific Achievement Award; Werner Baltensweiler, Lyubomir Dimitri, Alan Fletcher and Florian Scholz received the Distinguished Service Award.

The Division 2 programme at the IUFRO Centennial in Berlin in 1992 was designed to commemorate the role of the Division and its structural predecessors in IUFRO during the first century. It paid tribute to German forest geneticists Otto Schröck and Hans Schönbach, whose contributions to research were made in the face of extreme political adversity. The programme focused on past, present and future research on tree improvement, plant protection and pollution and climate change, with particular emphasis on the European contributions. At the 20th IUFRO World Congress in 1995, Division 2 had 48 sessions on 26 topics and was involved in 2 interdivisional sessions. There was a strong emphasis on tree physiology research and on pathology and entomology. A major contribution was the poster programme of the Division, consisting of 113 peer-reviewed posters.

From a geographical viewpoint, 44 countries were represented by Division 2 officers in 1995, four more than at the beginning of the term. One fourth of these were developing countries. Most of the officers from developing countries were in the Working Parties concerned with provenances and breeding, pathology and entomology. At this point, most of the officers in the working parties concerned with more fundamental research in tree physiology and genetics were from the more developed countries of North America, Europe and Asia. Air pollution research was primarily a concern of countries in the northern hemisphere.

Communication is the essence of IUFRO, and world-wide, the infrastructure for rapid communication among scientists in IUFRO developed rapidly. By the end of the term, nearly all officers and many of the scientists in Division 2 were able to communicate by facsimile transmission. Of even more importance, the number of IUFRO scientists able to communicate by electronic mail was large, whereas at the beginning of the term very few could do so. Nearly half of the Division 2 officers had e-mail addresses at the end of the term. These changes are having a dramatic effect on the ability of the working groups to organise programmes and to establish networks for the rapid exchange of research information. In some cases where air post takes many weeks and fax doesn't work well, e-mail pro-

vides information exchange within 24 hours.

The large size of the Division, its complexity, and the consequent degree of effort required for effective coordination led to the conclusion that it should be divided into two new Divisions. Division 1 was nearly as large; both Divisions were 2 to 3 times as large as the other Divisions. During 1993-1995, considerable effort was expended on a proposed restructuring of IUFRO's Divisions. The consensus of response from scientists to the proposed restructuring was that smaller Division size and restructuring should facilitate intra-Divisional cohesion and interaction among scientists and group leaders at all levels, including Coordinators and Deputies. A final proposal was prepared and approved by the IUFRO Executive Board and the International Council to increase the number of Divisions from six to eight by splitting Divisions 1 and 2, the change to be effective 1 January 1996. Division 2 is divided into a new Division 2, to be called Physiology and Genetics, and a Division 7, to be called Forest Health. Rather than a simple apportionment of Division 2 working parties between the two new Divisions, the change included reorganisation within each of the two, by eliminating some inactive Working Parties, combining others, and making some changes in the Subject and Project Group structure.

The new Division 2 was restructured into four Subject Groups and two Project Groups with a total of 35 units. However, in accord with a Board decision, Subject and Project Groups will be called Research Groups, i.e. there are six Research Groups in the new Division 2. Division 7 has four Research Groups and a total of 32 units. In the restructuring of the current Division 2, a special effort was made to maintain the linkage between genetics, pathology, entomology and air pollution studies because of the importance of unified research on resistance to forest pests and the impact of air pollution and climate change on forest tree population genetics. The Research Group in Division 7 that is concerned with the physiology and genetics of resistance mechanisms will greatly aid in the linkage of Divisions 2 and 7.

Interdivisional interaction is important. As we increase the number of Divisions from six to eight, it is necessary that the interdisciplinary ties between the diverse research units and groups be strengthened, not weakened. One way of accomplishing this will be through networking. The IUFRO Secretariat will play a key role by providing a rapidly-available source of database information on linkages among research interests in different Divisions. E-mail servers of the Secretariat and research groups will be very useful to coordinators and chairs who are on the Internet, especially for the planning of meetings and avoidance of duplication in making any changes in Working Party structure. In the past, this has been a serious problem. A Research Group Coordinator or Working Party Chair should be able to make a rapid check to determine what research groups anywhere in IUFRO have common interests and what meetings are planned that will have common ground with the interests of his or her group. This will enhance interdisciplinary Co-operation.

To summarise, the past five years have been extremely active and demanding ones for IUFRO Division 2 leaders and scientists, with the Centennial programme, the World Congress and planning for major restructuring taking place during this period. At the same time, the importance of smaller group meetings and other activities to the scientists was shown by the large number of meetings and publications. There was an almost unanimous scientist agreement with the restructuring. Most scientists believed that it would enhance, rather than reduce, interaction. The revolution in communication technology had a very large effect on Division 2, and we can look forward to even greater improvements in the future which should further the basic goals and purposes of IUFRO as a scientist-based international organisation. The Coordinator is extremely grateful for all of the voluntary effort, co-operation and support of Division 2 officers and scientists during the term.

II. ANNUAL REPORT - 1995

In anticipation of the possible reorganisation to take place at the end of the year, no structural changes were made in the Division in 1995. There were a few officer changes. D.B. Neale, USA, was added to S2.02-17 as a Co-Chair in recognition of his assistance in compilation of the directory of tree breeders. K.S.S. Nair, India, was appointed a Deputy Leader of S2.07-00, Entomology. N. Kamata, Japan replaced resigning A. Yamane, Japan, Co-Chair of S2.07-11, Integrated Management of Forest Defoliating Insects. K. Darrow, South Africa, replaced P. Volker, South Africa as Chair of P2.02-01, Productivity of Eucalypts.

Subject Group S2.01-00, Physiology, was very active in 1995. In addition to the sessions and posters at the Congress, there were two meetings. One was a joint meeting of S2.01-12 (Canopy Processes) and S2.01-15 (Whole Tree Physiology), called a "Travelling Workshop on Interactive Environmental Effects on Forest Stands" and held in New Zealand 29 January-7 February. Another meeting of S2.01-15, "Dynamics of Physiological Processes in Woody Roots", was held in Ithaca, New York, USA, 8-12 October. Two important publications were:

(1) "Biology and Control of Reproductive Processes in Forest Trees", J. Webber, J. Owens and M. Stoehr, eds., Tree Physiology 15, pp I-X, 419-555, 1995, consisting of the papers presented at the 1993 S2.01-05 Working Party meeting held in Victoria, B.C., Canada; (2) "International Directory of Woody Plant Physiologists", S. B. Horsley and C.A. Weldon, compilers, 217 pp, USDA Forest Service Northeastern Forest Experiment Station, Warren, PA 16365, USA, issued in February 1995.

Our largest Subject Group, S2.02-00, Provenances, Breeding

and Genetic Resources, held several Congress sessions and participated in the poster programme, but also had a number of other activities. The four Working Parties concerned with Pacific Northwest conifers (Douglas-fir, S2.02-05; Contorta Pine, S2.02-06; Sitka Spruce, S2.02-12; Abies, S2.02-14) had a meeting titled "Evolution of Breeding Strategies for Conifers from the Pacific Northwest" 28 July-4 August in Limoges, France, preceded by a four-day field tour in the United Kingdom. An S2.02-07 meeting "Larch Genetics and Breeding; Research Findings and Ecological-Silvicultural Demands" was held 31 July-4 August at Remningstorp and Siljansfors in Sweden. The proceedings were published by the Swedish University of Agricultural Sciences (Reports, No. 39). "Eucalypt Plantations: Improving Fibre Yield and Quality" was the subject of a joint CRC/IUFRO S2.02-09 and P2.02-01 meeting held at Hobart, Tasmania, Australia from 19 to 24 February.

The proceedings are available for \$AUD100 (includes postage and handling) from the CRC for Temperate Hardwood Forestry, Locked Bag No. 2, Post Office, Sandy Bay, Hobart, Tasmania, Australia 7005. The poplar/willow working party, S2.02-10, had a meeting on "Poplar Biology and its Implications for Management and Conservation" in Seattle, Washington, USA, 20-25 August. It also continued publication of its periodic newsletter "Poplar Molecular Network", which is circulated to 274 scientists. "The World Directory of Forest Geneticists and Tree Breeders", F.T. Ledig and D.B. Neale, compilers, is now available electronically on the World Wide Web.

At the Congress, Subject Group 2.04-00 (Genetics) and two of its Working Parties had two sessions each on "Applications of Molecular Technology in Forest Genetics and Breeding: New Approaches to Breeding, and on Cytogenetics". Working Parties S2.04-06 (Molecular Genetics) and S2.04-07 (Somatic Cell Genetics) met together in Gent, Belgium, 26-30 September.

A pre-Congress meeting of S2.05-07 (Resistance to Pathogens) and S2.05-08 (Resistance to Insects) on "Bark Beetles, Blue-Stain Fungi and Conifer Defence Systems" was held from 31 July to 2 August in As, Norway. The Subject Group also contributed to the Congress interdivisional session on "The Vitality and Stability of Forest Ecosystems; Stress Impacts on the Forest".

Several Pathology Subject Group sessions were held at the Congress in addition to planning and participation in the Congress interdivisional session concerned with "The Vitality and Stability of Forest Ecosystems: Stress Impacts on the Forest". Working Parties S2.06-02 (Canker and Shoot Blight of Conifers) and S2.06-04 (Foliage Diseases) met jointly just before the Congress at the Hyytiälä Forestry Field Station in Finland. They also published the proceedings of their joint meeting on "Shoot and Foliage Diseases in Forest Trees" held in Vallombrosa, near Florence, Italy, 6-11 June 1994. Working Party S2.06-10 (Rusts of Pines) published the proceedings of its fourth conference, held in Tsukuba, Japan 2-7 October 1994.

Forest entomology was a very active part of Division 2 in 1995. The Entomology Subject Group (S2.07-00 and Working Parties S2.07-03, S2.07-05, S2.07-06, S2.07-07 and S2.07-11) concentrated its 1995 activity on the Congress and had more sessions and posters than any other Division 2 Subject or Project Group. Scientists from developing countries made a strong contribution to the Congress entomology programme.

Project Group P2.04-00 (Seed problems) was particularly involved with the developing countries. Three meetings were held, including: (1) "Recent Changes in Tropical Tree Seed Technology and Planting Stock Production", 12-14 June, Haad-Yai, Songkhla, Thailand; (2) Innovations in Tropical Tree Seed Technology", 5-15 September, Arusha, Tanzania; (3) "Latin American Symposium on Forest Tree Seeds", 16-20 October, Managua, Nicaragua. It also held three sessions at the Congress on Forest Tree Seeds: Production, Quality and Germination.

Project Group P2.05-00 holds a major meeting every other year and 1995 was an "in-between" year. R. F. Hüttl, Chair of P2.05-04 (Soil organisms, rhizosphere and nutrient uptake), was an invited speaker in the Congress Interdivisional session on "The Vitality and Stability of Forest Ecosystems: Stress Impacts on the Forest". A related important publication was: Hüttl, R.F., Nilsson, L.O., Johansson, U.T. (eds.) 1995: "Nutrient Uptake and Cycling in Forest Ecosystems. Plant and Soil" 168/169: 3-638.

Howard B. Kriebel

DIVISION 3 - FOREST OPERATIONS AND TECHNIQUES

Introduction

Since the World Congress in 1990, the Division has based most of its work upon the then expressed recommendations, i.e., in short "Environmental aspects and their short- and longterm consequences must always be considered when carrying out forest operations research. It is recommended that research and development programmes associated with forest operations be designed in a manner that gives appropriate significance to protection of the entire forest environment as well as to economic and ergonomic objectives". And also "it is recommended that IUFRO member institutions, with well established research programmes relating to forest operations, assist developing countries who have both need and desire to undertake appropriate research and development. Preliminary assistance should concentrate on living and working conditions, training, motivation, and improved planning and organisation".

This has shown in the programme of work of the Division and in the co-operation with institutions, universities and other organisations outside of IUFRO.

The mid-term symposium "Harvesting and Silviculture for Sustainable Forestry in the Tropics" held in Kuala Lumpur, Malaysia, October 1992, reflected these ideas. The three-day symposium, organised by the Forest Research Institute Malaysia (FRIM) was attended by 86 persons from 14 countries and followed by a two-day optional field excursion (attended by about 40 persons) to forest plantations and to tropical high forests in the hill regions of Pahang State.

As a result of the discussions held during the final session, consensus was reached on the following recommendations:

1) Future meetings like the above mentioned symposium are strongly recommended. Regional meetings should be held in each region of the tropics, and a major global symposium should be organised in connection with the 1995 IUFRO World Congress. Subject Group S3.05 should be the focal point for these symposia.

2) As seen in several presentations, cable crane and helicopter logging systems offer the potential of greatly reduced environmental impacts associated with harvesting of tropical high forests. Research to increase the acceptability of these systems in tropical forests should be encouraged.

3) It is clear that intensive planning can solve many of the environmental problems associated with harvesting and road construction. Workshops and other types of training are needed to teach forest managers, loggers, and others how to do this planning.

4) The relationships between harvesting and forest management need to be strengthened. Thus, for future meetings it would be beneficial to include more on forest management to complement the presentations on harvesting and environment.5) It is important that the research reported in symposia like this one be practical and relevant to foresters working on the ground. Researchers must endeavour to make their work useful and to avoid looking at forest operations from an "ivory tower" perspective.

6) In future meetings, more non-academics should be involved. To the extent possible we should invite presentations from concessionaries, equipment dealers, NGOs, and other potentially interested parties.

Subject/Project Group Summaries

S3.02 Operational Methods in the Establishment and Treatment of Stands

The objective of the group during 1991-1995 was to take into

consideration that the chain of measures in the establishment and treatment of new stands could not be isolated from each other. An overall view, covering operational efficiency, biology and sociology is necessary to bring forward a cost-effective regeneration. Thus co-operation within the IUFRO structure as well as with other bodies was recommended. In order to gather researchers from different areas of the world on equal footing it was suggested to chose topics that are of common interest to the industrial and the developing world, e.g. afforestation of first rotation sites or under difficult conditions. It is the judgement of the office holders that the work has been done according to the objectives.

S3.04 Operational Planning and Control; Work Study

During the period three meetings were held in which the following topics, among others, were treated: a) Integrated decision-making in planning and control of forest operations; b) International standardisation of measurement techniques and terminology etc.

The group wants an increased interaction with other IUFRO and non-IUFRO groups interested in integrated decision-making.

S3.05 Forest Operations in the Tropics

Six meetings were held in co-operation with other IUFRO groups and other bodies outside of IUFRO, especially the FAO Forest Harvesting and Transport Branch. Apart from the main event, the mid-term meeting, other topics were treated at a meeting of experts on forest practices, i.e. 1) Identify environmental or societal impacts which a code of forest practice should aim to reduce or eliminate; 2) Discuss components which participants believe would be essential in a "Model Code of Forest Practices"; 3) Individually report on codes of forest practice which have been implemented in each participant's country, state, or organisation, and provide written summaries of the details of such codes; 4) Report on individual experience in the development or implementation of improved forest harvesting practices, especially cost and efficiency studies.

S3.06 Forest Operations under Mountainous Conditions

In 1991-1995, five meetings were completed within the IUFRO structure as well as in co-operation with other bodies, regarding e.g. computer supported planning of roads and harvesting, planning and implementing future forest harvesting. Special attention was given to ergonomics, accessibility and environmental protection with regard to forest operations under mountainous conditions.

P3.03 Ergonomics

The group held ten meetings during the period in co-operation with other IUFRO groups as well as other international organisations. This work has resulted in, among other things, an effort to produce a handbook on ergonomic research methods, i.e. a standardisation of research methods is needed and appropriate research methods for developing countries should get special attention.

Plans for the future are to integrate ergonomics in other research groups, e.g. in Division 5.

P3.04 Small-Scale Forestry

Five meetings have been held in co-operation with other IUFRO groups especially S6.11-02 "Forestry and Rural Development in Industrialised Countries". The main features of these meetings have been the broad design of aspects and topics relevant to small-scale forestry, and the opening of the group to problems in private forestry in the countries in transition in Eastern Europe.

In the future a broad approach will be continued with special topics of each meeting.

P3.06 Economics and Harvesting of Thinnings

During the period two meetings were held in co-operation with other IUFRO groups and FAO/ECE/ILO Joint Committee. Special consideration was given to thinnings from biological, technical and economic aspects.

In the future there will only be the one research group and no working parties. Research work in co-operation with the European Union will handle cost-effective early thinnings among other things.

P3.07 Harvesting, Wood Delivery and Utilisation

The group organised six meetings in co-operation with other IUFRO groups and other bodies (international organisations). Some of the subjects the meetings dealt with were: a) Mechanised harvesting in the Pacific Northwest and other relevant areas; b) Harvesting systems and wood utilising challenges for the 1990s; c) Harvesting and product quality; d) Advanced technology in forest operations - applied ecology in action; e) Sustainable forest management and harvesting techniques; and f) The way ahead with harvesting and transportation technology.

Since the group was created at the Congress in Montreal in 1990, the group leader has issued a newsletter approximately 2 times per year to the members, containing information about upcoming meetings, new publications of interest, reports from meetings, etc.

P3.08 Forest Operations and Environmental Protection

Six meetings were held in co-operation with other IUFRO groups as well as other international organisations. Since the group's creation in 1990, environmental aspects have been integrated into the work of the Division. Work within the newly established working groups "Site Impact Caused by Forestry Operations", "Forest Operations on Sensitive Sites" and "Methods and Techniques for Site Protection, Improvement and Amelioration" is progressing and recommendations have been put forward regarding soil, tree, machine interactions.

Conclusion

The five year period culminated, as usual, with the World Congress which was held in Tampere, Finland. Two people engaged in Division 3 work were bestowed IUFRO Awards. Dr Thomas Corcoran, USA, received the IUFRO Distinguished Service Award and Dr Ann Merete Furuberg Gjedtjernet was bestowed the IUFRO Young Scientists Award. Division 3 expresses its congratulations to the recipients of these awards. Furthermore, Division 3 had a very successful programme for this congress with over 100 paper presentations and over 30 poster presentations.

In 1991-1995 the office holders of Division 3 were distributed in the different IUFRO regions as follows:

Northern Europe	16
Middle and South America	4
Central Europe	12
Africa	2
Eastern Europe	7
Asia	9
Mediterranean	3
Western Pacific	7
North America	20

To continue the work of Division 3 Professor Dennis P. Dykstra, CIFOR, former subject group leader of the Subject Group "Forest Operations in the Tropics", was elected new Coordinator of Division 3 for the coming period.

Publications 1991-1995

Beauvois, M. (ed) 1990. Proceedings of X International agricultural symposium on "Ergonomics and Safety", Paris 26-29 Jun, 1989, organised by IUFRO P3.03-00/IAAMRH/CIGR. Available from: CIGR, 9 rue Eugène Flachat, F-75017 Paris, France.

Corcoran, T.J., Linehan, P.E. and Suping Liu (eds) 1991. Proceedings of IUFRO 1990 S3.04 Subject Area XIX World Congress, Montreal, PQ, Canada, 5-11 August, 1990. Miscellaneous Report 354. Available from: Thomas J. Corcoran, University of Maine, Department of Management, Orono, Maine 04469, USA.

Division 3 Post-Congress Proceedings, containing the Division 3 papers presented at the IUFRO World Congress which were not published in the Congress Proceedings. Available from: IUFRO Div. 3 Secretariat, Swedish University of Agricultural Sciences, S-770 73 Garpenberg, Sweden.

Efthymiou, P.N. (ed) 1991. Proceedings of the International symposium on "Developments on work studies in forestry". IUFRO Working Party S3.04-02, 22-24 Jun 1988, Thessaloniki, Greece. Available from: P.N. Efthymiou, Forest Research Institute of Thessaloniki, GR-57006 Vassilika, Greece.

Sjøflot, L. (ed) 1991. Proceedings of the XI Joint International Ergonomic Symposium on "Psycho-social Factors Affecting Work in Agriculture and Forestry". Available from: L. Sjøflot, Dept. of Agricultural Engineering, Box 65, N-1432 Ås-NLH, Norway.

Staudt, F.J. (ed) 1991. Proceedings P3.03 Ergonomics, XIX World Congress IUFRO, Montreal, Canada, August, 1990. Available from: Frits J. Staudt, Department of Forestry, Section Forest Technique and Woodscience, Wageningen Agricultural University, P.O.Box 342, NL-6700 AH Wageningen, The Netherlands, fax: +31-8370-83542.

Proceedings of a conference "Ergonomic Research and its Application to Forestry", organised by IUFRO P3.03-00 Ergonomics and the Czech Ministry of Forestry in Brno, 28 May - 3 Jun, 1989, 124pp. Available from: University of Agriculture, Faculty of Forestry, Brno, Czechoslovakia.

Whyte, A.G.D. (ed) 1992. Compendium of Refereed Papers Presented at the IUFRO S3.04-01 Conference "Integrated Decision-Making in Planning & Control of Forest Operations", at the New Zealand School of Forestry, University of Canterbury, Christchurch, held 27-31 January, 1992. Available from: A.G.D. Whyte, School of Forestry, University of Canterbury, Christchurch 1, New Zealand, fax: +64-3-3642124.

Proceedings of the Workshop on "Computer Supported Planning of Roads and Harvesting", held in August 26-28, 1992, in Feldafing, Germany. Sponsored by IUFRO Groups S3.06 and S3.05 and University of Munich. Editor: John Sessions, fax: +1-503-7374316.

Proceedings of the International Mountain Logging and Pacific Northwest Skyline Symposium, held December 14-16, 1992, in Bellvue, Washington, USA. Sponsored by University of Washington and IUFRO Group S3.06. Eds: John Sessions and Peter Schiess, fax: +1-503-7374316.

Proceedings of the symposium on "Harvesting and Silviculture for Sustainable Forestry in the Tropics", held 5-9 October, 1992, in Kuala Lumpur, Malaysia. Eds: Wan Razali Wan

DIVISION 4 - INVENTORY, GROWTH, YIELD, QUANTITATIVE AND MANAGEMENT SCIENCE

Introduction

After a very successful IUFRO World Congress in Tampere my term as IUFRO Division Coordinator is coming to an end. It has been my privilege and great honour to help organise IUFRO activities in the course of the last five years. During this period Division 4 has been a very active Division within the IUFRO family. I felt well supported by my Deputy Coordinators.

IUFRO has the possibility of acknowledging the outstanding services of persons who have contributed to the well-being and development of the Union by awarding the Distinguished Service Award. During the divisional business meeting at the Tampere World Congress the Award was presented in the name of the IUFRO President, Dr. Salleh, to the following colleagues who have dedicated much of their time and inspiration to IUFRO:

Harold Burkhart, George Gertner Othmar Griess, H. Gyde Lund Adolf Priesol In his introductory remarks on this occasion our Past President, Walter Liese, stressed the significance of the Award and highlighted the idealistic and voluntary nature of IUFRO. In this spirit let me take the opportunity to thank all officers who served IUFRO during the last 5 years for their efficient cooperation.

To the outgoing officers of division 4 I convey my special gratitude for services well done and express my firm believe that they will continue to support IUFRO.

I welcome the incoming officers: thank you for accepting the responsibility to promote IUFRO's world wide activities.

Accomplishments

Mathematics and statistics are fields of special interest within Division 4. Therefore nobody should be surprised that we use a statistic approach to describe the many activities over the past five years. The IUFRO Secretariat has obligingly provided very interesting material. The main activity traditionally is to organise meetings.

Year	1	Divisions (No. of working units)											
And And		(71)		2 (75)		3 (28)		4 (13)		5 (33)		6 (29)	Total
1991	12	2	13	3	9	0	7	0	1	1	8	1	50
1992	15	4	25	5	12	3	10	3	10	4	3	0	75
1993	15	2	16	3	9	3	12	7	4	0	4	1	60
1994	19	5	16	0	11	5	17	5	3	1	8	0	74
1995	8	2	12	3	2	0	4	1	2	2	0	0	28
Total	69	15	82	14	43	11	50	16	20	8	23	2	287

Table 1: Meetings by Division

The above table shows that IUFRO Working Units organise an average of 57 meetings a year. During the past EB-period about 23% of all meetings were held in the developing countries and countries with economies in transition.

As can be taken from Table 1 all working units of our Division have been active in continuously organising meetings with a fairly good distribution to developing and disadvantaged countries. If you compare the total number of 50 meetings to the number of working units (Subject Groups, Project Groups, Working Parties) in Division 4 you get the indication of how active the groups have been, also in comparison to other Divisions (cf. bottom line of table 1).

Another important activity is publishing documents like proceedings. Again table 2 documents the absolute and even more relative outstanding work of collecting and editing scientific information:

Table 2: Publications of Working Units (joint publications: only the first mentioned is listed)

Division	1	2	3	4	5	6	Total
No.of publi- cations	12	91	18	61	9	9	200

Finally lets take the IUFRO World Series as an indication of valuable contributions to the public appearance of IUFRO. Since its start in 1990, 5 issues of IUFRO World Series have been published; two of these have been developed under the auspices of Division 4 working units.

3. New Frontiers

3.1. Information and Communication

A general need for IUFRO as a whole is better, cheaper and faster communication within the membership and outside to the general scientific community as well. This is why the Executive Board of IUFRO has launched a new initiative to create a network in the Internet on the basis of the IUFRO structure. This will enable all research groups and working parties to present themselves and their infrastructure (mailing list, publication list, meeting calendar, etc.) in the Internet. At the same time, the approx. 15.000 scientists of the IUFRO member organisations will have the possibility of getting interdisciplinary help in their projects and to find subject-related information from any one of the IUFRO working units. The first step will be to develop uniform homepages for every working unit.

3.2. Integration Versus Diversification

As all of you have experienced over the last decades that science has become more and more specialised. This has been the prerequisite for very successful research, exciting new

4. Recommendations

Communication

Communication among Subject/Project Group (SG/PG) Leaders, Working Party (WP) Chairs, the D4 Co-ordinator, and the Deputies & Co-chairs is the grease which allows Division 4 machinery to function. Communication should flow in all directions. D4 will function better than it has, if we all communicate better. For example, if you are a WP Co-chair, and have not been in touch with your WP Chair for a while, send him/her a letter, fax or phone call!

Activities

What does a SG, PG or WP officer do? There is a wide variety of answers to that question, depending on the talents, wishes, funding sources and energies available among the officers of a group.

SG/PG/WPs often do one or more of the following:

- issue a newsletter once or twice a year, sometimes in two languages, which might include research news of interest, IUFRO-specific news, future meetings of interest to the group, etc. When done well, this alone can be a low-budget, sufficient group activity.
- hold a meeting: SG/PGs usually hold a technical session at the IUFRO Congress, and one or more meetings during the five-year term; WPs usually do not have sessions at the Congress, but hold meetings between congresses.
- publish a book, based often on papers given at the Congress or at betweencongress meetings.
- arrange with a technical journal to have Congress or other papers from other meetings published in a single or special issue.
- conduct a study tour which offers group members an opportunity to see first-hand the most recent applications of research results, or problems in need of research.
- prepare definitions of procedures, description of measurement techniques or develop a multilingual glossary of terms for the subject matter of interest to the group. Over the past 100 years, IUFRO has done several of these which have enjoyed international reputation.
- conduct joint research projects.

Funding

Over the past 30 years, as IUFRO has spread from Europe to other industrialised nations, then to less-industr-

ialised nations, the issue of funding IUFRO activities has become more and more of a problem. But please keep in mind that funding is usually question No.3. Questions No. 1 and No. 2 are: "What fantastic idea or project is being proposed?", and "Who is the ideal genius of a person to make that idea or project work?" Once those questions are answered, the issue of funding often is settled quite easily. Too often I hear the third question first, and usually there is no answer! As Division Coordinator, I am often expected to find a source of funds for SG/PG/ WP activities. But I recommend D4 officers to handle that one on their own, partly because specific sources at the divisional level are non existent and partly because there are a lot of groups in D4 and the Co-ordinator can't (and shouldn't) micro-manage at that level. If the officer's employer is unable to offer basic support and there are no other sources apparently available, then I have two suggestions: 1) choose additional officers (Deputies or Co-chairs) who will have better funding support, and /or 2) find a way to operate the group at a lower-cost level of operation.

SPDC

The Special Programme for Developing Countries, based at the IUFRO Secretariat in Vienna, serves a variety of functions, one of which is to help scientists from developing countries attend IUFRO meetings, especially if they are on the programme. The SPDC can often provide funding for 1-2 people to attend a meeting, but not likely for 8-10 people.

Deputies and Co-chairs

Each SG, PG and WP should have more than one officer. The Leader or Chair is usually the one best able to find and recommend a Deputy or Co-chair, keeping in mind to strive for a geographic balance. Leaders and Deputies are approved by the Executive Board; Chairs and Cochairs are approved by the D4 Coordinator. Also keep in mind the 2-term limit for most positions.

Stepping Down

We are all volunteers in our IUFRO assignments, with other full-time jobs. Now and then a D4 officer finds it difficult to have enough time to manage the IUFRO job along with the "real job". In such a case, please notify your SG/PG Leader or Division Co-ordinator immediately; try to have in mind a logical person to replace you. Inactive groups are often eliminated because officers have become inactive, not because the subject matter is unimportant. Let's keep all groups vigorous!

I am very much indebted to Division 1 Coordinator Les Whitmore in offering and discussing these views.

Axel Roeder

DIVISION 5 - FOREST PRODUCTS

Introduction

The period 91-95 was marked by four main events:

- The Division 5 Conference in Nancy (France) in 1992
- the IUFRO Centenary celebrated after the Nancy Conference in Eberswalde and Berlin in 1992
- the World Congress of Tampere (Finland) in 1995
- and, between the main events mentioned above, the reorganisation of Div.5 started in 1993, achieved in 1994 and validated by the E.B. in 1995.

Division 5 Conference (Nancy - 92)

The all Division 5 Conference was organised in Nancy (France) at the end of August 1992. The title of the Conference was: "Better Wood Products through Science".

Four inter-group sessions on the following topics were organised during the meeting:

- Relations between wood properties, marketing, and users' needs
- Extending the useful life of structures: design, preser vation and surface finishes
- Production and use of energy from biomass
- Recycling of wood based materials

Around 400 persons from 62 countries attended the Conference .

A large number of papers and posters were presented during the different sessions.

There were

- 23 invited papers
- 282 voluntary papers
- 176 posters

IUFRO CENTENARY 92

The celebration of the IUFRO Centenary took place in Berlin just after the Div.5 Conference. Consequently, there were not many Div.5 specific events scheduled at this opportunity. Div. 1, 3 and 5 organised a very successful interdivisional workshop on "Environmental Changes in Eastern Europe with Respect to Wood Energy and Energy Plantations". 17 papers were presented during this joint workshop which stimulated some Eastern European countries to plan meetings focussing on this problem for the following years under the umbrella of IUFRO.

World Congress 95 (Tampere) and Division 5 Reorganisation

IUFRO's wish to facilitate and to sustain the cooperation between the different areas of the wood chain research activity was met by the choice of the topics presented in the course of the sessions, and especially during the plenary session, and by the large number of interdivisional sessions (13). Subjects regarding wood industry were treated particularly by two sessions entitled "Friendly Environmental Technologies" and "Silviculture for an Industrial Raw Material".

All subject and project groups had at least one business meeting. Div.5 presented approximately 60 posters and more than 80 papers during the Tampere Congress.

Div.5 structure was re-organised following the belief that the evolution of wood sciences and associated technologies should be considered more. A committee under the presidence of R.L. Youngs evaluated all suggestions and comments from IUFRO members and also from outside, and came up with a proposal of restructure which was approved by the E.B. According to this new organisation Div. 5 was divided into 11 research groups covering the following subjects:

- Wood Quality

- Formation of Wood
- Natural Variations in Wood Quality
- Biological Improvement of Wood Properties
- Wood Properties Desired by End-Users
- Timber Engineering
- Non-Destructive Evaluation of Wood and Timber
- Wood Protection
- Protection from Fire
- Wood Durability

- Wood Processing

- Wood Drying
- Adhesives and Wood Gluing
- Sawing, Milling and Machining
- Production Systematics
- Surfacing and Finishing
- Industrial Engineering and Operations

- Composites and Reconstituted Products

- Lignocellulosic-Based Composites
- Recycling and Recycled Products
- Wood/non-Wood Combinations
- Modification of Lignocellulosics
- Protection of Composites and Reconstituted Products

- Properties and Utilisation of Tropical Woods

- Energy and Chemical from Forest Biomass
- Wood Carbonisation
- Production and Utilisation of Bamboo and Related Species - Building with Bamboo
- Tree Ring Analysis
- Forest Products Marketing

- Non-Wood Forest Products

- Medicinal and Aromatic Plants
- Edible Products from the Forest
- Mushrooms Growing in the Forest

Research Groups: Report of Activity

During the 1991-1995 period, many research groups organised specific meetings and were very active in creating and managing a large number of networks and improving the development of international relations between researchers throughout the world. The extension of scientific networks was confirmed by the large Tampere attendance with participants from all continents.

The period was also characterised by the intensification of joint meetings regrouping researchers working on lignocelulosic material production and wood technologist. Thus, for example, Div.1, Div.3 and Div.5 organised joint meetings on the role of wood as energy supplier in relation to environmental changes.

WOOD QUALITY

The Wood Quality Subject Group incorporates a wide variety of topics, interests, and expertise. Topics covered during the period, especially at the World Congress, ranged from cellular detail to the whole tree, from hormonal regulation of cambial activity and ultrastructural details of cambial organition. The objectives of the group were slightly modified and there are basically two objectives now:

The first objective is to present topics of general interest to the international forestry community on wood preservation and fire protection issues.

The second objective is to provide a forum to discuss the research conducted by international scientists.

These changes were aimed at creating a more flexible and streamlined Research Group able to provide a forum for discussing the critical issues of wood preservation and fire protection in today's world. A very important session was held during the last World Congress which permitted an up-date of the state-of-the-art on topics such as termites, environmental concerns, regulations, and criteria for wood preservation performance. A wide array of new research developments in wood preservation was also presented during the meeting. A special technical session was devoted to fire issues.

The wood protection topic in the IUFRO organisation is affected by the competition with the International Research Group on Wood Preservation which is more focused on industrial applications than IUFRO. IRG receives a larger support from the industry of wood preservation products and there is a large attendance of engineers from the chemical industry at the IRG meetings. Basically IRG and IUFRO are not covering the same area, one representing the position of manufacturers of preservation products, the other reflecting the position of wood companies. This complementarity has not been very evident in the past and IUFRO has to be very attentive to this situation in order to strengthen the links between the two organisations.

WOOD PROCESSING

The Wood Processing Research Group held 5 working party sessions, 2 business meetings, and one interdivisional meeting during the World Congress. Most people were very pleased with the large number of countries involved and the ability to network with many people from diverse backgrounds. Two new research groups resulting from the Div.5 reorganisation had their first official meetings at this opportunity. (Finishing and Surfacing and Industrial Engineering and Operations). Due to the quality of the interdivisional session, the Wood Processing Research Group wanted to push for more interdivisional sessions organised at working party level to raise their scientific and technical contents and to avoid general papers without clear consequences and benefits in term of innovative processes or transfer of technology.

COMPOSITES AND RECONSTITUTED PRODUCTS

As a result of the recent reorganisation, the Composites and Reconstituted Products Subject Group S5.05, chaired by SAG Leader David Plackett with one Deputy Leader Roger Rowel, has now 4 working parties. The activities of this Subject Group were initiated at the World Congress, and all 4 working parties were very active. The activities of these parties at the XX World Congress are listed below:

- S5.05.01 - Lignocellulosic Based Composites - A total of 8 papers and 1 poster were presented. A Working Party Leader and a Deputy are in place, and 1 additional Deputy Leader is being sought at this time.

- S5.05.02 - Recycling and Recycled Products - A total of 5 papers and 1 poster were presented. A Working Party leader has been chosen, and Deputies are now being recruited.

- S5.05.03 - Wood/Non-Wood Combinations - A total of 6 papers was presented. A Working Party Leader and one Deputy Leader are in place, and an additional Deputy Leader is being recruited.

- S5.05.04 - Modification of Lignocellulosics - A total of 5 papers was presented. A Working Party Leader and one Deputy are in place, and 1 additional Deputy Leader is being recruited.

Subject Group S5.05 accommodated 6 posters in addition to the papers and posters noted above. There will be at least 6 meetings in the next 2 years that will focus on the subject areas of interest to this subject group. Notices of these meetings will be published in *IUFRO NEWS*. This subject group and the associated working parties are very active and there is much interest in the general area of wood based composite products.

PROPERTIES AND UTILISATION OF TROPICAL WOODS

The main activity of the Tropical Group during the period was the attendance at the IUFRO World Congress and a lot of members of the Group joined the post-Congress-tour on forest industry. The high degree of automation found in Finland may not be achievable or desirable in many tropical countries but the principles of utilising small material are the same.

Further developments were made in networking forest products research on the utilisation of small plantation grown logs between 13 institutions in 10 countries. It is hoped to hold a workshop in Kumasi (Ghana) in early 1996 in order to finalise the proposals.

A new Dry Area Sub-Group (to be confirmed by E.B.) was set up at the World Congress to deal with the specific problems of dry forest utilisation.

The Tropical Research Group is editing a newsletter which is sent out to some 200 group members. Up to now there have been two issues per year.

ENERGY AND CHEMICALS FROM FOREST

BIOMASS

At the World Congress, the Energy and Chemical from Biomass Research Group held four working sessions and two poster sessions. Most of these were well attended. Thirteen papers and six posters from 17 countries were presented. These considered the near-term to long-term projections on wood energy showing a significant expansion into the next century: in the US for power generation, in Brazil for domestic fuel, electricity generation in sawmills and charcoal making, and in Scandinavia where improvements in fuelwood harvesting and conversion technologies are expected to make wood fuels much more competitive. Canada and the US investigated ethanol production from hardwoods and softwoods. Japan developed novel carbonisation/gasification technology. Malaysia and Latvia investigated activated carbon and carbon adsorbent production. Serbia developed wood residue briquettes and investigated essential oils from local tree foliage. Australia and Nigeria determined the yields of carbon from plantation species. Korea investigated anomalies in heat values of waste oil/wood fuel mixes. Belgium was involved in an EC-ASEAN programme of biomass energy technology transfer. New Zealand conducted a study on the economic availability of forest residue energy. Romania studied the chemical modification of wood and the production of phenol- and urea- formaldehyde resins using lignosulphonate residue.

The Group held 5 working sessions and one intergroup session at the all Division 5 Conference where 28 papers and 9 posters were presented.

The utilisation of wood residues and the sustainable wood production for energy and chemicals are essential practices as we enter the 21st century if we are to make efficient use of the forest resources to perpetuity. The need to shift from fossil to renewable energy resources was highlighted in order to reduce the threat of global warming through greenhouse gas accumulation from fossil fuels. The forest products industry could benefit from integrating energy and chemicals production in its operations to fully utilise its residues. The highly integrated nature of the petrochemical industry has been the formula for its success in the 20th century.

In developing countries, community based energy forestry and effective government measures are needed in order to overcome domestic fuel shortages. Technical papers covered fuel and chemical characterisations of wood, bark and leaves of various species, fluid bed combustion and carbonisation, carbon products, wood-based plastics and composites, dyes and adhesives from woody material, wood fibre studies and short rotation intensive culture energy plantations.

The workshop held in Berlin, Germany, on 3 September 1992 was jointly organised with IUFRO Groups P1.09-00 and P3.07-04 as a result of a joint meeting between the project groups at the Montreal IUFRO World Congress in 1990. The

topic chosen was in response to a perceived need in the region which was more fully realised, however, in the subsequent events after the opening of Eastern Europe. This revealed the extent of the widespread pollution created by the antiquated fossil fuel combustion systems for power generation systems with poor emissions control. In addition, radioactive fallout from Chernobyl contaminated agricultural land in other parts of Europe such as Sweden.

Seventeen papers from twelve countries were presented which highlighted the benefits and potentials of forest biomass energy in short rotation energy plantations and efficient wood energy technologies in reducing dependence on fossil fuels, reducing air pollution (e.g. SO, and ozone), reduce greenhouse gas accumulation through fossil fuel substitution, adsorption of nutrient pollutants from farms and municipal sewage sludge and the fixing of radioactive nuclides in the roots of trees grown on contaminated land.

A conference on "Energy from Biomass Residues" was organised by the Forest Research Institute Malaysia and the Institute of Energy Malaysia. The 24 papers and 11 posters presented covered energy policies, carbonisation, gasification and combustion technologies, cogeneration, liquid fuels from biomass and the costs of fossil versus wood based fuels for domestic use in developing countries.

The period closed for P5-03 with the participation of some group members in the meeting on "Chemical Implications of Energy Uses for Agricultural and Forestry Resources" at the 1995 International Chemical Congress of Pacific Basin Societies, held from 17 to 22 of December in Honolulu (Hawaii).

PRODUCTION AND UTILISATION OF BAMBOO AND RELATED SPECIES

The main events concerning the Research Group on Bamboo and Related Species during the period 91-95 were:

- 27/30 November 91: Co-organisation of the 4th International Bamboo Workshop held in Chiangmai, Thailand, with the IDRC, the Royal Forest Department and the Kastsart University of Thailand. There were 250 participants from 26 countries from Asia, Australia and the Pacific, Africa, Europe and North America.

- 7/11 December 92 : The Group Leader was in charge of the delivery of opening remarks at the opening ceremony of the International Symposium on Industrial Use of Bamboo held in Beijing, China-Beijing.

- 24-26 June 94: The Group Leader was in charge of the delivery of the remarks on Bamboo Research and Development: the IUFRO and INBAR perspectives at the International Workshop on Bamboo Research: Problem Analysis on Bamboo Research in South East Asia organised by the IUFRO Research Team. Chi-Tou, China-Taipeh.

- 19/22 June 95 : The IV International Bamboo Congress. Ubud, Bali, Indonesia. IUFRO was member of the Steering Committee.

TREE RING ANALYSIS

At the World Congress a special emphasis was given to methodologies like X-ray densitometry and chemical components of growth rings. It was discussed whether a more detailed chemical analysis within the growth ring would give additional information. In this context the close influence of soil conditions was mentioned as an important factor in this research field. More attention should be paid to the reactions of growth ring parameters to the atmospheric carbondioxid increase. Recently developed techniques like resistographic measurements, sandblasting, etc. were not applied by the participants of the meeting.

In summary, traditional methodologies are sufficiently developed to be used for various applications and more attention should be paid to the new techniques which might contribute to a better understanding of tree ring structures.

FOREST PRODUCTS MARKETING

The group organised two technical sessions during the Tampere World Congress, one on "Market and Customer Orientation" with 4 papers presented and the other on "Environmental Impacts in Forest Products Marketing", with 5 papers.

NON-WOOD FOREST PRODUCTS

Two volumes of the book entitled "Recent Advances in Medicinal, Aromatic and Spice Crops" edited by S.P.Raychauduri were published in 1991 and 1992, respectively. These contain keynote addresses, special lectures and original papers presented during the international conference held in New-Delhi (India) on January 28-31 1989. A book entitled "Management of Plant Diseases Caused by Fastidious Prokarryotes" edited by S.P. Raychaudhuri and David S. Teakle was published in 1993. This volume contains the papers presented during the 4th International Plant Mycoplasma Workshop held in Brisbane, Australia in July, 1989.

An international conference on "Recent Advances in Utilization of Medicinal Plants" was held at Calcutta (India) from December 30, 1994 to January 1, 1995. Nearly 250 scientists from 12 countries attended the meeting.

The group had 3 Working Parties scheduled during the Tampere World Congress in the course of which 17 papers were presented.

India and South-East Asia took a great importance on the utilisation of non-wood forest products; this group has been very active on the topic for many years and the group is planning to prepare for the next World Congress with a particular attention on its subject, using the opportunity of the localisation to give a particular emphasis to the topic of non-wood forest products.

Amantino Ramos de Freitas

DIVISION 6 - SOCIAL, ECONOMIC, INFORMATION AND POLICY SCIENCES

1. Evaluation of Divisional Activities

All Division 6 groups have been active and productive following the reorganisation of divisions 4 and 6 in 1990 during the IUFRO World Congress in Montreal, Canada. After this reorganisation which was approved by the IUFRO Board of Directors and the IUFRO International Council, Division 6 now covers the following topics: economics at national and international levels; forest policy; forest history; research organisation (philosophy, management, application of results), forest recreation and landscape management; and information systems (including bibliography).

S6.01-00: FOREST RECREATION, LANDSCAPE PLANNING AND NATURE CONSERVA-TION S6.03-00: INFORMATION SYSTEMS AND TERMI-

	NOLOGY
S6.06-00:	MANAGEMENT OF FOREST RE-
	SEARCH
S6.07-00:	FOREST HISTORY
S6.11-00:	SOCIAL AND ECONOMIC ASPECTS OF
	FORESTRY
	(formerly S 4.07-00)
S6.12-00:	FOREST POLICY AND FORESTRY
	ADMINISTRATION
	(formerly S 4.08-00)
S6.13-00:	FOREST LAW AND ENVIRONMENTAL
	LEGISLATION
	formerly S 4.08-03)
S6.14-00:	URBAN FORESTRY
	(formerly P 1.05-00)
P6.01-00:	FOREST DECIMAL CLASSIFICATION
	(formerly P 6.01-00)

P6.11-00: FOREST SECTOR ANALYSIS (formerly P 4.11-00) P6.12-00: ECOLOGICAL ECONOMICS (new)

The rationale was based on the belief that Division 6 reflects more the problem-oriented nature of IUFRO activities. The reorganisation split the technical work of inventory, mensuration, and management systems (Division 4) away from economics, social and policy matters (Division 6) and provided each Division with significant research topics to organise its IUFRO activities. It also affirms IUFRO's commitment to the growing importance of economics, social, and policy sciences in forestry and improves the ability of each Division to operate more effectively.

Major activities of Division 6 included preparation work for the 1992 IUFRO Centennial Meeting and the 1995 IUFRO World Congress. Most of the research groups conducted formal sessions during these meetings, as well as informal meetings which are so valuable in a world-wide gathering. Under the coordination of Prof. Egon Gundermann, 28 sessions were held during the 1992 IUFRO Centennial Meeting and 30 sessions during the 1995 IUFRO World Congress. These sessions discussed such subjects as: economic evaluation of forest damage, impact of changes of political and economic systems on the role of forestry in rural development, institutional and administrative research and the development of forestry research organisations, and applied forest sector models.

In the past five years Division 6 faced a special challenge as relates to the transition countries. The Division needed to address the problem of how to help best these transition countries deal with the various issues and aspects of market economy, forest policy including forestry administration, as well as forest economics and planning. Major areas that the Division had research experience in included the understanding of the behaviour and functioning of the policy process as a whole, i.e. the knowledge of the policy process under a market system. Also the different type of knowledge needed in solving issues and problems of goal-setting, analysing the initial situation of policy formulation, searching and selecting effective policy means, implementing and executing policy programmes, i.e., in short, all the knowledge needed for the policy process including research in economics, social and political sciences, administrative sciences or science of law in a market economy. In response to these challenges, Division 6 established S6.11-06 "Economic and Social Aspects of Forestry in Countries in Transition".

Challenges remain, however, on how to integrate best Division 6 activities into IUFRO's overall programme and other organisation activities. Social, economics and policy sciences have made substantial progress in supplying the type and quality of information necessary for effective decisions concerning the use and management of forests. At no time in the past has such research had so far reaching an application to forestry and related problems. This application has increasingly involved multi-disciplinary research activities and a growing emphasis on social and economic problems arising from increased use of forest for the production of noncommodity outputs including water, recreation, and environmental amenities and changing economic institutional arrangements. The need for information supplied by Division 6 researchers will grow at a healthy pace in the years ahead. IUFRO researchers need to be challenged to fully utilise their unique training and insights, to select relevant and researchable problems for investigation, and to direct research findings to audiences who are in need of such information. Division 6 needs to be well-positioned to meet such challenges.

2. Changes in Leadership and Organisation 1991-1995

1992:

Working Party S6.07-04 "Ecological History" was established and was headed by Chairman Pietro Piussi of the Instituto di Selvicoltura, Università di Firenze, Via S. Bonaventura 13 1-50145, Florence, Italy. This Working Party was established to coordinate interdisciplinary studies of human-induced changes in forest ecosystems. These changes have occurred through time and thus are tightly linked to historical analysis. Some changes are results of management practices and others are due to climate or human activities distant from the forest, such as pollution. Foresters, ecologists, historians, geographers, archaeologists, anthropologists, and economists are invited to participate.

Brian Payne resigned as co-leader of S6.11-00 "Social and Economic Aspects of Forestry" on account of other working responsibilities. His successor is Fred Cubbage, U.S. Forest Service, Project Leader, Economics of Forest Protection and Management, Southern Forest Experiment Station, Research Triangle Park, North Carolina, USA.

1993:

Hans Gregersen resigned as co-chairman of S6.11-03 "Economics of Integrated Watershed Management" due to other commitments.

Working Party S6.11-03 "Economics of Integrated Watershed Management" was dissolved and combined with S6.12-03 "Integrated Land Use and Forest Policy". The chairman of S6.12-03 "Integrated Land Use and Forest Policy" continued to be P. Harou of the World Bank and Co-chair were K.O.Tejwani of India and H. Essmann of the Institut für Forstpolitik, Universität Freiburg, Germany.

1994:

Working Party Chairman of S6.06-03 "Extension", E.Elwood resigned on account of other commitments. He was replaced by James E.Johnson, Extension Project Leader, 222 Cheatham Hall, Virginia Tech, Blacksburg, Virginia 24061-0324, USA

3. Division 6 Activities - 1991-1995

17-22 February 1991 San José, Costa Rica S6.07-00

Meeting on "Latin American Forest and Conservation History". A variety of topics were covered during the meeting. The keynote address was on the "Perceptions about Tropical Deforestation in Tropical America: the Last 50 Years" by Gerardo Budowski, Director of Natural Resources, University for Peace, Sacazu, Cost Rica. Sessions were then held on Central America, Mexico, Brazil and Amazonia, and timber extraction and forestry since colonial times. Overall there were 30 papers presented on Central and South America. For more information about the proceedings contact:

Harold Steen, 701 Vickers Avenue, Durham North Carolina 27701, USA

27 May - 2 June 1991 Honolulu, Hawaii, USA. S6.07-00

Meeting on the "History of the Forest Economy of the Pacific Rim". The meeting was organised by R. Tucker and J. Dargavel. There were 16 papers presented on the history of forest products trade, economy and impacts on social institutions. For further information about the proceedings contact:

Harold Steen, 701 Vickers Avenue, Durham, North Carolina 27701, USA

18 - 20 June 1991 Wolverhampton, UK S6.14-00

The Working Party participated in the "Second UK Conference on Urban Forestry" in Wolverhampton Polytechnic, Dudley Campus, United Kingdom. The conference attracted 200 participants from eight countries and was organised around three key themes: technical, social/environmental and economic planning and developmental aspects of urban forestry. The main aim of the conference was to explore the best means of actually achieving an urban forestry programme. Presentations included the technical aspects of urban trees and their care, social/environmental aspects, and the economic planning and development aspects. A copy of the proceedings can be obtained from:

A Seed in Time Ltd., P.O.Box 158, Edinburgh, 9H2 4PP.

25.8. - 8.9.1991

Rovaniemi, Finland, Estonia and St.Petersburg, Russia S6.01-00 and S6.11-04

Study tour on "Recreational and Other Values of Forest Management". Meetings were held in Rovaniemi, Finland and Estonia and St.Petersburg (back then still Leningrad), Russia. The objectives of the meetings were to study the research activities on multiple-use values of forest management. For further information contact

A. Reunala, Finnish Forest Research Institute, Helsinki, Finland

2-7 September 1991

Freiburg, Germany

S6.07-00

Meeting on the "History of Small-Scale Forestry of Peasant Forestry". The objective of the meeting was to study the development of small forest holdings. Thirty papers were presented from throughout the world including the development of the far eastern forest lands in the USSR, history of farm forestry in India, woodland in the peasant economy of England, and history of the forests of northern Bangladesh. For further information contact:

H. Brandl, Forstliche Versuchs-und Forschungsanstalt Baden-Württemberg, Wonnhalde-strasse 4, D-7800 Freiburg, Germany.

18-19 September 1991 Paris, France

S6.12-01

Meeting on the "Evaluation of Forest Policies and Programme". This meeting took place as a satellite meeting of the 10th Forestry World Congress in Paris. Nine invited papers were presented on the state of the art of forest policy science and on how different disciplines contribute to the advancement of forest policy science. Topics included what the various disciplines of political science, sociology, law, and economics are contributing with regard to analysis and evaluation of forest policies, what are the strengths and weaknesses of each discipline, and what kind of synthesis across disciplines seems most promising. For further information contact:

Birger Solberg, Agricultural University of Norway, Dept of Forestry, P.O. Box 44, N-1432 AS-NLH,Norway, tel. 47-9-948880, fax 47-9-948400, or at his EFI address.

25 September 1991

Paris, France

S6.12-03 and P6.11-00 also held a satellite meeting of the l0th Forestry World Congress in Paris on "Forest Sector Analysis for Developing Nations". Both a review of literature and methodologies were presented on analysis techniques for developing countries. For additional information contact:

Patrice Harou, The World Bank, 1918 H St. NW. (R-34282), Washington, DC 20433. TEL 202 473-5526/ FAX 202 473-8229 7-11 October 1991 Rotorua, New Zealand S6.06-00

The Working Party conducted a successful meeting on "Forestry Research Management Initiatives for the 1990s". Six subject areas for the conference were identified that exerted influence on forest research in the 1990s. These were science and forestry institutional reforms such as privatisation, forestry research funding, evaluation of research, strategic planning, technology transfer and internationalisation of forestry. The conference provided researchers and administrators from 14 countries including 4 African countries, Papua-New Guinea, Malaysia and the Philippines, with the opportunity to discuss these subjects and present their ideas on how to meet best the challenges of the 1990s. For further information contact:

John Kininmouth, Forest Research Institute, Private Bag 3020, Rotorua, New Zealand, fax: (0064) 73-479-380

29 April - 1 May 1992

Seattle, Washington, USA.

P6.11-00

Meeting on "Forest Sector, Trade and Environmental Impact Models: Theory and Applications". The meeting was hosted by the University of Washington, Seattle, Washington, USA to review the state of the art for forest sector modelling and the changing philosophical basis for forestry decisions (i.e., sustainable forestry, ecological economics). The topics included theoretical advancements in modelling trade and environmental impacts, simultaneous models of product and factor trade, new developments in country, trade barrier and multiple product models, techniques in model assessment and validation, modelling of resource-based changes including land use and forest inventory, and models of technology changes and market acceptance changes. Thirty two technical papers were presented by participants from 14 countries. A field trip was held to study the local forestry situation and the international trade situation.

6-12 September 1992

Pushkino, Moscow Region, Russia

Joint meeting with Division 4 on "Integrated Sustainable Multiple-Use Forest Management under the Market System". The meeting was held to discuss problems of the transient process from centralised economic systems to market economy and to search for solutions in the problem areas of financing, pricing, planning, administrative bodies, form of enterprises and laws. Over thirty papers were presented during the conference. For proceedings contact:

Niels Koch, Danish Forest Research Institute, Skovbrynet I6, DK-2800 Lyngby, Denmark. FAX 45 45 934849.

22-25 November 1992 Prague, Czech Republic S6.12-00

Meeting on "Administrative Policy Making in Forestry". The objective was to compare views in administrative policy making in forestry in eastern and western Europe. For more information contact:

Jiri Matejicek, Forschungsanstalt für Forstwirtschaft und Jagdwesen, Jiloviste-Strnady, 15604 Praha 516, CSFP, Tel 0222 342500 ext 310, FAX 422 259 1413

29 August - 3 September 1993

North East Switzerland, Southern Germany and France (Vogues Mountains)

S6.06-04

Workshop on "Close to Nature Silviculture, Regeneration on Very Small Openings". The objective of the workshop was to examine the problems of teaching silviculture in a changing society, where there are new complex and contrasting demands towards forestry and silviculture. The plan was not to have any papers presented but instead to have a general discussion initiated by short contributions. For further information contact:

J. Ph. Schütz, Professur für Waldbau, ETH-Zentrum HG F 22.3, Raministrasse 101, CH-9092 Zürich, Switzerland.

30 August-10 September 1993

Korea Rep. and Taipei-China

S 6.01 and S6.11-04

Interim Meeting on "Recreation, Landscape Planning and Nature Conservation". The objective of the meetings was to study the research activities on multiple-use value of forest management and to learn about planning and how Korean and Taiwan cultures influence these activities. Included were paper sessions, visits to parks and forests and cultural events.

27-29 September 1993 Warsaw, Poland S6.12-02

Meeting on "Forest Administration and Environmental Protection". The objective of the meetings was to discuss challenges of forest administration. The meeting focused on the instruments of administrative policy making that proved to be effective in protecting the forest and in making its multifunctional use profitable. The main issues which were discussed were:

- (1) Duties and resources of forest administration for handling environmental issues;
- (2) organisation of forest administration and environmental protection administration on different regional levels, and (3) strategies for administrative policy-making.

For further information contact:

Max Krott, Universität Göttingen, Institut für Forstpolitik und Naturschutz, Büsgenweg 5, D-37077 Göttingen, Germany. 19-24 September 1993

Fredericton, New Brunswick, Canada

Sponsored by S6.11-02 together with the Canadian Institute of Forestry

Symposium on "Forestry and Rural Development in Industrialised Countries". The objective of the meeting was to create an awareness of the different kinds of activities members are involved in with respect to the Working Party subject matter area and to exchange information. Members were invited to share their experiences and knowledge through presentation and discussion on what they consider to be the highest priority for research investigation. Topics addressed included definition of resources, identification of problems and opportunities, development of models and methods to realise potentials, and development of models and methods of evaluation.

7-9 February 1994

Zaragoza, Spain

S6.12-03

Meeting on "Environmental and Land Issues in the Mediterranean Basin: An Economic Perspective". The objective of the meeting was to examine the interface between natural resources, environment and land use patterns. Forest scientists as well as policy makers were encouraged to participate in this seminar. For further information contact:

Patrice Harou, EDI, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, USA.

14-18 March 1994

Nancy, France

S6.03-00

Meeting on "Retrieval and Exchange of Scientific Forestry Information in Europe". Topics discussed included: the information situation of forestry information, multilingual forestry information, electronic documentation and its diffusion, and telecommunication networks and electronic mail services. For further information contact:

M. Lionnet, ENGREF, Bibliotheque, 14, rue Girardet, F-54042 Nancy CEDEX, France.

20-24 June 1994

Pushkino, Moscow Region, Russian Federation

Division 6 held a meeting on "Economic and Legal Aspects of Forest Management". The objective of the meeting was to examine forest policy options for public ownership of forest resources and private utilisation of them. Fifty scientists from seven countries in North America and Europe attended the meeting and shared their experience on different tenure and management arrangements. For further information on the proceedings of the meeting contact:

Fred Kaiser, USDA Forest Service, FIERR, 201 14TH Street, 8.W. Washington, D.C. 20250, USA.

29 August - 2 September 1994

Istanbul, Turkey

S6.06-04

Meeting of silviculture professors. The topic of the workshop was "Regeneration Problems of Mixed Forest Stands". Proceedings of the meeting will be available. Please contact:

Cemil Ata, Dean of the Forestry Faculty, Karaelmas University, TR-67 100 Zonguldak, Turkey.

31 August - 10 September 1994

USA

S6.01

The "3rd International IUFRO Student Excursion" took place in the USA. The excursion was organised by Perry Brown, University of Montana and Bill McLaughlin, University of Idaho. The excursion brought together more than 45 students and professors from eight countries.

12-13 September 1994

Vienna, Austria

S6.12.01

Meeting on "Analysis and Evaluation of Forest Policies and Programmes" The topic discussed was research design for analysis and evaluation of forest policy means for non-wood products. Fifteen persons from 9 countries attended. For further information contact:

Birger Solberg, European Forest Institute, Torikatu 14, SP-80100 Joensuu, Finland. FAX 358 73 124393.

18-21 September 1994 High Tatra, Slovakia S6.12-02 Meeting on "Public Re

Meeting on "Public Relations by Forest Administration- A Comparative View of Europe". The meeting's objective was to promote mutual understanding on public involvement and help enlarge practices in forest management. For more information contact:

Jozef Tutka, Forest Research Institute, 96092 Zvolen, T.G. Masaryka 22, Slovakia, fax +42-855-23397

7-9 November 1994

Tokyo, Japan

Divisions 4 and 6 held a meeting on "Public Participation and Environmental Conservation". The objective of the meeting was to promote mutual understanding on public involvement and help enlarge practices in forest management. For more information contact:

Yukichi Konohira, Tokyo University of Agriculture and Technology, 3-5-8 Saiwaicho, Fuchu, Tokyo 183, Japan, fax81 423-64-7812.

Harold F.Kaiser

In 1995, the SPDC began its 13th year, having been established in June, 1983. However, it was not until 1988 that the annual report was first published with the IUFRO Annual Report. A brief summary of SPDC's history was included in 1993, the first year of Brian Payne's tenure as its third Coordinator. In late 1993, the Executive Board approved the SPDC Strategy for 1993 to 2,000, which had been prepared by second Coordinator Lorne Riley.

It now appears that the SPDC will last until 2000, as it continues to find support for its mission of helping to strengthen the capacity of forestry research institutions in developing and disadvantaged countries. A measure of its success was the attendance of more than 600 participants from these countries at the 20th IUFRO World Congress in Tampere, Finland, in August 1995. Another measure of success was IUFRO's decision to hold its next Congress, in the year 2000, for the first time in a developing country, Malaysia.

Personnel

For 1995, receipts were \$409,409. Expenditures were \$545,291. The Government of Japan was again the primary source of receipts with their fifth grant for the series of BIO-REFOR workshops and core support to SPDC. Other receipts came from sales of training course materials and investment earnings.

Major disbursements occurred for the 4th annual BIO-REFOR workshop and the final payment for printing and shipping the research management training course. Others were for printing and mailing the Information Bulletin, and providing assistance to participants in the World Congress and other IUFRO meetings, including a 5-day training course on research planning and management just prior to the Congress.

Altogether, 129 financial transactions were completed in 1995, many with the cheerful, efficient, and indispensable help of Rita Z'berg, at the Swiss Federal Institute for Forest, Snow and Landscape Research in Birmensdorf. Their contribution of her time was highly appreciated.

Staff travel took Martina Melville to Birmensdorf for two days with Rita Z'berg to coordinate SPDC book-keeping and financial affairs with the Treasurer's office. Mirjam Freund accompanied other IUFRO staff to the World Congress in Tampere, Finland, where she and they worked endless hours, mostly behind the scenes, to ensure the success of the Congress. The coordinator participated in the Executive Board meeting and excursion in Madrid and Seville, Spain; a meeting of IUFRO officers in Oxford, U.K.; the 20th IUFRO World Congress in Tampere, Finland; and a meeting of the Policy and Planning Committee in Birmensdorf, Switzerland. He visited the Federal Forestry Research Station in Zvolen, Slovakia, twice, to assist in setting up a meeting by IUFRO S2.07.11 (new number: 7.03.06) and S2.07.06 (new number: 7.03.07) with SPDC support, and to deliver a paper at a conference on sustainable forest management. He visited FAO headquarters in Rome twice, once to discuss areas for co-operation with the SPDC, the other to represent IUFRO at a meeting of forestry information specialists, including CIFOR and ETFRN. He participated in a meeting of the Forestry Advisors Group at UNDP headquarters in New York, where he asked for support for the positions of SPDC coordinator and deputy coordinator. He served as a member of a team from the Society of American Foresters that visited the University of Forestry and Wood Sciences in Sopron, Hungary to evaluate its program according to professional accreditation standards used in the United States. Other travel included two trips to Washington, DC for consultations with the U.S. Forest Service, once as part of a home-leave visit.

Brian R. Payne, Coordinator

IUFRO Publications 1995

In addition to four issues of *IUFRO News* and the Annual Report 1994, the Secretariat published the following brochures:

- Occasional Paper No. 1 "Effects of Global Change on Managed Forests"

Occasional Paper No. 2
"La Red de Información Forestal para América Latina y el Caribe". Proceedings of a meeting held in Resistencia, Argentina, 21 - 24 March, 1995,only available in Spanish

- Occasional Paper No. 3 "Planning a Conference"

- Occasional Paper No. 4 Final Report of IUFRO Task Force "Forest, Climate Change and Air Pollution" (1991-1995)
- "Honours and Awards"
- "A Guide to IUFRO"

Honorary Membership

Robert E.Buckman, USA James Cayford, Canada Oscar Fugalli, Italy

Dinstinguished Service Award Winners 1995

Harold Burkhart, USA Thomas Corcoran, USA George Z.Gertner, USA Othmar Griess, Austria H.Gyde Lund, USA Kurth Perttu, Sweden Adolf Priesol, Slovakia Florian Scholz, Germany Risto Seppälä, Finland Gustaf Sirén, Sweden

Scientific Achievement Award Winners 1995

Ann Merete Furuberg-Gjedtjernet, Norway John Innes, Switzerland Antoine Kremer, France Constance I.Millar, USA Abd. Latif Mohmod, Malaysia John N.Saddler, Canada Thomas Spies, USA Pauline Stenberg, Finland Luís Alberto Arías Ugalde, Costa Rica Yang Zhong-qi, China, Beijing

FINANCES

The profit and loss account for 1995 shows an **excess of expenditure over income of SFr. 36'683.** Income amounted to SFr. 640'490, while expenses amounted to SFr. 677'173.

Income

Compared to 1994, the net income from **membership dues** increased by SFr. 20'035.

5
2.220
5.7 <u>51</u>
5.469

There was also an increase in **subsidies granted by the Austrian Federal Government** from SFr. 59'530 to SFr. 94'595. In April 1995, a new contract was signed with the Austrian Government which guarantees a refund for rental costs in addition to subsidies for wages and salaries. The Danish Ministry of Research, the Danish Forest and Nature Agency, and the Forest and Landscape Research Institute, Denmark, funded the **Internet Project** in Vienna in the form of a contribution of SFr. 41'266 for employment costs. The project was handled in cooperation with Niels Bruun de Neergaard, an expert from Denmark. Due to low interest rates, the **income from interest** on time deposits decreased, compared to 1994, by 15.6% to SFr. 47'724. This is SFr. 12'276 less than proposed in the 1995 budget.

Expenses

The increase of expenses on the **President's Account** is due to the fact that part of the expenses for representation at the World Congress in Finland were entered in this account.

Rental costs of SFr. 25'256 for office space, as stipulated in a new contract with Austria, are for the first time contained in the **Office Expenses** account. However, the rent was, as previously mentioned, refunded through higher subsidies by the Austrian Government.

For the 1995 Tampere **Congress** (Finland) IUFRO received an amount of SFr. 41'400 (USD 36'000) from the **USDA Forest Service** and SFr. 32'023 from **Sarec, Stockholm,** for the "Scientist Assistance Programme" (SAP). IUFRO itself sponsored the Congress with an additional SFr. 12'000.

Unfortunately, 1995 also brought **accounting losses** of a total of SFr. 54'145 for securities and foreign currency accounts, caused by exchange rate devaluations and lower income from interest. The US Dollar dropped almost as markedly as in 1994, from 1.3095 (Dec. 1994) to 1.151 (Dec. 1995). In the same period of time, the German Mark dropped from 84.49 to 80.38.

These facts alone produced a loss of SFr. 16'295 on the USD current account. The results delivered by time deposits in USD and DM were by SFr. 30'889 lower than at the end of 1994. In addition to such losses, the **"Other Expenses"** increased. They included, among other items, expenses of SFr. 15'394 for **Honours and Awards** conferred at the Tampere Congress (Finland). For the first time the cost of the **SPDC**'s sharing the IUFRO Secretariat's infrastructure and services was shown as an individual item (SFr. 153'596) under "Expenses". In the year under review SFr. 115'600 were refunded to IUFRO; the remaining amount of SFr. 37'996 was reimbursed in January 1996.

1) Balance

1.1 Assets

Compared to 1994, there was an increase in the **total of the securities**, which is due to the fact that part of the liquid assets was invested in interest-bearing time deposits.

Prepaid expenses: The most important amount of this item is the remaining credit balance of SFr. 37'996 for the SPDC's sharing the IUFRO Secretariat's infrastructure and services. Another item refers to the remaining reimbursement of the 1995 fees for the Danish expert (SFr. 16'360) who, according to contract with Denmark, installs the Internet in Vienna. SFr. 2'557.25 is a refund of the Swiss Federal Institute for Forest, Snow and Landscape Research in Birmensdorf for printing costs of the publication ,,IUFRO Task Force ,Forest, Climate Change and Air Pollution', Final Report of the Period 1991-1995".

1.2 Liabilities

The USDA made another donation to IUFRO (USDA Grant Award) amounting to SFr. 18'000. The money was used for paying outstanding membership dues of members in need of support. A contribution of SFr. 4973 by China-Taipei was spent on supplying IUFRO News to these members.

Congresses: For the 1995 Tampere Congress (Finland) IUFRO received SFr. 41'400 (USD 36'000) from the USDA Forest Service and SFr. 32'023 from Sarec, Stockholm, to be used for the "Scientist Assistance Programme" (SAP). Both amounts were immediately remitted to the organizing committee in Tampere and, consequently, no longer appear in the balance or in the profit and loss account. For future congresses the Austrian Federal Ministry of Agriculture and Forestry made a deposit of SFr. 8'610 (ATS 75'000).

As per December 31, 1995, the total assets after losses amounted to SFr. 894'498.

2) Membership

New members: 23 ordinary / 6 associated members Withdrawals: 19 ordinary / 2 associated members

Members as of Dec. 31, 1995:	
Ordinary members:	526
Sub-members and sub-sub-members:	191
Total	717

191 sub-members and sub-sub-members are charged via the ordinary members; so IUFRO has 717 member institutions.

3) Secretariat

An amount of SFr. 350'000 had been budgeted for expenditures of the Secretariat. This amount was exceeded by no more than 2%, i.e. SFr. 7'186. The auditing data are based on the examinations of KPMG Alpen-Treuhand GmbH, Vienna.

4) SPDC "Developing Countries" Account

The statement of account prepared by the Alpen-Treuhand trust office, Vienna, was approved as per auditing report of February 28, 1996.

Balance as of Dec. 31, 1994	USD	1.000.739.74
Income during 1995	USD	409.409.39
Expenditure during 1995	USD	545.291.01
Balance as of Dec. 31, 1995	USD	864.858.12

The major part of this sum is tied up for project-related activities in 1996. The balance was invested with Crédit Suisse on a short-term basis.

Profit and Loss Account as of December 31, 1995 in Swiss Franks

EXPENSES	1995	1994	INCOME	1995	1994
President's Office	16. 504	1.310	Membership dues	292.220	303.005
Office Expenses	28. 289	16.824	Contrib.of Austrian government	94.595	59.530
Fees (Internet Project)	42.872		Refund - Internet Project	41.266	
Salaries	158.399	64.710	SPDC - Refunds	153.596	72.526
Travel Expenses	33.551	23.450	Interests	47.724	56.574
IUFRO Congress	12.000	8.000	Sale of publications	10.587	11.620
Printing costs for			Profit of exchange	0	670
IUFRO News & World Series	29.163	29.751	Other returns	502	89
Post and telephone	50.271	60.738			
Computer expenses	15.966	52.319	Total income	640.490	504.014
Movable assets written off		49.999			
Bank charges	5.160	4.906	Balance	36.683	9.498
Interest - Development account	8.500	8.500			
Adjustment of currency				677.173	
and securities	54.145	18.713			
Debts written off	26.751	57.571			
Auditor expenses	2.482	4.299			
Other expenses	39.523	12.422			
Expenses - SPDC	153.596				
Total avnances	677 172	512 512			
Total expenses	<u>677.173</u>	513.512			

Treasurer's Office (May 30, 1996) (Translated from German)

Structure of Divisions ordered by Coordinators, Deputy Coordinators, Subject- and Project Group Leaders and Deputies and Working Party Chairmen and Co-chairmen

1995

Divisi	on 1			WD	S1.04-03	Marui, Hideaki	Japan
CO	D1.00-00	Whitmore, Jacob L.	United States	WL	S1.04-04	Woo, Bo-Myeong	Korea (Rep)
CD	D1.00-00	Kikkawa, Jiro	Australia	WD	S1.04-04	Faustino M., Jorge	Costa Rica
CD	D1.00-00	Paavilainen, Eero	Finland	SL	S1.05-00	Räsänen, Pentti K.	Finland
CD	D1.00-00	Salazar, Rodolfo	Costa Rica	SD	S1.05-00	Grosse W., Hans	Chile
SL	S1.01-00	Fanta, Josef	Netherlands	SD	S1.05-00	Luis, J.F.S.	Portugal
						,	•
SD	S1.01-00	Klinka, Karel	Canada	WL	S1.05-01	Päivänen, Juhani	Finland
WL	S1.01-01	Spies, Th.	United States	WD	S1.05-01	Braekke, Finn Harald	Norway
WD	S1.01-01	Koop, Henk	Netherlands	WL	S1.05-03	Grosse W., Hans	Chile
WD	S1.01-01	Matter, J.F.	Switzerland	WD	S1.05-03	Zajaczkowsky, Jan	Poland
WL	S1.01-05	Anko, Bostjan	Slovenia	WL	S1.05-04	Puttonen, Pasi	Canada
WD	S1.01-05	Crow, Thomas	United States	WL	S1.05-05	Eriksson, Harry	Sweden
WD	S1.01-05	Godt, Jochen	Germany	WL	S1.05-08	Leikola, M.	Finland
WL	S1.01-06	Oldeman, Roelof A.A.	Netherlands	WD	S1.05-08	Piussi, Pietro	Italy
WD	S1.01-06	Brown, Nick	United Kingdom	WD	S1.05-08	Silva, Natalino	Brazil
WL	S1.01-09	Moravcik, Pavel	Czech Republic	WL	S1.05-09	Amorini, E.	Italy
SL	S1.02-00	Kilian, Walter	Austria	WL	S1.05-10	Ferm, A.	Finland
SD	S1.02-00	Franc, Alain	France	WL	S1.05-11	Aksoy, Hüseying	Turkey
SD	S1.02-00	Waki, Kosuke	Japan	WL	S1.05-12	Ritari, Aulis	Finland
WL	S1.02-01	Nambiar, E.K.S.	Australia	WD	S1.05-12	Navratil, Stan	Canada
WD	S1.02-01	Hunter, Ian	United Kingdom	WL	S1.05-13	Hou, Quing Jiang	China
WD	S1.02-01	Mälkönen, Eino	Finland	WL	S1.05-14	Stern, Roland	Austria
WD	S1.02-01	Schlatter, Juan	Chile	WD	S1.05-14	Piussi, Pietro	Italy
WL	S1.02-05	Smith, Tattershill	New Zealand	WD	S1.05-14	Schoenenberger, Walter	Switzerland
WD	S1.02-05	Barton, Paul	New Zealand	WL	S1.05-16	Eder, Walter	Germany
WD	S1.02-05	Henry, Charles	United States	WD	S1.05-16	Prpic, Branimir	Croatia
WD		•		SL		• ·	
	S1.02-05	Moffat, Andrew	United Kingdom		S1.07-00	Wood, Peter J.	United Kingdom
WD	S1.02-06	Grey, Den Ham	South Africa	SD	S1.07-00	Maitre, Henri Felix	France
WD	S1.02-06	Klinka, Karel	Canada	SD	S1.07-00	Vanclay, Jerry	Indonesia
WL	S1.02-08	Hunter, Ian	United Kingdom	SD	S1.07-00	Wan Razali, Wan Mohd	Malaysia
WD	S1.02-08	Haibara, Kikuo	Japan	WL	S1.07-05	Appanah, S.	Malaysia
WD	S1.02-09	Boardman, Robert	Australia	WD	S1.07-05	Finegan, Bryan	Costa Rica
WD	S1.02-09	Toro, Jorge	Chile	WD	S1.07-05	Maitre, Henri Felix	France
WL	S1.02-10	Khanna, P.K.	Australia	WD	S1.07-05	Silva, Natalino	Brazil
WD	S1.02-10	Mutsch, Franz	Austria	WL	S1.07-08	Das, Someswar	Bangladesh
SL	S1.03-00	Robertson, Alexander	Canada	WD	S1.07-08	Ewel, Katherine C.	United States
SD	S1.03-00	Grip, Harald B.	Sweden	WL	S1.07-09	Zanotti, Rolando	Guatemala
SD	S1.03-00	Xu, Deying	China	WD	S1.07-09	De las Salas F., Gonzalo	Colombia
WL	S1.03-01	Hager, Herbert	Austria	WD	S1.07-09	Seitz, Rudi	Brazil
WD	S1.03-01	Canalis, Ramon	Argentina	WL	S1.07-13	Halos, S.	Philippines
WD	S1.03-01	Ji-Zheng, Sun	China	WL	S1.07-14	Moutanda, Antoine	Congo
WD	S1.03-01	Papadopol, Cristu - Silviu	Canada	WD	S1.07-14	Kadio, Adjoumane AimÚ	Côte d'Ivoire
WL	S1.03-02	Grip, Harald B.	Sweden	WL	S1.07-15	Kandeel, S.A. Ezzat	Egypt
WD	S1.03-02	Faustino M., Jorge	Costa Rica	WD	S1.07-15	Wrann, Johannes	Chile
WD	S1.03-02	Fukushima, Yishihiro	Japan	WL	S1.07-16	Manokaran, N.	Malaysia
WD	S1.03-02	O'Loughlin, Emmett M.	Australia	WL	S1.07-17	Maury-Lechon, Gema	France
WL	S1.03-02	Robertson, Alexander	Canada	WD	S1.07-17	Balasubramaniam, K.	India
WD	S1.03-03	Perttu, Kurth L.	Sweden	WD	S1.07-17	Chan, Hung Tuck	Malaysia
WD	S1.03-03	Serrao, Adilson	Brazil	WD	S1.07-17	Elouard, Claire	Malaysia
WL	S1.03-03	Gardiner, Barry	United Kingdom	WD	S1.07-17	Turner, I.	Singapore
		-	-				Denmark
WD	S1.03-04	Matuzaki, Takeshi	Japan	WL	S1.07-18	Brimer, Leon	
WD	S1.03-04	Robertson, Alexander	Canada	WD	S1.07-18	Fagg, Chris	United Kingdom
SL	S1.04-00	Sassa, Kyoji	Japan	SL	S1.08-00	DeGraaf, Richard	United States
SD	S1.04-00	Fiebiger, G.	Austria	SD	S1.08-00	Gossow, Hartmut	Austria
SD	S1.04-00	Michaelsen, Tage	United States	WL	S1.08-01	Gray, Paul	Canada
SD	S1.04-00	Ziemer, Robert R.	United States	WL	S1.08-02	DeGraaf, Richard	United States
WL	S1.04-01	Mizuyama, Takahisa	Japan	WD	S1.08-02	Larsson, Tor-Bjorn	Norway
WD	S1.04-01	Göttle, Albert	Germany	WL	S1.08-03	Gossow, Hartmut	Austria
WD	S1.04-01	Phillips, Chris	New Zealand	SL	S1.09-00	Goldammer, Johann Georg	Germany
WL	S1.04-02	Nitta, Ryuzo	Japan	SD	S1.09-00	Martin, Robert E.	United States
WD	S1.04-02	Frey, Werner	Switzerland	SD	S1.09-00	Velez-Munoz, Ricardo	Spain
WD	S1.04-02	Schaffhauser, Horst	Austria	WL	S1.09-01	Valette, Jean-Charles	France
				WD	S1.09-01	Koonce, Andrea	United States
				33/1	S1 00 02	Valaz Munoz Disando	Sacia

WL

S1.09-02

Velez-Munoz, Ricardo

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Spain

WD	S1.09-02	Donoghue, Linda R.	United States
WL	S1.09-03	Karlikowski, Tytus	Poland
WD	S1.09-03	George, Charles W.	United States
WL	S1.09-04	Landsberg, Johanna	United States
WD	S1.09-04	Vega-Hidalgo, Jose Antonio	Spain
PL	P1.06-00	Spiecker, Heinrich	Germany
PD	P1.06-00	Rogers, Robert	United States
PL	P1.07-00	Espinosa, Miguel	Chile
PD	P1.07-00	Linder, Sune	Sweden
PD	P1.07-00	Youxu, Jiang	China
PL	P1.09-00	Sennerby-Forsse, Lisa	Sweden
PD	P1.09-00	Kenney, W.A.	Canada
PD	P1.09-00	Mitchell, C. Paul	United Kingdom
WL	P1.09-01	Mitchell, C. Paul	United Kingdom
WD	P1.09-01	White, Edwin	United States
WL	P1.09-02	Kenney, W.A.	Canada
WD	P1.09-02	Viquez, Edgar	Costa Rica
PL	P1.10-00	Horvat-Marolt, Sonja	Slovenia
PL	P1.10-00	Paule, Ladislav	Slovakia
PD	P1.10-00	Muhs. Hans-Jakob	Germany
PD	P1.11-00	San Miguel-Ayanz, Alfonso	Spain
PL	P1.13-00	Frochot, H.	France
PD	P1.13-00	Dohrenbusch, A.	Germany
PD	P1.13-00	Glover, G.	United States
PL	P1.14-00	Stoszek, K.	Austria
PD	P1.14-00	Mendoza Briseño, M.A.	Mexico
PL	P1.15-00	Sinclair, Fergus L.	United Kingdom
PD	P1.15-00	Hsiung, Wenyue	China
PD	P1.15-00	Khosla, Prem Kumar	India
PD	P1.15-00	Prinsley, Roslyn	Australia
WL	P1.15-01	Gold, Michael	United States
WD	P1.15-01	Sibbald, Alan	United Kingdom
WD	P1.15-02	Beer, John	Costa Rica
WL	P1.15-03	Auclair, Daniel	France
WD	P1.15-03	Van Noordwijk, Meine	Indonesia
WD	P1.15-04	Scherr, Sara	United States
PL	P1.16-00	Boyle, Timothy	Canada
PD	P1.16-00	Appanah, S.	Malaysia
PD	P1.16-00	Szaro, Robert	United States
PL	P1.17-00	Sachs, Menachem	Israel
PD	P1.17-00	Parrotta, John	United States
WL	P1.17-01	Musat, Ilie	Romania
WD	P1.17-01	Vimmerstedt, John P.	United States
WL	P1.17-03	Parrotta. John	United States
WD	P1.17-03	Lamb, David	Australia

WL	S2.04-01	Gregorius, H.R.	Germany	PL	P2.02-00	Marien, Jean Noel	Morocco
WD	S2.04-01	Yeh, Francis C.	Canada	PD	P2.02-00	Cromer, Robin N.	Australia
WL	S2.04-02	Koski, Veikko	Finland	WL	P2.02-01	Darrow, Kevin	South Africa
WL WD	S2.04-05 S2.04-05	Baradat, Philippe Fineschi, Silvia	France Switzerland	WD	P2.02-01	Shimizu, Jarbas	Brazil France
WD	S2.04-05	Moran, Gavin	Australia	WL WL	P2.02-02 P2.02-04	Bailly, Alain Brewbaker, James L.	United States
WD	S2.04-05	Paule, Ladislav	Slovakia	WD	P2.02-04	El-Lakany, Hosny M.	Italy
WD	S2.04-05	Savolainen, Outi	Finland	PL	P2.04-00	Edwards, David George W.	Canada
WL	S2.04-06	Greenwood, Michael	United States	PD	P2.04-00	Musoke, R.	Uganda
WD	S2.04-06	Gustafsson, Petter	Sweden	PD	P2.04-00	Vozzo, John	United States
WL	S2.04-07	Ahuja, Raj M.	Germany	PL	P2.05-00	Huttunen, Satu	Finland
WL	S2.04-08	Schlarbaum, Scott E.	United States	PD	P2.05-00	Grill, Dieter	Austria
WD	S2.04-08	Borzan, Zelimir	Croatia	PD	P2.05-00	Linzon, Samuel	Canada
WD	S2.04-08	Butorina, Anastasiya K.	Russian Fed.	WL	P2.05-01	Stefan, Klaus	Austria Korea (Bar)
WD SL	S2.04-08 S2.05-00	Gill, B.S. Mattson, William	India United States	WD WD	P2.05-01 P2.05-01	Kim, Yoon-Soo Lux, Herbert	Korea (Rep) Germany
SD	S2.05-00	Lieutier, Francois	France	WD	P2.05-01	Yokobori, Makoto	Japan
SD	S2.05-00	McNabb Jr., Harold S.	United States	WL	P2.05-03	Tesche, Manfred	Germany
WL	S2.05-07	Wingfield, Michael	South Africa	WD	P2.05-03	Luangjame, Jesada	Thailand
WD	S2.05-08	Niemela, Pekka	Finland	WD	P2.05-03	Tingey, D.T.	United States
WL	S2.05-09	Rousi, Matti	Finland	WL	P2.05-04	Huettl, Reinhard F.	Germany
WD	S2.05-09	Hirakawa, Hirofumi	Japan	WD	P2.05-04	Freer-Smith, P.H.	United Kingdom
SL	S2.06-00	Dimitri, Lyubomir	Germany	WD	P2.05-04	Persson, Tryggve	Sweden
SD	S2.06-00	Rykowski, Kazimierz	Poland	WD	P2.05-05	Karnosky, David F.	United States
SD	S2.06-00	Suzuki, Kazuo Stenlid, Jan	Japan	WD	P2.05-05	Mejnartowicz, Leon	Poland
WL WD	S2.06-01 S2.06-01	Delatour, Claude	Sweden France	WL WL	P2.05-05 P2.05-06	Scholz, Florian Brooks, R.T.	Germany United States
WL	S2.06-01 S2.06-02	Stephan, Richard	Germany	WD	P2.05-06	Flückiger, Walter	Switzerland
WD	S2.06-02	Kurkela, Timo	Finland	WL	P2.05-07	Tesar, Vladimir	Czech Republic
WL	S2.06-04	Heiniger, Ursula	Switzerland	WL	P2.05-08	Eckstein, Dieter	Germany
WL	S2.06-05	French, D.W.	United States	WD	P2.05-08	Kurjatko, Stanislav	Slovakia
WL	S2.06-06	Brasier, Clive M.	United Kingdom			-	
WD	S2.06-06	Hubbes, Martin	Canada	Divisi			
WL	S2.06-08	Skilling, Darroll	United States	CO	D3.00-00	Nilsson, Per Olav	Sweden
WD	S2.06-08	Batzer, Harold O.	United States	CD	D3.00-00	Malinovski, Jorge Roberto	Brazil
WL WD	S2.06-09	Hamacher, Joachim	Germany	CD CD	D3.00-00	Mitchell, C. Paul	United Kingdom
WL	S2.06-09 S2.06-10	Maramorosch, Karl Kuhlman, E.G.	United States United States	SL	D3.00-00 S3.02-00	Riley, Lorne F. Berg, Staffan	Canada Sweden
WD	S2.06-10	Hiratsuka, Yasuyuki	Canada	SD	S3.02-00	Stokes, Bryce	United States
WD	S2.06-10	Kaneko, Shigeru	Japan	WL	S3.02-00	Kaushal. Parvinder	India
WL	S2.06-14	Toth, Jozsef	Hungary	WD	S3.02-01	Cazaux, Jean-Pierre	France
WD	S2.06-14	Przybyl, Krystyna	Poland	WD	S3.02-01	Hall, Peter	Australia
WD	S2.06-14	Tomiczek, Christian	Austria	WL	S3.02-02	Ryans, Mark	Canada
WL	S2.06-15	Sharma, Jyoti	India	WD	S3.02-02	Kazemaks, A.	Latvia
WD	S2.06-15	Kumar, Dinesh	India	WL	S3.02-03	Menzies, Mike	New Zealand
SL	S2.07-00	McFadden, Max W.	United States	WD	S3.02-03	Arnott, James	Canada
SD SD	S2.07-00 S2.07-00	Baranchikov, Yuri N. Nair, K.S.S.	Russian Fed. India	WD SL	S3.02-03 S3.04-00	Mattsson, Anders Tomanic, Simeun	Sweden Croatia
SD	S2.07-00	Schoenherr, Joachim H.	Germany	SD	S3.04-00	Field, David	United States
WL	S2.07-00	DeBarr, Gary L.	United States	SD	S3.04-00	Nieuwenhuis, Maarten	Ireland
WD	S2.07-01	Skrzypczynska, Malgorzata	Poland	SD	S3.04-00	Whyte, Graham	Australia
WD	S2.07-01	Turgeon, Jean	Canada	WL	S3.04-01	Robak, Ted	Canada
WD	S2.07-01	Yue, Shu-kui	China	WD	S3.04-01	Kitagawa, Katsuhiro	Japan
WL	S2.07-03	Alfaro, R.I.	Canada	WD	S3.04-01	Mikkonen, Esko U.A.	Finland
WD	S2.07-03	Langström, Bo E.	Sweden	WL	S3.04-02	Rickards, Jeremy	Canada
WL	S2.07-05	Payne, Thomas L.	United States	WD	S3.04-02	Björheden, Rolf	Sweden
WD	S2.07-05	Saarenmaa, Hannu	Finland	WD	S3.04-02	Tobioka, Jiro	Japan
WL WD	S2.07-06 S2.07-06	Hain, Fred P. Bogenschütz, Hermann	United States Germany	SL SD	\$3.05-00 \$3.05-00	Dykstra, Dennis P. Cordero, William	Indonesia Bolivia
WL	S2.07-00	Nair, K.S.S.	India	SD SD	S3.05-00	Ole-Meiludie, Raphael E.L.	Tanzania
WD	S2.07-07	Akanbi, M.O.	Nigeria	SD	S3.05-00	Wu, Shuen Chao	China - Taipei
WD	S2.07-07	Hutacharern, Chaweewan	Thailand	SL	S3.06-00	Sessions, John	United States
WL	S2.07-08	Baranchikov, Yuri N.	Russian Fed.	SD	S3.06-00	Abeli, Willibard S.	Tanzania
WL	S2.07-09	Perrin, Robert	France	SD	S3.06-00	Sever, Stanislav	Croatia
WL	S2.07-10	Kanamitsu, Keiji	Indonesia	SD	S3.06-00	Trzesniowski, Anton	Austria
WD	S2.07-10	La, Yong-Joon	Korea (Rep)	WL	S3.06-01	Guglhör, Wolf	Germany
WD	S2.07-10	Lee, Ming-Jen Vice, Comp Deu	China - Taipei	WD	S3.06-01	Heinimann, Hans-Rudolf	Switzerland
WD WL	S2.07-10	Xiao, Gang Rou McManus, Michael	China United States	WD WI	\$3.06-01	Okawara, Shoji Li, Guanada	Japan China
WL WD	S2.07-11 S2.07-11	Glowacka, Barbara	Poland	WL WD	S3.06-02 S3.06-02	Li, Guangda Lambert, Michael	China United States
WD	S2.07-11 S2.07-11	Yamane, Akiomi	Japan	WD	S3.06-02 S3.06-02	Lisland, Torstein	Norway
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PL	P3.03-00	Staudt, Frits J.	Netherlands	WD	S4.02-01	Ellatifi, Mohammed	Yemen
PD	P3.03-00	Lipoglavsek, Marjan	Slovenia	WL	S4.02-02	Preto, Giovanni	Italy
PD	P3.03-00	Sauder, Brent	Canada	WD	S4.02-02	Deltuvas, Romualdas	Lithuania
WL	P3.03-01	Apud, Elias	Chile	WD	S4.02-02	Husch, Bertram	Chile
WD	P3.03-01	Takimoto, Yoshihiko	Japan	WL	S4.02-03	Vanclay, Jerry	Indonesia
WL	P3.03-02	Jablonkay, Zoltan	Hungary	WD	S4.02-03	Gregoire, Timothy G.	United States
WD	P3.03-02	Juntunen, Marja-Liisa	Finland	WD	S4.02-03	Yang, Yong-Chi	China - Taipei
WL	P3.03-03	Ponten, Bengt	Sweden	WL	S4.02-04	Rondeux, Jacques	Belgium
WD	P3.03-03	Garland, John J.	United States	WD	S4.02-04	Hansen, Mark	United States
WL	P3.03-04	Wippermann, Jochen	Germany	WD	S4.02-04	Minowa, Mitsuhiro	Japan
WD	P3.03-04	Juvonen, Risto	Finland	WD	S4.02-04	Turner, Brian J.	Australia
PL	P3.04-00	Brandl, H.	Germany	WL	S4.02-05	Põivinen, Risto	Finland
PD	P3.04-00	Militon, Jaques	France	WD	S4.02-05	Liuyu, Li	China
PD	P3.06-00	Ievins, Imant K.	Latvia	WD	S4.02-05	Singh, Ashbindu	United States
PD	P3.06-00	Spellmann, Hermann	Germany	WD	S4.02-05	Thammincha, Songkram	Thailand
WL	P3.06-01	Siren, Matti	Finland	WL	S4.02-06	LaBau, Vernon J.	United States
WD	P3.06-01	Raymond, Keith	New Zealand	WD	S4.02-06	Magnussen, Steen	Canada
WD	P3.06-01	Roebuch, Brian	United Kingdom	WD	S4.02-06	Shvidenko, Anatoly Z.	Russian Fed.
WD	P3.06-02	Kerr, Gary	United Kingdom	SL	S4.04-00	Griess, Othmar	Austria
WD	P3.06-02	Solymos, Rezs÷	Hungary	SD	S4.04-00	Schram, Pierre	Luxembourg
PL	P3.07-00	Kellog, Loren	United States	WL	S4.04-01	Sagl, Wolfgang	Austria
PD	P3.07-00	Guimier, Daniel Y.	Canada	WD	S4.04-01	Gaspar-Hantos, G.	Hungary
WL	P3.07-01	Johnson, Leonard	United States	WL	S4.04-02	Jöbstl, Hans	Austria
WD	P3.07-01	Cossens, Paul	New Zealand	WD	S4.04-02	Villa, Wolfgang	Germany
WL	P3.07-01	Daugavietis, Maris	Latvia	WL	S4.04-02 S4.04-03	Kurth, Horst	Germany
WD	P3.07-02	Ilavsky, Jan	Slovakia	WD	S4.04-03	Ianculescu, Marian	Romania
WL	P3.07-02 P3.07-03	Zundel, Pierre	Canada	WD WL		,	United States
WD				WD	S4.04-04	Klemperer, David W.	
	P3.07-03	Sonntag, Georg	Germany		S4.04-04	Amano, Masahiro	Japan
WL	P3.07-04	Arola, Rodger A.	United States	WL	S4.04-06	García, Oscar	Chile
WD	P3.07-04	Danielsson, Bengt-Olof	Sweden	WD	S4.04-06	Blandon, Peter	United Kingdom
WD	P3.07-04	Mitchell, C. Paul	United Kingdom	SL	S4.11-00	Gertner, George	United States
WL	P3.07-05	McCormack, Robert	Australia	SD	S4.11-00	Pelz, Dieter R.	Germany
WD	P3.07-05	Amlin, Erik	Canada	WL	S4.11-01	Köhl, Michael	Switzerland
WD	P3.07-05	Dahlin, Bo	Sweden	WD	S4.11-01	Cheng, Zichun	China
PL	P3.08-00	Furuberg Gjedtjernet, A.M.	Norway	WL	S4.11-02	Rennolls, Keith	United Kingdom
PD	P3.08-00	Costa Filho, Perminio P.	Brazil	WD	S4.11-02	Teplyakov, Victor K.	Russian Fed.
PD	P3.08-00	Wästerlund, Iwan	Sweden	WL	S4.11-03	Schmoldt, Daniel L.	United States
PD	P3.08-00	Zabkiewicz, J.A.	New Zealand	WD	S4.11-03	Saarenmaa, Hannu	Finland
WL	P3.08-01	Wästerlund, Iwan	Sweden	SL	S4.12-00	Koch, Barbara	Germany
WD	P3.08-01	Gu, Zenping	China	SD	S4.12-00	Ahern, Francis J.	Canada
WD	P3.08-01	Lauhanen, Risto	Finland				
WD	P3.08-01	Matthies, Dietmar	Germany	Divisi			
WL	P3.08-02	Costa Filho, Perminio P.	Brazil	CO	D5.00-00	De Freitas, Amantino R.	Brazil
WD	P3.08-02	Hassan, Awatif	United States	CD	D5.00-00	Sales, Christian G.	France
WD	P3.08-02	Krag, Ray	Canada	CD	D5.00-00	Youngquist, John A.	United States
WD	P3.08-02	Skaar, Reidar	Norway	SL	S5.01-00	Wheeler, Elisabeth	United States
WL	P3.08-03	Zabkiewicz, J.A.	New Zealand	SD	S5.01-00	Baas, Pieter	Netherlands
WD	P3.08-03	Abeels, P.F.J.	Belgium	SD	S5.01-00	Nobuchi, Tadashi	Japan
WD	P3.08-03	Karr, Robert	United States	SD	S5.01-00	Phelps, John E.	United States
WD	P3.08-03	Rosén, Kaj	Sweden	SD	S5.01-00	Saranpää, Pekka	Finland
				WL	S5.01-01	Aloni, Roni	Israel
Divisio	on 4			WD	S5.01-01	Barnett, John	United Kingdom
CO	D4.00-00	Roeder, Axel	Germany	WD	S5.01-01	Takabe, Keiji	Japan
CD	D4.00-00	Chuenkov, Vladimir I.	Russian Fed.	WL	S5.01-02	Phelps, John E.	United States
CD	D4.00-00	Konohira, Yukichi	Japan	WD	S5.01-02	Nobuchi, Tadashi	Japan
SL	S4.01-00	Burkhart, Harold E.	United States	WD	S5.01-02	Wang, Hsiu Hwa	China - Taipei
SD	S4.01-00	Johann, Klaus	Austria	WL	S5.01-04	Nepveu, GÚrard	France
WL	S4.01-03	Preuhsler, Teja	Germany	WD	S5.01-04	Malan, Franþois	South Africa
WL	S4.01-04	Kupka, Ivo	Czech Republic	WD	S5.01-04	Thörnqvist, Thomas	Sweden
WD	S4.01-04	Tome, Margarida	Portugal	WL	S5.01-05	Cown, Dave	New Zealand
WL	S4.01-06	Solomon, Dale S.	United States	WD	S5.01-05	Glos, Peter	Germany
WD	S4.01-06	MacLean, David A.	Canada	WD	S5.01-05	Nakai, Takashi	Japan
WL	S4.01-07	Skovsgaard, J.P.	Denmark	SL	S5.02-00	Hoffmeyer, Preben	Denmark
WD	S4.01-07	Mowrer, Todd H.	United States	SD	S5.02-00	Glos, Peter	Germany
SL	S4.02-00	Lund, H. Gyde	United States	SD	S5.02-00	Green, David W.	United States
SD	S4.02-00	Clement, Jean	France	WL	S5.02-00	Beall, Frank C.	United States
SD	S4.02-00	Poso, Simo J.	Finland	WD	S5.02-01	Kucera, Ladislav J.	Switzerland
SD	S4.02-00	Temu, August Basil	Kenya	SL	S5.02-01	Le Van, Susan	United States
WL	S4.02-01	Caballero Deloya, Miguel	Mexico	SD	S5.03-00	Preston, Alan F.	United States
WD	S4.02-01	Atul, Mr.	India	SD	S5.03-00	Vihavainen, Tuija	Finland
WD	S4.02-01	Brown, Sandra	United States	WL	S5.03-02	Preston, Alan F.	United States
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WD	S5.03-04	Ishihara, Shigehisa	Japan	WL	S6.01-06	Chilman, K.	United States
WL	S5.03-05	Eaton, Rodney A.	United Kingdom	SL	S6.03-00	Kempf, Alois	Switzerland
WL	S5.03-08	Deon, Gerard R.Y.	France	SD	S6.03-00	Brown, Virginia	United States
SL	S5.04-00	Rosen, Howard N.	United States	SL	S6.06-00	Burns, Denver	United States
SD	S5.04-00	Hattori, Nobuaki	Japan	SD	S6.06-00	Caballero Deloya, Miguel	Mexico
SD	S5.04-00	Juvonen, Risto	Finland	SD	S6.06-00	Kiil, A. Dave	Canada
WL	S5.04-06	Vanek, Manfred	Austria	WL	S6.06-02	Brown, Kenneth	United States
WD	S5.04-06	Kanagawa, Yasushi	Japan	WL	S6.06-03	Johnson, James E.	United States
WD	S5.04-06	Moren, Tom	Sweden	WD	S6.06-03	Beck, Roland	Germany
WL WD	S5.04-07	Pizzi, Antonio	France United States	WL WD	S6.06-04	Carvalho Oliveira, Angelo	Portugal
WL	S5.04-07 S5.04-08	Hse, Chung-Yun Szymani, Ryszard	United States	WD WD	S6.06-04 S6.06-04	Ata, Cemil Gonzalez-Doncel, Ines	Turkey Spain
WD	S5.04-08	Groenlund, Anders	Sweden	SL	S6.07-00	Steen, Harold K.	United States
WL	S5.04-08	Birkeland, Rolf	Norway	SD	S6.07-00	Corvol-Dessert, Andree	France
WD	S5.04-10	Massey, Joseph G.	United States	SD	S6.07-00	Johann, Elisabeth	Austria
WD	S5.04-11	Plackett, David	Canada	SD	S6.07-00	Rubner, Heinrich	Germany
WL	S5.04-11	Youngquist, John A.	United States	WL	S6.07-01	Dargavel, John	Australia
SL	S5.05-00	Plackett, David	Canada	WD	S6.07-01	Ingerson, A.	United States
SD	S5.05-00	Rowell, Roger	United States	WL	S6.07-03	Ahvenainen, Jorma	Finland
WL	S5.05-01	Kawai, Suishi	Japan	WL	S6.07-04	Piussi, Pietro	Italy
WD	S5.05-01	Ballerini, Aldo	United States	SL	S6.11-00	Simula, Markku	Finland
WL	\$5.05-03	Gatenholm, Paul	Sweden	SD	S6.11-00	Cubbage, Fred	United States
WL	S5.05-04	Militz, Holger	Netherlands	WL	S6.11-01	Bertrand, Alain	France
PL	P5.01-00	Plumptre, Robert	United Kingdom	WD	S6.11-01	Mgeni, A.	Tanzania
PD	P5.01-00	Bhat, K. Mahabala	India	WD	S6.11-01	Seeland, Klaus	Switzerland
PD	P5.01-00	Echenique-Manrique, R.	Mexico	WD	S6.11-01	Shannon, M.	United States
PD	P5.01-00	Foudjet, Amos	Cameroon	WL	S6.11-02	Ager, Bengt	Sweden
PD	P5.01-00	Lindell, Gary	United States	WD	S6.11-02	Smyth, J.H.	Canada
PD	P5.01-00	Wang, Hsiu Hwa	China - Taipei	WL	S6.11-04	Peterson, George L.	United States
PL	P5.03-00	Fung, Paul Y.H.	Australia	WD	S6.11-04	Bludovsky, Zdenek	Czech Republic
PD	P5.03-00	Rosen, Howard N.	United States	WL	S6.11-05	Desteiguer, J. Edward	United States
WL	P5.03-01	Connor, Mike	Australia	WD	S6.11-05	Seppla, H.	Finland
PL	P5.04-00	Thammincha, Songkram	Thailand	SL	S6.12-00	Tikkanen, Ilpo	Finland
PD PL	P5.04-00	Azmy, Mohamed	Malaysia Switzerland	SD	S6.12-00	Glück, Peter	Austria Einland
PL PD	P5.05-00 P5.05-00	Schweingruber, Fritz Hans Jacoby C., Gordon	Switzerland United States	WL WD	S6.12-01	Solberg, Birger	Finland United States
PL	P5.06-00	Juslin, Heikki	Finland	WD WD	S6.12-01 S6.12-01	Cortner, Hanna Zimmermann, Willi	Switzerland
PD	P5.06-00	Becker, Michel	Germany	WL	S6.12-01	Ellefson, Paul V.	United States
PD	P5.06-00	Bush, Robert J.	United States	WD	S6.12-02	Krott, Max	Germany
PD	P5.06-00	Cohen, David H.	Canada	WL	S6.12-02	Harou, Patrice A.	United States
PD	P5.06-00	Evison, David	New Zealand	WD	S6.12-03	Essmann, Hans F.K.	Germany
PD	P5.06-00	Ishii, Yutaka	Japan	WD	S6.12-03	Tejwani, Khubchand	India
PD	P5.06-00	Jelvez, Arnaldo	Chile	SL	S6.13-00	Schmithüsen, Franz	Switzerland
PL	P5.07-00	Raychaudhuri, Syama P.	India	SD	S6.13-00	Gallardo, E.	Chile
PD	P5.07-00	Shortle, Walter C.	United States	SD	S6.13-00	Siegel, W.	United States
WD	P5.07-02	Raychaudhuri, Syama P.	India	SL	S6.14-00	Dwyer Jr., John F.	United States
WD	P5.07-02	Rembold, H.	Germany	SD	S6.14-00	Jim, C.Y.	Hong Kong
WL	P5.07-03	Jones, A.R.C.	Canada	PL	P6.01-00	Rütze, Matthias	Germany
WD	P5.07-03	Subansenee, Wanide	Thailand	PD	P6.01-00	Zorn-Pogorelc, M.	Slovenia
PL	P5.08-00	Massey, Joseph G.	United States	PL	P6.11-00	Lönnstedt, Lars	Sweden
PD	P5.08-00	Becker, Michel	Germany	PD	P6.11-00	Haynes, Richard W.	United States
PD	P5.08-00	Cohen, David H.	Canada	WL	P6.11-01	Bartelheimer, Peter	Germany
PD	P5.08-00	Jelvez, Arnaldo	Chile	PL	P6.12-00	Mattson, Jan Erik	Sweden
PD	P5.08-00	Juslin, Heikki	Finland	PD	P6.12-00	Bradley, D.	United States
PD	P5.08-00	Kline, D. Earl	United States				
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Divisio CO	D6.00-00	Kaiser, Harold F.	United States				
CD	D6.00-00 D6.00-00	Gundermann, Egon	Germany	As	of 1/1/19	96 the IUFRO structur	e has changed
CD	D6.00-00 D6.00-00	Koch, Niels Elers	Denmark				-
CD	D6.00-00	Stankey, George	United States	considerably and there are now eight Divisions instead			
SL	S6.01-00	Brown, Perry J.	United States			consult IUFRO News 1/96	
SD	S6.01-00	Chen, Chaw-Ming	China - Taipei	on	on the Union's new structure, the Divisons and new		
SD	S6.01-00	Heytze, Hans	Netherlands	offi	officers.		
WL	S6.01-02	Ammer, Ulrich	Germany				
WD	S6.01-02	Ewert, Alan	United States	The undeted list of HUED Or first 11			
WL	S6.01-04	Driver, Bev.	United States	The updated list of IUFRO officeholders can be found on			
WD	S6.01-04	Sievänen, Tuija	Finland		the Internet under the caption "Working Units and		
WL	S6.01-05	Reunala, Aarne	Finland	Off	Officeholders" at the IUFRO Internet address:		
WD	S6.01-05	Jensen, Frank S.	Denmark	http	http://iufro.boku.ac.at/		
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Admissions 1995

760.00.00

Australian Centre for International Agricultural Research (ACIAR) GPO Box 1571 Canberra, ACT 2601 Australia

761.00.00

Studien- und Beratungsgesellschaft für Landund Forstwirtschaft sowie Umweltinformatik (STUGES) Johannesgasse 15 A-1010 Wien, Austria

765.00.00

Ministry of Water, Forestry, Hunting and Fisheries c/o German Technical Cooperation BP 1360, Bangui Central African Republic

753.00.00

Dayanand National Academy of Environmental Sciences D.A.V. College Sector 10-D, Chandigarh 16001, India

764.00.00

Society for Social Forestry Research and Development Tamil Nadu 1C, Adwave Towers 9, South Baag Road, Thiyagaraya Nagar -Madras, India

755.00.00

University of Agricultural Sciences & Natural Resources College of Wood & Paper Engineering PO Box 474, Gorgan, Iran

758.00.00

University of Agricultural Sciences & Natural Resources College of Forestry PO Box 386 Gorgan, Iran

117.01.00 Norwegian Forest Research Institute N-5047 Fana, Norway

759.00.00

Eastern Norway Research Institute PO Box 1066 Skurva N-2601 Lillehammer Norway

754.00.00

University of Tras-Os-Montes and Alto Douro, Department of Forestry AP 206, P-5001 Vila Real Portugal

Membership

756.00.00

Slovenia Forest Service Vecna Pot 2 SLO-61001 Ljubljana Slovenia

763.00.00

University School of Technical Forest Engineering Universidad Politecnica de Madrid Ciudad Universitaria s/n E-28040 Madrid, Spain

762.00.00

Horticulture Research International Wellesbourne Warwick CV35 9EF United Kingdom

567.00.00 Montana Forest and Conservation Experiment Station School of Forestry

University of Montana Missoula Montana 59812, United States

757.00.00

Program on Environment East-West Center 1777 East-West Road Honolulu, 96848 United States

766.00.00

Poplar Research Institute Antona Cehova 13 / PO Box 117 21000 Novi Sad Yugoslavia (Serbia & Mon)

Withdrawals 1995

622.00.00 University of Dschang (ENSA) Department of Forestry BP 222 Dschang Cameroon

272.00.00

Institute for the Development of Renewable Natural Resources and the Environment (INDERENA) PO Box 13458, Bogotá, Colombia

675.00.00

Association Forestry-Cellulose ARMEF 30, Boulevard Foch F-77300 Fontainebleau France

700.00.00 State Agency for Forestry North Rhine-Westphalia Hebreme 2 D-59759 Arnsberg, Germany

520.00.00

Indian Plywood Industries Research & Training Institute Tumkur Road / PO Box 2273 Bangalore, 560022, India

666.00.00

Regional Soil Conservation Unit Swedish International Development Authority (SIDA) PO Box 30600 Nairobi, Kenya

397.00.00

Department of Wood, Cellulose and Paper, "Ing. Karl Augustin Grellmann" Universidad de Guadalajara AP 52-93, 45020 Zapopán, Jalisco Mexico

743.00.00

Juárez University of Durango Department of Academic Development Constitución No. 404 - Sur 34000 Durango-DGO Mexico

715.00.00 Agricultural Sciences Graduate College Campus Veracruz/Att. M. Mendoza AP 421, 91700 Veracruz Mexico

119.00.00 Norwegian Forest Research Institute N-5047 Fana

Norway

322.00.00 Papua New Guinea Forest Research Institute, Forest Authority PO Box 314, Lae Morobe Province Papua New Guinea

668.00.00

Cornell University Department of Natural Resources Fernow Hall, Ithaca New York 14853-3001 United States

173.00.00

American Pulpwood Association Inc. Suite 1020 1025 Vermont Avenue, Nw Washington D.C,20005 United States

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Harvard University Harvard Forest PO Box 68, Route 32 Petersham, 01366, MA United States