No. 2 August 1992

Newsletter
Programmes - Agenda - News

- Agricultural University Wageningen
  - Department of Forestry
- First General Assembly ETFRN
- STD/3 - Programme
The European Tropical Forest Research Network (ETFRN) has been established in October 1991 in order to provide information and services to support research on tropical humid and dry forests. This includes all research areas related to the tropical forest environment. The aim of ETFRN is to increase the cooperation and concertation of research institutions, governments and industry of European and Tropical countries through well targeted information mangement. ETFRN organises and participates in workshops and seminars. It supports the users in exploiting existing funding sources and in establishing research cooperations. It will use and support the development of a Global Tropical Forestry Research Information System.

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Impressum

The ETFRN-Newsletter is a quarterly publication of the European Tropical Forest Research Network; free copies can be obtained from:

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c/o Arbeitsgemeinschaft Tropische und Subtropische Agrarforschung (ATSAF) e.V.
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Editorial Coordination and Design: M. Reule
Editorial Assistant: A. Claßen
Organisations-Institutions
Programmes

The Wageningen Agricultural University consists of one Faculty for Agricultural and Environmental Sciences with seventy departments. Within this Faculty, the Department of Forestry is responsible for the development, the implementation and the execution of research and education in the field of all different aspects of forestry. The Department is provided with three professorial chairs representing three different lines of scientific approach and methodology, e.g. a biological (ecology and silviculture), a management and a policy approach; a fourth chair in wood sciences is expected to be added. The Department is organized in sections structured around the professorial chairs. Intensive interactions between staff members of the different sections ensures interdisciplinarity, strengthened further by many cooperative links with the other departments of Wageningen University. In this way, an excellent opportunity exists to adjust to new research questions in a flexible way and to carry out innovative research in interaction with the knowledge and expertise of different disciplines, while maintaining a firm base within forestry science.

Already since the beginning of the 20th century the Department has been actively engaged in tropical forestry research. Originally, most of this research was connected with forestry problems in the Dutch colonies. After the independence of Indonesia attention at first focussed on Surinam, but at present the attention of the tropical forestry research programme of the department has broadened to include representative regions in both the humid and semi-arid tropics in Africa, Asia and Latin America. The studies are carried out in close collaboration with research institutes in various countries.

Since 1990 the research programme of the Forestry Department concentrates on three main topics:

1. **Forest ecology** in relation to environmental problems and as a basis for sustained utilization and management of forests;

2. **Forest management**, including silviculture and wise utilization of forests and forest products, and the related processes of decision-making in forest enterprises;

3. **Forest policy development**, including the development of innovative approaches for appreciating the multiple-use and multiple-user characteristics of forests.

These topics are studied both in respect to temperate and tropical regions. In order to facilitate exchange of ideas and transfer of expertise, researchers have formed thematic working groups, i.e.
European Tropical Forest Research Network

a. Ecology and management of tropical rain forest
b. Soil ecology in forests
c. Silviculture and management in temperate forests
d. Wood science
e. Forest policy development.

Tropical forestry research is concentrated in the thematic groups on "Ecology and management of tropical rain forest" and "Forest policy development". In addition, also the thematic group on wood science is gradually expanding a tropical focus.

In order to be effective, the Department has decided to concentrate the tropical forestry research programme on specific regions. In the past, significant research programmes took place in Indonesia and Surinam. These programmes on "Anthropogenic impacts on the tropical rain forest ecosystem (in Surinam)" and "The role of forests and trees in land-use planning in Central Java" have now almost been terminated. The more recent programmes are directed at the following regions and subjects:

1. Tropical rain forest ecology and management in West Africa. Originally this programme was located in the Taiï region of Ivory Coast, where studies were carried out on rainforest typology and dynamics in and around the Taiï Forest Reserve. In 1991 a second research site was started in Cameroun, here research will focus on developing methods for sustainable management of forest areas subject to timber exploitation. This research takes place within the frame-work of the Dutch-sponsored TROPENBOS programme (see Newsletter No.1); local collaboration exists with the Institut de Recherche Agronomiques Cameroun.

2. Rain forest canopy research in French Guyana. In this project the development of the rainforest canopy is studied, with special attention to the influence of the factor light and silvicultural aspects. The research is carried out in collaboration with several French research institutions and universities, including ORSTOM Cayenne, CNRS and the University of Montpellier and Paris VI.

3. Role of forestry in land-use planning in the Atlantic Zone of Costa Rica. This programme is part of an interdisciplinary research programme of Wageningen University on "Land evaluation and farming systems analyses for land-use planning (LEFSA)", which is carried out in cooperation with CATIE and the Costa Rican Ministry of Agriculture (MAG).

4. Local utilization and management systems for woody vegetation in the Sahel. This programme is part of an interdisciplinary research programme of Wageningen University on "Utilization and management of silvo-pastoral lands in the Sahel" which is carried out in collaboration with the University of Ouagadougou. In addition, research is carried out in cooperation with several Dutch sponsored forestry development projects in the Sahel.
Core-funding for the research is obtained from the University within the framework of university approved five-year research programmes. Additional funding is received from scientific funds within the Netherlands such as the Netherlands Foundation for Scientific Research in the Tropics (WOTRO), the TROPENBOS Foundation and the Foundation Kronendak (Canopy Research). Other research is funded or co-funded by international organizations including the European Community, ITTO (International Tropical Timber Organization), UNESCO-MAB and FAO.

A list of research projects with the researchers involved and further information can be obtained from:

Agricultural University Wageningen
Department of Forestry
Gen. Foulkesweg 64
P.O. Box 3 42
6700 AH Wageningen
The Netherlands

Tel.: +31 (83 70)8 44 26
Fax: +31 (83 70)8 35 42
Telex: NL 4 50 15

Life Sciences and Technologies for Developing Countries
1991-1994 (STD3)

Background

The value of science and technology and the special role of agriculture, rural development and human health as prime factors in poverty alleviation and socio-economic development are recognised by both industrialised and developing countries. However, for various reasons, the world economic crisis, the debt burden, the urgency of other problems to be resolved, and natural disasters such as drought or floods, most developing countries are not really able to put their wishes into practise and develop their research capacities. In response to these considerations and in the light of the EC’s traditional experience in both tropical agriculture and tropical medicine research, the European Community has defined a cooperative research action which permits it to demonstrate its genuine desire for solidarity with the developing world.

The programme entitled "Life Sciences and Technologies for Developing Countries" (STD3) (1991-1994) is a direct follow-up to the first two programmes and its general objectives can be defined as follows:

- further strengthening of research capacity in both the developing countries and in the Community Member States in areas defined as having priority for Third World development (agriculture, health, nutrition and the environment in tropical
and subtropical areas), by means of joint research projects;

- improvement of coordination with the European Community, of the development of cooperation between developing countries and consolidation, strengthening and extension of the links between Community and developing countries partners, created in the first two programmes;

- significant progress on themes associated with development needs, including environmental protection and the rational management of natural resources to help improve living standards and health (in the developing countries) particularly in the poorest developing countries;

- making use of the work of certain teams used in the context of other Community S&T programmes, by offering them the opportunity of extending their field of investigation to the tropics and diversifying their methodological approach;

- acquisition of added value by the various existing national initiatives in this field, owing to the programme’s Community dimension.

Area I - Improvement of Living Conditions

The estimated amount reserved for this area is 14,950,000 ECU.
The research actions will cover tropical and subtropical agriculture, including forestry and fisheries. Projects undertaken will take full account of the systems in which they operate and will be compatible with sustainable development.

The work will cover different means of improving agricultural production, plant and animal, in areas where problems of food provision represent the first priority in the whole development process, since they have a direct effect on the general health status of the population.

1. Reduction of food shortages

The aim is to increase agricultural, plant and animal production by sustainable methods so as to improve food provision in regions where, for climatic, physical or human reasons, this problem constitutes the first priority.

a) Plant production:
   Food plant breeding, protection, with continuing care for the environment so that sustainable solutions are found.

b) Animal production:
   Role of livestock farming in production systems, forage resources with attention to environmental protection, alternative types of livestock farming in fragile environments and protection of animal health.

c) Fisheries and aquaculture:
   Rational management of resources for coastal fishing; improvement of primary production in a natural environment; nutrition from local products, pathology and breeding in aquaculture.

d) Restoration of the environment:
   The study of reforestation, the relation between agriculture, forestry and livestock farming (agroforestry), the regen-
eration of pastureland, improved water management, soil protection, etc.
e) Protection of nature:
Research into the operation of buffer zones around areas of unspoilt nature, and research into the viability of non-disruptive commercial use of animal and plant products from such areas.

2. The development of agricultural production of high economic value

The aim is to provide a scientific and technical basis to assess agricultural activities that are of high economic value (including the utilization of the forest and the aquatic environment) at the local level and for exportation in regions where there is no substantial food shortage.

The following forms of production come under this strategic theme:

a) Main traditional export crops (groundnuts, cotton, coffee, rubber, palm oil etc.)
b) Secondary crops giving a product of a high added value. Priority will in particular be given to studies into ways of replacing crops used for the production of narcotics with the products of high economic value.
c) Food products (products of animal origin and vegetables) commanding a high price on urban markets or for regional export.
d) Forests and forestry.
e) The production of bioenergy.

The work will cover:

a) Production systems and the marketing of crops
b) Quantitative improvements
c) Qualitative improvements
d) Feasibility studies of local processing
e) Environmental protection:
Impact of intensification of agriculture on the environment, ways of preventing or solving problems and possibilities for improving the natural environment while preserving or increasing its productivity.

Detailed information about procedures for the submission of proposals, the contract that will be established with successful proposers and background material on the research topics is available on request from the Commission’s services. Descriptions of work undertaken in earlier and related programmes are also available on request. The second call for proposals will be open from July to 30 November 1992. A third call for proposals will probably be published around 1993 with a closing date in November 1993.

All correspondence concerning this programme should be sent to:

Ref: Division "Scientific and Technical Cooperation with Developing countries"
CEC, DG XII/G-4
200 rue de la Loi
1049 Brussels
Belgium

Tel: 2/235 17 31
Telex: 21877 COMEU B
Fax: 2/236 33 08
Woody plants are generally considered to have a positive impact on agro-ecosystems in semi-arid regions. Improvements are considered both regarding productivity of products from woody plants that are useful for human utilisation (fruits, fodder, wood), and improvement of the environment. The latter aspect includes positive effects on soil fertility and soil humidity mainly. These assumptions are based on experiences and research in humid tropical regions mainly. Processes that are crucial for soil-enrichment by woody plants are both N-fixation and pumping of nutrients from the subsoil. Both processes are however less likely to occur in semi-arid regions.

The present project of the CABO firstly aims at the compilation of available data on the role of woody plants in agro-ecosystems in semi-arid regions. Secondly, field research has been set up to study crucial elements of the role of woody plants on nutrient cycling and the water balance. The study focuses on the Sahel region, which has received particular attention in projects carried out by the CABO during recent years. However, the role of woody plants remains an issue within the theories on primary production that has so far received relatively little attention.

The desk study includes the following subjects:

1) The importance of woody plants in the Sahel region is analysed on the basis of a summary of canopy cover data from studies dating back to the 1960’s. Canopy cover of woody plants is related to climatic zones, site conditions and land-use types. Changes due to the recent drought periods are analysed, showing a dramatic reduction of canopy cover throughout the zone. An ecological analysis of the influence of climate and site conditions on the distribution pattern of woody plants is presented.

2) The influence of water and nutrients on productivity of woody plants is worked out and a method is developed enabling to estimate woody plant productivity on the basis of canopy cover data.

3) The influence of woody plants on plant production factors is evaluated using studies from various semi-arid regions. Woody plants seem to concentrate and redistribute the availability of nutrients and water for their own productivity mainly. The ultimate effect is an increased pool of nutrients, cycling between the woody plant, its litter and the soil, and an increased productivity due to the combination with improved water availability. Woody plants and the associated soil can be considered as islands of fertility, which were developed at the expense of the surroundings, and are maintained via continuous concentration of elements.

4) The consequences of the analysis will be worked out for interventions with objectives such as increase of environmental protection, improvement of wood-, crop or livestock production. Basically, the role of woody plants in
agro-ecosystems in semi-arid regions can be characterised as one of stabilisation mainly. It will be difficult to expect at the same time a productive function.

The field study is carried out at two research sites in the Sahel zone in Mali, and is part of a major research project of the CABO, investigating the ecological factors that determine the possibilities for improvement of agricultural productivity with low external inputs. The project will be carried out for a period of four years. The field study on woody plants has started in 1992 only and includes the following subjects:

1) measurement of soil fertility gradients of a number of important woody plants;
2) quantification of the importance regarding nutrients of the various stages in the plant-litter-soil cycle;
3) experiments to analyse the origin ("feeding") of the enriched nutrient cycle (lateral uptake, vertical uptake, N-fixation, role of mycorrhiza; deposition by animals etc.);
4) measurements on water use by woody plants;
5) analyses of the effects of woody plants on the surrounding soil and associated vegetation;
6) experiments to test the importance of improved organic matter contents under woody canopy.

For further information please contact:
Centre for Agrobiological Research (CABO-DLO)
P.O. Box 14
NL-6700 AA Wageningen

The Nationaal Natuurhistorisch Museum (NNM Leiden) is dedicated to the study of the Earth’s natural diversity and to the propagation of man’s responsibility to safeguard it. It was founded in 1820 as the Rijksmuseum van Natuurlijke Historie, a name it retained till 1989, when due to a change in scope and structure the present name was adopted. From its start the museum has been involved in taxonomic, zoogeographic, ecological, geological, and mineralogical research in tropical rain forest areas in the colonies of the Netherlands at that time (Dutch East Indies, Suriname, Gold Coast) as well as in other areas where Dutch trade-missions had been established. Botany never formed part of the research of the museum (The closely linked Rijksherbarium Leiden performs this task). In order to organise the research in the Dutch East Indies on a firm footing, the so-called "Natuurkundige Commissie" ("Commission for the Natural History") was established in 1820. This Commission worked until 1850, when its work was taken over by individual collectors. The installation of the Commission, that only worked on behalf of the Rijksmuseum van Natuurlijke Historie, marshalled the start of a project to study the fauna of the then Dutch East Indies in its totality. As far as is known this is the first case in the world of a natural history museum involving itself on a long-term project-basis with the study of the fauna of tropical rain forest. The combined efforts of the "Natuurkundige
Commissie" and the Rijksmuseum van Natuurlijke Historie in the early part of the 19th century laid the foundation for all Dutch scientific research in tropical regions, not only in zoology, zoogeography, geology, petrology, but also in ethnology, anthropology, botany, agriculture and mining.

The interest of the museum in the fauna of the tropical rain forests of Indonesia, Suriname and West Africa has continued until the present time, though involvement in West Africa recently has been negligible. Most efforts are concentrated in Indonesia, where several projects, that run under the common denominator ‘Fauna of the Indo-Australian Archipelago’, have been developed:

1. Fauna Malesiana Project.
2. Inventoring insect diversity of the Indo-Australian Archipelago (Project Wallace follow-up)
3. Pleistocene mammals of Southeast Asia.
4. Vanishing rain forests of Indonesia (with Periplus Publishers and others, planned).

The Indo-Australian Archipelago and adjacent regions have been confirmed as a focus for exploratory field work. Field work takes either the form of larger expeditions, or of specific target trips, intended to fill critical geographic gaps in our faunal knowledge. Areas where field work has been done include Sabah, the Philippines, Sumatra, Sulawesi, Java, the Lesser Sundas and the Moluccas. All work in Indonesia is done in close cooperation with the Indonesian government organisations LIPI. Several museum curators invest their entire research capacity in the study of the South East Asian fauna.

Another area with tropical rainforest that historically has been the focus of the museum’s research activities was Suriname. Until the early 1980’s much work was done on vertebrates of that country. Because of zoogeographical requirements attention has shifted away from Suriname and now encompasses the entire Amazon basin (including the Guianas). At the moment only work on the herpetofauna of that area is in progress, with an active field work programme in Brazil in cooperation with the Museu Paraense Emílio Goeldi in Belém, the Instituto Nacional de Pesquisas do Amazonia in Manaus, and in Suriname with the University of Suriname in Paramaribo.

Current projects in this research area are:

1. Biodiversity estimation and comparison with other rain forest areas, both in South America and in South East Asia.
2. Herpetofauna of northern South America (taxonomy, zoogeography, ecology) (in cooperation with MPEG and University of Suriname).
3. Books on snakes and frogs of Suriname and an illustrated fieldguide to the lizards of northern South America (planned, and partly executed in cooperation with MPEG and INPA).

One museum curator invests most of his research capacity in this area. Field work has been executed in several localities in the Brazilian states of Amazonas, Pará, Amapá, Bahía and Mato Grosso, and in Ecuador, Peru and Venezuela.
On 7 September, 1991, the NNM Leiden organised a symposium on tropical rainforest with the title "Tropical rainforest: storehouse of biodiversity", with speakers from the Netherlands and Belgium. The symposium was organised as a contribution to the debate in the Netherlands on the Governmental Policy Paper on Tropical Rainforests. As a matter of fact in the general discussions the zoological aspect of the ecosystem tropical rainforest was neglected, and the symposium aimed to give a more balanced view, with some emphasis on zoology. The symposium was a success and it was decided to publish the papers read at the symposium as a book. This book is now available.

The museum is also involved in research on nature conservation in tropical rainforests and is an adviser to the Dutch Ministry of Agriculture, Nature Conservation and Fisheries in zoological matters concerning CITES (Washington Convention).

The NNM has a total permanent staff of 125 persons, and another 25 on temporary contracts. Scientific research is the responsibility of the Sector Research & Collections, consisting of five Departments (Vertebrates, Invertebrates, Insects, Paleontology-Stratigraphy, Petrology-Mineralogy). The number of permanent staff of this sector is 60, including 25 scientists (eight of which are involved in research in tropical rainforest). Other sectors in the museum are Presentations and Information Services. A general administration takes care of logistic, domestic and financial matters.

Responsible researchers: Dr. H. Breman and Ir. J.J. Kessler

Contact:
Dr. Marinus S. Hoogmoed
Head, Department of Vertebrates
Nationale Natuurhistorisch Museum
Postbus 9517
2300 RA Leiden
The Netherlands

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Law and Forest in Ecuador

The Department of Philosophy, Sociology and Information Science of Law of the University of Groningen proposed recently a research project about the role of law in the regulation of the tropical rain forest in Ecuador.

This research project is about the management of tropical rain forests, or to be more specific, about the actual and potential role of law and legal administration in the management of tropical rain forests. It has been inspired by a worldwide concern about the serious condition the world's resources in general, and the tropical rain forests in particular, are in. Presently, concern about the "fate of the forest" and its inhabitants seems to have come to a point that it is felt that something must be done, preferably as soon as possible. This research project is a reflection of this stadium.
Policies concerning conservation and wise use of tropical forests ultimately try to influence the ways in which people behave in relation to the forest. Most of these policies make extensive use of law. But legal regulation generally seems to be rather ineffective and, at times, even counterproductive. Research into the circumstances which determine the effective implementation of protective forest use regulation therefore is an essential complement to technical research about conservation requirements and sustainable exploitation alternatives for tropical forests. The problems referred to here have been treated extensively in socio-legal research. There, it has repeatedly been shown that the effectiveness of law in regulating human behaviour depends on many circumstances, in particular

1) the functioning of the legal/administrative system and
2) the sociolegal organization of the concrete situation in which regulated behaviour occurs.

The aim of this research project, then, is to provide information and insight into the role, potential and limitations of law and legal administration as an instrument of forest policy. Two interconnected research projects will be carried out to determine:

1) the ways in which the functioning of legal and administrative agencies is either to be credited for the effectiveness or to be held responsible for the ineffectiveness of legislation as an instrument of tropical forest policy; and
2) the relevant features of the local socio-legal situation, and the factors which inhibit or promote the effectiveness of national regulatory efforts or which provide more or less effective local alternatives for national regulation.

Central theories to be developed in this research will be on the one hand 'the social working of law', and on the other hand theories on 'management of natural resources'. The former theory has been defined in the social scientific study of law. The latter field of theories has mainly been developed in such diverse disciplines as nature conservation, forestry, agronomy, ecological anthropology, human ecology, etc. A focus on 'the management of natural resources' furtheres both academic integration with these other disciplines and conceptualization of policy recommendation.

The objectives of this research project are:

1) to gain insight into the relations between legal and other social factors influencing behaviour in relation to the tropical forest;
2) to develop a common methodology for studying those factors and their relationships qualitatively and/or quantitatively;
3) to place the results of the research in a general and comparative perspective to permit generalizations to be drawn which are not limited to one locality;
4) to inform other disciplines studying the problem of forest conservation and exploitation concerning socio-legally fea-
## International Agenda: Conferences

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<th>Date</th>
<th>Title</th>
<th>Contact</th>
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<tbody>
<tr>
<td>Sept. 92</td>
<td>Genetic Improvement of Bananas for resistance to Diseases and Pests. International Symposium, Montpellier/France</td>
<td>CIRAD/IRFA-Symposium Amélioration du Bananier, B.P. 5035, 34032 Montpellier, France; Tel: +33-67 61 58 64, Fax: +33-67 61 58 71</td>
</tr>
<tr>
<td>14. - 18.</td>
<td>International Conference on Alley Farming, Ibadan/Nigeria</td>
<td>Coordinator, AFNETA, c/o IITA, P.M.B 53 20, Ibadan, Nigeria; Telex: 31417 or 31159 tropin ng</td>
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<tr>
<td>14. - 18.</td>
<td>4th International Wetlands Conference, Columbus/Ohio/USA</td>
<td>William J. Mitsch, Wetlands '92, Conference Chair, School of Natural Resources, Ohio State University, Columbus, OH 43210, USA</td>
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<tr>
<td>15. - 25.</td>
<td>2nd International Symposium on Integrated Land Use Management for Tropical Agriculture: planning and managing for sustainable land use, Queensland/Australia</td>
<td>Director General, Queensland Dept. of Primary Industries, GPO Box 46, Brisbane, Queensland 4001, Australia; Tel: +61-7-2 39 32 43, Fax: +61-7-2 11 38 96</td>
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<tr>
<td>Oct. 92</td>
<td>1st International Symposium on Seed Procurement and Legal Regulation of Forests Reproductive Material in Tropical and Subtropical Countries, Nairobi/Kenya</td>
<td>IUFRO/GTZ Symposium, Attn. Mr. Jörg Albrecht, P.O. Box 4 16 07, Nairobi, Kenya</td>
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<tr>
<td>04. - 10.</td>
<td>7th Conference on Biomass for Energy and Environment, Agriculture and Industry, Florence/Italy</td>
<td>Granducato Viaggi by Managers’ Travel System, Via Masaccio 12/b, 50132 Firenze, Italy; Tel: +39-55-58 27 50, Fax: +39-55-57 93 09, Telex: 575855 mngri</td>
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<tr>
<td>05. - 09.</td>
<td>International Symposium - &quot;Harvesting and Silviculture for Sustainable Forestry in the Tropics&quot;, Kuala Lumpur/Malaysia</td>
<td>FRIM, Kepong, 52109, Kuala Lumpur, Malaysia; Tel: +60-3-6 34 26 33, Fax: +60-3-6 36 77 53</td>
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<tr>
<td>06. - 08.</td>
<td>MARISY’92 Symposium: Evaluation of Natural Resources with Remote Sensing Techniques, Rabat/Morocco</td>
<td>Dr. B. Pfeiffer, ESA/ESTEC - ISY Office, P.O. Box 2 99, 2200 AD Nordwijk, The Netherlands; Fax: +31-17 19-1 46 42</td>
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<tr>
<td>07. - 09.</td>
<td>Forstliche Hochschulwoche 1992, Freiburg/Germany</td>
<td>Dekanat der Forstwissenschaftlichen Fakultät, Erbprinzenstr. 13, W-7800 Freiburg, Germany; Tel: +49-7 61-2 0231 34/31 55</td>
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<tr>
<td>09. - 18.</td>
<td>Resolving Tropical Forest Resource Concerns through Tree Improvement, Gene Conservation and Domestication of New Species, Cali/Colombia</td>
<td>CAMCORE, North Carolina State University, P.O. Box 76 26, Raleigh, North Carolina 27695-7626, USA</td>
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19. - 23.
Erythrina in the new and old world. An International Conference in honour of G. Budowski, Turrialba/Costa Rica

Donald Kass, CATIE, Turrialba, Costa Rica or Mark Powell, NFTA, P.O. Box 6 80, Waimanalo, Hawaii 96795; Fax: +1-808-2 59 65 55

Nov. 92

09. - 11.
Plant Genome I, San Diego/California/USA

Scherago International Inc., 11 Penn Plaza, Suite 1003, New York, NY 10001; Tel: +1-2 12-6 43-17 50, Fax: +1-2 12-6 43-17 58

17. - 24.
International Tropical Timber Organisation, 13th Session, Yokohama/Japan

ITTO Headquarters, Sangyo Boeki Centre Bldg., 2 Yamashita-cho, Naka-ku, Yokohama 231, Japan; Tel: +81-45-6 71 70 45/6 71 70 46, Fax: +81-45-6 71 70 01

23. - 08.12.
IUFRO Symposium on Tree Seeds, Ouagadougou/Burkina Faso

Directeur du Centre National de Semences Forestiers, B.P. 24 82, Ouagadougou 01, Burkina Faso; Fax: +2 26-30 12 32

Dec. 92

06. - 09.
International Conference on Current Progress in Medicinal and Aromatic Plant Research, Calcutta/India

Dr. Dantwana Mukherjee (Ms.), Secretary General, 131/A S.P. Mukherjee Road, Calcutta 700026, India; Tel: +91-74 00 30 or +91-41 17 32

Feb. 92

World Neem Conference, Bangalore/India

T.S. Subramaniam, Conference Secretariat, "World Neem Conference", Agricultural Research Centre, ITC Ltd., International Business Division, 7th Floor, Amrutha Topaz, Somajiguda, Hyderabad - 500 482, (A.P.) India; Tel: + 91-8 42-21 06 61/21 01 62/21 18 24, Fax: +91-8 42-21 09 21

March 92

12.
Energy, Carbon Dioxide and Forests, Edinburgh/UK

Edinburgh Centre for Tropical Forests, Darwin Building, University of Edinburgh, Mayfield Road, Edinburgh EH9 3JU, Scotland, U.K.; Tel: +44-31-6 62 07 52, Fax: +44-31-6 62 04 78

April 92

09. - 17.
Joint Conference of the University Brunei Darussalam and the Royal Geographical Society on Tropical Rainforest Research: Current Issues, Brunei Darussalam

University Brunei Darussalam, Bandar Seri Begawan 3186, Brunei Darussalam; Tel: +6 73-2-42 70 07, Fax: +6 73-2-42 70 03, Telex: bu 2725

19. - 22.
First International Symposium on the Biology of Adventitious Root Formation, Dallas/Texas/USA

Edith Franson, Executive Secretary, Rooting Symposium, USDA Forest Sciences Lab., Box 8 98, Rhinelander, Wisconsin 54501, USA; Tel: +1-7 15-3 62 11 12, Fax: +1-7 15-3 62 78 16
# European Tropical Forest Research Network

**June 92**

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<td>14. - 16.</td>
<td>Modern Methods for Estimating Tree Volume and Increment, Morgantown- /W. Virginia/USA</td>
<td>Dr. Harry V. Wiant Jr., Div. of Forestry, West Virginia University, Morgantown, WV 26506, USA; Tel: +1-3 04-2 83 34 11, Fax: +1-3 04-2 83 24 41</td>
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<tr>
<td>15. - 19.</td>
<td>International Symposium on Genetic Conservation and Production of Tropical Forest Tree Seed, Chiang Mai/Thailand</td>
<td>Symposium Secretariat, ASEAN-Canada Forest Tree Seed Project, Muak-Lek, Saraburi 18180, Thailand; Tel: +66-36-34 13 05, Fax: +66-36-34 16 91</td>
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**July 92**

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<th>Date</th>
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<td>18. - 23.</td>
<td>Wind and wind-related damage to trees, Heriot-Watt University, Edinburgh/UK</td>
<td>C.P. Quine, Forestry Commission, Northern Research Station, Roslin, Midlothian, Scotland, EH25 9SY, U.K.; Tel: +44-31-4 45 21 76, Fax: +44-31-4 45 51 24</td>
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**Sept. 92**

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<tr>
<td>13. - 18.</td>
<td>14th Commonwealth Forestry Conference: &quot;People, the Environment and Forestry - Conflict or Harmony&quot;, Kuala Lumpur/Malaysia</td>
<td>The Secretary General CFC-14, Forestry Department Headquarters, Peninsular Malaysia, Jalan Sultan Salahuddin, 50660 Kuala Lumpur, Malaysia; Tel: +60-3-2 98 82 44, Fax: +60-3-2 92 86 57</td>
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**Nov. 92**

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<tr>
<td>22. - 26.</td>
<td>Water Issues in Forests Today, Canberra/Australia</td>
<td>International Symposium on Forest Hydrology, c/o ACTS, GPO Box 22 00, Canberra ACT 2601, Australia; Tel: +61-6-2 57 32 99, Fax: +61-6-2 57 32 56</td>
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<td></td>
<td>Fifth Symposium of the Silviculture in Latin America, Campeche/Mexico</td>
<td>Dr. Aurelio Fierros, contact via: G. De Las Salas, WL S1.07 - 09, CONIF, Parque la Florida, AP 03 16 76/09 51 53, Bogotá, Colombia; Fax: +57-1-2 13 92 19</td>
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# International Agenda: Workshops

**Sept. 92**

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<td>21. - 25.</td>
<td>SADCC Regional Workshop on Forestry Research, Gaborone/Botswana</td>
<td>Mr. J. Salmi, INDFUFORE, Unioninkatu 39 A 9, 00170 Helsinki, Finland; Tel: +3 58-0-1 35 22 33, Fax: +3 58-0-1 35 25 52</td>
</tr>
<tr>
<td>23. - 25.</td>
<td>International Workshop on Deposition into and Emission from Forest Ecosystems, Tharandt/Germany</td>
<td>Dr. Herbert Lux, Institute of Plant Chemistry, TU Dresden, Planer Str. 23, 0-8223 Tharandt, Germany; Telex: 25246</td>
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</table>
European Tropical Forest Research Network

Dec. 92
07. - 11. International Workshop on Improved Utilisation of Timber Resources in Southeast Asia, Kuala Lumpur/Malaysia

The Organising Secretariat, International Workshop on Utilisation of Timber Resources, c/o Forest Products Division, Forest Research Institute Malaysia, Kepong, 52109, Kuala Lumpur, Malaysia; Tel: +6 03-6 34-26 33, Fax: +6 03-6 36-77 53

International Agenda: Training Courses

Nov. 92
Enhancing Local Initiatives - Participatory Tools for Social Forestry, The Netherlands

FMD Consultants, P.O. Box 1 03 63, 7301 GJ Apeldoorn, The Netherlands; Tel: +31 55-2 22 93 33, Fax: +31 55-2 25 73 33

ICRAF Group Training Activities

Sept. 92

The Training Coordinator, ICRAF Training Programme, P.O. Box 3 06 77, Nairobi, Kenya; Fax: +2 54-2-52 10 01, Telex: 22048, E-Mail: 167 CGI 230

Oct. 92
05. - 30. Agroforestry Research for Development (for National Scientists, Latin America; held in Spanish and Portuguese), Manaus/Brazil

see above!

12. - 30. Agroforestry Research for Development (Agroforestry resource staff, international), Nairobi/Kenya

see above!

26. - 13.11. Technician Training Course (for SALWA Research Technicians), ISC Niamey/Niger

s.a.

Nov. 92
02. - 27. Technician Training Course (for Research technicians, East and Southern Africa AFRENA), Machakos/Kenya

s.a.

16. - 27. Agroforestry Research for Development (for Agroforestry resource staff, HULWA countries), Cameroun

s.a.

23. - 12.12. Experimental Design in Agroforestry Research (for Agroforestry researchers, international), Nairobi/Kenya

s.a.

Abbreviations used in ICRAF-Agenda:
AFRENA: Agroforestry Research Networks for Africa
ICRAF: International Centre for Research in Agroforestry
SALWA: Semi-Arid Lowlands of East Africa
HULWA: Humid Lowlands

iv
sible exploitation, management and regulation possibilities.

The project will be executed in Ecuador. Ecuador is a suitable location, because its eastern provinces form part of the Amazon region, which is the most important area of tropical forests in the world. Processes of deforestation are taking place alongside conservationist forest use. Moreover, Ecuador has established government research objectives regarding the Amazon area to which this project can make an important contribution (see Tropical Forestry Action Plan for Ecuador, special project no. 30, 'Caracterización y lineamientos para la conservación y manejo de la Amazonía Ecuatoriana').

The project is sponsored by the Tropenbos foundation, and will be supervised and executed by the Department of Sociology of law, Faculty of Law, University of Groningen (Netherlands) and the Latin American Development Corporation (CLD) in Ecuador jointly. Each institution will provide two researchers. Cooperation with scientists of Ecuadorian universities will be sought. It is expected that one of the Dutch researchers and one or two of the Ecuadorian researchers will produce dissertations based on the research. The University of Groningen is prepared to provide the required doctoral supervision.

The primary research methodology will be that of legal ethnography involving a combination of qualitative and quantitative techniques. Extended presence at the field site is essential. A total of twelve months of fieldwork at least is considered adequate. The first fieldwork period of ten months starts in May and lasts until March 1993. A second period of fieldwork will be done later in 1993. In collaboration with CLD at least two frontier 'sites' in Ecuador will be selected. In this way, comparisons can be made as to the social working of the same legal measures in different contexts, as well as of different legal measures in the same context. The study of the legal and administrative system will be linked to these field sites.

The project will result in reports to Tropenbos, the Ecuadorian counterpart institutions and to national policy-making agencies. In addition, papers will be presented at relevant (inter)national meetings and articles will be published in local and international scientific journals. The doctoral candidates will produce published dissertations based on their field research. National and international workshops are also envisaged as a means of disseminating the results of the research.

For further information please contact:
University of Groningen
Dep. of Philosophy, Sociology and Information Science of Law
Mrs Tanja Taale
Postbus 9 16
NL-9700 AS Groningen
From 8th to 9th of July, 1992 the first General Assembly of ETFRN took place in Brussels, at the CEC DG XII. The main results of the Meeting were summarized by the representatives of the European Network Nodes as follows:

Priority Aims for the Network Nodes

a. Information

The first task of the Network Nodes is to ensure an adequate flow of information within National Nodes and between National Nodes and Coordination Unit

- identify relevant institutions to be incorporated in the (national) information network
- establish collaboration with the national data-centre (focal points of AGREP), and support the flow of information of data on institutes, scientists and research activities; check periodically data-flow and stimulate data entry
- establish and maintain a mailing list of all relevant research institutions in their country
- serve as national node for information exchange on tropical forest research

b. Research Strategy

The second task is to represent a centre for consultation on national research aspects of tropical forests;

- consult individual institutions on research activities in tropical forestry; prepare meetings on research aspects of tropical forests
- exchange information on research programmes and opportunities for cooperation

Focuses of future work of the Coordination Unit

a. Integration of the European Network Nodes

The prerequisite for a functioning European Tropical Forest Research Network is the willingness of European tropical research institutes, to support actively a network of this kind. Actively also means to agree - on a national basis - on one (or more) representative(s) (National Nodes), who will take over the coordination of the above-mentioned activities of the respective National Nodes.

On a European scale, up to now, only Belgium, France and the Netherlands have determined their National Nodes. All other EC countries have agreed on a provisional solution (Germany, Ireland, Italy, United Kingdom), or are momentarily preparing
their nodes (Denmark, Greece, Luxemburg, Portugal, Spain).

In future, also countries of EFTA (Austria, Finland, Liechtenstein, Norway, Sweden, Suisse), as well as other international organisations (e.g. IUFRO, FAO, CIFOR) should have the opportunity to affiliate with EFRN.

b. Workshops and Task Forces

The European Internal Market is also aimed at stimulating the cooperation between the European tropical forest institutes. A major stimulus for this could be the realisation of common research projects, which could be financed by the CEC’s STD-3 Programme, if they are projects between European and Tropical forestry research institutes.

However, such research projects should be adapted to the needs of the respective developing country and be coordinated closely with its experts. The realisation of workshops or task forces in relevant fields of research with the aim to identify concrete project profiles and probable cooperation partners, could lead to such research cooperations. A task of EFRN will be to prepare and execute workshops and task forces, to offer the needed financial support, and to search for adequate cooperation partners.

c. Promotion of Information Exchange

Another main focus lies on the collection of tropical-forest-related information on a national, European, as well as on a global scale. The lack of knowledge concerning existing information about tropical research is striking. A high number of different databases and data-systems reflects the low level of transparency and access to stored data.

One aim for the European area is a close cooperation with the Agricultural Research Project (AGREP) through the National Nodes of EFRN. A task is to induce the national tropical forestry institutes to communicate available information on publicly-funded forestry-research projects to the respective National Focal Points of AGREP. If this will be realised, about 70 - 90 % of the information on publicly-funded tropical research activities could be brought into a form which would be transparent for all participants.

This would simplify the exchange of such data with other regional data-systems (e.g. SIAMAZ/South America, ICRAF/Africa, FORSPA/South East Asia). Furthermore, it would lead to the development of a Global Tropical Forest Research Information System, which has been initiated by IUFRO.

Thus EFRN should give European institutes and organisations the opportunity to use available resources (e.g. project-infrastructure, regional knowledge) in a more efficient way. This is to be achieved by a decentralized system which is characterized by an improved communication between research partners, the exchange of information among them, the execution of joint activities, and a common use of existing infrastructure.
At the first General Assembly of ETRFRN, from 8 - 9 July, 1992, in Brussels, Mr. E. Lammerts van Bueren (Netherlands) was elected as Chairman of the General Assembly, for a period of two years; a re-election for another period of two years is possible.

Mr. F. Grison (France), Mr. I. Hunter (United Kingdom) and Mr. R. M. Sardinha (Portugal) were elected Vice-Chairmen.

Mr. Lammerts van Bueren and Mr. Grison will also be members of the ETRFRN-Board.

The ETRFRN-Newsletter which you are now reading is primarily meant to be a means of communication by scientists for scientists.

For this reason we would like to offer individuals and institutions, who are working in the field of tropical-forest research, a forum in this Newsletter under the heading of "ETFRN-Research Cooperation", where they can search project partners for new projects, e.g. for an STD-3 programme, or where they may offer research opportunities in already existing projects to interested scientists, and share infrastructure and local experience.

The project-description, including the desired field of cooperation respectively the offered research opportunities, should not exceed 1/2 page. With the aim of facilitating communication, the author's address (incl. Tel. and Fax) should also be given for further information to scientists interested in a cooperation.

Opinions and proposals should be sent directly to the editor.

The National Institute of Agrarian Research of Spain (INIA) is organising a round table for 9 - 14 November, 1992 in Madrid to discuss "Forestry Information Systems in Latin-America and the Caribbean". The Meeting will be sponsored by UNDP, USDA Forest Service and INIA with the cooperation of the IUFRO-SPDC.

The meeting aims primarily at discussing the establishment of a Forestry Information System for Latin-America and the Caribbean, including the following objectives:

- identify information systems and those who need the service
- identify and evaluate the Information Systems now in place in the region
- identify the types of information to be included
- define mechanisms for data base development, data update and standardisation of data entry
- identify implementation procedures to achieve proposed goals.
Further information can be obtained from:

Centro de Investigación y
Tecnología del INIA
Avda. de Puerta de Hierro s/n,
P.O. Box 8.111
28080 - Madrid
España
Tel: 34-1-347 3750
Fax:34-1-549 0956

Forest Sector Modelling Systems

Flexible, easy-to-use software packages are now available, which enable users to set up their own, purpose-built models with any IBM compatible microcomputer equipped with a hard disk or twin floppy disk drives.

Models built with these modelling systems simulate forest sector behaviour over time in response to the specific requirements of each user. The modelling technique is very powerful and capable of handling all known forestry situations. Modelling is fast and very cost-effective.

The systems are invaluable for analysis, appraisal, planning and strategy formulation. They can be used at national, regional, district or project level. Their proven success is based on more than ten years of development and experience worldwide, including applications in Korea, Fiji, Sabah, India, Malawi, Zambia, Nigeria, Argentina, Honduras and Panama.

Noteworthy features of the systems include:

- models set up and controlled through easily assembled data files,
- no restrictions on model structure or size,
- products and crops defined by the user,
- will handle both natural forest and plantations,
- easily understandable modular structure,
- scope includes forest management, harvesting, processing and trade,
- supply and demand projections for up to 100 years ahead,
- planting, felling and capital programmes can be automatically generated,
- year-by-year costs, returns, foreign exchange and employment shown,
- interactive testing of alternatives through the keyboard,
- no limits on changes to variables or sensitivity analyses,
- printed tables of results selected by the user,
- tables of net changes in growing stock to reveal sustainability,
- special tables for discounted cash flow analysis,
- full documentation, including flow diagrams and equations,
- error-checking facilities included in the software,
- no special expertise or computer programming skills needed,
- systems which are simple to operate and user-friendly.

Comprehensive User Guides are supplied with the software. They include detailed descriptions of the systems and full in-
structions for setting up and running models. A complete specification of each module is provided, with explanatory notes. Data collection forms are supplied to facilitate model-building.

Three modelling systems are now available, which work in a similar way, but are designed for different purposes:

**VOLPLAN** for supply/demand analysis and physical planning of forestry output. The system deals with areas and quantities of forest products.

**TIMPLAN** for financial and economic planning of timber growing, harvesting, processing and trade. The system provides projections of future costs, returns, employment and capital formation, and is capable of giving a complete cost-benefit analysis of forestry production activities at national, district or project level.

**GROPLAN** for management and financial planning by forestry enterprises and timber growers. The system gives a detailed breakdown of yields by assortments and financial analysis of alternatives, including discounted cash flow tables.

A demonstration and training package has also been developed. This contains a modified version of the VOLPLAN program called VOLDEMO, which runs a small model containing two products and four crops. It can be used interactively to test options and to investigate the interrelationships between products and crops, but cannot be used to build new models. With VOLDEMO trainees can teach themselves, at their own pace, how to use the modelling systems and discover for themselves the powerful analytical features which they provide.

The modelling systems are available for use under licence. Enquiries should be addressed to:

Dr. Michael Gane
Millgreen
Kilmington
Axminster
Devon EX13 7HE
United Kingdom

**Commonwealth Forestry Conference
Kuala Lumpur, 13 - 18 Sept. 1993**

Under the Subheading "People, the Environment and Forestry - Conflict or Harmony?" a conference will take place with the objective "to show how forests in tropical and temperate regions can be managed in a sustainable way for the benefit of present and future generations, to provide opportunities for economic development, to promote the well-being of rural people, and to conserve the forest as a habitat for other environmental benefits".

The conference itself will be discussion-orientated and will comprise keynote speakers, discussion of invited papers and case study sessions.

Pre-and post-conference tours will illustrate the conference themes in the Malaysian context.
A very important aspect will be the post-conference technical attachments, whereby delegates can gain practical experience of some of the topics aired at the conference. A menu of attachments with five different forest institutions in Malaysia will be available. It is expected that these attachments will be of interest to junior foresters from developing countries of the Commonwealth.

Further details of the Conference and registration forms are available from:

The Secretary-General CFC-14
Forestry Department Headquarters, Peninsular Malaysia
Jalan Sultan Salahuddin
50660 Kuala Lumpur
Malaysia

Tel: (603)298 8244
Fax: (603)292 5657

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Publications

*A New Magazine: "Down to Earth"

Down to Earth is a fortnightly newsmagazine which is planned to start by June 1992. It will be published by a new agency based in New Delhi called the "Society for Environmental Communications" (SEC). SEC is a non-profit making society set up by a group of leading journalists and environmentalists of India.

The magazine will offer its readers new reports on current developments and debates in the field of science, technology, energy, health, urbanisation, forestry, agriculture, environment and sustainable development. While most magazines focus only on global and national economies, Down to Earth will try to present a more holistic picture. The long-term aim is to fuel well-informed debates on how the world can manage the urgently needed transformation towards a sustainable and equitable future.

For further information or subscription in Europe please contact:

Durga Press
Luitpold Str. 20
W-8036 Herrsching
Germany
Tel: 34-1-347 37 50
Fax: 34-1-549 09 56

The publication of this first atlas in a series of three volumes planned to cover all the world's tropical rain and monsoon forests is intended to inform the worldwide community involved in the debate on their future.

The forest maps have been compiled from satellite and radar imagery, aerial photography, and data provided by forestry departments, development agencies, charities, international organisations and individuals.

The text interprets the maps from a conservationist's standpoint and describes the local impact of deforestation in each country of the region. In addition chapters on major issues assess the effect of deforestation throughout the region on species' diversity, the peoples of the tropical forests, natural forest management and shifting cultivation. They also describe control and limitation of human impact and current attempts to provide sustainable forest development by looking in turn at the tropical timber trade, the protected areas system, government policies and the Tropical Forestry Action Plan. Finally a way forward is summarised in the chapter 'A Future for Tropical Forests'.
(from the inside cover)


This book arises out of a symposium on forest and woodland terrestrial ecosystems which was held in Florence on 20 - 24th May 1991.

It was organised jointly by the Commission of the European Communities (CEC) and the European Science Foundation (ESF) in association with the Italian Research Council (CNR).

The symposium brought together most of the internationally recognized groups working on forest ecosystems including biologists, botanists, ecologists, soil scientists, modellers, foresters and policy makers.

The structure of this book reflects the main elements of the meeting. As such it includes three main sections. The first consists of six major state-of-the-art reviews corresponding to the six plenary sessions, each followed by a discussion which has been summarized by rapporteurs. The reviews were prepared to assess critically the state of current knowledge in ecosystems research and to provide a scientific basis both for policy decisions and for further research.
The second part of the book includes papers containing presentation by the various invited groups on their findings at local level. These papers have been grouped together according to their geographical distribution as case studies. A substantial proportion of the work reported was carried out under contract to the CEC or under the Forest Ecosystem Research Network (FERN) of ESF. The questions raised during the discussions are summarized by the rapporteurs.

The final short section is an attempt by the rapporteurs to synthesize the main issues which were raised during the extensive discussion sessions at the end of the meeting. Based upon this, some general guidelines for the directions of future research are suggested. (from the preface)

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Since the beginning of the eighties the increasing deforestation of tropical forests has raised major concerns both in the respective tropical countries and in the industrialized countries. The reason for this is that the destruction of tropical forest ecosystems not only impacts on the economic and ecological well-being of tropical countries but is likely to incur changes in the world climate by aggravating the greenhouse effect. Nonetheless, the tropical countries have recognized that their forest areas are a major economic resource...
that can be exploited in order to foster economic growth and development.

The study assesses the contribution of various economic sectors to the deforestation and forest degradation of tropical moist forests and analyzes the impact on the economic development of 40 tropical countries.
(from the preface).


News reports concerning decline of the world’s forests are becoming sadly familiar. Most losses are measured in square kilometers, but a more profound loss cannot be measured. As forests disappear, so do their genetic resources. The genes and biological diversity they possess can no longer aid in their adaption to a changing environment, nor can they be used to develop improved varieties or products. This book assesses the status of the world’s tree genetic resources. Strategies for meeting future needs and alternatives to harvesting natural forests are presented. The book also outlines methods and technologies for management, evaluates activities now under way, and makes specific recommendations for a global strategy for tree genetic resources management.
(from the cover).

Vacancy Announcements

ICRAF: Multipurpose Tree Improvement Specialist in Brazil (Manaus)

The International Centre for Research in Agroforestry (ICRAF) is an autonomous, non-profit organisation, established in 1977 with headquarters in Nairobi, Kenya and a member of the Consultative Group on International Agricultural Research (CGIAR). ICRAF’s overall goal is to mitigate tropical deforestation, land depletion and rural poverty through improved agroforestry systems.

The individual will be stationed at EMBRAPA’s Agroforestry Research Centre in Manaus, Brazil, and will work as part of a team with Brazilian scientists and members of the CATIE-CIAT-IICA consortium on natural resource management. Main responsibilities are: to collect, select and improve multipurpose tree germplasm of importance to provide agroforestry alternatives to slash and burn agriculture with emphasis on indigenous species such as Bractis gasipaes; evaluating adaptability to acid soils, participate in training programmes and strengthen national institutions. The individual will also be expected to develop a collaborative multi-localational programme of species/provenance evaluation.

Candidates must have a PhD degree or equivalent in silviculture, tree breeding, plant breeding or horticulture; and at least five years experience in internationally recognized research; demonstrated ability
to design, formulate and coordinate research programs with minimal supervision; computer literacy and understanding of cross-cultural multidisciplinary environments. Fluency in English and Spanish or Portuguese is essential. Spanish speaking candidates will be expected to develop proficiency in Portuguese.

Appointments to these international senior staff position will initially be for two years beginning in 1992 or as soon as a suitable candidate is identified. Competitive salary and benefits are comparable to similar international agricultural research institutions. Applicants should send their updated C.V., including salary details, names and full addresses (including telephone, fax/telex) of three referees, addressed to:

Head of Human Resources
International Centre for Research in Agroforestry
P.O. Box 3 06 77
Nairobi
Kenya

Tel: (254-2)52 14 50
Telefax: (254-2)52 10 01
Telex: 22038
E-mail: CGI354
Cable: ICRAF.

Currently the Centro Agronomico Tropical de Investigacion y Enseñanza offers the above mentioned vacancy. The applicant speaks English and Spanish fluently. Further information can be obtained at, and the application has to be send to

Unidad de Recursos Humanos
CATIE 7170
Turribala, Costa Rica
Fax: (506)56-15 33

before 31 October, 1992.
European Tropical Forest Research Network

The following organisations act as National Nodes to the EUROPEAN TROPICAL FOREST RESEARCH NETWORK:

Belgium:
* Université Catholique de Louvain, Unité AGRO-EFOR, Place Croix du Sud 2, B-1348 Louvain-la-Neuve. Tel: 32 10 473707, Fax: 32 10 473697, contact: P. Mertens

Denmark:
* NFNA, Danish State Forestry, Tree Improvement Station, Krogerupvej 21, DK-3050 Humleback. Tel: 45 49 190214, Fax: 45 49 160016, contact: L. Graudal

France:
* CTFT, 45 bis, Avenue de la Belle Gabrielle, F-94736 Nogent/Marne cedex, Tel: +33-1-43 94 43 00, Fax: +33-1-43 94 43 29, contact: F. Grison

Germany:
* ATSAF, Hans-Böckler-Str.5, D-W-5300 Bonn 3. Tel: 49 228 4001313, Fax: 49 228 4001311, contact: H. Freiberg
* Institut für Zoologie III, Universität Würzburg, Röntgenring 19, W-8700 Würzburg, contact: K. Linsenmair

Greece:
* Ministry of Agriculture, Secretariat General on Forests, 3-5 Ippokratous St., GR-10164 Athens. Tel: 30 1 3607438, Fax: 30 1 3607138, contact: N. Efthathiadis

Ireland:
* IDI Ltd., Head of Forestry Division, Wilton Park House, Wilton Place, IRL-Dublin 2. Tel: 353 1 687555, Fax: 353 1 601733, contact: R. Keogh

Italy:
* Laboratorio di Botanica, Agraria e Forestale, Dipartimento di Biologia Vegetale, Università di Firenze, Piazzale delle Cascine 28, I-50144 Firenze. Tel: 39 55 365798, Fax: 39 55 360137, contact: C. Lenzi-Grillini

Netherlands:
* Tropenbos, P.O. Box 2 32, NL-6700 AE Wageningen. Tel: 31 8370 2 62 62, Fax: 31 8370 2 30 24, contact: E. Lammerts van Bueren
* Tropical Forestry Center, Tapada da Ajuda, P-1300 Lisbon. Tel: 351 1 33 46 62, Fax: 351 13 97 32 06, contact: R.M. de A. Sardinha

Spain:
* CICyT, Calle Rosario Pino 14-16, E-28020 Madrid. Fax: 34 1 5715781, contact: J. A. Muñoz Delgado

United Kingdom:
* UK Tropical Forest Forum, c/o Royal Botanic Gardens, Kew, Richmond, UK-Surrey TW9 3AE. Tel: 44 81 3326299, Fax: 44 81 3326294, contact: J. Thornback

International Organisations:
* Commission of the European Communities, (DG XII/G/4), Rue de la Loi 200, B-1049 Brussel. Tel: 32 2 2350927, Fax: 32 2 2363308, contact: T. Wollersen
* CTA, Postbus 380, NL-6700 AJ Wageningen. Tel: 31 8380 60400, Fax: 31 8380 31052, contact: R. Delleré
* IUFRO, International Union of Forestry Research Organisations, Seekendorf-Gudent-Weg 8, A-1131 Wien. Tel: 43 1 820151, Fax: 43 1 829355, contact: L. F. Riley

Other:
* Indufor Ky, Unioninkatu 39 A 9, SF-00170 Helsinki. Tel: 358 0 1352233, Fax: 358 0 1352552, contact: M. Simula

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