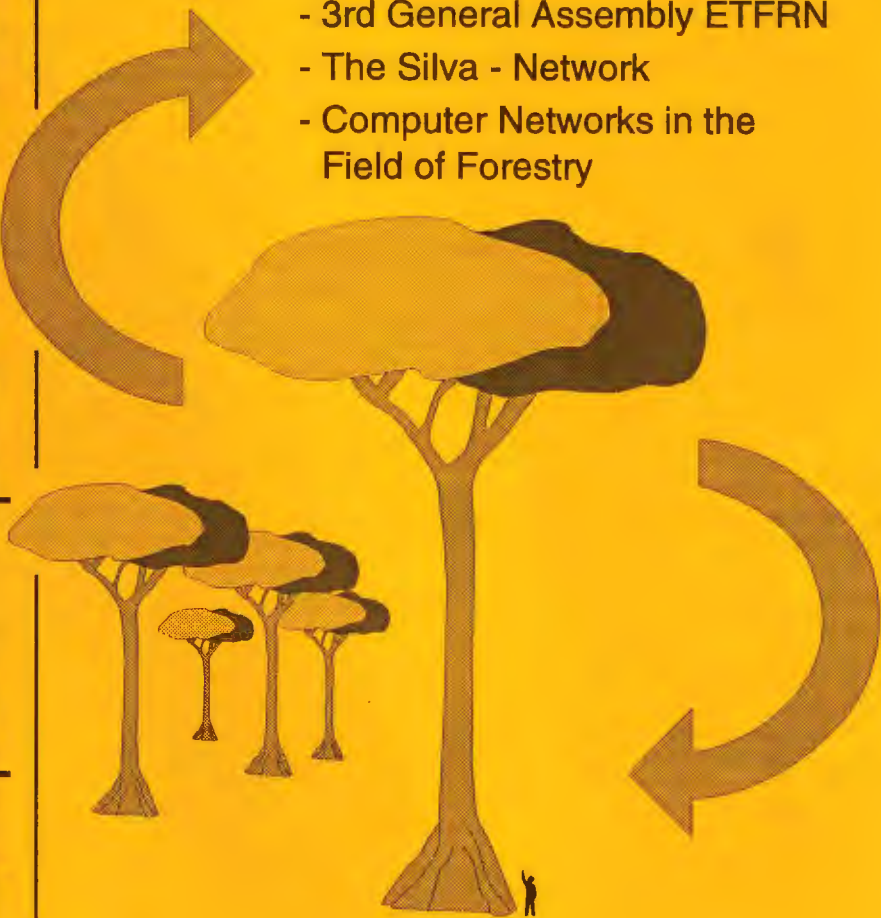


Newsletter

Programmes - Agenda - News

- 3rd General Assembly ETFRN
- The Silva - Network
- Computer Networks in the Field of Forestry



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 management.

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

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Organisations-Institutions Programmes

The Guaraqueçaba Program in Brazil Conservation of the Atlantic Forest

Once extending nearly 500,000 square miles, the tropical forest of Brazil's Atlantic coast now covers approx. 38,000 square miles (less than 8%), an example of the accelerated reduction of natural areas and the resulting loss of biodiversity of biologically rich Brazilian ecosystems.

Some 40% of the mammals, 50% of the birds, and 55% of the plants found in the area occur nowhere else on Earth. The Atlantic forest is widely considered to be one of the top three conservation priorities in the world.

The Guaraqueçaba region is located in the southeastern part of Brazil, with 775,000 acres (1,150 square miles). The area comprises a high diversity of habitats and ecosystems. They range from marine continental shelf and estuarine systems to mountain forests, since the area is limited to west and north by the Brazilian Atlantic Range.

The impressive and unknown biological diversity - a new species of monkey, the black faced lion tamarin, was found in 1990 in the heart of the Guaraqueçaba Region - the several archeological sites, the exceptionally beautiful landscapes, and the low demographic density (8 inhabit-

ants/square mile) combined with the isolation of the area, all make Guaraqueçaba a unique region and an area of special interest for environmental conservation.

It represents one of the last remnants of the Atlantic forest and within it is a complex system of estuaries and lagoons. Surrounding the Guaraqueçaba region there are a number of protected areas constituting the Lagamar region with 7,8 million acre (11,575 square miles), the largest remaining portion of continuous Atlantic rainforest in the world.

Guaraqueçaba can be considered a tremendous conservation challenge if we take into account the incredible number of biological and natural resources and their over-exploitation, which could lead to elimination of these critical resources.

With the technical and financial support of a North American environmental organization, The Nature Conservancy (TNC), and in cooperation with the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), the Society of Wildlife Research and Environmental Education (SPVS) has developed, in 1992, an "Integrated Conservation Plan for the Guaraqueçaba Region".

This plan is a technical tool for governmental and non-governmental organizations, researchers, and local residents to help them understand the region and prioritize activities. The plan indicates the need for coordination of socio-economic and conservation activities to ensure a

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long-term economic stability and conservation of natural resources.

Established in January 1992, the "Guaraqueçaba Programme" represents SPVS's commitment to work in the region taking action on the priorities identified in the Plan. The conclusions of the Plan make up the initial goals and objectives of this programme.

Protection is necessary and immediate actions must be taken to protect: natural resources like the "palmito" (heart of palm), endangered species, timber resources, the rich estuarine system, and soils from erosion due to inappropriate agricultural activities. At the same time, conservation of this region must take into account the interests of the local residents.

Solutions to land tenure problems must be found, the development of cattle raising, and tourism to keep activities in harmony with conservation objectives has to be controlled, and plans to promote institutional integration and the equilibrium between environment and human activities must be supported.

The basic strategies of this plan are as follows:

- banning of new economic enterprises that would have a negative effect on the integrity of the region;
- research on physical, biological and socioeconomic aspects to provide the knowledge required for a real preservation;

- community programmes aimed at improving the standard of living of the local population;
- implementation of systems of coordination of federal and state action as a form of integration of the several authorities acting in the area.

This year, SPVS is initiating a good number of projects and actions in health, education and conservation biology. The most important projects are:

- Critical Areas (The Nature Conservancy);
- Farming Viability (Mac Arthur Foundation);
- Infrastructure for the Guaraqueçaba Programme (Mac Arthur Foundation);
- Construction and implementation of the "Sociability House" (The Nature Conservancy).

An integrated conservation of this area, combining both social and environmental issues, will only be possible if governmental authorities act in an effective manner and if organizations, both in Brazil and abroad cooperate to support these studies and research (see p.12 of this Newsletter).

For further information please contact:

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Presidente

SPVS

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80.420-030 - Curitiba

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The SILVA-NETWORK

The SILVA-Network is an Interuniversity Cooperation Programme (ICP) inside the EC-ERASMUS-Programme and can be considered as a nucleus of a European University, aiming at international forestry education. All aspects of forestry are covered in the Network, from forest ecology to wood science, from sociology to exploitation and from tropical silviculture to polar vegetation science.

At the moment (study year 1993/1994) 21 academic forestry institutes from 14 European countries, both inside the EC and EFTA, are participating in the SILVA-Network (see table 1). Eastern European universities are not yet included. Each university has appointed a representative, who has a double function. On the one hand he represents his university at the annual meetings of the Network, on the other hand he is the contact person both for students from his university and for students from foreign universities. This representative acts for the whole institute. The SILVA-Network is coordinated by the Department of Forestry, Agricultural University Wageningen.

Instruments

To stimulate the interuniversity cooperation, an ICP can use four different instruments, characterized by the terms 'Student Mobility', 'Teacher Mobility', 'Development of a Joint Curriculum' and 'Intensive Courses'. All four can be used simultaneously,

but it is possible to concentrate on one or two of them. The SILVA-Network emphasizes now the mobility of students, which will be discussed below. The possibility of teaching at a foreign university, the development of a joint curriculum, which can be included in all academical forestry curricula, as well as the organisation of intensive courses, given by teachers of four universities and open to all (forestry) students, got less attention.

Student Mobility

Inside the SILVA-Network, as in other ICPs, student mobility is based on the agreement, that curricula parts passed at a host university will be acknowledged at the home university and, if possible, mentioned on the diploma. All different curricula parts, be it lectures, practicals or thesis, are included. The only prerequisite is that the student has to have finished the first year at the home university.

At the start of the SILVA-Network, with only nine universities involved, it proved to be very difficult to find a more or less common core which fitted in the nine curricula and which could be the base for student mobility. Some universities know a trimester system, others a semester system; the starting date of the study year varies from September 1st to October 15th; the examination regulations differ and are very strict sometimes, prohibiting the student to move to the next year, when he has not completely passed the preceding one; courses run over one trimester up to 18 months; etc. Moreover, educative objectives and methods differ.

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The extension to 21 universities did not simplify this. Therefore, at the start it was decided to use theses as the central part of the SILVA-Network. Students were and are stimulated to do a thesis at a host university. The subject of the thesis is chosen in deliberation with teachers of the home and host university, but it is done, coached and judged solely at the host university according to the rules of the latter one. The mark is then 'translated' at the home university. This decision got the network really started. During the first and second year (1990/1 and 1991/2) only about ten students transformed their interest in a real stay at a host university, but due to more active public relations, not only by teachers but also by students, it is estimated that in 1992/3 about 40 students will be actively involved. Noteworthy is that, additional to a thesis, a lot of students follow lectures too.

A very important aspect here is the choice of a thesis subject. The SILVA-Network allows students to enlarge or to deepen their professional knowledge and their scientific experience. Moreover it allows them to choose a thesis subject which is not under research at their home university. Finally it allows them to ensure coaching by a real expert. Condition is that research activities as well as the curriculum of all participating universities are more or less known to the representatives.

A problem, of course, in each ICP is the language problem. To solve this, students are stimulated to follow language courses, both at the home and/or at the host univer-

sity. Some universities already give courses in English, which lessens the linguistic problems.

Finances and administration

The EC stimulates the SILVA-Network in two ways: first, it grants funds for coordination to the Network to pay for the annual meetings, for language courses for students, for communication etc. Second, students are funded through the National Grant Awarding Authorities (NGAA) for extra costs of living in a foreign town. These funds are additional to the normal study financing. Students stay enrolled at the home university, a free of charge enrollment at the host university ensures them of the student benefits there.

Future

The SILVA-Network is an open Network, meaning that universities can come and go. More students will get involved, not only for a thesis, but also for a combination of thesis and lectures on a special subject. More attention will have to be given to the exchange of teachers and to intensive courses (summer schools). The Network should study the possibilities of an international school of research and of the cooperation with the eastern European countries.

For further information please contact:

P. Schmidt
Department of Forestry
Agricultural University Wageningen
P.O. Box 342
6700 AH Wageningen
The Netherlands

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Table 1: Participating institutes in the SILVA-Network for the year 1993

Austria:	Universität für Bodenkultur, Vienna
Belgium:	University of Ghent, Forestry Laboratory, Ghent Catholic University Leuven, Forestry Laboratory, Leuven
Finland:	University of Helsinki, Department of Forest Economics, Helsinki University of Joensuu, Faculty of Forests, Joensuu
France:	Université Catholique de Louvain, Unité des Eaux et Forêts, Louvain-la-Neuve Université des Sciences et Techniques du Languedoc, Institute of Botany, Montpellier Ecole Nationale du Génie Rurale, des Eaux et des Forêts, Nancy
Germany:	Albrecht-Ludwigs-Universität, Forstwissenschaftliche Fakultät, Freiburg Ludwig-Maximilian-Universität München, Forstwissenschaftliche Fakultät, München Technical University Dresden, Forestry Department, Tharandt
Greece:	Aristotelian University Thessaloniki, Department of Forestry, Thessaloniki
Ireland:	University College of Dublin, Forestry Department, Dublin
Italy:	Università degli studi di Padova, Dipartimento di Biotecnologie Agrarie, Padova
The Netherlands:	Agricultural University Wageningen, Department of Forestry, Wageningen
Norway:	Agricultural University of Norway, Department of Forestry, As
Portugal:	Technical University of Lisbon, Institute of Agriculture, Department of Forest Engineering, Lisbon
Sweden:	Swedish University of Agricultural Sciences, Department of Silviculture, Umea
Switzerland:	Eidgenössische Technische Hochschule Zürich, Forstwissenschaftliche Fakultät, Zürich
United Kingdom:	University of Aberdeen, Forestry Department, Aberdeen University of Wales, School of Agricultural and Forest Sciences, Bangor

The RBJ-FACE Foundation Rehabilitation of Logged-over Forests Project

The RBJ-Face Foundation Rehabilitation of Logged-over Forests (ReLoFo) Project is a cooperative venture between Rakyat Berjaya Sdn Bhd - the operational subsidiary of a company with vast experience in logging operations - and the Face (Forests Absorb

ing Carbondioxide Emissions) Foundation of the Netherlands, an organisation set up by the Dutch Electricity Generating Board to promote the planting of forests to absorb CO₂ from the atmosphere and offset the emissions of their power stations. The objective is to carry out large scale rehabilitation of logged forests by enrichment planting and reclamation of degraded areas using indigenous tree species such as dipterocarps, fast growing pioneers and forest fruit trees.

In the initial pilot phase, 2,000 ha of logged-over forests are being planted over three years (1992 - 1994) as a demonstration unit for management of tropical forests. A major attraction of the project is the integration of a substantial research and training component with the main operation. Ten percent of the total budget is to be directed towards research with the objective of developing strategies for rehabilitation of logged forests. Large field trials employing different systems are being established. Trials will test the performance of stands in different "ages" of logged forests, with different degrees of disturbance; site and species matching; use of fertilizers; different spacing, width of planting lines and size of planting holes. Insect and herbivore damage will be monitored and control measures will be investigated. Different strategies for reclamation of severely degraded areas such as log-landings and skid trails will be tested in order to promote the establishment of local pioneer tree species.

The development of the stands will be closely monitored in order to extract the maximum amount of information required for a better understanding of the problems and difficulties involved in large scale planting of logged-over forests. Subsequently, the critical points identified are addressed by specific research projects to generate solutions and alternatives for maximizing survival growth and development of seedlings at a feasible cost. The results achieved will be used to produce a management plan for the rehabilitation of logged forests, to serve as a guideline for

the second phase of the project. This will aim at rehabilitating 25,000 ha of logged forests over 26 years.

For further information please contact:
Dr. Pedro Moura Costa
Research Coordinator
RBJ-Face Foundation Project
Danum Valley Field Centre
PS 282, 91108 Lahad Datu
Sabah, Malaysia
Fax: +60-89-830 91

Forest, Trees and People

Forest Trees and People is a development programme which was launched by FAO in 1987. It belongs to a group of projects, which have developed since the 1970s, and aim at a close partnership with those directly concerned and responsible for the management of natural resources.

The FTP programme tries to implement this kind of partnership throughout the developing world, and to convey this cooperation method to its correspondents. At present approx. 5,000 individuals are taking part and are supporting this programme.

FTP is hosted by the 'Community Forest Unit' of FAO, Dept. of Politics and Planning. It is funded by five countries:

- The Netherlands (to support the implementation of the programme in Latin-america)
- Switzerland (Asia)
- Sweden (East Africa)

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- France (French-speaking Africa)
- Italy (to support the exchange of information)

The programme's board is composed of representatives, donors and one representative from each of the four regions.

As far as French-speaking Africa is concerned, the programme will be supported by France for two years (from March 1992 to March 1994). In this regard a contract was set up between the French Ministry of Cooperation and SILVA, which includes the translation and publication of the quarterly newsletter of the FTP programme in French language. Two issues have already been published (July 1992 and February 1993).

For further information please contact:

FAO
Forest, Trees and People
Viale delle Terme di Caracalla
00100 Rome
Italy

The SOFT Programme of the French Ministry of Environment

The SOFT Programme (Sols et Forêts Tropicaux) is supported by the French Ministry of Environment and was launched in 1989 to contribute to solve the problem of accelerated deforestation and degradation of soils in the humid tropics. The basic philosophy is that an efficient use of environments derived from primary forests would decrease the pressure on primary forests and improve the life of populations. This

would conciliate the conservation of forests and their associated biodiversity, and local economic development.

Research is mainly strategic and aims at finding solutions to problems of the traditional users of the environment, i.e. foresters and agronomists who require rational techniques for the exploitation of forest resources, conservationists concerned with the accelerated disappearance of biodiversity, and finally, small farmers and planters.

Research projects have four complementary objectives, i.e.

1. to understand the mechanisms of forest regeneration in natural conditions to improve spontaneous regeneration of deforested areas or design new techniques for silviculture;
2. to identify techniques of soil management which are sustainable and productive, through the manipulation of soil biological processes;
3. to identify management practices which conserve biodiversity and understand the link between biological diversity and ecosystem function;
4. to evaluate the effects of deforestation and subsequent cropping on the production of greenhouse gases.

In 1989 - 1992, 28 projects have been funded. 17 projects are developed in tropical America (including eight in French Guyana and three in the French West Indies), seven in Africa and two in Asia. All the French institutions involved in tropical research participate to this programme. In

late September 1993, results obtained so far will be presented and synthesized during a 3-days colloquium held at the ORSTOM center and Bondy.

For further information please contact:
Patrick Lavelle
Ministère de l'Environnement
D.R.A.E.I.
14 Bd. du Général Leclerc
92000 Neuilly-sur-Seine Cedex
France

Research Cooperations

Under this heading the ETFRN Newsletter offers its readers the possibility to write a short article for one of the next issues of the Newsletter offering research cooperation opportunities.

Should you be interested in making your cooperation efforts known to the Newsletter readers, please feel free to send us your summaries.

The Salim Ali Centre for Ornithology and Natural History

The Salim Ali Centre for Ornithology and Natural History (SACON) was established by the Government of India in 1990 as an autonomous centre of excellence in research in the divisions of avian, wetland and terrestrial ecology. The other divisions include conservation biology, ecotoxicology and environmental impact assessment.

Currently the Centre has scientific staff of ten scientists, who represent expertise in the fields of field ornithology, wetland ecology, conservation and management of natural resources, primatology, ecotoxicology, remote sensing/GIS application in forest ecology, and medicinal plant phytochemistry and ecology. Research is conducted through a number of projects covering different biogeographical areas of India. Presently SACON's research activities embrace the Himalaya, Indogangetic plains, Northeast India, Western Ghats, Andaman and Nicobar Islands, and Coramandel Coastal plains.

The SACON is a growing organisation and would like to build up its infrastructure and research capabilities further by involving collaborative projects with professional colleagues participating in ETFRN or other scientists interested in the Tropics. The exchanges and collaborative efforts can be at either short term or long term. Funding efforts of such ventures have to be taken up by the interested colleagues themselves.

Further details can be obtained from:
Dr. S. Narendra Prasad
Salim Ali Centre for
Ornithology and Natural History
Kalampalayam
Coimbatore 641 010
Tamil Nadu
India
Tel./Fax: +91-422-322 73

Silvolab Guyana: Call for Research Proposals

Last March a few scientists working on silviculture of natural rainforests in the region of Amazonia and the Guyanas met in French Guyana. Coming from Venezuela, (CAIAH, IFLA, CVG, Forestry Institute of Mérida), Brazil (EMBRAPA, INPA, FCAP), The Netherlands (TROPENBOS-Guyana), Surinam (Forest Service) and French Guyana (CIRAD, ONF, ENGREF), they represented most of the forestry knowledge background existing in Amazonia. From their discussions "general recommendations concerning management of the Guyana tropical rainforest" resulted. It is planned to establish a multinational project of forest management on a real scale on several sites of the Amazonian Region, on the condition that financial support will be found. One of the sites will be in French Guyana.

The idea: to manage 12,000 ha of natural tropical rainforest in a sustainable way for timber production, with all the knowledge accumulated by forest research, and to control the effect of silvicultural systems applied on a real scale.

Scientific aims: to translate experiment results obtained on small experimental plots to real scale; to study the impact of forest management that can't be evaluated on small plots (fauna, biodiversity, etc.).

Development aims: to be a demonstration of sustainable management, to develop technical tools for carrying out such management, to identify the socio-economic parameters necessary to enable sustainable management.

Minimum programme: management planning and the scientific follow-up of stands evolution, forest regeneration and fauna (done by Silvolab and Museum teams).

Call for proposals: Interested persons and institutions are asked to propose research programmes to be carried out within this project. Complete proposals must be in Silvolab the first week of September 1993. A selection will be done by the scientific committee of Silvolab, after consultation of European specialists (two for each proposal). A pre-project for the French Guyanan site will be written, and sent to every European participant in October. Coordination with the other sites in the Amazonian region will take place in October-November. Final project must be ready by the end of 1993 (both French Guyanan site project and general project).

For further information please contact:
Olivier Laroussinie
President of the Management Committee of Silvolab-Guyana
BP 316
97379 Kourou
French Guyana
Fax: + 594-32-43-02

The Wildlife Research and Environmental Society - SPVS

Over the last several decades, the process of occupation and development in southern Brazil has been marked by a totally inadequate use of its natural resources. As a result, original ground cover has been reduced to dangerously low levels, erosion has turned green areas into veritable deserts and rivers have been the repositories of all kinds of waste, from urban sewage to fertilizers.

To counter this accelerating destruction, effective measures must be taken immediately to protect our remaining natural lands.

Since its beginning in 1984, the Wildlife Research and Environmental Educations Society (SPVS) has been developing programs to protect those natural areas that still remain.

Based in the state of Paraná, where forest cover has now been reduced to less than 5% of its original area, SPVS has concentrated its work on the main ecosystems of southern Brazil, such as the "araucária" pine forests of Paraná, wildlands and subtropical rainforests. Priority focus has been given to the Atlantic rainforest, considered by the scientific community to be one of the top three conservation priorities in the world, and its adjacent coastal area - a complex system of estuaries, lagoons and mangrove forests.

Programs developed by SPVS include management techniques for conservation units, basic research on native flora and fauna with particular emphasis on endangered species, studies on forest evolution and recovery of damaged areas. One of its programs is described in detail in chapter 'Organisations and Programs' of this Newsletter.

In the area of environmental education, SPVS works with the surrounding urban and rural communities which have a direct or indirect impact on conservation areas, seeking to raise their awareness of environmental issues. Activities aimed at school-age children, in particular, have been developed to focus their attention on the region's specific conservation problems and possible solutions.

SPVS seeks to cooperate on a scientific basis with other international research organisations.

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European Tropical Forest Research Network

International Agenda: Conferences

Date	Title	Contact
Sept. 93		
01. - 03.	Asia-Pacific Symposium on Mangrove Ecosystems, Hong Kong	Ms Linda Yam, Conference Secretariat, Research Center, The HK University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong; Tel: +8 52-3 58 69 10, Fax: +8 52-3 58 13 34
12. - 15.	Trees in the Environment: Their Biology, Management and Impact, Edinburgh/UK	University of Edinburgh, Old College, South Bridge, Edinburgh EH8 9YL, United Kingdom; Tel: +44-31-6 67 10 11, Tlx: 727442 unived g
12. - 16.	3rd International Symposium on Plant-Soil Interactions at Low pH, Brisbane/Australia	Low pH Symposium, Australian Convention and Travel Services, GPO Box 2200, Canberra, ACT 2601, Australia; Tel: +61-6-257 32 99, Fax: +61-6-257 32 56
13. - 17.	Climate Change - From Impact to Interaction - Conference on the Effect of Climate Change on Agriculture and the Rural Economy, Dundee/UK	Conference Secretariat, Climate Change Conference, SCRI, Invergowrie, Dundee DD2 5DA, United Kingdom
13. - 17.	4th International Carbon Dioxide Conference, Paris/France	Mrs M. Revillon, INSU/CNRS, 77 Av. Denfert-Rochereau, 75014 Paris, France
13. - 18.	14th Commonwealth Forestry Conference: "People, the Environment and Forestry - Conflict or Harmony", Kuala Lumpur/Malaysia	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 56 57
15. - 19.	3rd Inter-American Indigenous Congress on Environment and Economic Development, Vancouver/Canada	Alex Hamer, Intertribal Forestry Association of British Columbia, Vancouver, Canada; Tel: +1-6 04-7 69-44 33, Fax: +1-6 04-7 69-48 66
18. - 26.	XII Congreso Latinoamericano de la Ciencia del Suelo, Salamanca y Sevilla/España	Secretaría de la propia Revista, C.C.M./C.S.I.C., Serrano 115 Dpdo., Madrid, España

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19. - 24. Australasian Forestry and the Global Environment, Queensland/Australia Peter Francis, IFA 93 Conference Convenor, GPO Box 16 97, Brisbane, Qld. 4001, Australia; Tel: +61-7-2 34 01 05, Fax: +61-7-2 34 12 00
19. - 25. International Wildlife Management Congress, San José/Costa Rica Tom Bandolin, IWMC Secretariat, The Wildlife Society, 5410 Grosvenor Lane, Bethesda, Maryland 20814-2197, USA; Tel: +1-3 01-8 97 97 70, Fax: +1-3 01-5 30 24 71
20. - 24. Silviculture and Sustainable Development in Tropical America, Cali/Colombia Dr. Aurelio Fierros, contact via: G. De Las Salas, WL S1.07 - 09, CONIF, Parque la Florida, AP 09 16 76/09 51 53, Bogotá, Colombia; Fax: +57-1-2 13 92 19
20. - 25. Advancement in Forest Inventory and Forest Management Sciences, Seoul/Korea Prof. O-Bok Kwon, Forestry Research Institute, 207 Chongnyangni-dong, Tongdaemun-gu, Seoul 130-012, Korea; Tel: +82-2-9 61 25 31, Fax: +82-2-9 67 51 01
23. - 24. The Nondestructive Testing of Wood Symposium, Madison/USA T.M. Maloney, Director, Washington State University, Pullman, Washington 99164-1806, USA; Fax: +1-509-335-72 37
24. - 28. Global Forum on Environmental and Development Education, New Delhi/India Dr. Desh Bandhu, President, Indian Environmental Society, U-112 (3rd Floor), Vikas Marg, Delhi-110092, India
26. - 29. Administrative Policy Making in Environmental Issues of Forestry: A Comparative View of Europe, Warsaw/Poland Dr. inż. Jerzy Smykala, Instytut Badawczy Lesnictwa, ul. Bitwy Warszawskiej 1920 rnr 3, 00-973 Warszawa, Poland; Tel: +48-22-22 49 38 or Dr. Max Krott, Universität für Bodenkultur, Gregor-Mendel-Strasse 33, 1180 Wien, Austria; Tel: +43-1-476 54, Fax: +43-1-310 51 75
27. - 01.10. XI International Symposium on Environmental Biogeochemistry, Salamanca/Spain XI ISEB Secretariat, Atn.: J.F. Gallardo, Aptado. 257. C.S.I.C., Salamanca, 37071, Spain; Fax: +34-23-21 96 09
27. - 01.10. Modelling Stand Response to Silvicultural Practices, Blacksburg/USA Dr. Harold E. Burkhart, Dept. of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061-0324, USA; Tel: +1-7 03-2 31 69 52, Fax: +1-7 03-2 31 33 30

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03. - 10. Diseases and Insects in Forest Nurseries, Dijon/France
Dr. Robert Perrin, INRA, Station de Recherches sur la Flore Pathogène, Dans Le Sol 17, Rue Sully - B.P. 1540, 21034 Dijon Cédex, France; Tel: +33-80-63 30 57, Fax: +33-80-63 32 32
05. 6th Meeting of the Tropical Forest Forum, United Kingdom
Jane Thornback, UK Tropical Forest Forum, c/o Royal Botanic Gardens Kew, Richmond, Surrey TW9 3AB, United Kingdom; Tel.: +44-81-332 62 99, Fax: +44-81-332 62 94
18. - 22. Biotechnology of Trees, Valsain/Spain
Dr. M. Raj Ahuja, Institute of Forest Genetics, Federal Research Centre for Forestry and Forest Products, Sieker Landstr. 2, 22917 Grosshansdorf, Germany; Tel: +49-4 10 26 10 79, Fax: +49-4 10 26 29 81
19. - 22. Site Classification and Evaluation, Clermont-Ferrand/France
M. Alain Franc, SL 1.02-06, CEMA-GREF, Div. Techniques Forestières, Domaine de Lалуas, 63200 Riom, France; Tel: +33-73-38 20 52, Fax: +33-73-38 76 41
19. - 22. International Conference on Cocoa Economy, Bali/Indonesia
Jl. Brawijaya, VII/5 Kebayoran, Jakarta 1216, Indonesia
20. - 21. 1st TREES Conference, Belgirate/Italy
J.P. LeGorgeu, TREES Conference Organizing Committee, IATD TP 440 Joint Research Centre, 21020 Ispra, Italy; Fax: +39-332-78 95 36
25. - 29. Behaviour, Population Dynamics, and Control of Forest Insects, Koloa/Hawaii
Dr. Thomas L. Payne, Dept. of Entomology, Virginia Polytechnic Institute and State University, 216 Price Hall, Blackburg, VA 24061, USA; Tel: +1-7 03-2 31 63 41, Fax: +1-7 03-9 82 60 50

Nov. 93

04. - 07. BIOFRES '93: Primer Taller Internacional sobre el Aprovechamiento de la Biomasa Forestal, Pinar del Río/Cuba
Dr. Jacinto Cires López, Servicios Académicos Internacionales, Centro Universitario de Pinar del Río, Mart No. 270 esq. a 27 de Noviembre, Provincia de Pinar del Río, CP 2011 Cuba; Tel: +53-58 13 or +53-54 79

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08. - 12. Global Environmental Movement Initiative 1993: the 3rd Green Step, Indonesia Org. Committee, POCE '93, Environment Building, Jalan Kramat IV No. 8, Jakarta Pusat 10420, Indonesia
18. - 19. Forest Growth Models and their Uses, Québec City/Canada Dr. Chhun-Huor UNG, Forestry Canada, Québec Region, Laurentian Forestry Centre, 1055 rue du P.E.P.S., P.O. Box 3800, Sainte-Foy, Québec, Canada G1V 4C7;
Tel: +1-418-648 58 34,
Fax: +1-418-648 58 49
22. - 26. Water Issues in Forests Today, Canberra/Australia 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
23. - 25. ASEAN Seminar on Management and Conservation of Biodiversity, Kuala Lumpur/Malaysia Director, ASEAN Institute of Forest Management, Suite 903, IGB Plaza, 6, Jalan Kampar, 50400 Kuala Lumpur, Malaysia;
Tel: +603-442 92 51,
Fax: +603-442 51 15
23. - 26. Impact of Diseases and Insect Pests in Tropical Forests, Cochin/India Dr. K.S.S. Nair, Chairman S2.07-07, Kerala Forest Research Institute, Peechi - 680 653, Thrissur Dist., Kerala State, India;
Tel: +91-487-223 75,
Fax: +91-487-404 51,
Tlx: 887275 kfri in
- Dec. 93**
06. - 11. Sustainable Development of Degraded Lands through Agroforestry in Asia and the Pacific, New Delhi/India Panjab Singh, Director, Indian Grassland and Fodder Research Institute, Jhansi 284 003, India
- March 94**
07. - 09. 5th Round Table Conference on Dipterocarps: Recent Advances in Dipterocarp Reserach for Sustainable Forest Management, Chiang Mai/Thailand Somyos Kijkar, Director, ASEAN-Canada Forest Tree Seed Center, Muak Lek, Saraburi 18180, Thailand;
Tel: +66-36-34 13 05,
Fax: +66-36-34 18 95
- April 94**
24. - 30. Minimum Data Requirements for Sustainable Forest Management, Stellenbosch/South Africa Prof. B. Bredenkamp, Faculty of Forestry, University of Stellenbosch, Private Bag X5018, 7599 Stellenbosch, South Africa;
Fax: +27-22 31-77 36 03

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May 94

02. - 07. International Symposium on Biodiversity and Taxonomy in Tropical Ecosystems (Tropical Zoology is concerned), Bonn/Germany
Dr. F. Krapp, c/o Zoologisches Forschungsinstitut, Museum A. Koenig, Adenauer Allee 150 - 164, 53113 Bonn, Germany;
Tel: +49-2 28-91 22-2 94,
Fax: +49-2 28-21 69 79
16. - 20. International Symposium on the Spatial Accuracy of Natural Resource Data Base: "Unlocking the Puzzle", Williamsburg/USA
Dr. James L. Smith, Dept. of Forestry, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0324, USA

June 94

07. - 10. 5th International Symposium on Society and Resource Management, Fort Collins/USA
Michael J. Manfreda, Program Chair, Human Dimensions in Natural Resources Unit, Colorado State University, Fort Collins, Colorado 80523, USA; Tel: +1-303/491-65 91, Fax: +1-303/491-22 55
20. - 24. International Conference on Ecology and Environment, Costa Rica
Celso Vargas, Departamento de Computacion, ITCR, Aptdo. 159, Cartago, Costa Rica;
Fax: +506-51 53 48,
E-mail: vargase@bitnet.ucrvm2

Aug. 94

20. - 26. VI International Congress of Ecology, Manchester/UK
The Secretary, VI International Congress of Ecology, Dept. of Environmental Biology, The University, Manchester M13 9PL, United Kingdom
28. - 03.09. Measuring and Monitoring Biodiversity in Tropical and Temperate Forests, Chiang Mai/Thailand
Secretariat, Forest Biodiversity Symposium, c/o Royal Forest Dept Silvicultural Research Sub-Division, 61 Paholoyothin Road, Chatuchak, Bangkok, Thailand 10900;
Fax: +66-2-579 47 30

Sep. 94

05. - 09. 8th Symposium of the IAMAP Commission on Atmospheric Chemistry and Global Pollution and 2nd Scientific Conference of the International Global Atmospheric Chemistry Project, Tokyo/Japan
T. Ogawa, CACGP IGAC Symposium, Dept. of Earth and Planetary Physics, Faculty of Science, University of Tokyo, Bunkyo-ku, Tokyo 113, Japan
06. - 08. Allelopathy in Sustainable Agriculture, Forestry and Environment, Rajasthan/India
Dr. Shamsher S. Narwal, Dept. of Agronomy, CCS Haryana Agricultural University, Hisar-125 004, Haryana, India; Tel: +91-16 62-7 37 21 Ext. 42 68, Fax: +91-16 62-7 35 52

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12. - 16. Resource Technology 94: Decision Support - 2001, Toronto/Canada M. Power, Co-Chair, RT/94, Toronto, Canada; Tel: +1-613-589 28 80, Fax: +1-613-589 22 75, E-mail: mpower@pnfi.forestry.ca
18. - 21. Inventory and Management of the Boreal Forests, Anchorage/USA Mr. Vernon J. LaBau, USDA Forest Service, Forestry Sciences Lab., 201 E. 9th Ave., Suite 303, Anchorage, AK 99501, USA; Tel: +1-9 07-2 71 25 85
- Oct. 94**
03. - 07. Resources and Environmental Monitoring, Rio de Janeiro/Brazil Roberto Pereira da Cunha, INPE, P.O. Box 5 15, 12201 Sao Jose dos Campos, Brazil
- Nov. 94**
21. - 25. Systems-Oriented Research in Agriculture and Rural Development, Montpellier/France Jacques Faxe & Michel Dulcire, International Symposium, Systems-Oriented Research and Rural Development, BP 50 35, 34032 Montpellier, France; Tel.: +33-67 61 71 85, Fax: +33-67 61 71 86, E-mail: Sympo94@montp2.cirad.fr
- Aug. 95**
06. - 12. 20th IUFRO World Congress, Tampere/Finland Prof. Risto Seppälä, Finnish Forest Research Institute, Unioninkatu 40 A, 00170 Helsinki, Finland; Tel: +3 58-0-85 70 51, Fax: +3 58-0-62 53 08
-

International Agenda: Workshops

- Aug. 93**
29. - 03.09. Artificial Intelligence in Agriculture, Natural Resources, and Environmental Sciences, Chambéry/France Dr. Nicholas D. Stone, Virginia Tech, Blacksburg, VA 24061, USA; Tel: +1-703-231 68 85, Fax: +1-703-231 91 31 or Dr. Roger Martin-Clouaire, INRA Auzeville, B.P. 27, 31326 Castanet-Tolosan Cédex, France; Tel: +33-61 28 52 86, Fax: +33-61 28 53 35
30. - 03.09. Teaching Silviculture in a Changing Time and Society, Zürich/Switzerland Dr. J.-Ph. Schütz, Professur für Waldbau, ETH-Zentrum, HG F 22.3, Rämistrasse 101, 8092 Zürich, Switzerland

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Sep. 93

15. - 20. International Workshop: Advances in Tree Development Control and Biotechnology, Beijing/China
Mr. Wang Shasheng, P.O. Box 29, Beijing Forestry University, Beijing, P.R. China

July 94

04. - 09. Interactive Seminar and Workshop on Soil, Tree, Machine Interactions in Forest Operations, Feldafing/Germany
Dr. Dietmar Matthies, Lehrstuhl für forstliche Arbeitswissenschaft und Angewandte Informatik, Hohenbachernstr. 22, 85354 Freising, Germany

International Agenda: Training Courses

May 93

31. - 19.06. Arboles y Sostenibilidad: Aspectos Biologicos, Economicos y Sociales, Costa Rica
Rolain Borel, University for Peace, P.O. Box 1 38, 6100 Ciudad Colón, Costa Rica; Tel: +5 06-49 15 11, Fax: +5 06-49 19 29

Sept. 93

05. - 11.12. International Course on the Design of Community Forestry, Wageningen/Netherlands
International Agricultural Centre (IAC), P.O. Box 88, Lawickse Allee 11, 6700 AB Wageningen, The Netherlands;
Tel: +31-83 70-9 01 11,
Fax: +31-83 70-1 85 52

06. - 17. Multipurpose Tree Improvement & Management, Maseno/Kenya
The Training Coordinator, ICRAF Training Programme, P.O. Box 3 06 77, Nairobi, Kenya;
Fax: 2 54-2-52 10 01,
E-mail: 157:CGI236

08. - 10. European Research Working for Coconut, Montpellier/France
CIRAD-CP, European Research Working for Coconut, B.P. 5035, 34032 Montpellier Cedex 1, France;
Tel: +33-67 61 71 31,
Fax: +33-67 61 71 20

12. - 11.10. 10th International Seminar on Forest Administration and Management, Michigan/USA
Director, International Forestry Seminars, School of Natural Resources, University of Michigan, Ann Arbor, MI 48109-1115, USA;
Tel: +1-313-747-43 37,
Fax: +1-313-936-21 95

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06. - 17. Agricultural Extension Technology in the Tropics - Towards Sustainable Systems, Edinburgh/UK Edith Field, Tropag Courses, UnivEd Technologies Ltd., 16 Buccleuch Place, Edinburgh EH8 9LN, United Kingdom; Tel: +44-31-650 34 73, Fax: +44-31-650 34 74, Tlx: 727442 unived g
11. - 29. Agroforestry Research for Development, Nairobi/ Kenya The Training Coordinator, October 1993 (XIX) Training Course, ICRAF Training Programme, P.O. Box 30677, Nairobi, Kenya; Fax: +2 54-2-52 10 01
11. - 03.12. 8th Annual Forestry Planning and Management Course, Gympie/Australia Course Co-ordinator, ANUTECH Pty Ltd, GPO Box 4, Canberra, ACT 2601, Australia; Tel: +6 16-2 49 56 71, Fax: +6 16-2 49 58 75
- Nov. 93**
29. - 17.12. Experimental Design and Analysis in Agroforestry Research, Nairobi/Kenya The Course Coordinator, ICRAF Training Programme, P.O. Box 3067-7, Nairobi, Kenya; Fax: +2 54-2-5 2 10 01
- March 94**
14. - 25. Forest Genetics and Tree Improvement, Raleigh/USA Ann Coughlin, North Carolina State University, College of Forest Resources, Box 8001, Raleigh, North Carolina, 27695-8001, USA; Tel: +1-919/515-31 84, Fax: +1-919/515-72 31
- April 94**
18. - 27.05. Rural Project Planning Course, Australia Course Co-ordinator, ANUTECH Pty Ltd, GPO Box 4, Canberra, ACT 2601, Australia; Tel: +6 16-24 95 6 71, Fax: +6 16-2 49 58 75
- May 94**
02. - 27. First International Course in Tropical and Subtropical Nematology, Brisbane/Australia International Consultancies, Dept. of Primary Industries, Queensland, GPO Box 46, Brisbane Qld 4001, Australia; Tel: +61-7-2 39 33 02, Fax: +61-7-2 21 38 96
02. - 10.06. International Short Course in Land Use Management for Tropical Agriculture, Brisbane/ Australia International Consultancies, Dept. of Primary Industries, Queensland, GPO Box 46, Brisbane Qld 4001, Australia; Tel: +61-7-2 39 33 02, Fax: +61-7-2 21 38 96

News

German ETRFN Node established

With effect of 1 July 1993 the Federal Ministry of Agriculture has appointed Prof. Dr. Jochen Heuveldop, from the Institute for World Forestry at the Federal Research Centre for Forestry and Forest Products, in Hamburg, as official representative for the German ETRFN Node (for address see last page).

3rd General Assembly of ETRFN

The third General Assembly of ETRFN took place on 25. - 26. June 1993, at the premises of the Natural Resources Institute (NRI) in Chatham/UK. The Chairman E. Lammerts van Bueren welcomed the ETRFN Node representatives, six of which only lately joined the Network (Austria, Denmark, Finland, Ireland, Norway and Sweden), as well as representatives from FAO and CIFOR, who, together with a representative from IUFRO-SPDC, will act as 'observers' to ETRFN meetings from now on. The participation of representatives from international organisations should improve the flow and exchange of information, and is expected to result in a 'synergy-effect' on joint efforts.

For the future orientation of the Network, the General Assembly agreed on the following points:

- It is essential for its work to have a high quality information-exchange level. The strength of the Network lies in its ability to process specific problems and form a useful opinion over a short timespan, which should be possible by the large number of highly qualified scientists working together.
- The Network should develop its ability to serve as scientific advisory body to all institutions requesting for information on research strategies and research priorities in the field of tropical forests.
- The Network should help stimulate and facilitate the cooperation and joint efforts regarding the formulation and implementation of research priorities.

Main items of the agenda of the meeting included:

EASDSS - ETRFN/AGREP-Supplementary-Data-Service-System

The development of this information system will remain connected and compatible to AGREP. Currently the first version of the programme is being revised. During the next months, a working group will elaborate a discussion paper to be presented at the fourth General Assembly for discussion.

ETRFN Task Force 'PIRFAG'

The preparation of the discussion paper on this task force has not yet finished; therefore, final decisions on future activities of the Network in this field will be made on the fourth General Assembly. In this context, a representative of the French Node presented the French research programme

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SILVOLAB (see chapter 'Research Cooperation' of this Newsletter p.11), and invited interested researchers to join the programme.

Task Force 'Sustainable Management'

This subject will remain to be important for ETRFN, and will be dealt with also in future. In order to avoid duplication of efforts, a survey will be elaborated on current initiatives in this field of activity. After an evaluation of the survey, further steps of the Network will be decided upon.

STD Programme

Recently the last call for proposals of research projects for the STD/3 programme was launched by DG XII of the Commission in Brussels. Proposals can be handed in at the Commission from interested companies, research institutes or universities, which are located in the EC or in developing countries, until 30 November 1993.

TREES (Tropical Ecosystem and Environment Monitoring by Satellite)

The potential fields of cooperation between TREES and ETRFN-associated tropical forest research institutions were presented and discussed: Validation of remote sensing assessments, Tropical forest classification, Characterization of seasonality, Identification of forest fragmentation, Identification of possible cooperation partners.

Task Force 'ASAL'

The Finnish Node proposed this subject as new ETRFN task force theme. The participants agreed that ASAL (Arid and Semi-Arid Land Forestry Research Programme) is

an important ecoregional and multi-disciplinary theme, which should be discussed within ETRFN. A corresponding discussion paper will be sent to all Nodes for internal discussion.

The next General Assembly of the Network will be held on 10 December 1993, in Florence/Italy.

*1st TREES Conference
20. - 21.10.1993, Belgirate/Italy*

The first TREES (Tropical Ecosystem and Environment Monitoring by Satellite) Project conference will be organized by the Joint Research Centre and the European Space Agency (we reported on the project in the ETRFN Newsletter No. 5/93, p. 3 f.). The JRC will host the meeting at the Villa Carlotta in the picturesque town of Belgirate, a few kilometers south of Stresa on the west shore of the Lago Maggiore (Italy).

This conference is held at the end of the first phase of the JRC-ESA TREES Project which has focused on the development of remote sensing techniques for addressing tropical forest monitoring issues. During the last three years, research and development activities have taken place in the CEC laboratories as well as among a large number of collaborators with the scope of improving the monitoring of tropical forest ecosystems at regional to global scales.

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The conference will report on current results and achievements in this respect. It will also provide an opportunity for other related programmes and projects to present current activities and future plans. Finally, an extensive proposal by the Joint Research Centre, together with other services of the Commission to initiate a TREES II Project will be presented and discussed in a roundtable format.

Presentations will address the following topics:

1. CEC Tropical Forest Policy
2. Global AVHRR 1 km collection and analysis
3. Validation using high resolution data
4. Perspectives in the use of microwave data
5. Other relevant tropical forest monitoring programmes
6. Tropical Forest Information System
7. TREES II: presentation and roundtable discussion.

While only invited papers will be presented during the session, there will be space available for poster display.

Institutions and individuals requiring further information about this meeting should contact:

J.P. LeGorgeu
TREES Conference Organizing Committee
IATD TP 440 Joint Research Centre 21020
Ispra
Italy
Fax: +39-332-78 95 36

*International Conference
on Ecology and Environment
20. - 24. June 1994, Costa Rica*

The Foundation for Primary Forest Protection (FUNBOSPRI) is calling for papers to specialists, organisations and people interested in ecology and environment and related fields.

The goal of the conference is to share experiences, to get perspectives and to discuss problems related with ecology and environment and to join individuals and institutions interested in this topic. It is also to give the opportunity to enjoy some of the most beautiful places in Costa Rica and discuss the ecological problems of the area in order to propose a solution.

The conference will take place during five days. Two trips are planned during the conference: the first to Isla de Cano, one of the most exciting places, and the second to the Corcovado's National Park, characterized by the primary forest and exotic biological varieties. The conference schedule is planned so that it allows people to travel during the week.

The main topics considered at the conference are the following:

- ecological experiences
- models for development and planning
- pacific uses of nuclear energy and environment
- quality control and environment
- conservation and management

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- community and ecology
 - ecology and education
 - native cultures and ecology
- Related topics can be considered.

Deadlines

Abstracts: 15 Dec. 1993
Summaries no longer than 200 words.
Acceptance notification: Feb. 1994
Papers: 15 April 1994

Please contact:
Celso Vargas
Departamento de Computacion
ITCR, Aptdo 159,
Cartago,
Costa Rica
Fax: +506-51 53 48
E-mail: vargase@bitnet.ucrvm2

Computer Networks in the Field of Forestry

For many years, researchers have been able to use computer facilities from remote hosts. What makes the computer networks more attractive today is that the different networks are interlinked, the telecommunication infrastructure more powerful and that the publicly available information sources are growing each day. As a consequence, it is of less importance to which academic network a researcher is connected. For example, Internet and Bitnet offer access to electronic mailing functions which allows the users to send and receive messages worldwide.

Additionally, the MAIL command supports the subscription to topic-oriented electronic bulletin boards or discussion lists. Two other main functions of the Internet with its TCP/IP standards are FTP and TELNET. FTP stands for "file transfer protocol" and helps to exchange binary or ASCII files between two computers. TELNET is the command for accessing a remote host in an interactive way. The following examples should clarify somewhat the different applications which are related to these TCP/IP commands.

Mailing lists and discussion groups

At present it is almost impossible to overview all the existing discussion lists on the different computer networks. Some of them are simple mailing lists to which everybody can subscribe and contribute. Other forums or bulletin boards are moderated, i.e. somebody receives the messages for the list and edits the articles before redistribution. Forestry in the narrow sense of the word has only a few specific discussion groups (see Fig. 1). However, many of the general and particular lists treating computer programmes or ecology aspects, could also be of interest to forest scientists. As the availability of network access has a strong geographical bias, countries from the tropical regions are less covered.

File transfer and "Anonymous FTP"

As many research institutions, libraries or computer centres offer both programme and text files from the public domain to interested persons an efficient file transport

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Figure 1: Discussion groups in relation to forestry

bionet.agroforestry	BIOSCI agroforestry bulletin board newsgroup on USENET, or subscription as AG-FORST@IRLEARN on LISTSERV@IRLEAEN
bionet.biology.tropical	BIOSCI forum on tropical biology newsgroup on USENET, to read for example via TELNET to "ezinfo.ethz.ch", option "NEWS"
FMDDS-L	Discussion list on forest management decision support systems subscribe to LISTSERV@PNFI.FORESTRY.CA
forest@nic.funet.fi	Mailing list (direct distribution list) initiated by the IUFRO working party S4.11.03 "Computers" subscribe to MAILSERV@NIC.FUNET.FI
ITRDBFOR@ASUACAD	Dendrochronology forum subscribe to LISTSERV@ASUACAD
WOODWORK@IPFWVM	BITNET-List on woodworking subscribe to LISTSERV@ipfwvm

(compiled by A. Kempf from various sources, March 1993)

other than by mail is very useful. On the Internet this tool for sending and receiving ASCII or binary files is the command FTP. A special feature which should be stressed in this context is the so-called "anonymous FTP". It enables a potential user of electronic archives to have access to a host without needing an account for that purpose. The login is done with the user-name "anonymous" followed by the e-mail address as password. The interactive information service "Archie" will help to find the address from which a particular file can be ordered.

Information services, catalogues and archives

As soon as someone gets an account on a computer which is connected to the Internet hundreds of potential information resources will become his personal electronic library. From introductory training material about how to use the networks to the weather forecast of a certain region or the directory of a professional association; there are a variety of services available in this electronic web. Often, one will be glad to find a menu-guided programme like HYTELNET or special information services

such as GOPHER, WAIS (wide area information systems) or WWW (world-wide web) which help to navigate to relevant hosts with useful applications. No special guide is available for forestry-related topics. However, one can find resources about global change, biodiversity and environmental concerns, as well as a few more specific databases.

For the time being, it is difficult to judge whether it would already be worthwhile to connect to these networks. A careful examination of these possibilities by an expert in the field of forestry would be required to evaluate the possible benefits of the use of computer networks.

For further information please contact:

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Swiss Federal Institute
for Forest, Snow and
Landscape Research

Zürcher Str. 111

8903 Birmensdorf

Switzerland

Tel: 01/739 21 11

Fax: 01/739 22 15

E-mail: kempf@wsl.ethz.ch

Publications

Mass Production Technology for Genetically Improved Forest Tree Species

AFOCEL. 1993. Mass production technology for genetically improved fast growing forest tree species. 251 pp.
ISSN 0398-494 X

Between 14 to 18 September, 200 genetic researchers and reforestation managers from 33 countries met in Carcans (France) on the theme "Mass production technology for genetically improved fast growing forest tree species".

The symposium was organized by AFOCEL together with IUFRO. 94 written contributions were accepted and gathered in the proceedings which are already published in two volumes. They show the important scientific effort done prior to the symposium by all its participants and confirm the interest that this theme arouses among the international scientific community.

It seemed useful to have a broader dissemination of the work achieved during the symposium and so to publish it again in a different form. The result is this booklet which contains all the summaries of the scientific sessions and the conclusion sessions.

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This document is intended to be a reference for more thinking on the subject, intended not only for researchers but also for forest managers. So the introductory session that shows the political impact of the subject as well as the invited papers that deal with the subject from a scientific point of view are also included.

Forest Resource Inventory and Monitoring and Remote Sensing Technologies

G. Preto. 1993. Forest resource inventory and monitoring and remote sensing technology, Proceedings of the IUFRO Centennial Meeting in Berlin, Aug. 31 - Sept. 4, 1992. Japan Society of Forest Planning Press. 297 pp. ISBN 4-915870-03-0

The IUFRO Centennial Meeting has been a historical occasion not only for remembering the past relevant accomplishment of the Union, but also for performing a wide and thorough review among specialists and concerned people of the main issues of world forestry today.

The Subject Group S4.02.00 "Forest Inventory and Monitoring" has organized four technical sessions, one of which in cooperation with S4.11.00 "Statistical methods, mathematics and computers", on the main problems related to the past achievements and to the future perspectives of assessing and controlling forest resources at local, national and global scale.

The Subject Group S4.12 "Remote Sensing Technologies" organized a session for the two working parties "Remote Sensing and Geographic Information Systems - New Technologies and Evaluation Methods with Reference to Ecology and Forestry" and "Application of Remote Sensing in Developing Countries".

This volume contains papers from all these sessions. The papers are presented in the same order as they had been presented within the session.

Conservation of Genetic Resources in Tropical Forest Management

R.H. Kemp, G. Namkoong, F.H. Wadsworth. 1993. Conservation of genetic resources in tropical forest management - Principles and concepts. FAO Forestry Paper 107. p 105. ISBN 92-5-103309-9

In accordance with its mandate, FAO has, for the past 40 years, published a number of manuals on the sustainable management of tropical forests, complemented over the past 20 years by guides on the conservation of forest genetic resources. The technical feasibility of both tropical forest management and conservation have been stressed repeatedly in these documents.

The present book constitutes a first step towards a more systematic approach to the provision of guidelines for harmonizing sustainable utilization and conservation of

genetic resources of tropical forest trees. Many presently prescribed forest management interventions could with minor adjustment be made less harmful to conservation concerns. Conversely, some compromises could be made in existing methodologies for the conservation of forest genetic resources which could help achieve the main aims of conservation while at the same time meeting pressing, present-day needs for the goods and environmental services provided by the forest.

This document outlines present forest management practices, illustrated by case studies from three tropical countries. It briefly reviews available strategies and methodologies for the conservation of forest genetic resources in the light of their compatibility with sustainable use of the resources targeted for conservation.

Rooting Cuttings of Tropical Trees

Longman K.A. 1993. Tropical Trees: Propagation and Planting Manuals. Vol. 1. Rooting Cuttings of Tropical Trees. 137 pp. ISBN 0-85092-394-8

This Manual is the first in a new series of readable, illustrated handbooks for propagating and planting tropical trees.

The series is designed to provide clear and concise information on how to select, grow, plant and care for tropical trees. The manuals are intended for anyone interested in growing trees, from the small-holder to the experienced forester, in both humid and drier areas.

Manual I is concerned with rooting cuttings in order to multiply trees vegetatively. Farmers have used vegetative propagation for centuries in growing tropical food crops. It is a standard technique for producing improved rubber trees, and is also now used for tea, coffee, oil-palm and other crops. But growing more and better indigenous trees may be the most far-reaching contribution to sustainable land use that vegetative propagation can play. It facilitates the quicker 'domestication' of these 'wild' species, encouraging both smaller and larger growers to tap the multiplicity of potential benefits offered by tropical trees.

This manual gives clear, step-by-step instructions on the rooting of tree cuttings, including:

- choosing the best trees to propagate
- producing good cuttings from stock-plants
- constructing a favourable environment for propagation
- rooting and handling leafy cuttings

The procedures described in this Manual can be used with most woody species to provide diverse clonal mixtures. Such superior planting stock will help to fulfil the potential of multiple usefulness offered by tropical trees, while encouraging the conservation of genetic resources.

(from the back cover)

Forestry Extension Materials in Review

E. Shanks. 1992. *Networking in Action: Forestry Extension Materials in Review*. ODI/RDFN Network Paper No.14a. ODI. London, United Kingdom. 112 p. ISSN: 0968-2627

This paper is a synthesis of over 170 items of forestry extension literature sent to the Rural Development Forestry Network by its members.

It is derived from 35 countries, although some items are not country-specific and have wide potential relevance.

The paper is presented in two parts. In part one, the overall characteristics of the material are analyzed in an essay illustrated with descriptions of many of the more notable items. This is followed in part two by an annotated bibliography, listing all items.

The essay begins with an examination of the intended audience of the material, and a classification of the documents into five broad types (operational manuals, technical handbooks, booklets and pamphlets, series and periodicals, and flipcharts). The material is then examined according to subject matter, noting that the greatest coverage is of nursery practices and tree species (descriptions and husbandry), whilst relatively little covers certain other matters

such as natural forest management, and legislative issues.

The conceptual structure of the various materials is also considered, as well as the manner of its production and use.

Finally, a number of conclusions are drawn with regard to the changing nature of the forestry extension "message", and apparent gaps in the type of extension materials currently available.

Long-term Implications of Climate Change and Air Pollution on Forest Ecosystems

Schlaepfer, R. (ed.). 1993. *Long-term implications of climate change and air pollution on forest ecosystems*. Progress report of the IUFRO Task Force "Forest, climate change and air pollution". Vienna, IUFRO; Birmensdorf, WSL. IUFRO World Series Vol. 4. 132 pp. ISSN 1016-3263 ISBN 3-7040-1165-7

The volume presents a state-of-the-art report on important questions surrounding the potential impacts of air pollution and climate change on forest ecosystems. Compiled by the IUFRO Task Force "Forest, Climate Change and Air Pollution", it contains the contributions of 29 leading scientists from seven countries together with two in-depth reviews of the subject. The text is in English, with French, German and Spanish summaries.

Vacancy Announcements

CIFOR:
*Outstanding Opportunities in
Tropical Forest Sciences*

The Center for International Forestry Research (CIFOR) is a new non-profit, autonomous, scientific research organisation with headquarters at Bogor in Indonesia. CIFOR is a focal point for strategic forestry research in the pan-tropics of the developing world and is one of 18 international agricultural research centres supported by the CGIAR.

Applications are invited for international staff positions, to be filled as soon as possible in order to implement both the 1993 programme and the medium-term plan which is currently being developed. Staff are sought for the following programme areas:

- * social sciences, economic, policy analysis and development;
- * conservation and management of natural forests;
- * rehabilitation of degraded and depleted forest lands;
- * utilization and marketing of forest goods and services;
- * research support, information services, development of human and institutional resources.

In addition, CIFOR will be recruiting for a number of other research positions in the next twelve months.

Applicants should possess a PhD or equivalent research qualification followed by a distinguished record of research in tropical forest sciences or related subjects, and experience of living and working in developing countries. Applicants should have demonstrated ability to develop functional collaborative research partnerships with national research institutions in both developed and developing countries.

All positions require substantial travel. Applicants should have an ability to work with people of different cultures and nationalities. They must have good communications skills and be able to represent CIFOR effectively to national research services, officials of governments, donor agencies and other international organisations.

Excellent knowledge of spoken and written English is essential for all positions. Applicants should have a working knowledge of either French or Spanish, preferably both. Knowledge of Bahasa Indonesia would be an advantage.

Appointments will be initially for periods of 2 - 3 years with a probability of extension. Salary and related benefits are free of local taxes for expatriates, and commensurate with comparable international organisations.

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Applicants should send their curriculum vitae, a narrative of their suitability for one of the above positions, date of availability, and names of three referees (including telephone, telex or fax numbers if available) to the address below. Acknowledgement of receipt of applications and further information about job responsibilities and terms and conditions of employment will be sent only to suitably qualified applicants.

Jeffrey Sayer,
Director General
CIFOR
Jalan Gunung Batu 5
P.O. Box 161
Bogor 16001
Indonesia

FAO: Agricultural Officer

The Food and Agriculture Organisation of the United Nations (FAO) is looking for an Agricultural Officer in the field of forestry.

Under supervision of the Senior Officer, and in close cooperation with the other groups in Crop and Grassland Service (AGPC), the Agroforestry Officer will:

- ensure that multipurpose trees and shrubs will be integrated into agroforestry systems;

- assist in maintaining liaison related to agroforestry between AGPC and other services and departments within FAO and national and international institutions;
- identify existing, economically sustainable systems, including lesser-known ones, and disseminate information on them;
- assist in preparing guidelines for monitoring and economic evaluation of existing agroforestry technology and of new development schemes;
- assist in organizing networks, technical meetings, and training programmes on agroforestry;
- prepare reports and technical publications;
- perform other related duties as required.

Essential qualifications and experience

- University degree in agriculture, with postgraduate degree in agronomy.
- Five years of progressively responsible professional experience (including experience in developing countries) in agroforestry with particular reference to agro-economy, forage crop production, soil science, or extension.
- Working knowledge of English and Spanish, and limited knowledge of French.
- Ability to write reports clearly and concisely, and to evaluate, analyse and summarize technical information. Ability to express ideas clearly and effectively, ability to establish and maintain effective

working relationships with people of different national and cultural backgrounds. Willingness to use word processing equipment.

Desirable qualifications and experience

- Experience in the development of integrated crop management systems and the economic analysis of such systems.
- Knowledge of major industrial tree crops; horticultural fruit and nut crops; fodder trees.

This vacancy is open to male and female candidates. Applications from qualified women candidates are encouraged.

Please send detailed Curriculum Vitae to:

Central Recruitment
Personnel Division
FAO
Viale delle Terme di Caracalla
I-00100 Rome

Before sending their application, German aspirants are recommended to contact:

Dr. Vockert
Bundesamt für Ernährung und Forstwirtschaft
Adickesallee 40
60322 Frankfurt
Tel: 069/1564-383
Fax: 069/1564-445

ICRAF:
*Applied Anthropologist/
Rural Sociologist*

The International Centre for Research in Agroforestry (ICRAF) is an international research organisation supported by the Consultative Group on International Agricultural Research (CGIAR). Its ultimate purpose is to help mitigate tropical deforestation, land depletion and rural poverty through the better use of trees and shrubs in crop and livestock production systems in humid, sub-humid and semi-arid tropics.

ICRAF is seeking to fill a senior position for an anthropologist or a rural sociologist who will work in its Characterization and Impact Programme. Based at ICRAF's headquarters in Nairobi, this person will undertake interdisciplinary research on agroecosystem characterization and will analyze the impact of agroforestry technologies on farmer welfare. Issues addressed will include, community and household mechanisms for resource allocation, the decision-making sustainability of agroforestry systems and the interface between the natural resource base of agroecosystems and socio-economic variables. The scientist will also participate in ICRAF's training activities and will be required to travel to selected ICRAF-sites in Africa, South East Asia and Latin America.

Qualifications

A Ph.D. in anthropology, rural sociology, or a related field with a minimum of seven years experience in internationally recognized research in tropical agriculture, demonstrated ability to design, formulate and coordinate research programs with minimal supervision; and an understanding of cross-cultural multidisciplinary environments. In addition, a systems orientation and an ability to work on different agroecosystem levels (household, community, regional) are also needed.

Excellent command of English is required, fluency in Spanish and/or French would be an advantage.

Conditions of employment

This is an international core funded senior position. Appointments at ICRAF are for fixed periods of two years and are renewable for up to ten years in duration. The salary and benefits are competitive and include a cost-of-living allowance, annual home-leave travel and a comprehensive retirement and health package. Applicants are invited to send a detailed curriculum vitae including the names and full addresses of three referees. Applications will be considered until 30 September 1993, and should be addressed to the

Head of Human Resources

ICRAF

P.O. Box 30677

Nairobi

Kenya

Fax: +254-2-52 10 01

Voluntary Service Overseas: Various Postings in Forestry

VSO (Voluntary Service Overseas) originated over thirty years ago, as an agency specializing in broadening the horizons of school-leavers by sending them to spend a year in the developing world. Today, the organisation selects skilled adults (the average age is 33 and the age limit is 70) to spend two years working in a post requested by the host government or community organisation, living in local conditions.

Around 1,600 VSOs are working in countries throughout Asia, Africa, the Caribbean and the Pacific. They are supplying skills which are not widely available locally; and a central element of every volunteer's work involves transferring those skills to local colleagues.

Deforestation is now an overriding problem in many areas of the developing world. As a result VSO is receiving requests for volunteers able to work with communities to help to contain this problem. In forestry projects the main emphasis is on education. People usually realise the importance and potential of trees, but due to the pressures of daily existence, the fact that trees are not an inexhaustible source of building material, fuelwood and other essentials is often not seen until it is too late.

VSO postings in forestry means shifting from protection and policing to preserving forest reserves, through developing an interdependence between the community and the trees.

VSO has job requests for Forestry Research Officers to work with Belize's Ministry of Natural Resources. The research division of the Forestry department has been operating at a low level for some time due to staff shortages. This post will enable the research division to get 'up and running' at an appropriate level. The Ministry of Natural Resources would like applicants to have a degree with at least two years 'hands on' experience.

VSO also has job requests for Community and Agroforesters in Nepal, the Philippines, Papua New Guinea, Ghana, Malawi, Sri Lanka and Nigeria. Volunteers will work with local communities and forestry staff in planning, developing and improving district farm forestry activities. Volunteers need a BSc/HND in forestry and a minimum of one years work experience. Practical Training periods can be counted as experience and, if the work/training experience has been gained overseas, less than one year would be considered.

For example, the Nepal posts are based in the Terai Forest. The jobs involve planning, developing and improving nursery management, plantation management, natural forest management, training and extension, the involvement of communities in protection, development and utilisation of resources, farm forestry activities and trial and demonstration activities.

The Terai represents the fertile lowlands of Nepal with only 14% of the total land area out of more than 40% of the population of the country. This population is estimated to be increasing still at a rate of over 4% per annum which is partly due to immigration from both the hills as well as from India. An intense pressure on the remaining forested areas is the result, and the forest degradation and destruction occurs at an alarming rate, due to illegal extraction of forest products of all sorts, intensive grazing, deliberate forest fires and encroachment. Project activities in the Terai forests focus on addressing this situation through, amongst others, establishing nurseries and plantations, improving the management of the remaining natural forests, propagating the private planting of trees, and seeking a greater interest and participation of communities in activities.

VSO posts are for two years. A salary based on local rates and accomodation are provided by the employer. Other costs such as flights and health insurance are met by VSO. VSO has a field office in each country which assesses every posting.

Anyone interested in finding out more about VSO should contact:

Enquiries Unit
VSO
Putney Bridge Road
UK-London SW15 2PN
Tel.: +44-81-780 22 66