

COORDINATOR'S REPORT

It seems very strange to be writing these words from my new office in Canada, and perhaps many will be surprised that a new IUFRO-SPDC Coordinator is not writing this report. Thus, a brief update on the status of the SPDC Coordinator is warranted. My secondment to IUFRO ended on June 30 and shortly thereafter I returned to my research position with the Canadian Forest Service in Edmonton. In Vol. 30, Issue 1 of IUFRO News I introduced our new SPDC Coordinator, Professor Andreas Schulte, whom we expected to take up office in April. Unfortunately, because of substantial re-organization planned by the University of Paderborn over forthcoming months, it was not possible for Prof. Schulte to join the SPDC team. While we regret these unforeseen circumstances, we certainly understand this decision and we send Prof. Schulte our best wishes for a happy outcome during this period of change. We were pleased, however, that the commitment of funds by the GTZ (German Agency for Technical Cooperation) and the Federal German Ministry for Economic Cooperation and Development remained to facilitate the staffing of the SPDC Coordinator position. Following another conditional international search, we were very pleased to hire Dr. Michael Kleine as the new SPDC Coordinator, who will take up office in September. An article is included in this issue to formally introduce Michael. In the meantime, I am lending assistance to the SPDC to ensure that the Programme operates unhindered through the summer.

Since the last report 6 months ago, the SPDC has experienced a period of hectic activity. Most of this activity has surrounded the EC-funded GFIS-Africa Project. The technical training is now well under way and much progress has been made towards establishment of

the GFIS websites at the 5 African nodes. Our thanks to Project Information Officer at FAO, Margherita Sini, for the excellent work that she is doing in organizing training and technical support for the project personnel at the nodes. A detailed report on the Project is included in this issue.

Our 4-year project in Eastern Europe, *Effects of Air Pollution on Forest Health and Biodiversity in Forests of the Carpathian Mountains*, funded by the United States Foreign Agricultural Service has now come to an end. The final project workshop, funded in part by NATO, was held in Stara Lesna, Slovakia in May and was well-attended and highly-successful. Thanks to Dr. Julius Oszlanyi and Dr. Bob Szaro for organizing a great workshop. We eagerly await the workshop proceedings which will be published in the NATO Science Series.

The "Handbook for Preparing and Writing Research Proposals" continues to be in high demand. A recent workshop on this topic held in Iran, co-sponsored by the SPDC, is reported on herein. The French translation of this Handbook is now complete and will be used for two workshops in francophone Africa later this year. We expect that a revised version will be published by early 2002.

Thanks again to the SPDC team, Dr. Atse Yapi, Birgit Buxbaum and Margareta Khorchidi, for their continued excellent work and to the IUFRO Secretariat for continued support. My greatest thanks are reserved for our numerous partners and friends worldwide with whom SPDC works to achieve many good and beneficial works.

*Dr. David Langor
Canadian Forest Service
Edmonton, Canada*

Welcome to the new IUFRO-SPDC Coordinator



It is with great pleasure that we introduce Dr. Michael Kleine who was recently appointed as the new IUFRO-SPDC Coordinator. Dr. Kleine follows Dr. David Langor, who returned to the Canadian Forest Service at the end of June, 2001. Dr. Kleine will take up office on September 1, 2001. Dr. Kleine overlapped with Dr. Langor for several weeks in June for briefing and to facilitate a smooth transition. This three year assignment is financed by the German Federal Ministry for Economic Cooperation and Development (BMZ).

Dr. Kleine is a forestry graduate of the University of Agricultural Sciences (BOKU), Vienna, Austria. Over the last sixteen years he has participated in natural forest research and management through residential assignments in Austria, Pakistan and Malaysia. His work focused on forest growth and yield, ecosystem modelling and systems analysis, forest management planning, and silviculture under forest conditions ranging from central Europe, through seasonal Asia, into perhumid South East Asia. Over the past four years, he has worked as free-lance forestry consultant on various short-term assignments for national and international agencies in Asia and Central America. Dr. Kleine's extensive experience in developing countries will be a great asset to the SPDC. We welcome Dr. Kleine to the SPDC and look forward to working with him.

A Baby Girl!

We heartily welcome little „Bernadette“, the youngest in the IUFRO family and daughter of our dear colleague Eva Schimpf, who

is on maternity leave now. Congratulations to Eva and her husband!

The IUFRO Secretariat Team

GFIS - AFRICA *Update*

The three year GFIS-Africa Project, funded mainly by the European Commission DG Development, has now reached its half-way point. The project aims to build capacity within sub-Saharan Africa to allow active participation in IUFRO's Global Forest Information Service (GFIS). Five GFIS nodes (websites) will be established in Kenya, Zimbabwe, Gabon, Senegal and Ghana. The progress of the project was reviewed at a Project Steering Committee meeting in Nairobi, Kenya, 25-26 April 2001. This report summarizes the highlights of the project to date.

Training and Equipment

A major focus of the project is to provide extensive and intensive training to personnel at all 5 nodes.

- A 4-week course for GFIS nodal webmasters was held at FAO in Rome from 12 March – 6 April for which there were 8 participants. This course was organized by Margherita Sini of FAO and benefited from the instruction of professionals from FAO, Cirad-forêt, Oxford University and the University of Wageningen. Participants received a detailed introduction to use of information technologies, website establishment and maintenance, database management, interoperability solutions, GFIS metadata standards and protocols, etc. Participants were given a list of technical duties and exercises to do upon return to their institutes to further hone their skills and to prepare the way for the installation of the GFIS websites. Webmasters will continue to receive training on site.
- Future training sessions at each node will focus on providing training to people who will be responsible for filling the metadata catalogues. The first session occurred at FORIG in Kumasi, Ghana from 16-20 July. Ten participants from Ghana and Nigeria were trained in indexing and cataloguing, use of the GFIS nodal data entry and browsing interfaces, Microsoft Access, and GFIS tools for metadata entry.

- Documentation has been written to support training and to describe the general structure and function of GFIS nodes. This will later be refined and published as a GFIS User Handbook.
- The necessary computer hardware and software to establish the GFIS websites has been ordered and is now in place at most nodes. This includes server, PC, UPS, CD-writer and software.

Technical Development

The metadata catalogue structure for the nodes is in an advanced stage of development and will form the basis for the metadatabase structure. Nodes now must work to make existing metadatabases compatible with the GFIS database structure. Furthermore, work is underway to develop the software to create an interface between the user and the metadata to facilitate easy and efficient searching of metadata at all GFIS nodes (= interoperability).

Thematic Networking and Syntheses

The project includes work to support thematic networking and syntheses to demonstrate how the GFIS may facilitate

value added products stemming from better information access and utilization. Through a wide consultation led by Dr. Iba Koné (AAS/AFORNET), three priority themes were identified. These themes will be the focus of an electronic discussion forum which will lead to the establishment of a functioning network of interested professionals and the production of valuable syntheses. The themes and thematic leaders/co-leaders are: 1) Rehabilitation/reforestation of degraded lands (Prof. O. Luukkanen/Dr. D. Blay); 2) Non-timber forest products (Prof. R. Ishengoma/Prof. J. Kaboggoza); 3) Community-based forestry (Prof. F. Owino/Dr. P. Sall).

Partnership building

Although the GFIS nodes or websites will be hosted by specific institutions or organizations, the nodes are envisioned to serve a regional need and, therefore, have a regional mandate. The geographic areas of responsibility (=catchment areas) of each node have now been identified (Table 1) and the nodes granted the mandate by relevant sub-regional forestry networks (CORAF, AFREA, SADC-FSTCU) to serve the other countries in the catch-



Participants of the GFIS-Africa Steering Committee meeting in Nairobi

ment areas. The current project budget is sufficient to engage the active participation of two institutions from non-nodal countries in each of the catchment areas. Personnel from these institutions will be given training in metadata collection and provided with a modest budget to collect and submit metadata from their institutions to the regional nodes. This approach serves to build the partnership base of the project and encourage support of and participation in GFIS.

The future

The project is on schedule and we expect that objectives will be met or exceeded by project completion (December 2002). We expect that all nodal websites will be functioning interoperably by early 2002 allowing users to simultaneously search the metadatabases of all nodes. Of course it is recognized that the current project resources are only sufficient to get the

project up and running and that new resources will be needed to build on this foundation. The Steering Committee is already exploring options to facilitate a second phase for this project, and a concept paper is in progress.

IUFRO-SPDC thanks its many partners in this project for their continued support and dedication.

*Dr. Atse Yapi
Dr. David Langor*

Table 1: GFIS-Africa project Nodes and Catchment Area Countries

Project Nodes	Catchment Area Countries
ADIE (Gabon)	Cameroon, Central African Republic, Chad, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon and Sao Tome & Principe.
FORIG (Ghana)	Bénin, Côte d'Ivoire, Ghana, Guinea (Conakry), Liberia, Nigeria, Sierra Leone and Togo.
KEFRI (Kenya)	Burundi, Djibouti, Ethiopia, Eritrea, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda.
ISRA-CNRF (Senegal)	Burkina Faso, Cape Verde, Gambia, Guinea-Bissau, Mali, Mauritania, Niger and Senegal.
FRC (Zimbabwe)	Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.

NEWS FROM AFRICA

KEFRI: A Profile of Research Success

Our Deputy Coordinator for Africa, Dr. Atse Yapi, continues his series on forest research institutes and achievements in Africa in an effort to familiarize our readers with some of our African IUFRO member institutes and their outstanding contributions to forest science. In this second part of the series, Dr. Yapi reports on the Kenya Forestry Research Institute.

KEFRI Research Programs

Kenya is a country with low forest cover and large areas of existing forests are experiencing conversion to agriculture and settlements. Forest development priorities in Kenya are focused on increasing forest and tree cover, conservation of natural habitat

and biological diversity, creation of employment and poverty alleviation, and promotion of national interests relating to international environmental and forest-related conventions and principles. To address national priorities, KEFRI focuses on four core research programs which are summarized below. A Service Program was also established to undertake issues related to information dissemination, outreach training, tree seed procurement and distribution, wood production at KEFRI-owned plantations, processing and marketing forest products, donor and research liaison and consultancy.

Farm Forestry. Farm forestry, in the form of agroforestry or woodlots on farms, is the preferred form of forestry

for wood production in densely populated areas, and provides an important source of wood for primary industries. The major challenges for farm forestry are: inadequate technology and management guidelines; under-developed market systems for tree products; inadequate supply of high germplasm; ineffective extension approaches; insufficient recognition of indigenous knowledge and practices; and unclear policy and inappropriate legislation.

Natural Forests. Natural forests are challenged by the continuous destruction through conversion of forest land to agriculture and settlement. Priority problems constraining sustainable management of natural forests and woodlands are: inadequate information

to support management policy decisions; forests are undervalued; inadequate information on availability and utilization of wood and non-wood resources; and insufficient validation and documentation of indigenous knowledge and practices.

Drylands Forestry. Drylands research in Kenya is proceeding through collaborative projects between the Kenya Forestry Research Institute, the Kenya Agricultural Research Institute and the Natural Resources Institute. The bulk of these efforts seem to focus on on-farm dryland agroforestry technology development, with fuelwood, poles and fodder production, fruit trees, live fencing, and hedgerow intercropping, as main activities. Enhancing capacity of communities to address local poverty and environmental problems in dryland areas; and harmonizing policy framework for addressing problems of transboundary dryland resources in sub-regional planning, remain some of the major research challenges.

Industrial Forest Plantations. For more than 40 years Kenya has used a few fast growing exotic species for timber production, but wood supply is now quickly declining because the plantation programme is unsustainable due to pest problems. There is an urgent need to widen the commercial tree species base especially through increased cultivation of indigenous species. Other priority problems for research are: inadequate supply of high quality germplasm; insufficient economic/financial

analysis of silvicultural operations; inefficient harvesting and utilization of wood products.

Recent Achievements in Research and Development

Farm Forestry Research

- One of the constraints hindering the development of the dairy industry in Kenya is inadequate supply of livestock feed. A collaborative research project with KEFRI, KARI and ICRAF in Embu has shown that the tree *Calliandra calothyrsus* can be used as a fodder in supplementing the animal protein diet.

- Areas around Lake Victoria are densely populated and repeated cropping with little or no inputs has resulted in serious decline in soil fertility and per capita food production. Collaborative research between KEFRI, ICRAF and KARI focused on developing technologies to improve soil fertility. Through use of leguminous trees and herbaceous shrubs such as *Crotalaria cunninghamiana*, *Tephrosia vogelii* and *Sesbania sesban*, a two to three fold increase in maize yields has been achieved.

- *Casuarina equisetifolia* is a tree of considerable social and economic importance in the coastal areas of Kenya. It has been planted widely for production of poles for construction. Initial introduction of the species in Kenya was not based on any prior knowledge of appropriateness of the seed sources.

In 1990, 25 provenances were tested in Kenya which led to discovery of provenances that grew up to 30% faster than the local provenances. Work on propagation and genetics continues.

Natural Forests Research

- Policy research on the management of natural forests and woodlands is a top priority area for Kenya. The aim is to generate information required for policy decision in order to reduce the on-going rates of forest and woodland degradation. The on-going research is collecting data on biophysical and socio-economic factors important on management and utilisation of natural forests by forest adjacent communities.

- Work on rehabilitation of degraded forests using indigenous species has shown that it is possible to achieve complete recovery within a period of ten years. With proper tending, some of the indigenous species, which were previously thought to be slow growing have adapted well to such sites. It was also demonstrated that indigenous trees may be restored to sites that have been planted by eucalyptus for over 70 years.

- In Kenya, official statistics seriously under-estimate the value of forest resources. KEFRI has initiated studies to demonstrate that forest resources hold higher values for adjacent communities than official documents reveal. The results so far show that the value of a forest to society as a source of subsistence is about five fold more than

The Kenya Forestry Research Institute (KEFRI)¹

KEFRI is one of the youngest forestry research institutes in sub-Saharan Africa but has quickly progressed as one of the leading research establishments in the region. Forestry research in Kenya has been conducted under the auspices of various national or regional units and organizations since 1934. It was not until 1986 that KEFRI was emerged as an independent research institution from the Kenya Agricultural Research Institute (KARI). KEFRI's mission is "to enhance the social and economic welfare of Kenyans through

user-oriented research for sustainable development of forest and allied natural resources". Its main objectives are: 1) to generate technologies for farm forestry, natural forestry, drylands forests and forest plantations; 2) to strengthen research capacity; and 3) to document and disseminate scientific information. KEFRI has good research facilities in three of its five Regional Research Centres. It has 80 research scientists and there are 24 additional scientists on training leave. KEFRI strives to establish partnerships and

collaborative arrangements with other institutions as a strategy for capacity building, reducing research costs and sharing of research finding. KEFRI is also a partner in IUFRO-SPDC's GFIS-Africa Project and will host one of the GFIS regional nodes.

¹ The Kenya Forestry Research Institute (KEFRI) can be contacted at the following address: Dr. Paul Konuche, Director-KEFRI PO Box 20412, Nairobi, Kenya E-mail: kefri@arcc.or.ke

the forest value as a source of income. Such findings are important in convincing the policy makers of the need to allocate more funds to forestry development.

Dryland Forestry

• Among the valuable indigenous species which thrive well in semi-arid conditions and are well known and appreciated by farmers is *Melia volkensii*. Efforts by farmers to plant *M. volkensii* in their farms are hampered by non-availability of seedlings in local nurseries as the species exhibits poor germination. KEFRI, with the support of the Japanese International Cooperation Agency (JICA), has developed technologies at its Kitui Centre to improve *M. volkensii* growth, seed extraction and management under plantation conditions. This species is fast growing, attaining growth of 5 m height in about 2 years. The tree can be grown for timber on rotation of 8-10 years and for pole production on a rotation of 3-4 years under intensive management. The timber of *M. volkensii* is in high demand and has potential to earn farmers cash incomes comparable or better than those grown in the public plantations in high potential areas.

• Wood carving is an important component of the handicraft industry in Kenya, providing direct employment to about 60,000 woodcarvers and over 300,000 dependants, and with an export value of about US\$20 million per year. *Dalbergia melanoxylon* (ebony) is a precious tree species for wood carving and other handicrafts. Its superior qualities in woodcarving has led to over-exploitation and its future availability is uncertain with the current declining woodlands and bushlands in the semi-arid lands. Its restocking capacities are hampered by low regeneration abilities and slow growth rates. KEFRI initiated plantation trials to investigate ways of improving growth and stem quality for better recovery and yield. As a result growth of ebony was increased by over 100% as compared to its natural growing conditions. Techniques to improve its stem form and reduce the multi-stem growth have also been developed.

• In recent years, the steady increase in the demand for raw materials for wood carving has had marked effects on the natural populations of the most preferred indigenous tree species, namely ebony/mpingo, Muhugu (*Brachylaena huillensis*), Mutanga (*Spirostachys africana*) and Mutamaiyu (*Olea europaea* sub sp. *africana*). Collaborative research by KEFRI, WWF and UNESCO seeks to quantify the volume of neem (*Azadirachta indica*) wood entering the entire carving markets in Kenya as part of the long term effort to address the carving resource conservation and ensure the sustainability of the industry. One of the aims for the study is to demonstrate the viability of cultivation of neem as an investment for the wood carving industry, using the available plantations. Initiatives have also been started to develop a form of appropriate eco-labeling system of carvings made from alternative species based on timber certification principles.

Industrial Forest Plantations

• Cypress aphid, *Cinara cupressi*, invaded Kenya in 1990 and became a serious pest of cypress (*Cupressus lusitanica*), the main plantation species. In 1991 a biological control project was initiated, in collaboration with CABI and with support from CIDA, to control this pest. A biological control agent, *Pauesia juniperorum* (wasp) was imported from the U.K., reared, and released in plantations in central Kenya from 1994-96. Although the wasp did not appear to establish at the release sites, it was recovered in western Kenya in 1999, a distance of about 200 km from the release sites. To hasten the spread of the wasp, they were subsequently mass reared and released at other sites. A survey in 2000 showed that the wasp is now well established in the country and has considerably reduced the population of the aphid. Exports of wasps to other countries are underway.

• Improvement of eucalypts in Kenya started early in the last century. Over the years, *Eucalyptus saligna* and *E. grandis* have become the major species for planting in the highlands. The

latter has demonstrated better growth and form compared to the former. Tree improvement initiatives focused on *E. grandis*, with testing of Australian, South African and local provenances, have identified Australian provenances with up to 50% faster growth compared with the local provenances. These provenances have since then been converted into a seed orchard. The progenies from the orchard have increased volume yields from 25 to 50m³ per ha per year at Muguga. The current improvement program is focusing on further progeny testing and introduction of Zimbabwe and Australian families; introduction of the Zimbabwe and South African germplasm to widen the gene pool; collaboration with Mondi Forest of South Africa on introduction of eucalyptus hybrid clones; and improvement of seed production from existing orchard.

• The main exotic softwood plantation species in Kenya are *Cupressus lusitanica* (cypress) and *Pinus patula*. Traditionally, these species have been established using "shamba" or taungya system. Although shamba system had been successful for establishing plantations for over sixty years, it was stopped in 1990 due to abuse. However, alternative methods, such as direct planting, had a low adoption rate. As a result, large areas of pine and cypress plantations have been harvested but replanting has been constrained by insufficient funds and abolition of shamba system. For many years in Kenya, it has been observed that good regeneration sometimes occur following clear-felling of cypress and pine plantations, but are always removed in the process of site preparation for planting. Because it is possible to develop forest stands through natural regeneration, KEFRI has recently initiated natural regeneration management trials using cypress and pine to develop tending, pruning and thinning regimes. Results are showing a lot of promise and efforts are currently directed at establishing pilot stands and developing management guidelines.

Dr. Atse M. Yapi
IUFRO-SPDC Deputy Coordinator
for Africa

SPDC MEETING REPORTS

Report on Workshop on Research Proposal Writing in Iran

From 21 to 25 April Dr. Seyed F. Emadian, College of Agricultural Sciences of the University of Mazandaran, organized a successful workshop on research proposal writing in Sari, Iran. This workshop was co-sponsored by the College of Agricultural Sciences of the University of Mazandaran, the International Foundation for Sciences (IFS) and IUFRO-SPDC. The workshop was based on the IUFRO-SPDC "Handbook for Preparing and Writing Research Proposals", authored by Prof. C. Patrick Reid.

A total of 34 young scientists from 18 different Iranian university departments or research institutions attended the course. The participants came from the University of Mazandaran, the Forest & Range Research Institute, the

Environment Organization, the Open University, the Rice Research Institute, the Crop Seed Improvement Research Center, the Pest & Disease Research Institute, the Research Institute of Biotechnology and the Agricultural Research Institute. They represented mainly the disciplines of Forestry, Agriculture, Chemistry, Plant Pathology, Irrigation, Horticulture and Soil Science.

Topics covered include the identification of research needs, basic components of the scientific method, application of modern information technology in research, statements of objectives and hypotheses, different kinds of scientific writing, documentation & citations and the application of simulation models in proposal research design. As part of the training the participants pre-

sented their own proposals, which were reviewed by the 8 principal instructors to provide suggestions for improvement. During the closing ceremony all participants received a copy of the "Handbook for Preparing and Writing Research Proposals" which was signed by Prof. Ghorban A. Nematzadeh, the Dean of the College of Agricultural Sciences and Mr. Per Ekman, the Scientific Secretary of IFS.

Participants who evaluated the workshop indicated that they had received excellent benefit from participation in this course. We wish all participants great success as they put their new skills into practice.

*Dr. Seyed F. Emadian
College of Agricultural Sciences,
University of Mazandaran, Iran*

Announcement

The Deutsche Forstservice GmbH is currently looking for qualified staff with EU/ACP citizenship in the fields of Tropical Forestry Management and Tropical Plantations for long and short-term assignments.

Qualified candidates are invited to take part in a tender for the EU-funded „Forest Resources Management and Con-

servation Programme“ in Uganda and are welcome to send their application and curriculum vitae to dfs@dfs-online.de or info@dfs-online.de or to Deutsche Forstservice GmbH, Wittelsbacher Str.11, 85622 Feldkirchen, Germany.

The following positions have to be manned: Chief Technical Advisor (long-term), Natural Forest Management Spe-

cialist (long-term), Financial and Administrative Adviser (long-term) and Tropical Plantation Specialist(s) (short-term) with specialisation in nursery planting stock production, the establishment and maintenance of timber plantations or plantation fire control/protection.

For further information please set your browser to <http://www.dfs-online.de>.

New on the Web

The newly published
***Handbook for
Preparing and Writing Research Proposals***
by C.P. Patrick Reid

is now available on our web site!

As a special service we have also included a PowerPoint presentation. Don't miss it!

Please set your browser to:
<http://iufro.boku.ac.at/iufro/spdc/spdcpublg.htm>

Please note

Hardcopies of the *Handbook for Preparing and Writing Research Proposals* by C. P. Reid are available **completely free of charge** (no costs for postage or handling!) **for scientists from member institutes in developing countries!** The price for all others: USD 20.- plus USD 5.- for postage and handling. Download the order form from our web site or write to: spdc@forvie.ac.at
Our postal address:
IUFRO-SPDC
c/o Federal Forest Research Centre
Seckendorff-Gudent-Weg 8
A-1131 Vienna, Austria