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ETFRN-News is a quarterly publication of the European Tropical Forest Research Network:

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Editorial

Dear Readers,

The term 'forest' often conjures up images of lush green tropical forests with tall trees dripping with humidity. It is easy to forget that much of the world's population in arid and semi-arid areas also depends on the products of forests to sustain their livelihoods, although these forests may appear to be no more than scrubby landscapes with low-growing, contorted-looking trees, leafless for much of the year. The importance of these innocuous-looking landscapes should not be underestimated. In Sudan, the forestry sector produces 12% of the gross domestic product, much of this being contributed by a single product, gum arabic, produced for the world market from *Acacia senegal*. Throughout the Sahel zone, forests are particularly important in providing fuelwood, fruit (and other foods) and construction timber, and play a crucial role in sustaining livestock production. In many areas of Sub-Saharan West Africa, people have managed the landscape over generations to create 'agroforestry parklands' in which particularly useful trees are retained scattered in farms and fallows. In southern Africa, the sale of wooden crafts to tourists is an important source of revenue for many families and, in common with many other forest types, poor people are found to be particularly dependent on resources which require little capital investment.

Arid and semi-arid zones are difficult environments to survive in, nevertheless some exotic species prosper to the point of becoming weeds. Such a one is *Prosopis*, introduced from the Americas and now considered by some to be a pest while others hail it as a wonder tree for the many products it provides in even the harshest conditions. While most attention has undoubtedly been paid to the forests of semiarid Africa, dry forests also exist in other parts of the world. Within Europe, the Iberian peninsula is the home to several oak and pine species, which support complex agro-silvo-pastoral production systems mirrored on the North African side of the Mediterranean. The Mesoamerican dry forests are the source of some of the most widespread agroforestry species, such as *Albizia*, *Gliricidia* and *Leucaena*, but, in their home environment, these trees survive primarily through use on farms as few forest fragments remain.

I hope that this issue of ETFRN News will help to redress the balance in favour of a broad definition of forests to include both the dry and the humid.

Kate Schreckenber

We are grateful to Kate Schreckenber for the final editing of this issue of the ETFRN News. Please note the theme and deadline for the next issue on the back cover and I look forward to receiving your contributions.

Willemine Brinkman

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Cover illustration: Wilko Willemsen
The illustration depicts the wooden frame for a luak, a type of cattle shelter in the Dinka area in south Sudan



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ETFRN and European Commission News

By Willemine Brinkman

ETFRN NEWS

Dr Yves Birot and Dr Birger Solberg have conducted an evaluation of ETFRN. Dr Birot presented the draft report to the ETFRN Executive Committee last June, and the final report will be discussed by the ETFRN Steering Committee meeting in Hamburg 1-2 October 1999. The report is very positive about the network's accomplishments over the last years, particularly regarding the web-based information system. It also provides valuable comments and ideas for further improvement. Further details will be available once the report is finalised.

The ETFRN Coordination Unit has recently submitted a proposal for funding the Coordination Unit's activities for a next phase of ETFRN 2000-2003 to the European Commission's DG12 INCO-DEV programme. The result will be reported in the next issue. The present funding phase for the ETFRN Coordination Unit ends 31 December 1999.

The ETFRN listserv is now operational. This will enable more targeted and faster distribution of research cooperation and information requests, and of information on meetings and funding opportunities. It is a moderated list, which means that all messages are screened by the ETFRN Coordination Unit in order to ensure relevance, and to regulate the number of messages. Forest researchers listed in the ETFRN on-line Directory with an E-mail address may subscribe to this E-mail list. All those already listed with a correct E-mail address should have received an E-mail message about the use and purpose of this networking mechanism. Participants in the ETFRN E-mail list can change the keywords and research areas they wish to receive information on. If your organisation is listed in the ETFRN directory, and you would like to be added to the list, please contact one of the people listed as contact persons for your organisation, or contact the ETFRN Coordination Unit. For further information on the listserv please contact the ETFRN Coordination Unit.

Please note the URLs for the following pages of the ETFRN website:

Homepage: <http://www.etfrn.org/etfrn/>.

Directory of European institutions involved in tropical, subtropical and Mediterranean Forest research: <http://www.etfrn.org/etfrn/network/dir.html>.

Calendar of events: http://www.etfrn.org/etfrn/resource/int_cal.html.

Funding Opportunities: <http://www.etfrn.org/etfrn/resource/frames/linkfund.html>.

Forestry Links: <http://www.etfrn.org/etfrn/resource/links.html>.

The ETFRN Coordination Unit continuously improves and updates the website. We are always grateful for any comments and additions sent to us.

The theme for the next issue of the ETFRN News is biodiversity. This will be a double issue for the Winter of 1999/2000. The deadline for contributions is 15 November 1999.

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New Commission; changes in Commission Directorates expected

A new European Commission is in the process of being nominated. Last July 9, the President designate Mr Romano Prodi announced the names and portfolios of his 19 proposed Commissioners. The Prodi Commission now awaits approval by the European Parliament, and is expected to take office by mid September. Mr Prodi has announced Commission Department reforms in several fields, including external relations, which will be divided up by subject (trade, development, enlargement, and foreign and security policy) rather than by geographical region. One Commissioner will be responsible for overall coordination of external relations. This will affect DGs 1B and 8, the two Directorates responsible for the implementation of the tropical forest budget line.

The total number of Commission Departments is to be cut back, and the Departments will be given names rather than numbers. Details and news, as well as the list of proposed Commissioners and their portfolios is available on the web at: http://europa.eu.int/comm/newcomm/index_en.htm

Fifth Framework Programme: INCO-DEV

The second INCO DEV call for proposals, publication planned for March 2000, will probably include opportunities for tropical and subtropical forest research. General information on rules, guidelines and workplans for the Fifth Framework Programme on Research, Technological Development and demonstration activities (FP5) is available at <http://www.cordis.lu/fp5>.

The previous issue of the ETFRN News also included summary information, and drew attention to the fact that opportunities for tropical forest research are not limited to the INCO-DEV programme. It will be worth exploring opportunities under the FP5 programmes for 'quality of life and management of living resources'; and 'environment and sustainable development'.

The first INCO DEV call for proposals for shared costs actions, concerted actions, and thematic networks was published on 27 March this year. Under this particular call, opportunities for subtropical and tropical forest research are quite limited.

Readers working on policy research related to access to forest and tree resources may have found an opportunity in *(a) Policy research on the conditions for sustainable development: (a.ii) meeting basic needs: food, water, sanitation and health care.*

Item (b) Tools for sustainable development (bii) Technologies for sustainable plant and animal production: building blocks for improvement (for small-scale or environmentally-constrained systems) includes a few fairly specific opportunities for agroforestry research proposals to enhance production of specific food crops, listed per region in the call text.

The full call text, guide for proposers and submission forms may be downloaded from the following web page: <http://www.cordis.lu/inco2/calls/199905.htm>

Alternatively, INCO-DEV information packages are available from:

European Commission
DGXII-E-4
200 Rue de la Loi
B-1049 Brussels, Belgium
E-mail: inco@dg12.cec.be

Deadline for submission of proposals: 15 September 1999 Please note that for a proposal to be considered eligible for funding, it is necessary to carefully follow the rules and guidelines regarding participation of several partners from different countries, as well as those regarding completion of forms.

Tropical forest research activities funded by the European Commission from other budget lines

The CIFOR/EC/SADC project "Management of Miombo Woodlands" is funded by the European Commission's Tropical Forest Budget Line, B7/6201. The project publishes 'Miombo Woodlands Research Briefs', which are circulated by E-mail to inform people with an interest in the topic on the

project's activities, and as a means for informal communication among the researchers involved in the project. The May 1999 issue highlighted results of some of the policy research conducted, and the next issue will deal with local communities' livelihood opportunities in miombo woodlands. Further information is available from:

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The EU Tropical Forestry Sourcebook prepared by the UK Overseas Development Institute (ODI) with funds from the European Commission's Tropical Forest Budget Line is now available online at <http://www.oneworld.org/odi/tropics/Sourcebook/index.html>. This publication provides a wealth of information on EU and Member States policies and activities regarding tropical forests. It was announced in ETFRN News 25.

The website of the Global Vegetation Monitoring Unit of the EU Joint Research Centre (JRC) presents information on the projects in which it is involved:

- TREES TRopical Ecosystem Environment observation by Satellite. Tropical forest monitoring.
- FIRE Fire in global Resources and Environmental monitoring. Monitoring of biomass burning.
- TEAM Terrestrial Environment and Atmosphere Modelling.
- MERCATOR Monitoring Ecosystems with Remote sensing and Cartography in African TrOpical Regions.
- NAMORS European Network for the development of Advanced Models to interpret Optical Remote Sensing data over terrestrial environments.

The web address is: <http://www.gvm.sai.jrc.it>

Products developed by the TREES programme, such as vegetation maps of tropical Africa and America, and the deforestation hot spot report, were announced in previous issues of the ETFRN News. For those readers without web access, the ETFRN Coordination Unit still has a few vegetation maps of Central Africa (1: 5 000 000) available for distribution. These maps were published in 1998.

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DRYLAND FORESTRY AND AGROFORESTRY IN THE SUDAN: Results and current topics of Sudan-Finland research cooperation

by Olavi Luukkanen, Mohamed A. El Fadl and Abdalla Gaffar Mohamed

With a land area of 2.5 million km², the Sudan is the largest country in Africa, although sparsely populated with only 25 million inhabitants. Most permanent settlement is concentrated in the vicinity of the Nile river system and in areas with more than 300 mm of annual rainfall. About half of the total land area, where precipitation is lower, is classified as desert or semi-desert.

In areas receiving at least 300 mm of annual rainfall, the natural vegetation consists of shrub or tree savannas dominated by *Acacia* species. This woody vegetation is disappearing at a rate of 480,000 hectares annually, of which less than 10 % is reforested. Following a number of government decrees passed in 1993, a total of 7.6 million hectares (equivalent to 3 % of the total land area) was declared as forest reserves. Of this, 453,000 ha (6 %) are plantation forests established using reforestation, and 42,000 ha (0.6 %) are community woodlots established through afforestation on denuded land.

The forestry sector in the Sudan produces 12 % of the gross domestic product. In addition, forests and trees provide significant benefits in the form of wood energy, fodder and grazing opportunities outside the market economy, and by protecting soil and water resources. The most important forest products are firewood and charcoal. As in many other countries, forest products in the Sudan are, to a great extent, derived from land that is normally not classified as forest. This has important implications for national and local-level forest management planning and forest policy development.

In the Sudan, gum arabic is an important non-wood product which is obtained from *Acacia senegal*. This tree occurs naturally on sandy soils, mainly in the 300 km wide 'gum belt' in central Sudan where annual precipitation is around 300-600 mm. The traditional agroforestry system, in which natural or artificially regenerated *A. senegal* trees are managed and tapped for gum during the fallow

phase alternating with agricultural crops, is considered one of the best examples of sustainable dryland agroforestry. Apart from gum, *A. senegal* also yields fuelwood, local construction timber and dry-season fodder from leaves and pods.

With a total annual gum arabic production of 20-40,000 tons, the Sudan is the global leader in supplying this commodity, which is widely used as a stabiliser and natural additive in the food industry around the world. The current trend of consumer preferences for more natural and plant-based products (for instance, gum arabic instead of beef gelatine) in sweets and other foods is favouring increased use and production of gum arabic. This has created a new interest in traditional *A. senegal* agroforestry, which had been threatened by industrial, permanent agriculture and indiscriminate clearing of natural *A. senegal* forests.

In 1979, an afforestation and tree nursery project was initiated in the Sudan as part of the official Finnish development cooperation, with Enso Forest Development Ltd. as the main consultant. It included rehabilitation of the gum belt forests using *A. senegal* and the introduced *Prosopis juliflora* in forest plantations and village agroforestry systems, as well as development of forest nursery techniques. The associated research carried out by the University of Helsinki since 1983 was initially focused on tree seedling production and planting techniques, later it dealt increasingly with dryland ecology and natural forest management.

In 1991, when the Finnish-supported tree planting and nursery operations in the White Nile and Blue Nile regions were already showing encouraging results, most of the bilateral programme was abruptly discontinued because of sudden changes in development cooperation preferences. In the wake of the Gulf War, the same happened with almost all international development projects in the Sudan. However, the Finnish development agency (then known as FINNIDA), far-sightedly allowed the academic training of Sudanese researchers in Finland and the associated field research to continue. As a result, Finnish-trained doctoral degree holders now form the leadership of the principal government agency for forestry, the Forests National Corporation, as well as of the Forestry Research Centre, and the University of Khartoum Department of Forest Management.

Some of the scientific results of the Sudan-Finland cooperation (including Enso Forest Development Ltd., several University of Helsinki departments, and other partners in Finland) have already been published and can be summarised as follows: (1) Suitable semi-mechanised seedling production techniques are available for use in large-scale central tree nurseries; (2) the genetic population structure of *Faidherbia albida*, as indicated by isoenzyme and ecophysiological studies, suggests distinct ecotypic and geographic (between Sahelian and other origins) differentiation; (3) forest plantations studied in the Blue Nile floodplain areas offer economically and socially feasible land-use alternatives to agricultural crops; (4) natural *Acacia seyal* forests of the clay soils can be sustainably managed with appropriate silvicultural interventions and especially when integrated into traditional land-use; (5) in the rainfed sandy soil areas, *Prosopis juliflora* has favourable effects on agricultural crops, which can be further increased with management.

After having built up a strong institutional capacity for dryland forestry research in the Sudan, as well as in Kenya, the Tropical Silviculture Unit (TSU) at the University of Helsinki is now continuing field research in the Sudan with a focus on the development of traditional *A. senegal* agroforestry. The present three-year project is supported by the Academy of Finland. Its aims include: finding new artificial and natural regeneration techniques; increasing gum and woody biomass yields through tree genotype selection and management interventions; optimising tree-crop interactions; and identifying ecophysiological characteristics in *A. senegal* and agricultural crops, which can be used to predict the agroforestry system performance. This work is linked to separate studies on the socio-economic aspects of gum arabic production.

Contacts with other interested researchers and institutions are very welcome. More information can be obtained from the authors at:

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LOCAL FOREST MANAGEMENT IN THE SAHEL: PRELIMINARY RESEARCH RESULTS

by Paul Kerkhof

SOS Sahel (GB) has been carrying out research on 'Initiatives in local management of dryland forest areas in the Sudano-Sahelian zone' since 1996. Funded under research grant R6510 of the Forestry Research Programme, UK Department for International Development, the project was first announced in ETFRN Newsletter no. 20, 1997. The research is concentrated on the Sudan-Sahel zone (average annual rainfall 100-600mm/year, hereafter called 'Sahel'). This article presents preliminary conclusions.

In *ecological terms*, the Sahel is characterised by major abiotic events, droughts in particular, which tend to create a disequilibrium. It is not clear whether Sahelian ecology can best be explained by a non-Clementsian disequilibrium model or whether it is merely affected by major disturbances. In either case, conventional forestry planning tools based on stable, sustainable annual off-takes ('quotas'), can hardly be applied.

In *economic terms*, the research case studies show that forest products other than firewood, especially livestock, construction timber and fruit, are the most important revenue earners. Although poorer sections of the local society tend to benefit most from forest exploitation, the very poorest people hardly benefit because they often lack the physical capacity for the hard work required. An 'economic nomadism' prevails in which forest exploitation, migration, artisanal production and other secondary economic activities are undertaken as a function of the highly variable agricultural production. In any case, the relations between the different interest groups are complex, dynamic and locally defined, which further complicates the quota system.

These conclusions are important in the light of the prevailing policy for local forest management in the Sahel, the World Bank supported 'Domestic Energy Strategy' and the rural firewood markets. The SOS Sahel study shows that institutions, laws and fiscal policy in many Sahelian countries are currently being reformed in a way which allows a single stakeholder (the commercial firewood producer) to impose on a multi-stakeholder resource (the Sahelian forest).

In *institutional terms*, the research to date concludes that decentralisation is the driving force in local forest management. International conventions are in principle supportive, but their influence tends to be weak. Emerging environmental institutions could be supportive given their integrated objectives, but they do not have sufficient impact at a local level. The forest service has hardly been supportive to local forest management, as central planning and rent-seeking behaviour are still a driving force among their agents. Given the mission and ideology of the forest service, its role in the development of local forest management is likely to be limited in the near future.

Local institutions lack legal recognition and are often not fully representative of the various user groups. Internal and external regulations are rarely transparent, and accountability is often poor. For successful local forest management, institutional capacities need to be strengthened. This can, to a certain extent, be achieved by exploiting capacities which often exist at village level, for instance those used to manage the school, first aid centre and credit scheme. Secondly, forest management tools should be shaped to suit local capacity, and not the other way around. The quota system should be abandoned and locally manageable monitoring systems should be developed instead. SOS Sahel's action-research has contributed to finding alternatives to classic forest inventory through the use of panoramic photography and local forest product counting.

Furthermore, local institutions should be legally recognised with exclusive management rights, even if such rights are subjected to conditions of 'good management'. Finally, good governance at higher levels is a *sine qua non* for successful forest management at the lowest level.

For further information, please contact:
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IMPROVED MANAGEMENT OF AGROFORESTRY PARKLAND SYSTEMS IN SUB-SAHARAN AFRICA

by Zewge Teklehaimanot

This research project (Contract No ERB IC18-CT98-0261) is funded by the Commission of European Communities, Directorate General XII, under the programme of Co-operation with Developing Countries (INCO-DC). Its planned duration is four years, from October 1998 to September 2002. A large number of partners are involved:

1. Co-ordinator, University of Wales Bangor (UWB), U.K.
2. Ben Gurion University (BGU), Israel.
3. Centre National de Semences Forestière (CNSF), Burkina Faso.
4. Co-operative Office for Voluntary Organisations of Uganda (COVOL), Uganda
5. University of Freiburg (UF), Germany.
6. Centre International de Recherche en Agronomie pour le Développement (CIRAD.Forêt), France.
7. Wageningen Agricultural University (WAU), the Netherlands
8. Institut de l'Environnement et de Recherches Agricoles (INERA), Burkina Faso
9. PROPAGE, France.
10. Istituto Sperimentale per la Elaiotecnica (ISE), Italy.
11. AARHUS Oliefabrik, Denmark.
12. Université Pierre et Marie Curie (UPMC), France.
13. Institut d'Economie Rurale (IER), Mali.
14. University of Ibadan (UI), Nigeria.
15. International Centre for Research in Agroforestry (ICRAF/SALWA), Mali

General Objectives of the Project

1. To promote security and self-sufficiency in food production in Sub-Saharan Africa (SSA) a) by enhancing the productivity of traditional agroforestry parkland systems, and b) by maximising the economic values and optimising the marketing of parkland tree products (with particular emphasis on *Parkia biglobosa* and *Vitellaria paradoxa*).
2. To help reverse the trend of environmental degradation and combat desertification in SSA by a) conserving the biodiversity of parklands, and b) promoting the sustainable use of indigenous woody plant resources.
3. To use and develop the expertise of North and South research teams through the use of advanced technologies and enhance North/South collaboration to achieve a sustainable improvement in

agricultural production and natural resource management in SSA.

Approach & methodology

Traditional agroforestry parkland systems - where annual crops are grown in fields with scattered, 'protected' trees - are one of the most widespread system of land use in SSA. Recent evidence, however, suggests that parklands have been degrading, at the system, species and genetic level. This research project, therefore, proposes to initiate an integrated and multi-disciplinary approach in order to reverse this trend. Initially, the indigenous knowledge and management practices of parkland systems will be studied so that due prominence is given to local people's knowledge and practices in the research and future improvement of parklands. Possibilities for improving parklands' productivity through the use of different pruning regimes for *Vitellaria paradoxa* and *Parkia biglobosa* will be investigated. The impacts of different parkland management practices on plant resource diversity will be assessed at systems, species and genetic levels. Methods of improving *Vitellaria* and *Parkia* trees will be investigated through selection of superior genotypes and by developing methods to enhance their growth and fruit yield. The chemical composition of *Vitellaria* and *Parkia* fruit will also be investigated to identify compounds with commercial potential. Constraints in the current marketing and processing practices of *Vitellaria* and *Parkia* products will be identified.

Expected results and importance for Sub-Saharan Africa

The project aims to develop methods to enhance the agricultural and economic productivity of parklands in SSA, at the same time as conserving and restoring biodiversity. This will be achieved by obtaining higher yields of annual crops through better tree-crop combinations and improved tree management, generation of greater value from tree products through development and reintroduction of improved cultivars of *Vitellaria* and *Parkia*, improving storage and processing methods, and by identification of unique fruit compounds with commercial potential. A unique database of marketing information will also be developed to improve existing methods, develop new marketing channels and recommend appropriate price structures such that farmers, traders, processors and consumers are all reasonably satisfied, without either the traders or the processors making an excessive profit at the expense of the farmers.

The major goal of the proposed project is the improvement of traditional agroforestry parklands, which has fundamental bearings on food security and sustainable natural resource management in SSA. Intended benefits include the restoration of tree resources to parklands, and an increased supply of products from *Vitellaria* and *Parkia*. The domestication of *Vitellaria* and *Parkia* in parklands through improved agroforestry practices will enable farmers' families to make nutritional gains and to generate cash income from the sale of the fruit. The existence of regional and international markets for *Vitellaria* and *Parkia* products offers remarkable opportunities for the development of agriculturally-based industries in SSA.

For further information please contact the Project contact and Coordinator:

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MODERNISATION D'UN PROGRAMME DE RECHERCHE SUR LA FORET ET L'ARBRE AU MALI

(Modernisation of a research programme on forests and trees in Mali)

by Amadou Malé Kouyaté and Jean-Pierre Sorg

Sikasso, la capitale de la 3e Région du Mali, héberge une intéressante unité de recherche sur la gestion des ressources forestières, appuyée par le régisseur Intercoopération (Berne, Suisse) sur financement de la coopération suisse.

Les activités de recherche avaient été conçues au départ, vers 1986, de façon modeste dans le cadre des besoins du service forestier local. Leur finalité était dans une grande mesure technique et concernait la pépinière, le reboisement et l'amélioration des forêts naturelles. Les relations avec des acteurs non forestiers étaient alors plutôt timides. Aujourd'hui, cette unité gère un programme régional dynamique, d'un bon niveau scientifique, et poursuit sa transformation en une structure résolument participative au sein de l'Institut d'Economie Rurale, l'institution de recherche agronomique au Mali.

La recherche participative se déroule en contact étroit avec le milieu rural. Les paysannes et les paysans définissent leurs besoins et participent à la préparation, au suivi et à l'évaluation d'activités de recherche dont ils sont les premiers bénéficiaires. A Sikasso, la recherche forestière n'hésite pas à se présenter à ses partenaires - paysans, vulgarisateurs, services agricoles et forestiers - et à se soumettre à leur critique.

Les aspects techniques sont toujours présents, mais les recherches s'insèrent désormais dans une démarche de gestion des ressources de l'arbre et de la forêt. Le bois est une production parmi d'autres qui sont parfois plus importantes, à l'exemple du fourrage, des fruits et des plantes médicinales. L'arbre et la forêt font partie du terroir villageois, l'espace régi par la coutume et dans lequel une population exerce ses activités culturelles, sociales et économiques.

La recherche forestière est devenu pluridisciplinaire; les forestiers travaillent avec des agronomes, des sociologues et, bien sûr, avec les femmes et les hommes du terroir, dans le but d'assurer une gestion raisonnable de l'ensemble des ressources naturelles.

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THE CONTRIBUTION OF FOREST PRODUCT COMMERCIALISATION TO RURAL LIVELIHOODS IN SOUTHERN ZIMBABWE

by Oliver Braedt, Jobst-Michael Schröder and Jochen Heuveldop

Background

Since July 1996 the Institute for World Forestry at the Federal Research Centre for Forestry and Forest Products, Hamburg, Germany, in collaboration with the Institute of Environmental Studies at the University of Zimbabwe, Harare, and the Center for International Forestry Research (CIFOR), Bogor, Indonesia, have been carrying out research on the socio-economic contribution of forest products to rural households in Zimbabwe.

In recent years markets selling woodcrafts and other forest products as curios have been expanding in number and size along main roads in Zimbabwe. The rapid growth of the craft industry has raised concerns in governmental institutions and environmental groups about degradation of forested lands caused by uncontrolled timber consumption. However, lack of information about the craft industry has prevented authorities from taking decisions on whether to promote or hinder this sector.

Essential data needed include the actual extent in number and size of the craft industry at national level and the types of products offered. There are no figures on the types of people participating in the sale of forest products and the economic importance of the handicraft industry at household, village and ward level. Institutional arrangements governing the commercialisation of forest products sold as curios need to be identified and existing rules and regulations noted.

Objective The main objective of the study is to analyse and document the importance of forest product commercialisation for rural livelihoods in Zimbabwe. Results are intended to contribute information towards the formulation of frameworks for necessary policy decisions, such as those regulating the environmental impact caused by the increased commercialisation of forest products as curios.

Method

In order to obtain information on the actual extent and size of the craft industry in Zimbabwe, 16 tourist routes - defined as main roads between major towns and important tourist attractions - were surveyed on a yearly basis. Only markets on rural roadsides, outside urban centres, were studied. Markets offering all types of material were included.

Three wards in Chivi District, southern Zimbabwe, were chosen for detailed studies on markets and households. All markets in the area were visited regularly and information was obtained through interviews with individuals and groups, as well as by recording tree species used and measuring their timber volumes. Gender, social dynamics and institutional issues were addressed. Randomly selected households were visited on a yearly and some on a monthly basis. Data describing the general socio-economic setting, the income structure of the area and the extent of participation in the craft industry were collected during interviews with household heads.

Participatory rural appraisal (PRA) tools were used in group discussions on markets. Formal questionnaires were administered with individual households, market participants and officials, and semi-structured and open-ended interviews took place with groups and individuals. Emphasis was laid on participatory and direct observation at craft markets and households. The data underlying this research were collected during 1997 and 1998.

Preliminary Results

In 1998 more than 200 craft markets of different size were located along roadsides leading to tourist attractions and major towns in Zimbabwe. More than 80 % of these markets only emerged after 1990. In total, seven significant types of raw material (wood, stone, clay, grasses and palm leaves, bark of *Andansonia digitata*, cotton thread and wool) were distinguished. Wooden objects dominated the material range, and were found on 68 % of all markets surveyed. Wood carvings are mainly produced by individual self-trained artisans or rarely by small village groups. The preferred timber species for the curios are almost exclusively five indigenous tree species (*Azelia quanzensis*, *Baikiaea plurijuga*, *Combretum imberbe*, *Kirkia acuminata* and *Pterocarpus angolensis*), yet all five species are protected from unauthorised cutting by forest law in Zimbabwe. Of the craft markets recorded throughout the country, 11 % were located in the surveyed district with eight markets being located in the three study wards.

Different steps within the production chain were identified and the contribution of each step towards rural household incomes was noted. Some 20 % of the households in the study area were found to obtain earnings through the commercialisation of craft products. Although money gained through the craft industry was less than 6 % of the gross annual cash income, for some households the sale of curios at roadside markets was the only source of cash.

Current institutional arrangements concerning the harvesting of trees for the craft trade in communal

areas were analysed. Results indicate that existing legal and traditional institutions are largely disregarded by user-specific or interest-based groups and individuals whose concern is not oriented towards the benefit of the whole community. Existing legislature and taboos regulating the use of trees are currently not adhered to and the knowledge of codified regulations at village and ward level is deteriorating markedly in the communal lands of southern Zimbabwe.

Final results of the study are expected by the end of the year 2000.

Acknowledgements

The funds for this research project were provided by the Center for International Forestry Research (CIFOR), Bogor, Indonesia, financed by the German Federal Ministry for Economic Co-operation and Development (BMZ).

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SOCIAL BENEFITS AND TREE SPECIES DIVERSITY IN NATURAL AND PLANTATION FORESTS IN NORTHEAST ZIMBABWE

by Tapani Tyynelä

The majority of people in southern Africa live on customary or communal land and are dependent on the resources these lands can provide. In Zimbabwe, the main land tenure categories include communal areas (42.0 %), large-scale commercial farms (32.5 %) and resettlement areas (6.8 %).

Communal areas support about 70 % of the total population, which has often been devastating for the environment. Most of the woodlands in communal areas have been deforested due to the high population pressure. In spite of the pressure on wood resources, however, local people have not experienced severe wood shortages. The main reason for this has been a significant increase in tree planting in the last 15 years, which has substituted for the natural resource.

Exotic species, and especially *Eucalyptus* spp., have dominated tree planting in Zimbabwe. At the same time as tree planting has increased, the availability of traditional woodland products has decreased, especially fruit, poles and firewood. Key research questions are whether customary and communal management systems have promoted rather than prevented the deterioration of natural forests, and whether changes from traditional forest management towards more plantation-oriented forestry practices have decreased the biodiversity value of forests in Zimbabwe.

This article is a short introduction to a PhD-study focusing on the above-mentioned research problems. The specific aim of the study was to assess the impacts of various land management categories on the socio-economic benefits obtained from the forests, and compare the tree species diversity in managed natural forests and *Eucalyptus camaldulensis* plantations. The land management categories studied were communal, resettlement and large-scale commercial farm areas.

Tree species diversity (including the Berger and Parker (D') and the Shannon and Wiener (H') indices) was measured in a systematic sample of forest sites around villages and resettlement areas. Tree species were recorded at 200 and 800 metres from the village centre. Preliminary results support the expectations that *Eucalyptus* plantations are poorer in species diversity than the natural forests nearby. However, there are also examples of plantations with lots of tree species and natural

forests with few tree species. It seems that the owner class (private, school owned or co-operative plantations) and the quality of management have effects on tree species diversity in *Eucalyptus* plantations. Generally, plantations have higher basal areas and volumes per hectare than the natural forests nearby.

The socio-economic benefits obtained from the forests were investigated using Participatory Rural Appraisal (PRA) techniques, especially mapping, ranking and scoring. Semi-structured interviews were carried out with plantation owners and traditional leaders. The preliminary results show that, in spite of rapid deforestation in the last three decades, the benefits of natural forests are still very important especially for the poor in communal areas. The rich are not so dependant on natural forests and can benefit more from *Eucalyptus* plantations. However, the situation is now changing so that poorer people will also have plantations in the future.

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PROSOPIS - PEST OR PROVIDENCE, WEED OR WONDER TREE?

by Nick Pasiecznik

"So mesquite is something more than a tree, it is almost an elemental force, comparable to fire - too valuable to extinguish completely and too dangerous to trust unwatched" (Peattie, 1953).

Some of the most widespread tree species in the world's deserts, *Prosopis* (mesquite) are proclaimed both as a saviour and disaster. Foresters, environmentalists and researchers all voice their opinions, rarely coinciding, and send a confused message to extension workers and farmers. Like *Eucalyptus*, which raise concerns about water use, *Prosopis* are seen as a weed and worse. Several species have been introduced from the Americas and are now common world-wide, mainly the sub-tropical *P. glandulosa* and *P. velutina* and the truly tropical *P. juliflora* and *P. pallida*. These are fast growing, nitrogen-fixing, very salt and drought tolerant trees that coppice well. The wood is hard and durable and an excellent fuel and timber. Flowers provide bee forage, and sweet, nutritious pods are relished by livestock and made into human food. Foliage is rarely browsed but leaf litter improves soil quality. However, large, stout thorns are positively disliked, and after cutting or browsing, trees produce many basal stems leading to a shrubby, multi-stemmed form. Seeds pass through animals' stomachs undigested, the process aiding germination, and are spread widely by livestock and water. Tap roots can reach deep water tables and extensive lateral roots spread well beyond the crown.

Invading *Prosopis* tends to form dense, impenetrable thickets. In pastures, it reduces grass cover and stocking density, threatening ranchers' livelihoods, even forcing the migration of traditional pastoralists. Invasions into agricultural land, along irrigation channels and water courses, is also a major problem. The trees are believed to deplete groundwater reserves and to reduce the growth of neighbouring crops. *Prosopis* pollen is said to be a major cause of allergic reactions, the thorns to be poisonous, and the trees to harbour nematodes. Although the trees have many competitive ecological advantages over other plants, the seedlings are sensitive. They often colonise disturbed, eroded, over-grazed or drought-ridden land associated with unsustainable agronomic practices, such as following the introduction of cattle ranching in the Americas. Millions of hectares of rangeland have been invaded in this century, and the process is still occurring in South Africa, Australia and coastal Asia, where *Prosopis* species have been introduced. However, the ability to establish easily is an advantage for firewood collectors, who can find *Prosopis* on even the poorest of sites.

Prosopis are phreatophytes with deep tap roots to keep trees green during droughts by accessing the water table, and lateral roots to draw on surface water during the rains. Leaf adaptations reduce water

loss, as expected in desert plants. Pot studies do not reflect actual water use in the field, and re-appearance of streams after land clearance has been explained by increased soil permeability following stump removal. *Prosopis* are not voracious water users. Research on allelopathic effects shows decreased seed germination and seedling growth, with negative effects apparently due to shade and root competition. However, there are many conflicting reports of plants being lush and growing quicker under *Prosopis* canopies. Increased nematode populations near *Prosopis* are unconfirmed. Deaths from thorn pricks have been explained by secondary infection, although stout thorns certainly penetrate most shoes and are likely to cause injury. Where *Prosopis* are the most common trees, the pollen has been recorded as a major allergen.

Views for and against *Prosopis* come from different quarters. "The popularity of *P. juliflora* is income related, those that can afford bottled gas for cooking and do not have to raise livestock quickly forget its value as a fuel and fodder tree. Comments concerning its monoculture, lack of aesthetic value and unconfirmed beliefs on the lowering of water tables come only from the more affluent. Rural farmers are invariably aware of its importance" (Pasiiecznik, 1998). *Prosopis* is generally the scourge of ranchers and pastoralists, but a boon to the rural poor. In contrast to negative views of *Prosopis* as a weed, in India, where *Prosopis* provides up to 70 % of the firewood needs of rural populations in dry regions, only its value is noted. "The rebellious sands are subdued and the inhospitable soils are colonised. The dreary scene of dry districts is changed to that of green belts. The bleak tree-less landscape is painted with splashes of brown, green and yellow. The monotony is broken for the traveller and the sheep and goats munch and crunch happily on the proteinous pods. The rural folk, whose lands were getting buried under drifting sands are grateful to the Forester and *Prosopis*, and the poor folk who had no fuel to burn in their hearths now have *Prosopis*. They collect the fuel in their leisure and sell in towns for a decent price" (Konda Reddy, 1978).

For over fifty years, ranchers in south-western USA and Argentina tried every possible technique to eradicate or control *Prosopis*. The end result? Millions of dollars spent and still no cost effective programme found. In Sudan, the eradication programme even trains children to uproot seedlings. In South Africa and Australia amongst others, eradication or control programmes exist, and new methods of biological control using seed-eating beetles are being attempted. However, it seems that once it has arrived, *Prosopis* is there to stay, so why not learn how to live in harmony with this new neighbour? Some change in land-use systems appears necessary. Cattle spread seed widely, for example, whereas sheep kill most seed ingested and pigs kill them all. A reduction in stocking rates can encourage good grass cover, which prevents seedling establishment. But what to do with dense stands? They must be thinned, which is not a desirable job, to 100-200 stems per hectare. Stumps have to be removed or treated. Remaining trees must be pruned to single stems. Seedlings do not establish under tree canopies, so such a cover will prevent further establishment. Pruned crowns reduce root competition and grass growth will improve. With the production of fuelwood, sweet pods and straight trunks for timber, this can only be a profitable use of otherwise unproductive lands.

References

Konda Reddy, C.V. 1978. *Prosopis juliflora*, the precocious child of the plant world. *Indian Forester* 104: 14-17.

Pasiiecznik, N.M. 1998. *Prosopis* and provenance research in Cape Verde. pp 73-76 in: J.C. Tewari, N.M. Pasiiecznik, L.N. Harsh and P.J.C. Harris (eds.), *Prosopis Species in the Arid and Semi-Arid Zones of India*. The *Prosopis* Society of India and the Henry Doubleday Research Association, Coventry, U.K.

Peattie, D.C. 1953. *Natural History of Western Trees*. Riverside Press, Cambridge, Boston, USA.

HDRA are also seeking research cooperation - please see page

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MEDCHANGE - CHANGING LAND USE PRACTICES IN FOREST AND GRAZING ECOSYSTEMS - MEDCHANGE

by C Coelho (1); M Sala (2); M Tanago (3); A Laouina (4); A Hamza (5)

Introduction

The overall objective of the project 'Effects of land use and land management practices changes on land degradation under forest and grazing ecosystems' (MEDCHANGE) is to investigate the impacts of land-use and land management practice changes in areas of the Western Mediterranean that are vulnerable to land degradation and desertification.

The project seeks:

1. to investigate how increased forest and grazing activities affect land degradation in the Western Mediterranean region (Morocco, Tunisia and the Iberian Peninsula);
2. to assess the current and probable future land-use and land-management practice changes which may be induced in areas vulnerable to land degradation and desertification by contemporary socio-economic trends, national/regional policies, the 2010 free trade zone and the EU CAP Aid Scheme for Forestry.

To achieve these objectives, the project has taken a holistic approach, combining both environmental and socio-economic dimensions. By so doing, it hopes to improve the basis of policies in support of sustainable development; to evaluate the effects of natural conditions and human activities on water depletion, soil degradation and vegetation health; to establish optimal practices for land management, in order to achieve greater sustainability through a reconciliation of potentially conflicting interests; to contribute to the definition of criteria for evaluation and mitigation of land degradation; and to disseminate results among rural populations and government officials.

Study areas

The Medchange project works in nine study areas (see Figure 1) which were selected on the basis of their serious land degradation and desertification problems, brought about by changes in socio-economic, demographic and natural conditions. The choice of sites allows for a comparison of the two margins of the Mediterranean, both in relation to socio-economic profiles and to land uses and land management techniques practised at each site.

A core of six areas is associated with the climax distribution of *Quercus suber* and *Quercus ilex* (Portugal - Mação and Portel; Spain - Gavares; Morocco - Ksar el Kebir and Ben Slimane; and Tunisia - Azmour), and provides a more or less uniform base for a comparison of different land management practices and socio-economic factors. Two sites are cooler and wetter (Canencia, a *Quercus pyrenaica* forest in the Guadarrama Mountains; and the Port del Compte, an area dominated by *Pinus nigra* and *Pinus laricio* in the pre-Pyrenees in Spain), while the final site has a drier climate (Ain Khmaissia in Tunisia, which is a typically arid environment dominated by *Quercus ilex* and Aleppo Pine).

Marginal areas of the Iberian Peninsula are suffering heavy population losses towards the more developed areas. This has led to the abandoning of agriculture, an increase in the lands under forest and greater growth of understorey vegetation. This, in turn, is accompanied by a growing risk of forest fires, the spatial expansion of land degradation, and increasingly unregulated traditional agro-forestry systems.

In contrast, the Moroccan and Tunisian study areas are still experiencing increasing rural populations, and the high human densities (173 people/km² in Azmour and 120 people/km² in Aim Khmaissia) are causing serious land degradation, with socio-economic deterioration and poverty as a consequence. The growing population making a living from an agro-silvo-pastoral system, has put pressure on natural resources, leading to the intensification of agriculture and grazing and the use of non-

traditional land management practices. The original vegetation has progressively been replaced by agriculture, mainly wheat and barley, with irrigated crops in the flat plains.

Methodology

Activities can be divided into four major groups:

- 1) Evaluation of current responses and prediction of likely future responses in terms of land-use and land management practices to (i) national/regional government policies (soil-water conservation) and (ii) contemporary socio-economic trends. This includes: (a) establishing exactly what the policies are; (b) an assessment of current land-use and recent land-use trends in the study regions, using national/regional demographic and agricultural statistics; (c) structured interviews with forestry, agricultural and local government administrators and officials concerning current/future land-use and land management problems as well as impacts of international, national/regional policies, (with special emphasis on the impacts of the 2010 free trade zone and EU CAP Aid Scheme for Forestry); and (d) a questionnaire survey of land users on their views of current/future land-use and land-management practice trends and problems, as well as their responses to national initiatives and policy.
- 2) Gathering of data on hydrology, erosion, soils and vegetation for the different land-use/land-management practice types within each of the study areas. This includes: (a) the identification and specification of the land-use/land-management practice types within the study areas; (b) sampling of the key surface and soil properties that influence erosion and hydrology; (c) rainfall simulation experiments to establish susceptibility to erosion and overland flow dynamics; (d) analysis of existing rainfall and river flow records to establish basin-scale hydrological characteristics of the principal land-use types; and (e) measurement and modelling of hydrology and sediment yield.
- 3) Use of data gathered in the previous steps to predict erosion, hydrological and soil sustainability consequences of the land-use/land-management practice changes. Particular attention will be paid to those land uses expected to arise from the national/ regional soil-water conservation strategies and land-management practice alternatives.
- 4) Proposing recommendations on possible modifications to national/regional policies to minimise any adverse environmental consequences.

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CONSERVATION THROUGH USE OF TREE SPECIES DIVERSITY IN FRAGMENTED MESOAMERICAN DRY FOREST (CUBOS)

Implemented jointly by the Oxford Forestry Institute and the Overseas Development Institute, this project aims to evaluate the potential for conservation of tree species diversity through use within farm-forest landscapes in two fragmented dry tropical forest zones in Honduras and Mexico. It began in September 1997 and will continue until August 2000.

Mesoamerican dry forest is of key global importance as a source of germplasm of a wide range of internationally-important multipurpose and industrial tree genera, including *Albizia*, *Bombacopsis*, *Cordia*, *Gliricidia* and *Leucaena*. At the same time, it is considered by some to be one of the most endangered tropical ecosystems worldwide, due to a combination of factors including ranching, smallholder agriculture and human-induced fire. Recognition of this fact and concern over the degradation of native populations of valuable tree genera has prompted the UK's Department for International Development (DFID - formerly ODA) to sponsor population explorations, seed collection and dissemination, *ex situ* conservation, tree improvement and breeding systems research in the region over the last two decades. The CUBOS project, funded by DFID's Forestry Research Programme, was initiated in recognition of the need to take human considerations into account in the designing of workable conservation strategies, and to allocate limited conservation resources efficiently on the basis of an informed and objective assessment of conservation priorities.

The research carried out by CUBOS is of three types:

- botanical/ecological inventory, in farmers' fields in eight case study communities spread across the South of Honduras and the coast of Oaxaca state, Mexico, and also in forest patches throughout the area, to identify and characterise species and sites of high priority for conservation;
- socioeconomic studies, involving 160 farm families in the same communities, to gain an understanding of their systems of use and management of trees, land and other natural resources;
- economic studies, to identify the economic importance of trees, compared to other land uses, and the economic constraints to their cultivation.

Indications to date show that:

- Socioeconomic conditions and land-use patterns vary widely across the region, ranging from the highly populated agricultural landscape of southern Honduras, to the abandoned cattle pastures of Costa Rica and the extensive tracts of apparently intact forest remaining on much of the Pacific slopes of Mexico.
- Even in the ecologically degraded conditions of southern Honduras, hundreds of tree and shrub species persist. Most of these appear to be surviving reasonably well, due to a combination of their pioneer characteristics, the low-intensity nature of the agriculture on the uplands and the practice of active protection and management of useful trees in fields, carried out by many farmers in response to shortages of off-farm trees. These protection practices are directly related to the value placed on certain tree species by farmers.
- Levels of human population in southern Honduras continue to increase; this situation could represent a threat to on-farm trees and forest patches.
- Most forest patches in southern Honduras are secondary in nature and their species composition differs little from the surrounding agricultural lands. It is probably most appropriate to consider forests and agricultural lands as forming parts of one 'agroecosystem' in state of constant flux.
- Tree-planting by small farmers faces a number of important constraints, including the ready availability of tree products from natural regeneration and the seasonal practice of pasturing cattle in cropping areas and fallows. Planted trees are largely confined to backyards (*solares*).
- There are only a few species in southern Honduras which are not either common or widespread; some of these, however, are of significant conservation concern.
- The extensive tracts of apparently intact forest found in Oaxaca and several other Mexican Pacific-slope states appear to be of much greater importance for conservation than the southern Honduran agroecosystem.
- Community controls over natural resource management in Mexico (based upon either the communal or *ejidal* systems) are much stronger than in Honduras, though they are in some cases in decline. There is strong antipathy in the Mexican communities studied to the concept of externally-imposed protected areas.

These findings have a number of important implications for the conservation of tree species diversity:

- The types of large-scale protected areas or restoration activities possible in the lowly-populated abandoned pastures of Costa Rica are not an option for the small-farmer dominated agroscape of the southern Honduran hills. Here, the human inhabitants and their activities must be recognised as integral components of the ecosystem and conservation or land-use strategies must be designed accordingly.
- Conservation in southern Honduras should focus on the agroecosystem as a whole and not on the protection of small patches of forest which are compositionally little different from the surrounding landscape. This approach should seek to maintain the relatively 'tree-friendly' nature of the agroecosystem while avoiding conserving its human inhabitants to extinction.
- Conservation technologies should focus more on the protection and management of naturally-regenerated trees than on tree planting.
- Species-specific strategies should be designed for the limited, but important, range of species which do not thrive in these disturbed conditions. These could include, for example, the promotion of uses for these species in order to increase the value placed upon them, legal controls and *ex-situ* conservation.
- By contrast, in Oaxaca, priority should be given to conserving the most valuable areas of apparently intact forest; this is made possible by the relatively low population pressures there. For such conservation to work it must have the approval of local communities and be implemented through existing community-based control structures.

Although field research has been concentrated on Honduras and Mexico, it is hoped that the results of CUBOS will be of relevance to dry forest throughout the whole of Mesoamerica and possibly beyond. Results will be presented and discussed at a regional workshop at the end of the project. In the interim, interaction with conservation, rural development and research bodies elsewhere in Mesoamerica would be welcomed.

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APPEAL FOR COLLABORATIVE RESEARCH ON SISSOO (*Dalbergia sissoo*) DECLINE IN NEPAL

The accelerated rate of deforestation in the past in Nepal has led to extensive forest degradation. Fortunately some of the country's fast-growing species have become very popular for plantations. In the last two decades, 'sissoo' (*Dalbergia sissoo* Roxb.) has been the most popular plantation species in both the private and government sector because of its fast growing nature, good quality timber, easy propagation, drought resistance, etc. Sissoo is a nitrogen-fixing leguminous multipurpose tree, occurring in the lowland region of Nepal up to altitudes of 1000m. It is an important reforestation species on the Terai plains. The tree occurs naturally in the successional stages of the sal forests (*Shorea robusta*, Gaertn.). Unfortunately, for the last few years, sissoo has been in decline all over Nepal, particularly in monoculture plantation forests. No causes for the decline have yet been determined. I would be interested to work with a research institution on this topic.

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IMPROVEMENT OF NEEM (*AZADIRACHTA INDICA*) AND ITS POTENTIAL BENEFITS TO POOR

FARMERS IN DEVELOPING COUNTRIES

Azadirachta indica (neem) is a tree with pesticidal properties. Although, used for centuries in India, neem remains under-exploited within its natural range and where introduced. This project, funded by the Forestry Research Programme of the UK Department for International Development, will assess constraints to the development of neem and its products for the benefit of poor farmers and provide a prioritised assessment of research and development requirements. Fieldwork carried out in Ghana and India and through a postal questionnaire will contribute to findings. An electronic workshop, held in late 1999 will allow findings to be appraised. Requests are made for contact details of those who have worked or are working with neem and would like to contribute to the postal questionnaire or email workshop.

For further information please contact:

Felicity Childs
Henry Doubleday Research Association Ryton-on-Dunsmore
Coventry CV8 3LG
United Kingdom
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Fax: + 44 1203 639229
[E-mail: fchilds@hdra.org.uk](mailto:fchilds@hdra.org.uk)

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PROSOPIS JULIFLORA AND RELATED ARBOREAL SPECIES: A MONOGRAPH, EXTENSION MANUAL AND DATABASE

This project aims to summarise the present state of knowledge on *Prosopis juliflora* and complexing species, probably the most widespread species in the arid zones of the world. Much has been published and in many languages, but as yet, no synthesis exists. Funded by the Forestry Research Programme of the UK Department for International Development, this project will produce a scientific monograph, and also a practical, technical manual aimed at India, covering management and product processing. Along with these will be a database on CD-ROM, including references on all aspects of *Prosopis* species. We are requesting information on relevant projects in progress and lists of publications on *Prosopis* species, preferably in electronic format. All sources will be gratefully acknowledged.

For further information, please contact:

N.M. Pasiecznik
HDRA
Ryton-on-Dunsmore
Coventry CV8 3LG
United Kingdom.
Tel: +44 1203 308200
Fax: +44 1203 639229;
[E-mail: npasiecznik@hdra.org.uk](mailto:npasiecznik@hdra.org.uk)

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IDENTIFICATION OF TROPICAL MEDICINAL PLANTS IN KENYA

Jack Wafula has initiated a herbal medicine project and is seeking technical advice and materials relating to this field, and, if possible, funding sources.

For further information, please contact:

Jack Wafula
 Box 126
 Endebess
 Kenya
 Fax: +25 43253 1462

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CALL FOR AUTHORS FOR PROSEA, Plant Resources Of South East Asia, Vol. 14

'Vegetable oils and fats'

The PROSEA Publication Office has started with preparations for the volume on 'vegetable oils and fats'.

Collectively, oil crops and their products are one of the most valuable commodities in world trade. The bulk of vegetable oils and fats are used for edible purposes, either directly or indirectly through high-protein animal feed. However, there are many technical uses (pharmaceutical products, soaps, paints, cosmetics, lubrication, candles, etc.) increasing the applicability of vegetable oils and fats in the industrial markets. A thorough review of lesser-known species and traditional uses and applications will contribute to this versatility.

The species list for the volume has been prepared with care, but it is quite possible that species still have to be added. You are invited to give your advice. Please keep in mind that many oil-bearing plants (peanut, soya bean, maize, lac tree, cotton, linseed, perilla, poppy) have already been described, or will be described, in other volumes of the PROSEA Handbook.

List of taxa:

Astrocaryum tucum nuts
A. aculeatum
A. gynacanthum
A. mexicanum
A. vulgare
Brassica Brassica oil seeds
B. carinata
B. juncea
B. napus
B. rapa
Carthamus tinctorius safflower
Chisocheton cumingianus balukanag
Cocos nucifera coconut palm
Elaeis guineensis oil palm
Garcinia kokam butter
G. indica
G. morella
Guizotia abyssinica niger seed

Helianthus annuus sunflower
Irvingia malayana pauh kijang
Lecythis sapucaia nut
L.ollaria
L.pisonis
L.zubucayo
Olea europaea olive
Orbignya cohune cohune palm
Reutealis trisperma bagilumbang oil
(syn. *Aleurites trisperma*)
Ricinus communis castor
Salvia hispanica chia
Sapium sebiferum tallow tree
Sesamum sesame
S.orientale
S.radiatum
Shorea tengkawang fat
S.macrophylla
S.scaberrima
S.singkawang
S.splendida
S.stenoptera
S.sumatrana
Vernicia (syn. *Aleurites*) tung oil
V.fordii (*A.fordii*)
V.montana (*A.montana*)
Xanthophyllum lanceatum siur-siur

In case you are interested to contribute as an author on one or more of the above-mentioned species or genera, please notify the Publication Office. To help the editors in making an appropriate selection, please indicate your important former publications on the subject.

Applications should be sent to:

Dr. J. S. Siemonsma
Head PROSEA Publication Office
Wageningen Agricultural University
P.O.Box 341
6700 AH Wageningen
The Netherlands
Tel: +31 317 484587
Fax: +31 317 482206
Email: prosea@pros.agro.wau.nl

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NEW FAO FOREST INVENTORY MANUAL

FAO Forest Resources Division is planning to review and update the 'Manual of Forest Inventory' (FAO Forestry Paper no. 27, Rome 1981) to provide professionals and operators engaged in the evaluation and management of forest resources with a practical handbook for assessing and monitoring forests and tree resources all over the world. The revision of the former forest inventory manual is required not only to disseminate knowledge on new methodologies and technologies, but also to improve the efficiency of national and sub-national inventory operations and facilitate the comparison and combination of the resources data obtained from different inventories. FAO Forest

Resources Division would like to establish a network of professionals active in different technical and methodological aspects of forest resources assessment and monitoring to share experiences, obtain advice on the main topics to be covered by the publication, and to achieve a broad dissemination of relevant achievements and issues in assessing and monitoring forest resources at various scales and for different purposes. If you are interested in participating in the initiative please contact:

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Internet Features

by Jelle Maas

The **International Arid Lands Consortium** (<http://ialcworld.org/>) is an independent, non-profit research organisation supporting ecological sustainability in arid and semiarid lands world-wide. The website highlights the tree-planting programme of one of its members, the JNF in Israel (<http://www.jpostshop.com/JNF/>).

The **International Centre for Research in Agroforestry (ICRAF)** publishes specific information on the semi-arid lowlands of West Africa in its Regional Programmes. This includes information on the characteristics of ecoregions and main land-use systems, the main constraints and opportunities for intervention and more.

http://www.cgiar.org/ICRAF/regional/region_3/region_3.htm

The World Bank group on **Drylands management & combating desertification** is accessible through the ESSD (Environmentally and Socially Sustainable Development) web sites and links (<http://wbln0018.worldbank.org/essd/kb.nsf/>), as are many other subjects concerning the World Bank and the environment. One interesting link is the Bank's Forest Policy Implementation Review and Strategy, which is directly accessible at <http://wbln0018.worldbank.org/essd/forestpol-e.nsf/Mainview>. Included is an update of the latest meetings (under 'the latest on the process') with links to minutes or background papers, including three recent new studies:

Recent Experience in Collaborative Forest Management Approaches: A Review of Key Issues. This study by Jane Carter focuses on institutional and organisational arrangements necessary for local forest management, based on sustainable and environmentally-friendly principles. Appropriate instruments, circumstances for resolution and the promotion of participatory approaches are also addressed.

Discussion Note. Indigenous Peoples and Forests: Main Issues. This paper produced by Marcus Colchester is available in English and Spanish.

The World Bank and Non-Forest Sector Policies that Affect Forests by David Kaimowitz and Arild Angelsen, Center for International Forestry Research (CIFOR), Bogor Indonesia.

The website of the United Nations Convention to Combat Desertification was previously announced in ETFRN News. Because of its relevance for the subject of (semi-)arid forestry the address is repeated: <http://www.unccd.ch>. Information on COP-2 of UNCCD is available at <http://www.iisd.ca/linkages/desert.html>. The 'Réseau Internationale des ONG sur la Désertification' (RIOD) is a network of Regional, Subregional and National Focal Points implementing the Convention to Combat Desertification in Africa (<http://www.enda.sn/energie/desertif/desertif.htm>). Available information is mainly in French.

The UNDP has a special Office to Combat Desertification and Drought (UNSO). Information on its activities can be viewed at: <http://www.undp.org/seed/unso/>

The International Institute for Environment and Development has a special Drylands programme. Information can be retrieved at <http://www.oneworld.org/iied/drylands/index.html>. Other similar programmes have been developed by CSIRO, Australia (<http://www.clw.csiro.au/>) and IDRC, Canada

(<http://www.idrc.ca/index.html>). The latter provides information in French and English.

Research institutes with information available on the web on arid land management include: the Applied Research Institute of Jerusalem (Israel, <http://www.arij.org>), Centre for Arid Zone Studies at the University of Bangor (<http://www.cazs.bangor.ac.uk/>), the 'Instituto Argentino de Investigaciones de las Zonas Áridas', IADIZA (<http://www.cricyt.edu.ar/INSTITUTOS/>

[iadiza/](http://www.iadiza.com)), and the Sheffield Centre for International Dryland Research, SCIDR (<http://www.shef.ac.uk/~scidr/>). The Desert Research Institute, DRI, in Nevada (<http://www.dri.edu>), also has an international collaboration programme, with projects in the US, Middle East, Africa and Latin America.

Several newsletters covering the issue of (semi-) arid forests are available on the internet, including: ARIDLANDS Newsletter (<http://ag.arizona.edu/OALS/ALN/>

[ALNHome.html](http://www.alnhome.com)) published by the College of Agriculture, University of Arizona, and the Journal of Arid Environments (<http://www.academicpress.com/jae>) published by Academic Press.

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Other News

- [AGROMISA](#)
- [IFS/IUFRO DRYLAND FORESTRY RESEARCH WORKSHOP \(HYTTIÄLÄ, FINLAND, 31 JULY-4 AUGUST 1995\) RECOMMENDATIONS](#)
- [NFTP-BIOCULTURAL-DIGEST SUBSCRIPTION INFORMATION](#)
- ['DECISION TREES' - A ONE DAY WORKSHOP IN EDINBURGH](#)

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AGROMISA

Agromisa is a Dutch non-profit organisation whose aim is to support and strengthen the social and economic position of the rural population in the South. Agromisa fulfils its role by providing information on small-scale sustainable agriculture to farmers and organisations in developing countries. Agromisa's work is based on the idea that knowledge stimulates people to develop their own initiatives to improve their living conditions.

Agromisa offers individuals and organisations:

Question and Answer Service

This service provides - free of charge - written know-how and advice in reply to questions from farmers, extension agents, development workers and organisations in the South;

Agrodok publications

A series of practical and informative manuals in the fields of natural resources and the environment, animal and plant production, and food storage and preservation;

The 'A-week'

A course on participatory approaches to local development, held in the Netherlands twice a year and, if required, in other countries.

Agromisa is eager to build contacts with development organisations for whom our services may be of interest, particularly with staff in the South.

For more information or if you have any questions, please contact:

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 Fax: +31 317 419178
[E-mail: AGROMISA@wxs.nl](mailto:AGROMISA@wxs.nl)
[Internet: www.tool.nl/~agromisa](http://www.tool.nl/~agromisa)

IFS/IUFRO DRYLAND FORESTRY RESEARCH WORKSHOP (HYTTIÄLÄ, FINLAND, 31 JULY-4 AUGUST 1995) RECOMMENDATIONS

The workshop participants agreed on a wide-ranging set of resolutions to which they wish to draw the attention of national governments, international donors, and associated forestry research institutions. These were designed to address the problems experienced by the people of the world's drylands and deserts and highlight the significant role research can play in solving them.

1. The workshop *recognises* the wide range of wood and non-wood products harvested from natural dryland areas and the lack of sustainable management of this resource and *recommends* that priority be given to research on improved management of natural areas.
2. The workshop *draws attention* to the importance of developing new, cost-effective, socially, and economically suitable management methods for plantations and natural vegetation and *recommends* that adaptive research should concentrate on technologies suitable for the relevant communities.
3. The workshop *recognises* the need for maximising the returns to small producers of saleable products and *recommends* that intensified research on production and marketing of valuable products should involve experts in marketing.
4. In order to achieve participation of relevant communities in research programmes for trees on community and other lands, the workshop *recommends*:
 - a) That forest research actively seek closer collaboration between natural and social scientists in involving communities in all phases of identification, design, management, and monitoring of research, especially for on-farm experiments.
 - b) To all forestry researchers that participatory appraisal techniques be increasingly used to define research needs and to prepare participatory research plans.
5. The workshop *recognises* that land-use problems of the dry zone can best be solved by forestry research in collaboration with other scientific disciplines and therefore *recommends* that:
 - a) increased support be given to multidisciplinary and regional research; and
 - b) in dryland development projects, a component of forestry research should be included and integrated into the project.
6. The workshop *notes* the valuable information to be gained from long-term monitoring, especially using permanent sample plots and *recommends*:
 - a) That networks of such plots be regularly maintained and assessed.
 - b) That the protected areas set aside should include the areas traditionally protected by communities for cultural reasons.
7. The workshop *notes* the vital importance of information storage, handling, and dissemination in order to inform researchers and to avoid duplication of effort and *draws the attention* of national governments and funding agencies to the vital importance of maintaining national institutional capability in this area.
8. Since water is the critical natural resource in drylands, the workshop *recommends* that research on tree growing and plantations should pay particular attention to the optimisation of water use and the maintenance of site productivity. The following should be *considered*:
 - a) The hydrological effects of management practices in natural vegetation formations.
 - b) Water use efficiency and hydrological effects of species adopted for planting.
 - c) The techniques and feasibility of using rain water harvesting techniques for planted trees.
 - d) Where appropriate, management methods and technology for trees on irrigated lands.

e) Water relations in farming systems which incorporate trees.

9. The workshop *emphasises* the importance and value of local and traditional knowledge for dryland management and *recommends* that support be given as a matter of urgency to collecting and consolidating local knowledge and to exchanging and sharing such information with the people concerned, so that the best use can be made of all knowledge in achieving sustainable development.

10. The workshop *recognises* the expanding need for tree planting for a wide range of products and services and *recommends* that:

a) High priority be given to improving knowledge on the adaptability of species and provenances, especially with regard to difficult sites.

b) Plantation performance (taking account of their socio-economic and environmental effects) should be compared with a range of alternative production systems, so as to provide tools for decision making on optimal landuse.

Source: Proceedings of an IFS/IUFRO Workshop, Hyytiälä, Finland, 31 July-4 August 1995. Please also see page

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NTFP-BIOCULTURAL-DIGEST SUBSCRIPTION INFORMATION

For the attention of website and mailing list administrators and newsletter and magazine editors.

The old system for subscribing to NTFP-Biocultural-Digest in which you sent an email to majordomo@igc.org is or will soon be terminated. Website administrators and newsletter editors who maintain or have provided information on subscribing to the digest can provide their members with the following new subscription information.

The fastest way to subscribe (or unsubscribe) to NTFP-Biocultural-Digest is to visit the website that hosts the mailing list and follow the instructions (<http://www.anthrotech.com/ice/ntfp/digest/>)

If you do not have access to the web you may request subscription by sending an email to: etjones@igc.org

Source: NTFP-Biocultural-Digest, Vol. 03, No. 010

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'DECISION TREES' - A ONE DAY WORKSHOP IN EDINBURGH

On 8 October 1999 the Edinburgh Centre for Tropical Forests will be holding a workshop titled 'Decision Trees; understanding individual, collective and policy decisions on forestry in northern and southern countries'.

Participative forestry is increasingly advocated in both temperate and tropical regions, but how similar are the practices in each region, and what socio-economic tools are being used to quantify the factors controlling farmer, community and political decisions? Seven presentations are planned. For details, please see:

<http://www.nmw.ac.uk/ECTF/decisions.html>

For contact information, please see International Calendar in this issue.

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Job opportunities

An up-to-date list of job opportunities can be seen on the ETFRN website at:

<http://www.etfrn.org/etfrn/resource/info-vacancies.html>

SWISS FEDERAL INSTITUTE FOR FOREST, SNOW AND LANDSCAPE RESEARCH -

LEADER - FOREST ECOSYSTEMS AND ECOLOGICAL RISKS DEPARTMENT

Our Institute undertakes research into the use, management and protection of terrestrial habitats and the management of natural hazards. In the Forest Division, we have a vacancy for the post of Leader in the Forest Ecosystems and Ecological Risks Department

The unit consists of about 20 people and investigates various aspects of forest ecology, including ecophysiology, nutrient cycles and forest condition, and is also responsible for long-term forest ecosystem monitoring and ecological risk analysis. Particular emphasis is placed on inter-disciplinary research and on the solution of complex ecological problems.

For this exacting task, we are looking for someone with leadership experience and an international scientific reputation in the field of forest ecology and/or ecological risk analysis.

We expect the successful candidate to have leadership qualities, such as social responsibility, communication skills and decision-making ability, and to be dynamic and creative. In addition, a solid publication list in international reviewed journals and demonstrated experience of working in international research teams is expected. Apart from English, a good knowledge of German is required; in addition, knowledge of French or Italian would be an advantage.

We offer a team-oriented working environment and the possibility for further advancement, so that you can develop an international profile. The existing research team is highly motivated, the infrastructure is excellent and there are many exciting challenges for the future.

Information about the WSL and about the Department is available at the following web site: <http://www.wsl.ch>. Further information about the position will be gladly provided by [Dr. B. Oester \(oester@wsl.ch\)](mailto:oester@wsl.ch), Leader of the Forest Division. Your letter of application, including a curriculum vitae, publication list and the names of up to five referees should be sent to our Personnel Office, with a reference to Vacancy No. 188. In order to improve the ratio between men and women in leadership positions at the WSL, applications from female scientists are particularly welcome.

Please contact:

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 e-mail: innes@wsl.ch

[Http://www.wsl.ch/wsidb/wsidb.html](http://www.wsl.ch/wsidb/wsidb.html)



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Publications

- [CIFOR CRITERIA & INDICATORS TOOLBOX SERIES \(1999\)](#)
 - [No. 1: Guidelines for Developing, Testing and Selecting Criteria and Indicators for Sustainable Forest Management](#)
 - [No. 2, The CIFOR Criteria and Indicators Generic Template](#)
 - [No. 3, CIMAT \(Criteria and Indicators Modification and Adaptation Tool\)](#)
 - [No. 4, The CIFOR Criteria and Indicators Resource Book Database](#)
 - [No. 5, The BAG \(Basic Assessment Guide for Human Well-Being\)](#)
 - [No. 6, The Grab Bag: Supplementary Methods for Assessing Human Well-Being](#)
 - [No. 7, Scoring and Analysis Guide](#)
 - [No. 8, Who Counts Most? Assessing Human Well-Being in Sustainable Forest Management](#)
 - [No. 9, Guidelines for Applying Multi-Criteria Analysis to the Assessment of Criteria and Indicators](#)
 - [No. 10, Methodologies for Assessing Ecological Indicators for Sustainable Forest Management](#)
- [MANAGEMENT OF BUSHLAND VEGETATION USING RAINWATER HARVESTING IN EASTERN KENYA.](#)
- [DRYLAND FORESTRY RESEARCH: PROCEEDINGS OF THE IFS/IUFRO DRYLAND FORESTRY RESEARCH WORKSHOP \(HYYTIÄLÄ, FINLAND, 31 JULY-4 AUGUST 1995](#)
- [AGRODOK NO 19: PROPAGATING AND PLANTING TREES](#)
- [TROPICAL RESOURCE MANAGEMENT PAPERS NO 19: SIMULATION OF MAIZE GROWTH UNDER CONSERVATION FARMING IN TROPICAL ENVIRONMENTS](#)
- [POSTHARVEST: AN INTRODUCTION TO THE PHYSIOLOGY AND HANDLING OF FRUIT, VEGETABLES AND ORNAMENTALS](#)
- [SILVICULTURE IN THE TROPICAL RAINFOREST. AN HISTORICAL ANALYSIS OF SUCCESS AND FAILURE. ANNOTATED ABSTRACTS](#)
- [CLIMATE, BIODIVERSITY AND FORESTS. ISSUES AND OPPORTUNITIES EMERGING FROM THE KYOTO PROTOCOL](#)
- [ECOLOGY AND MANAGEMENT OF TROPICAL SECONDARY FORESTS: SCIENCE, PEOPLE AND POLICY](#)
- [FROM CONFLICT TO COLLABORATION. PEOPLE AND FORESTS AT MOUNT ELGON, UGANDA](#)
- [EVALUATION REPORT ON SAVE THE CHILDREN MANGROVE PLANTING PROJECT, THACH HA DISTRICT, HA TINH PROVINCE, VIETNAM](#)
- [NON-WOOD FOREST PRODUCTS FROM CONIFERS](#)
- [THE ECONOMICS OF NON-TIMBER FOREST BENEFITS: AN OVERVIEW](#)
- [SYNTHESIS OF DECADES OF SILVICULTURAL RESEARCH IN DENSE](#)

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RAINFORESTS OF FRANCOPHONE AFRICA: SERIE FORAFRI, 1998

- 11. Synthèse sur les caractéristiques technologiques de référence des principaux bois commerciaux africains
- 12. Les cartes, la télédétection et les S.I.G., des outils pour la gestion et l'aménagement des forêts tropicales d'Afrique Centrale
- 13. Le S.I.G., une aide pour tracer un réseau de pistes forestières. Méthodes et résultats
- 14. Parcelles permanentes de recherche en forêt dense tropicale humide. Eléments pour une méthodologie d'analyse de données
- 15. L'analyse de cernes: applications aux études de croissance de quelques essences en peuplements naturels de forêt dense africaine
- 16. Dynamique et croissance de l'Okoumé en zone côtière du Gabon
- 17. Les techniques d'exploitation à faible impact en forêt dense humide camerounaise
- GESTÃO PARTICIPATIVA DOS RECURSOS FLORESTAIS. ESTUDOS DE CASOS.
- CONSIDERACIONES ECOLÓGICAS SOBRE LA REGENERACIÓN NATURAL APLICADA AL MANEJO FORESTAL.

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CIFOR CRITERIA & INDICATORS TOOLBOX SERIES (1999)

This series of manuals and software was developed by CIFOR and collaborators. The principal sponsor of this project was the European Union under budget heading B7-6201, together with the GTZ and USAID. The Criteria & Indicators Toolbox is currently being translated into French and Indonesian. The French version will appear in the CIRAD-Forêt/CIFOR FORAFRI Series.

No. 1: Guidelines for Developing, Testing and Selecting Criteria and Indicators for Sustainable Forest Management

R. Prabhu, C.J.P. Colfer, R.G. Dudley

Form of publication: Manual on paper

Abstract:

This manual provides methods for the development and evaluation of criteria and indicators (C&I) which can then be used to assess the sustainability of forest management. The manual is written primarily for researchers, people or groups interested in evaluating C&I for assessments of forests in new areas, or as a reference for readers wanting to know how CIFOR's Generic Template was produced. The methods presented are aimed at the development of sets of C&I for natural forest at the forest management unit (FMU) level, especially in the tropics. Following an introductory chapter focusing on the overall purpose, specific objectives, and the C&I development process, Chapters 2-4 explain how to prepare for C&I testing, how to conduct a test, and how to analyse the results. Chapters 5-7 explain the conceptual basis of C&I development, with three case studies offered as examples, and suggested additional reading materials. Specific forms and tools that have been used in the course of CIFOR's testing are presented in Chapter 8. Finally Chapter 9 provides possible baseline sets of C&I, available to users for evaluation and testing in their own contexts.

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No. 2, The CIFOR Criteria and Indicators Generic Template

CIFOR C&I Team

Form of publication: Manual on paper

Abstract:

This manual provides a comprehensive set of C&I for sustainable forest management based on CIFOR's research. This research was conducted by interdisciplinary teams of experts in large-scale natural forests managed for commercial timber production in Indonesia, Côte d'Ivoire, Brazil and Cameroon, with additional sites in Germany, Austria and USA.

The use of the term '*generic template*' for these C&I is intended to prevent them being confused with an ideal and universally applicable set of C&I. It is envisaged that this template will be used primarily for tropical natural forests managed for commercial purposes. Use of the term 'generic' emphasises that the C&I in this set can be modified and customised to comply with local conditions. They could therefore be used both as a flexible set that is adaptable to all types of forest situations, and as an operational 'mother' set to be used by CIFOR's proposed CIMAT system (C&I Toolbox Series No.3). 'Generic' also implies that this C&I template can be employed by a variety of user groups, such as certification bodies, government officials, donors, forest managers, project managers, and scientists.

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No. 3, CIMAT (Criteria and Indicators Modification and Adaptation Tool)

R. Prabhu, M. Haggith, H. Purnomo, A. Rizal, D. Sukadri, J. Taylor, and Y. Yasmi

Form of publication: CD-ROM + user manual on paper

Abstract:

CIMAT is a computer software package designed to help users modify, customise and adapt the CIFOR C&I generic template to meet local conditions and expectations. It is accompanied by a manual which guides you through all the basic steps in creating a new C&I set, helps you to navigate the current C&I knowledge base, and introduces the topic of an on-site assessment. In later versions *CIMAT* will provide more substantial support for assessment and monitoring of C&I. *CIMAT* can also be treated as a 'learning tool' for those who are merely interested in exploring the C&I knowledge stored in it.

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No. 4, The CIFOR Criteria and Indicators Resource Book Database

C. McDougall, I.R. Isbadi, L. Santoso, M. Corless, and H. Purnomo (eds.)

Form of publication: CD-ROM + user manual on paper

Abstract:

The Resource Book Database is a source of information on some key items in the generic template. It offers information on attributes, definitions, relevance, methods for assessment, how to go about measuring a particular indicator, how to design a sample plot, etc. It represents work-in-progress at CIFOR and is subject to further improvements.

NOTE: Tools 3&4 are 'burnt' on to the same 'C&I CD-ROM'. This also contains all the other tools, as well as the Lammerts van Bueren & Blom (1997) paper "Principles, criteria, indicators; hierarchical framework for the formulation of sustainable forest management standards" (Tropenbos series), and other C&I related papers including hitherto unpublished reports of C&I tests, internal discussion papers and drafts. All of this information can be accessed through Internet Explorer or a specially developed browser. Much of the information has been converted to HTML format and hyperlinked for ease of access.

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No. 5, The BAG (Basic Assessment Guide for Human Well-Being)

C.J.P. Colfer, M.A. Brocklesby, C. Diaw, P. Etuge, M. Günter, E. Harwell, C. McDougall, N.M. Porro, R. Porro, R. Prabhu, A. Salim, M.A. Sardjono, B. Tchikangwa, A.M. Tiani, R.L. Wadley, J. Woelfel and E. Wollenberg

Form of publication: Manual on paper

Abstract:

The BAG focuses on the social C&I for sustainable forest management, a topic that has been the subject of considerable controversy and uncertainty. The six simple methods described in this manual are presented in a 'cookbook' format. They are designed for use by people (with a college-level education) who are interested in assessing sustainable forest management, but do not have a high degree of expertise in social sciences.

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No. 6, The Grab Bag: Supplementary Methods for Assessing Human Well-Being

C.J.P. Colfer, M.A. Brocklesby, C. Diaw, P. Etuge, E. Harwell, C. McDougall, N.M. Porro, R. Porro, R. Prabhu, A. Salim, M.A. Sardjono, B. Tchikangwa, A.M. Tiani, R.L. Wadley, J. Woelfel and E. Wollenberg

Form of publication: Manual on paper

Abstract:

The Grab Bag complements *The BAG* and is designed for use by social scientists who may find *The BAG* overly prescriptive. The eight methods presented are either more difficult for non-social scientists to use or, in a couple of cases, can substitute for one or more method presented in *The BAG*.

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No. 7, Scoring and Analysis Guide

A. Salim and C.J.P. Colfer with C. McDougall

Form of publication: Manual on paper

Abstract:

The Scoring and Analysis Guide for Assessing Human Well-Being is designed to supplement *The BAG* and *The Grab Bag*. It provides a scoring method that can be used with the two manuals, to come to a decision about particular C&I in particular forest and human settings. This is followed by a section on analysis, which begins very simply, leading the user through the steps of making a spreadsheet, and concludes with more complex statistical analyses that may be desirable in some circumstances. Different teams have different requirements for quantitative and statistical sophistication in their analyses. This manual responds to these differing needs.

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No. 8, Who Counts Most? Assessing Human Well-Being in Sustainable Forest Management

C.J.P. Colfer, R. Prabhu, M. Günter, C. McDougall, N.M. Porro and R. Porro

Form of publication: Manual on paper

Abstract:

This publication presents a tool, the 'Who Counts Matrix', for differentiating 'forest actors', or people

whose well-being and forest management are intimately intertwined, from other stakeholders. The authors suggest seven dimensions by which forest actors can be differentiated from other stakeholders, and a simple scoring technique for use by formal managers to determine whose well-being must form an integral part of sustainable forest management in a given locale. Three illustrative sets of stakeholders, from Indonesia, Côte d'Ivoire and the United States, and Who Counts Matrices from seven trials, are presented in an appendix.

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No. 9, Guidelines for Applying Multi-Criteria Analysis to the Assessment of Criteria and Indicators

G.A. Mendoza and P. Macoun with R. Prabhu, D. Sukadri, H. Purnomo and H. Hartanto

Form of publication: Manual on paper

Abstract:

Multi-Criteria Analysis (MCA) is a decision-making tool developed for complex problems. In a situation where multiple criteria are involved confusion can arise if a logical, well-structured decision-making process is not followed. Another difficulty in decision making is that reaching a general consensus in a multidisciplinary team can be very difficult to achieve. By using MCA the members don't have to agree on the relative importance of the criteria or the rankings of the alternatives. Each member enters his or her own judgements, and makes a distinct, identifiable contribution to a jointly reached conclusion.

This manual is designed for easy use in the field. It first reviews the conceptual framework of C&I and then introduces the theoretical basis of MCA, and methods such as ranking, rating and pairwise comparisons in the Analytic Hierarchy Process (AHP). It provides an example of how MCA can be applied to C&I in a Forest Certification context both from a 'top-down' perspective as well as in a more 'bottom-up' context.

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No. 10, Methodologies for Assessing Ecological Indicators for Sustainable Forest Management (Draft under development)

*Orders: Center for International Forestry Research, P.O. Box 6596 JKPWB, Jakarta 10065, Indonesia
Tel: +62 251 622622, Fax: +62 251 622100*

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MANAGEMENT OF BUSHLAND VEGETATION USING RAINWATER HARVESTING IN EASTERN KENYA.

V Kaarakka (1996)

This PhD thesis was published by the Finnish Society of Forest Science in *Acta Forestalia Fennica* 253. The study had two main objectives: (1) to compare the methods and assess the practicability of microcatchment water harvesting (MCWH) for tree planting; and (2) to investigate the regeneration dynamics and rehabilitation of natural bushland in semiarid/arid conditions in Eastern Kenya.

It was concluded that MCWH improved the survival and growth of planted trees on heavy soils five to six years after planting. In the best method, the cross-tied furrow microcatchments, the mean annual increments (MAI; based on the average biomass of living trees multiplied by tree density and survival) of the total and usable biomass in *Prosopis juliflora* were 2787 and 1610 kg ha⁻¹a⁻¹ respectively, when the initial tree density was 500 to 1667 trees per hectare. Based on survival, the indigenous

Acacia horrida, *A. mellifera* and *A. zanzibarica* were the most suitable species for planting using MCWH. When both survival and yield were considered, a local seed source of the introduced *P. juliflora* was superior to all other species. The MAI in MCWH was at best distinctly higher than that in the natural vegetation (163-307 and 66-111 kg ha⁻¹a⁻¹ for total and usable biomass respectively). However, this cannot satisfy the fuelwood demand of concentrated populations, such as in towns or irrigation schemes.

The density of seeds of woody species in the topsoil was 40.1 seeds m⁻² in the *Acacia-Commiphora* bushland and 12.6 seeds m⁻² in the zone between the bushland and the Tana riverine forest. Rehabilitation of woody vegetation using the soil seed bank alone proved difficult due to the lack of seeds of desirable species.

The regeneration and dynamics of woody vegetation were studied both in cleared and undisturbed bushland. A sub-type of *Acacia-Commiphora* bushland was identified as *Acacia reficiens* bushland, in which the dominant *Commiphora* species is *C. campestris*. Most of the woody species did not have even-aged populations but cohort structures that were skewed towards young individuals. The woody vegetation and the status of soil nutrients were estimated to recover in 15-20 years on Vertic Natrargid soils after total removal of above-ground vegetation.

Keywords: Drylands, Kenya, land rehabilitation, rainwater harvesting, seed bank, vegetation dynamics.

Further information: Dr Vesa Kaarakka, Department of Forest Ecology/Tropical Silviculture, University of Helsinki, P.O Box 28, FIN-00014 University of Helsinki, Finland. Fax +358-9-708 58646, E-mail: vesa.kaarakka@helsinki.fi

Exchange enquiries: Finnish Society of Forest Science, Unioninkatu 40 A, FIN-00170 Helsinki, Finland, Tel +358 9 8570 5235, Fax +358 9 8570 5677, E-mail sms@helsinki.fi.

Subscriptions and orders: Academic Bookstore, Subscription Services, P.O. Box 23, FIN-00371 Helsinki, Finland, Tel +358 9 121 4430, Fax +358 9 121 4450.

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DRYLAND FORESTRY RESEARCH: PROCEEDINGS OF THE IFS/IUFRO DRYLAND FORESTRY RESEARCH WORKSHOP (HYTTIÄLÄ, FINLAND, 31 JULY-4 AUGUST 1995

S. Bruns, J. Furberg, O. Luukkanen & P. Wood (eds)

The above workshop was held in connection with the IUFRO XX World Congress in Tampere, Finland, in 1995. The workshop was attended by 55 dryland forestry specialists from 30 countries. The proceedings also contain the keynote lectures, group work recommendations, and short abstracts of ongoing research topics of the workshop participants. The workshop recommendations can be seen on page 25.

Orders: A limited number of these proceedings is still available free of charge from the International Foundation for Science (IFS), Grev Turegatan 19, S-114 38 Stockholm, Sweden. Email: info@ifs.se

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AGRODOK NO 19: PROPAGATING AND PLANTING TREES

H.W. Schreppers, P. Paap & E. Schinkel (1998)

Key words: direct seeding; wildlings; tree planting; planting material; farm nurseries.

This booklet was prepared in response to many questions about how to increase the number of trees in the landscape. It discusses several techniques for propagating trees: natural regeneration, direct

seedling and planting of wildlings. Beginning with general guidelines on how to choose the right tree for the right location, the booklet goes on to deal with propagation methods and the collection of propagation material. Two chapters cover the design, construction and management of a farm nursery. These are followed by chapters dealing with the preparation of the planting site, transport and storage of the planting material, and the planting and maintenance of trees. An appendix demonstrates how to calculate the amount of seed needed for direct sowing and the number of seedlings and space required in the nursery. A list of seed suppliers is also provided.

The publication is meant primarily for farmers and extension workers. The document therefore emphasises low-cost and low-input methods and techniques and is written in simple English. It covers a variety of regions in the tropics, and therefore provides information of a general nature. The reader is encouraged to look carefully at local circumstances, knowledge and experience, and then to use the information provided in a selective way appropriate to his or her specific situation.

This publication is part of the *Agrodok series* of 29 low-priced, practical and informative booklets relating to small-scale agriculture in the tropics and sub-tropics. They are aimed at extension workers, teachers and farmers' intermediaries. Titles range from topics in plant and animal production to natural resources and food processing. This booklet is published by Agromisa in conjunction with the CTA.

Orders: 79pp; ISBN 90-72746-78-3;
from Agromisa, PO Box 41, 6700 AA Wageningen, The Netherlands.
Fax: +31-317-419178, E-mail: agromisa@wxs.nl.

All Agrodoks are available in English and French; some titles are also available in Portuguese and Spanish. Agrodoks cost NLG 13.21 (approx. US\$7) including postage & packing (excl. VAT).

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TROPICAL RESOURCE MANAGEMENT PAPERS NO 19: SIMULATION OF MAIZE GROWTH UNDER CONSERVATION FARMING IN TROPICAL ENVIRONMENTS

L. Stroosnijder & P. Kiepe

This book is written for students and researchers with a keen interest in the quantification of the field soil water balance in tropical environments and the effect of conservation farming on crop production. Part 1 deals with the potential production, i.e. crop growth under ample supply of water nutrients in a pest-, disease- and weed-free environment. Part 2 deals with crop production under rainfed or water-limited conditions by including the crop water balance as well as the soil water balance. Both models use maize as an example. The way the MAIZE models are presented differs from the modular structure of present day models, where separate data blocks for soil, crop and climate are added at the end of a main programme. Here, the explanatory text follows, as closely as possible, the computer listing of the model. Each chapter starts with a number of lines which were copied from the listing. Subsequently, the terminology is justified and the input data and the dimensions of variables are explained. Another special feature is the fact that parameter and function values are defined directly after the line in which they are used for the first time. This method highlights the places where the model needs input from the user. In this way it is stressed that the accuracy of the model depends on the availability and quality of the input data, together with the correct understanding and description of the processes involved. The third part of this book contains a number of applications.

Orders:
Wageningen Agricultural University, Liaison Office, PO Box 9101, 6700 HB Wageningen, The Netherlands. Tel: +31 317 484293, Fax: +31 317 484292

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POSTHARVEST: AN INTRODUCTION TO THE PHYSIOLOGY AND HANDLING OF FRUIT, VEGETABLES AND ORNAMENTALS

R. Wills, B. McGlasson, D. Graham & D. Joyce

Production of fruit, vegetables and ornamentals has been increasing worldwide and represents a huge investment of resources in transport, storage and marketing facilities designed to maintain a continuous supply of these perishable goods. The goals of postharvest practices are to protect that investment. Essentially a textbook, this new version of an earlier work has been substantially updated to include ornamentals and to reflect modern industrial practices and technology. Particularly noteworthy is the book's coverage of tropical produce.

Orders:

This is not a CTA co-publication but is available from CTA for ACT countries only against 20 credit points. Otherwise: CAB International, Wallingford, Oxon, OX10 8DE, United Kingdom. Fax: +44 1491 833508, E-mail: cabi@cabi.org. Price from CABI: £24.50.

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*Organisations which work for agricultural and rural development in the ACP States, but are **not based in an ACP country**, should write to CTA giving details of the publications they wish to acquire and the reasons why they are needed.*

Source: SPORE, No 77, October 1998.

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SILVICULTURE IN THE TROPICAL RAINFOREST. AN HISTORICAL ANALYSIS OF SUCCESS AND FAILURE. ANNOTATED ABSTRACTS

H.C. Dawkins and S. Dipper (ed.) (1998)

As a memorial to H.C. Dawkins, the Oxford Forestry Institute has published a provisional version of the book 'Silviculture in the tropical rain forest. An historical analysis of success and failure'. Dawkins' aim was to provide a concise summary of what was known about the tropical rain forest and to create a guide to past literature enabling today's foresters to familiarise themselves quickly and efficiently with knowledge already available. This would avoid duplication of work already done and save time for the work yet to be undertaken.

The book presents 141 abstracts, mainly covering publications published until the 1980s. A first index lists all the references mentioned in each abstract, while a second index of plant names indicates in which abstract they are referred to. The apparent Asia bias of the content, the lack of recent literature and the lack of analysis are intended to be resolved in a forthcoming issue of the book. The original set-up of the book as anticipated by Dawkins is included as an annex.

Orders:

Oxford Forestry Institute, University of Oxford, South Parks Road, Oxford OX1 3RB, UK. Tel.: +44-1865-275000, Fax: +44-1865-275074

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CLIMATE, BIODIVERSITY AND FORESTS. ISSUES AND OPPORTUNITIES EMERGING FROM THE KYOTO PROTOCOL

P. Brown (1998)

In this joint publication, and within the context of their respective programmes, the World Resources Institute (Forest Frontiers Initiative) and the IUCN-The World Conservation Union (Climate Change Initiative) bring together two profound global environmental issues - biodiversity loss and climate change.

In five chapters the author aims to give insights to the ways in which forests and land-use change can both exacerbate and mitigate climate change. He identifies opportunities presented by the Kyoto Protocol regarding the conservation, improved management and restoration of forests, and considers some of the reasons the issue has proven controversial. He goes on to highlight key future decisions that will determine whether these opportunities are seized and examines how these decisions can be made to work for climate, forests and biodiversity.

The recommendations emphasise the need for:

- synergy between efforts to halt climate change and promote environmental stewardship;
- compatibility of accounting methods, mitigation frameworks, definitions, and implementation of the Kyoto Protocol in order to meet climate, development, and environmental objectives; and
- further research to clarify the difficulties of including land-use change and forests and the implications of not taking them into account.

Orders:

WRI, Forest Frontiers Initiative, 1709 New York Avenue, N.W., Washington, D.C. 20006, USA. Tel.: +1-202-683-6300, Fax: +1-202-683-0036, E-mail: ffi@wri.org. IUCN-The World Conservation Union, 28 Rue de Mauverney, C4-1196 Gland, Switzerland. [Http://www.iucn.org](http://www.iucn.org). Price US\$ 20

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ECOLOGY AND MANAGEMENT OF TROPICAL SECONDARY FORESTS: SCIENCE, PEOPLE AND POLICY

M.R. Guariguata and B. Finegan (eds) (1998)

These are the proceedings of a conference of the same title jointly organised and sponsored by CATIE, CIFOR, IUFRO, WWF and GTZ (10-12 November 1997). The objectives of the conference were to summarise the state of knowledge of tropical secondary forests from the standpoint of the ecological, social, and political sciences, and to report the most recent results of research on secondary forest from all relevant disciplines.

In general the 16 papers in the proceedings are related to the conceptual, ecological, silvicultural and policy aspects of secondary forests in the neotropics. After a general overview of the current status of secondary forests in terms of extent, origin and management potential and constraints, examples of the need for an appropriate legal framework and a pantropical view on the ecology of secondary forest succession are given in the two papers that follow. The next nine papers elaborate on tree growth, structure and floristics in secondary forests of different ages in Brazil, Colombia, Mexico, Paraguay and Argentina, as well as discussing management implications. The remaining four papers deal with timber and non-timber forest products, soil fertility and atmospheric carbon sequestration.

The proceedings underline the need for:

- practical, applied research into the (local knowledge of the) management potential of secondary forests;
- the incorporation of secondary forests and their management in local, national and international policies, strategies and projects dealing with land-use planning, land tenure and nature

- conservation; and
- research into socio-political and participatory aspects involved in secondary forest management.

Orders:

Serie Técnica, Reuniones Tecnicas No. 4. CATIE, CATIE 7170, Turrialba, Costa Rica. Tel: +506 556 1933, Fax: +506 556 7766

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FROM CONFLICT TO COLLABORATION. PEOPLE AND FORESTS AT MOUNT ELGON, UGANDA

P. Scott (1998)

Mount Elgon, situated in Southeast Uganda and bordering Kenya, is a solitary, extinct volcano, the oldest in the Rift Valley. The topography, volcanic soils and tropical moist climate have contributed to a high biological diversity and high human population densities in the Elgon region.

Traditionally, forest use was regulated by tribal laws and cultural values. From 1929 Mount Elgon came under the control of the state but it was not until the end of the 1930s that the boundaries of the region were entirely demarcated. In 1988, after the 15 year period of civil unrest, a new Forest Policy was issued and a Forest Department rehabilitation programme initiated. Since the early 1990s Mount Elgon has been managed by the Uganda Wildlife Authority.

The heavy dependence of the neighbouring population on the park's resources in combination with the former paramilitary approach to management have resulted in a hostile and conflicting relationship between management and the people. The Mount Elgon Conservation and Development project was set up in 1988 to try to incorporate sustainable utilisation into a management regime supported by the local population and in favour of both human needs and nature conservation.

The book reviews the people-forest connections in the region and outlines the application of these research results to various levels of the decision-making process, emphasising how the information has been useful as a foundation for embarking on a collaborative approach to management of the Mount Elgon National Park.

Orders:

IUCN Publications Services Unit, 219C Huntingdon Road , Cambridge CB3 0DL, UK, tel.: +44-1223-277894, fax: +44-1223-277175, E-mail: info@books.iucn.org

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EVALUATION REPORT ON SAVE THE CHILDREN MANGROVE PLANTING PROJECT, THACH HA DISTRICT, HA TINH PROVINCE, VIETNAM

D.J. Macintosh, S. Levine and J.L. Overton (1998)

The North-Central Ha Tinh Province is one of the poorest in Vietnam, characterised by high population pressure, low agricultural productivity and frequent devastating typhoons. Objectives of the Save the Children Fund (SCF) mangrove planting project were:

- to protect the sea dikes against storm damage, and thus to protect the communes from loss of harvests, soil salinisation, etc.;
- to contribute to the improvement of the marine environment by providing a breeding ground for fish, shrimp, crab, etc.; and
- to provide an additional source of income for families which protect and benefit from the by-products of the mangrove forests.

Commissioned by SCF, cenTER (Denmark) evaluated the Ha Tinh project. Generally speaking the report concludes that the project is successful in terms of hectares of mangroves planted. However, agricultural land is still threatened by lack of maintenance of dikes and typhoons. The project also resulted in a positive input to the improvement of the marine environment, thus enhancing the fishery productivity, and yielded benefits for aqua- and agricultural farmers, traders and wood producers, amongst others. The cost-benefit analysis is positive. However, in order to safeguard long-term management of the mangrove plantations, local participation should be strengthened. In this respect, the organisation of community-level workshops is strongly recommended.

Orders:

Save the Children Fund, 218 Doi Can Street, Ba Dinh District, Hanoi, Vietnam, Tel: +84-832-5139, Fax: +84-844-832-5073.

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NON-WOOD FOREST PRODUCTS FROM CONIFERS *W.M. Ciesla (1998)*

Conifers are important sources of a wide range of non-wood products. Many of these products have been used for thousands of years. The tapping of pines and other conifers for resin, for example, has been practised since biblical times. A more recent discovery is the use of the bark of a *Taxus* species as an anti-cancer agent.

In ten chapters this publication gives a general overview of the role of conifers in human culture and systematically describes the species and the use of whole trees, foliage, bark and roots, resin, essential oils, seeds, fruit and cones, and products from conifer associated organisms. The publication also examines the commercial potentials and constraints of the use of non-wood forest products from conifers. In this respect it underlines the need for sustainable management of the conifer resources (both natural and planted), for examples of over-exploitation are already at hand, and the recognition of local people's uses of and rights to non-wood products from conifers.

Orders:

Non-wood forest products no. 12. 125 pp. ISBN: 9251042128 FAO, Sales and Marketing Group, Viale delle terme di Caracalla, 00100 Rome, Italy

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THE ECONOMICS OF NON-TIMBER FOREST BENEFITS: AN OVERVIEW

J.T. Bishop (1998)

This paper focuses on recent advances in the economic evaluation of forestry activities and, in particular, on how techniques for valuing non-timber forest benefits in monetary terms can assist the development of forest policy and management systems.

Firstly, the non-market nature of many non-timber forest benefits is considered, and why markets often fail to take account of them. Secondly, different techniques used to evaluate non-market benefits in monetary terms are reviewed and the long-term dynamics of forest value explored. The paper concludes with a brief discussion of how the results of valuation studies can contribute to improved forest policy and management.

Orders:

IIED, 3 Endsleigh Street. London, WC1H 0DD, UK. Tel.: +44-171-388-2117, Fax: +44-171-388-2826, [E-mail: environ.econ@iied.org](mailto:environ.econ@iied.org).

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SYNTHESIS OF DECADES OF SILVICULTURAL RESEARCH IN DENSE RAINFORESTS OF FRANCOPHONE AFRICA: SERIE FORAFRI, 1998

For close to thirty years, CIRAD-Forêt has conducted research in the dense rainforest ecosystems of West and Central Africa. A series of documents which synthesise and capitalise on the results of these research efforts has now been published in the context of the FORAFRI Project, which is financed by the French Fonds d'Aide et de coopération (FAC). A short note on the FORAFRI project was published in ETFRN News 21. The titles of the documents which have been published so far follow below. (Earlier titles were announced in ETFRN News 26)

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Document 11: **Synthèse sur les caractéristiques technologiques de référence des principaux bois commerciaux africains** (Summary of the technological reference characteristics of the main commercial African timbers) *J. Gérard, A. Edi Kouassi, C. Daigremont, P. Détienne, D. Fouquet & M. Vernay (1998)*

Document 12: **Les cartes, la télédétection et les S.I.G., des outils pour la gestion et l'aménagement des forêts tropicales d'Afrique Centrale** (Maps, remote sensing and GIS, tools for the sustainable management of the Central African tropical forest) *P. Detienne, F. Oyono, L. Durrieu de Madron, B. Demarquez & R. Nasi (1998)*

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Document 13: **Le S.I.G., une aide pour tracer un réseau de pistes forestières. Méthodes et résultats** (GIS, an aid to opening up a network of forest roads. Methods and results)

V. Freycon & E. Yandji (1998)

Document 14: **Parcelles permanentes de recherche en forêt dense tropicale humide. Eléments pour une méthodologie d'analyse de données** (Permanent research plots in tropical rainforests. Elements for a data analysis methodology)

V. Favrichon, S. Gourlet-Fleury, A. Bar-Hen & H. Dessard (1998)

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Document 15: **L'analyse de cernes: applications aux études de croissance de quelques essences en peuplements naturels de forêt dense africaine** (Tree-ring analysis: applications for growth studies of several species in natural stands in African high forest)

P. Detienne, F. Oyono, L. Durrieu de Madron, B. Demarquez & R. Nasi (1998)

Document 16: **Dynamique et croissance de l'Okoumé en zone côtière du Gabon** (Dynamics and growth of Okoumé in the coastal zone of Gabon)

M. Fuhr, M.A. Delege, R. Nasi & J.M. Minkoué (1998)

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Document 17: **Les techniques d'exploitation à faible impact en forêt dense humide camerounaise** (Techniques for low impact logging in tropical rainforests in Cameroon)

L. Durrieu de Madron, E. Forni & M. Mekok (1998)

For further information, or for orders, please contact: CIRAD-Forêt, Programme Forêt Naturelle, Campus de Baillarguet, BP 5035, 34032 Montpellier Cedex 1, France. Tel: +33 4 67 59 37 89, Fax: +33 4 67 59 37 33

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GESTÃO PARTICIPATIVA DOS RECURSOS FLORESTAIS. ESTUDOS DE CASOS.

C. Guillery & F. Besse (1998)

De 17 a 23 de novembro de 1997 um ateliê internacional teve lugar em Torodi, Niger sobre a tema "Redes de comunicação para a promoção das florestas e das árvores tropicais - O caso da "Rede Árvores Tropicais". Durante a manifestação vinte experiências foram estudadas. Dentre elas, nove foram escolhidas para a produção deste documento.

O documento apresenta estudos de casos que abrangem o conjunto das zonas geográficas e climáticas da África. Quatro descrevem uma ação em zona húmida ou sudano-guineana,, quatro em zona saheliana ou sudano-saheliana e uma em região de montanha. As casos se apresentam novas maneiras para salvar e corrigir os erros cometidos durante as tentativas anteriores de salvaguarda do meio ambiente em Burundi, Congo Democrático, Costa de Marfim, Guiné, Mali, Senegal e Togo. Assim, o documento apresenta experiências importante com gestão participativa dos recursos florestais em países confrontados com efeitos letais, imediatamente sensíveis, da destruição das árvores.

Informações: SILVA, 21 Rue Paul Bert, 94130 Nogent sur Marne, France. Tel.: +33 148 755944, Fax: +33 148 763193, Email: silva@cirad.fr (72 pp. SILVA. Documento Técnico. SILVA/FAO/CTA).

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CONSIDERACIONES ECOLÓGICAS SOBRE LA REGENERACIÓN NATURAL APLICADA AL MANEJO FORESTAL. (Ecological aspects of the use of natural regeneration in forest management)

M.R. Guariguata (1998)

The booklet discusses the main ecological factors that influence tree recruitment in neotropical moist and wet forests within the context of timber management based on selective logging. It is proposed that setting aside protection areas in managed forests as a way to preserve ecological processes may not be sufficient to ensure sustainable levels of natural regeneration. Likewise it is argued that a thorough understanding and application of tree seed ecology can help to refine management prescriptions. A review is provided of critical aspects of tree reproductive biology, seed production and dispersal, spatial and temporal constraints on seed availability, disperser behaviour, and the potential consequences of hunting and forest fragmentation on tree regeneration. All these issues are discussed in the light of their implications for biological sustainability in selectively logged forests.

Orders: CATIE, CATIE 7170, Turrialba, Costa Rica.

Tel: +506 556 1933, Fax: +506 556 7766 Serie Técnica, Informe Técnico No. 304, Colección Manejo Diversificado de Bosques Naturales, Publicación No. 14, 27 pp.

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