

**Annex 1:  
Terms of Reference**

# **Terms of Reference**

**for**

## **Thematic Review of Danida Forest Seed Centre, 2003**

### Introduction

During 2000 and 2001, an evaluation of Danida-funded development research was undertaken by the Hernes Commission (Danida, April 2001). A comprehensive reorientation of support to Danish development research is currently being implemented as a follow-up to the Hernes report. The Hernes report identified a number of weaknesses in the previous allocation of research funds. Therefore, the reorientation will emphasise both (1) the introduction of performance contracts that can raise the quality and efficiency of the research and (2) a more direct link between Danida's sector programmes and the research projects so that research support makes a more direct contribution to assistance efforts.

At its meeting 15-16 January 2002, the Technical Advisory Committee (TAC) of Danida Forest Seed Centre (DFSC) took note of the quite favourable observations concerning DFSC made by the Hernes Commission; and TAC recommended that Danida undertake a thematic review of tree seed related projects and that this review imply both a review and a forward-looking assessment that would help guide DFSC's future role (DFSC, May 2002). While this recommendation has been found relevant, Danida furthermore finds it beneficial to undertake a broader forward-looking assessment with point of departure in the overall Danish support to natural resource management and the role of trees in this context.

A reorientation of Danish sector research in general is also underway. A review of Danish sector research was undertaken in the spring 2002 (Danmarks Forskningsråd, May 2002). Subsequently, an interministerial working group has prepared a set of objectives and principles for future sector research in Denmark in order to renew the sector research and support a more coherent and well-functioning research system in Denmark (Ministeriet for Videnskab, Teknologi og udvikling *et al.*, Oct. 2002). These objectives and principles may also to some extent affect development research supported by Danida. An important objective is to ensure a critical mass of competences and promote synergy. Danida has in this context expressed an interest in assessing the present organisational structure and institutional setting of DFSC. One option proposed would be to integrate DFSC into the future Centre for Forestry, Landscape and Planning which will be established as a result of a merger between the Forestry School (Skovskolen), the Research Centre for Forestry and Landscape (Forskningscentret for skov og Landskab) and relevant parts of the Institute for Economics, Forestry and Landscape of the Royal Veterinary and Agricultural University. The future Centre will become a special institute within the Royal Veterinary and Agricultural University.

Danida has therefore decided to implement a broad thematic review of Danida Forest Seed Centre which should consider the current reorientation of support to Danish development research as well as the overall objectives and principles underway for Danish sector research.

## 1. Background

Danida Forest Seed Centre (DFSC) is part of the Danish development and environmental assistance programme and operates within this overall context.

### 1.1 Danish development and environmental assistance to forest related issues

Denmark provides significant support to forest management, agro-forestry and forest conservation as part of the Danish development assistance and the specific Danish environmental assistance through the Environment, Peace and Stability Fund (EPSF).

The overall Danish policy in this context is to improve living conditions among the rural poor; to maintain or improve the environmentally protective functions of trees and forests; and to conserve biological diversity.

Danish support to forest management and conservation has been in a period of transition marked in particular by the concentration of traditional Danida support on specific sectors implying less priority to the forest sector in the narrow sense, while support to tree planting as part of integrated natural resource management in general has been increasing.

Furthermore, 'Forests and Wood Resources' and 'Biological diversity' are two of the focus areas in the Danish environmental co-operation with developing countries through the EPSF.

Forestry and agro-forestry are considered parts of the agricultural sector at large, and also as part of the natural resource management sector. The Danida Sector policy for agriculture conceives the sector assistance to agriculture within the context of natural resource management. The sector approach and the integration of forestry and tree planting in the agricultural sector will most likely lead to increasing tree planting as part of integrated land management in the agricultural sector, and thus to increased support from Danida to tree planting activities.

The development and environmental assistance to forest related activities include the following broad areas of support:

- a. Support to the establishment and institutional strengthening of tree seed centres, including genetic conservation of tree seeds, development of the national legal framework and national institutions, establishment of seed supply systems and public awareness raising;
- b. Support to the establishment and strengthening of natural resource management systems, including legislative aspects of physical planning at central, local and community level, support to implementation of management systems aiming at conservation or eco-friendly exploitation systems, community or joint forest management, etc.
- c. Support to the establishment of pilot schemes and models for sustainable use of trees integrated in agricultural systems (agro-forestry), for fuel wood purposes, etc.

### 1.2 Danida Forest Seed Centre in development research and development assistance

DFSC is a public Danish non-profit institute with its own budget and staff. The development objective of DFSC is to contribute to improve the benefits of growing trees for the well-being of people in developing countries within the framework of overall Danida policies.

DFSC was established in 1969 with the support of FAO and Danida in response to the depletion of the tropical forests and the threat this poses to mankind, which today - more than 30 years later - is generally recognised as one of the major issues in environment and development. DFSC is based in Denmark but all its activities are directed towards the developing countries.

Before 1997 DFSC was a development assistance project subject to the standard cycle of Danish development projects involving periodic reviews and approval by the Board of Danida. Since 1997 DFSC has been an institution listed in the Danish State Budget. Up to 1999 the objectives and activities of DFSC were laid down in project documents in accordance with current Danida procedures. From 2000, the work of DFSC is guided by a new strategy for the institution, "Danida Forest Seed Centre Strategy 2000-2010, Challenges and priorities in management of forest genetic resources 2000-2005" (DFSC 2000a).

The work and programme of DFSC is directed by a Board of Directors chaired by Danida and a Technical Advisory Committee (TAC) with representatives from a number of Danish and international institutions (DFSC 2002).

The core budget of DFSC is allocated each year by the Ministry of Foreign Affairs (Danida) on the Danish Government Finance Act approved by the Danish Parliament. DFSC has at present an annual budget of 6 million DKK for base programme activities. This budget is drawn from Danida research funds. In addition DFSC provides other development assistance services for approximately 2-3 million DKK per year (the project support programme).

The base programme comprise a general information service including publications and advise, a seed bank and seed supply service, provision of training, and research and development activities. The project support programme provides all types of services in management of forest genetic resources, primarily in the form of consultancy services.

DFSC has over the years contributed to the initiation and support of a number of Danish supported development and environment projects in different regions and countries<sup>1</sup>. Currently there are active Danish supported tree seed programmes in Indonesia, Nepal, Burkina Faso, Vietnam, Laos and Cambodia. Furthermore, more specific research and development programmes have been implemented with IPGRI, ICRAF, FAO and CATIE. All these activities amount to a current total annual allocation of some 30 million DKK; an amount that has been relatively constant in the last 10-15 years.

DFSC constitutes a Danish anchoring node of a large international network contributing to adaptation and transfer of know-how in use and conservation of tree genetic resources. The work of DFSC has over the years reflected the changing priorities in international development assistance in accordance with Danida development assistance policy and more recently also with Danish environment assistance policy (cf. DFSC 2000). DFSC is thus *not* a research institution *per se* but rather a *knowledge based* development assistance institution

### 1.3 Previous reviews and evaluations

While a project (1969-1997), DFSC was subject to reviews and evaluations as part of the standard project cycle. An evaluation of DFSC for the period 1969-79 was undertaken in 1980 (Ministry of Foreign Affairs 1980). A review of activities 1980-1988 took place in 1988 (Danida 1989) and an evaluation again in 1993 covering the period 1989-1993 (Danida 1993).

In preparation for the DFSC Strategy mentioned above, a Stakeholder-Seminar on Forest and Trees in Environment and Development Co-operation entitled 'The Importance of Managing Forest Genetic Resources and Reproductive Material for Sustainable Forest Management' was held in 1998. The seminar provided a set of recommendations (DFSC 1998) which were used for the DFSC

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<sup>1</sup> Burkina Faso, Central America, Cambodia, Eritrea, Ethiopia, India, Indonesia, Laos, Nepal, Nicaragua, Sudan, Tanzania, Thailand, Uganda and Vietnam.

Strategy for 2000-2010. According to the DFSC Strategy, the next review should take place some time before 2005 (DFSC 2000).

## 2. Objective of the Review

The objective of the review is to provide the analytical background for an assessment (impact and relevance) of DFSC performance since 1993 and its future role within development and environmental assistance as well as the future institutional set-up of the institution.

## 3. Approach

The review will be carried out in three phases:

- 1) A study in Denmark (including desk study),
- 2) a field 'impact/sustainability' study (visits to at least two Danida supported projects in Africa and Asia and at least one international collaborative institution) and
- 3) preparation of debriefing note and debriefing session in Danida. Preparation of a draft review report and a final review report after having received comments to the draft report from Danida and DFSC.

During the first phase, a detailed approach and work programme, including travel programme will be presented by the Consultant to Danida.

The review will include relevant material and information going back to 1993 and will thus cover the period 1993-2002.

It is envisaged that the Consultant will base the impact assessment on already existing documentation verified by field observations rather than an independent in-depth assessment.

## 4. Scope of work

The Review will comprise, but not necessarily be limited to the following activities:

In phase 1 the review team will:

- Prepare an overview of Danida supported forest-related activities during the last 10 years and an overview of the present trends in forest related activities. This overview should include the use of and an assessment of the future need for research-based knowledge.
- Provide an overview of DFSC activities since 1993 and the major achievements.
- Analyse to what extent the DFSC-objectives are in line with Danida's overall priorities for development assistance with particular relevance to environmental issues, poverty alleviation aspects, people's participation and women aspects.
- Analyse the relevance of the DFSC-outputs and DFSC-research and -development activities in relation to the specific needs of the relevant Danida sector programmes and the international demand for research-based knowledge in forest-related development activities.
- Assess the role of DFSC as resource base for Danida.
- Examine methodology and quality of the research and development carried out at DFSC since 1993.
- Assess the level and quality (appropriateness) of the 'DFSC-outreach-activities' compared to the needs of defined target groups.

- Examine and assess the co-operation between DFSC and a) institutions in developing countries, b) international institutions and c) Danish research and training institutions.
- Assess the feasibility of merging or integrating DFSC with another Danish research and training institution, such as i.a. the future Centre for Forestry, Landscape and Planning, in order to ensure a critical mass of competences and more synergy
- Examine DFSC's internal organisation, management and working methods and staff composition.
- Examine the present administrative and management arrangement with the Danish Forest and Nature Agency and assess strengths and weaknesses.
- Assess the present funding modalities for DFSC, and make suggestions for future modalities.
- Propose a future institutional setting and organisation of DFSC based on i.a. the feasibility study mentioned above.
- Propose future major activity areas for DFSC.

In phase 2 the review team shall:

- Assess the impact of the DFSC since 1993, including services rendered to Danida-financed 'tree seed projects'
- Analyse and assess the need for DFSC-support/services to relevant Danida Sector programmes.
- Assess the usefulness of the DFSC-publication service compared to the need of the target groups in developing countries.

In phase 3 the review team shall:

- Prepare a debriefing note and have debriefing sessions at Danida and DFSC.
- Prepare a comprehensive review report (draft and final) following the Danida standard to the extend possible. The report shall include the following recommendations regarding DFSC:
  - Institutional setting and organisation, including options for integration with another research and training institution as well as the advantages and disadvantages of such options.
  - Technical working areas, including major activity areas to be included in a future performance contract with Danida.
  - Target institutions and organisations for DFSC-services, and means and ways for DFSC to provide the required services.
  - Modalities for collaboration with in-country and out-country institutions and organisations.

## 5. Composition of the team

The review team will consist of the following persons

- *Poul Buch-Hansen, Development Associates A/S*  
Institutional and organisational specialist, with particular knowledge of international development work and the Danida programme, teamleader.

- *Marcus Robbins, Free lance Consultant*  
International level specialist on tropical and sub-tropical forestry, with in-depth knowledge of forest genetic resources
- *Henrik Als, Development Associates A/S*  
International level social scientist with particular knowledge on means and ways to reach and support the farmer level groups in developing countries.

## 6. Timing

The review shall be carried out from 17 March to Mid June 2003. The first phase, in Denmark, will be of four weeks duration, the second phase, in Europe, Africa and Asia will be of two weeks duration and the third phase will be of two weeks duration. The team may consider to split up in two teams and undertake two study trips of two weeks' duration each.

## 7. Major Reference Documents (to be completed/updated)

- Danida 1989: Danida Forest Seed Centre. Review Report. Danida, February 1989.  
 Danida 1989: Danida Forest Seed Centre Project 1990-1994. Appraisal Report. Danida, July 1989.  
 Danida 1993: Evaluation Report. Danida forest Seed Centre. Danida 1993/8.  
 Danida 1994: Project Document. Danida Forest Seed Centre (1995-1999). August 1994.  
 Danmarks Forskningsråd, May 2002: Gennemgang af sektorforskningen  
 DFSC 1995: Danida Forest Seed Centre Strategy and Work plan 1995-99.  
 DFSC 1998: The Importance of Managing Forest Genetic Resources and Reproductive Material for Sustainable Forest Management. Proceedings of the Seminar on Forest and Trees in Environment and Development Co-operation, Denmark 1998.  
 DFSC 2000a: Danida Forest Seed Centre Strategy 2000-2010. Challenges and priorities in management of forest genetic resources 2000-2005.  
 DFSC 2000b: Annual work plan 2000.  
 DFSC 2000c: Proposal for activities within the framework of the DFSC Strategy 2000-2010. long version.  
 DFSC 2000d: List of publications, reports and reprints from Danida Forest Seed Centre.  
 DFSC 2000: Institutional profile prepared for the work of the Hernes Commission 2000/2001.  
 DFSC 2002: Report of the meeting of the Technical Advisory Committee (TAC) of Danida Forest Seed Centre, 15-16 January 2002.  
 Ministry of Foreign Affairs 1980: Evaluation of Danish/FAO Forest Tree Seed Centre. Report of the Mission, September 1980.  
 Ministeriet for Videnskab, Teknologi og udvikling *et al.*, Oct. 2002...
- Relevant documents from selected development and environmental programmes and projects.  
 Danida 1995: Danida Sector Policies: Forestry and Agro-Forestry  
 Danida 2000: Partnerskab 2000

11 March 2003

**Annex 2:  
List of Persons Met**



## **Annex 2: List of Persons Met**

### **DESK WORK PHASE: March/April**

Niels Ehlers Koch, Director, Danish Forest and Landscape Research Institute, FSL  
Bo J. Thorsen, Danish Forest and Landscape Research Institute  
Per Holten Andersen, Rector, The Royal and Veterinary and Agricultural University, KVL  
Søren Hartz, Rector of Education, The Royal and Veterinary and Agricultural University, KVL  
Carsten Schmidt Olesen, Forestry Department, The Royal and Veterinary and Agricultural University  
Jens D. Dragsted, Head of Forestry Department, The Royal and Veterinary and Agricultural University  
Erik Kjær, Prof., The Royal and Veterinary and Agricultural University  
Jens Peter Simonsen, Deputy Director, Forest and Nature Agency

### **ITALY: 28 March – 2 April**

Christel Palmberg-Lerche, Retired Chief, Forestry Department, Food and Agriculture Organisation of the United Nations (FAO)  
Froylan Castaneda, Forestry Officer (Management of Tropical Forests), Forestry Department, FAO  
Dr. Peter Holmgren, Chief, Forestry Department, FAO  
Peter Iversen, Associate Professional Officer (Forest Genetic Resources), Forestry Department, FAO  
Michel L. Malagnouk, Forestry Officer (Arid Zone and Fuelwood Production), Forestry Department, FAO  
Dr. Syaka Sadio, Forestry Officer (Agroforestry and Land Use), Forestry Department, FAO  
El Hadji M.Sene, Director, Forestry Department, FAO  
Mette Loche Wilkie, Forestry Officer (Forest Management), Forestry Department, FAO  
Dr. Weber A.N. Amaral, Senior Scientist, Forest Genetic Resources Coordinator, International Plant Genetic Resources Institute (IPGRI)  
J.M.M. Engels, Director, Genetic Resources Science and Technology Group, IPGRI  
Jarkko Koskela, EUFORGEN Coordinator, Regional Office for Europe, IPGRI  
Barbara Vinceti, Associate Scientist, Forest Genetic Resources, IPGRI

### **KENYA: 28 - 29 April**

Dr. Kwesi Atta-Krah, Regional Director, Sub-Saharan Africa, International Plant Genetic Resources Institute (IPGRI), c/o ICRAF  
Dr. Mikkel Grum, Genetic Diversity Scientist, Sub-Saharan Africa Group, IPGRI  
Dr. Kameswara N.Rao, Germplasm Conservation Scientist, Sub-Saharan Africa Group, IPGRI  
Dr. Alice A. Kaudia, Assistant Director, Kenya Forestry Research Institute (KEFRI)  
Dr. Paul K. Konoche, Director, KEFRI  
Bernard Owuor, Manager / Research Scientist, Seed Centre, KEFRI  
Glenn L. Denning, Director of Development, World Agroforestry Centre (ICRAF)  
Dr. Steven C. Franzel, Principal Scientist, Agricultural Economics, ICRAF  
Will Frost, Nursery and Tree Product Marketing Scientist, ICRAF  
Dr. Bashir Jama, Senior Scientist (Agroforestry), Research and Development, ICRAF, Uganda  
Dr. Roeland Kindt, Tree and Landscape Diversity Specialist, ICRAF  
Jens-Peter Barkenow Lillesø, Seed supply specialist, ICRAF  
Diane Russell, Co-Leader, Tree and Markets, ICRAF

## **TANZANIA: 30 April – 9 May**

### **Dar es Salaam**

Robert Jensen, Chief Technical Adviser

Alfred G. Kalaghe, Agro/Environmental Adviser, Africare

Dr. Veli, Adviser (Forestry), Finnish Embassy

Britt Granqvist, Seed Adviser, Ministry of Agriculture and Food Security

Mary H. Lutkamu, Assistant Director (SP), Ministry of Agriculture and Food Security

Mr. Hadija, Ministry of Natural Resources

Prof. Said Iddi, Director, Forestry and Beekeeping Division, Ministry of Natural Resources and Tourism

Jan-Erik Studsrod, First Secretary, Royal Norwegian Embassy

### **Morogoro**

Prof. Willbard S. Abeli, Director, Directorate of Research and Post-graduate Studies (DRPGS), Sokoine University of Agriculture, Morogoro (SUA)

Prof. S.A.O. Chamshama, (Petrea), Department of Forest Biology, Faculty of Forest and Nature Conservation, SUA

P. Gillah, Associate Dean, Faculty of Forestry and Nature Conservation, SUA

Prof. R.C. Ishengoma, Faculty of Forest and Nature Conservation, SUA

S. M. Salim Maliondo, Associate Professor, Soil Scientist, Department of Forest Biology, Faculty of Forest and Nature Conservation, SUA

Dr. Ephraim J. Mtengeti, Senior Lecturer, Pastures and Range Management, Department of Animal Science and Production, SUA

Z.S.K Mvena, Head, Agricultural Education and Extension, SUA

Dr. Yonika M. Ngaga, Resource Economist, Forest Economics Department, Faculty of Forestry and Nature Conservation, SUA

Mr. E. Sabas, Principal Research Officer, Tanzania Forestry Research Institute (TAFORI), Morogoro

Heriel P. Msanga, Chief Executive, Tanzania Tree Seed Agency (TTSA), Morogoro

E. Moshi, Head of Wildlife Conservation Society of Tanzania, Uluguru Mt. Biodiversity Conservation Project, Morogoro

Stephen W. Mariki, Country Programme Officer, WWF Tanzania Programme Office

## **VIETNAM: 19 May – 3 June**

### **Hanoi**

Mr. Steen Forum, Acting Senior Adviser, Indochina Tree Seed Programme, Danida

Mr. Nguyen Hong Quan, Deputy Director, Department for Forestry Development and Director of Projects

Mr. Vu Van Me, Deputy Director, Forest Sector Support Programme, Ministry of Agriculture and Rural Development

Mr. Arvid Sloth, Adviser, Cambodia Tree Seed Project, Danida

Mr. Lars Mikkel Johannessen, Development Cooperation Counsellor, Royal Danish Embassy

Ms. Nguyen Thi Yen, Forest Programme Officer, The World Conservation Union (IUCN)

Mr. Nguyen Cong Minh, Biodiversity Support Officer, The World Conservation Union (IUCN)

Mr. Tim Dawson, Forest Programme Coordinator, WWF Indochina Programme

Mr. Le Cong Uan, Forestry Programme Officer, WWF Indochina Programme

Mr. Arif Qaraéen, Chief Technical Adviser, Agricultural Sector Programme Support, Danida

Mr. Nguyen Duc To Luu, Head of Technical Section, Ministry of Agriculture and Rural Development

Prof. Dr. Tran Duy Quy, Director, Institute of Agricultural Genetics, Ministry of Agriculture and Rural Development

Ms Pham Thi Viet, Senior Secretary, Institute of Agricultural Genetics, Ministry of Agriculture and Rural Development

Dr. Cao Thang Binh, Operations Officer, Rural Development and Natural Resources, The World Bank

Dr. Klaus Muller, Director, KfW German Development Cooperation

Mr. Le Thanh Binh, Nature Conservation Division, Vietnam Environment Protection Agency (VEPA).  
Ministry of Environment and Natural Resources (MOENR)  
Dr. Ha Huy Thinh, Director, Research Centre for Tree Improvement, Forest Science Institute of Vietnam

### **Phu Tho Province**

Mr. Dung, Director, Central North Region Forest Seed Enterprise, Central Forest Seed Company.  
Mr. Nhan, Forest Research Centre, Bai Bang

### **Lang Son Province**

Mr. Hoang Le Minh, Director, North East Region Forest Seed Enterprise, Central Forest Seed Company,  
Ms. Van, Vice Director, North East Region Forest Seed Enterprise, Central Forest Seed Company  
Head of Technical Department, North East Region Forest Seed Enterprise, Central Forest Seed Company  
Head, Department of Forest Protection, Peoples' Committee, MARD  
Deputy Director, KfW project,

### **Ha Tinh Province**

Mr. Dong Bong, Micro-planning Consultant, Biodiversity Conservation in the North Truong Son Mountain Range  
Mr. Le Quang Uy, Project Director, Biodiversity Conservation in the North Truong Son Mountain Range

### **Nghe An Province**

Mr. Vo Duy Viet, Vice Director, Department of Agriculture and Rural Development (DARD)  
Mr. Long, Deputy Head of Forestry Division, Department of Agriculture and Rural Development (DARD)  
Mr. Ebbe Poulsen, Senior Adviser, Forest Protection Project, Danida  
Mr. Chu Van Dung, Project Director, Forest Protection Project, Danida  
Mr. Nguyen Cong Trung, Vice Director, Centre of Agroforestry Technology Science and Rural Development  
Mr. Tran Nhat, Vice Director, Agriculture and Forestry Extension Centre, DARD  
Mr. Nguyen Thanh Tung, Director, Nghi Loc Forest Enterprise  
Mr. Ha, Vice Director, Nghi Loc Forest Enterprise  
Mr. Nguyen Le Van Khne, Deputy Head of Planning Division (Forestry), DARD  
Mr. Nguyen Truong Linh, Head of Nursery Brigade  
Mr. Tran Van Viet, Forest Development Department, DARD  
Ms. Bwi Thi Chung, Owner of Private Nursery, Dong Tien Village, Dong Hien Commune, Nghia Dan District  
Mr. Bui Trong Thao, Co-owner of Private Nursery, Dong Tien Village, Dong Hien Commune, Nghia Dan District  
Mr. Vo Dinh Hai, Seed Customer, Dong Tien Village, Dong Hien Commune, Nghia Dan District  
Mr. Nguyen Hun Quang, Owner of Seed Orchard, Dong Tien Village, Dong Hien Commune, Nghia Dan District

### **Thanh Hoa Province**

Mr. Nguyen Nam Son, Vice Director, Department of Agriculture and Rural Development (DARD)  
Mr. Ha Xuan Thanh, Director, Forest Seed Enterprise  
Mr. Ha Long Giang, Chief Accountant, Forest Seed Enterprise  
Mr. Vo Dinh Tuyen, Deputy Director, Forestry Development Department, DARD / Chairman of Management Board, Seed Network  
Mr. Ngo Voc, Director, Ha Trung Forest Enterprise  
Ms. Le Thi Oanh, Owner of Private Nursery, Thien Son Village, Van Thien Commune, Nong Cong District

**Annex 3:  
Summary of DFSC's Strategy**

### **ANNEX 3: Summary of DFSC's strategy:**

The overall development objective (goal) of the DFSC corresponds to Danish development policy in relation to the environment and the forestry sector:

- *To contribute to improving the benefits of growing trees for the well-being of poor people in developing countries, now and in the future.*

This goal is expanded in more detail:

- *Improved provision of benefits from growing woody plants to help meet the requirements for timber, poles, fuel, fodder, food and shelter,*
- *Contribution to the maintenance of the environmentally protective functions of trees and forests and rehabilitation of degraded environments, and conservation of genetic resources of trees*

The immediate objective (purpose) is: *The promotion of "tree seed programmes" in developing countries,*

A *programme* is defined as encompassing the activities of all stakeholders for the sub-sector, and *tree seed* includes all woody plants and their reproductive material (seeds, vegetative material, etc.) required for the use and conservation of genetic resources. The aim of such programmes is *to provide and promote a sustainable supply of genetically appropriate material in good physiological condition.*

DFSC restates the three technical elements, together with a crosscutting institutional fourth element with which to meet its objectives:

- **Seed procurement** includes practices designed to ensure the quantity and physiological quality of seed supplies (e.g. collection, processing, testing, storage, treatment, and distribution).
- **Tree improvement** includes practices to improve the genetic quality of tree species already in use and to introducing new and better species and types (e.g. selection of species and provenances (sources) and breeding)
- **Gene conservation** includes practices designed to maintain genetic variation now and in the future (e.g. protection of endangered seed sources, and establishment of new)
- **Institutional development** contributes to setting up efficient forest seed programmes and their facilities, and improving existing ones.

#### **The Five Focal Areas**

DFSC strategy identifies five focal areas of work (equivalent to outputs) and several activity areas summarised as follows:

##### **(1) Integration of tree seed programmes**

DFSC recognises that the four elements must be properly integrated within tree seed programmes, according to the needs of the country, and that existing programmes may need to be changed to meet future needs better. Activity areas are therefore:

- Studying baseline data e.g. obtaining knowledge of a country's planting programmes, current seed supply, institutional infrastructure, stakeholders' interests etc.
- Planning and organising efficient seed-supply programmes and networks that fit into the (changing) institutional set-up of the country in question
- Managing seed programmes, including improvement of management routines for planning, finances and decision-making.
- Reviewing policy, legislation and regulation of conservation and use of tree genetic resources at international and national levels
- Analysing stakeholders prior to new programmes, or to guide re-orientation of existing ones.
- The remaining focal areas and activities that DFSC describes could be part of integrated seed programmes, but may need specific support.

## **(2) Provision of quality seeds for farmers**

Since there is a growing demand for appropriate multi-purpose tree seed for planting outside forests by farmers, activity areas identified by DFSC are:

- Surveying needs and priorities of farmers with regard to tree species and purpose of planting
- Developing sustainable seed supply systems that will fit the situation of the farmers
- Surveying farmer's methods in order to make good use of local experience
- Developing practical techniques for domestication, seed handling, and plant production adapted to farmer's situation
- Developing local extension material and capacity building by training of trainers

## **(3) Conservation of the genetic resources of trees**

Genetic resources will always form the building blocks for future species selection and improvement, required by farmers or larger scale reforestation programmes. The activity areas identified by DFSC are:

- Evaluating conservation requirements and establishing and maintaining conservation stands, *in situ* and *ex situ*.
- Developing conservation methods for tree species that are part of complex forest systems comprising a variety of species
- Developing management methods that promote 'conservation in use' of tree species

## **(4) Promotion of (under-utilised) species**

There are many species that are not widely or improperly used because little is known about their procurement, best seed sources, or there are problems in propagation. The activity areas identified by DFSC are:

- Surveying 'new' species of potential importance in tree planting programmes and transferring information about them.
- Developing improved methods of handling seed to prevent this element from becoming a bottleneck in the utilisation of certain species.
- Promoting the practical applications of results from species and provenance trials.
- Developing domestication plans, in particular for 'new' local species and for species used in agroforestry.

## **(5) Transfer and use of knowledge**

DFSC plays a role as an information house, conducting training, providing extension material, and creating awareness among policy makers etc. The activity areas identified by DFSC are:

- Analysing pathways of dissemination of know-how to different groups of beneficiaries
- Developing outreach methods involving different media
- Maintaining and developing global information services that target different groups of tree planters and decision makers.

**Annex 4:  
List of DFSC Publications**

## ANNEX 4: DANIDA FOREST SEED CENTRE PUBLICATIONS

(Current publications in chronological order 1981-2003)

Status, April 2003

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### 1981:

#### Technical Notes

1. Measurement and Management of Tree Seed Moisture. F.T. Bonner, November 1981.

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### 1983:

#### Technical Notes

16. Seed Collection Units, 1. Seed Zones. H. Barner and R.L. Willan (editors). May 1983.
4. Nursery Techniques for Tropical & Sub-tropical Pines. I.A. Napier & R.L. Willan. Sept. 1983.
7. Climbing into the Crown Directly. The Advanced Line Technique for Gaining Access to Tree Crowns. A.M.J. Robbins. Nov. 1983.

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### 1984:

#### Technical Notes

9. Seed Extraction, 1. The Tarpaulin Method of Sun Drying Cones and Seed Extraction. A.M.J. Robbins. February 1984. (Revised Sept. 1994).
11. Climbing within the Crown. Climbing using the Prussic Knot. Peter Ochsner. March 1984.
12. A Review of 'Seed Testing. Project Seed Laboratory 2000-5000', by W.J. van der Burg, J. Bekendam, A. van Geffen and M. Heuver. March 1984.
13. Tools for Harvesting Tree Fruits. A.M.J. Robbins. April 1984.
14. Provenance Seed Stands and Provenance Conservation Stands. R.L. Willan. May 1984.
17. Seed Extraction, 2. Extraction of Pine Seed by Means of Sun Drying on Elevated Trays Followed by Tumbling. J. Granhof. August 1984. (Revised Sept. 1994).
18. The Use of Small Covered Containers for Germination Testing. A.M.J. Robbins. October 1984. (Revised Feb. 1997).
19. Seed Crop Evaluation. H. Barner and K. Olesen. October 1984. (Revised April 1994).

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### 1985:

#### Technical Notes

20. Mechanical Extraction and Cleaning of Gmelina arborea Nuts. Sim Boon Liang and Wong Ching Yong. January 1985.
21. Glossary of Seed Germination Terms for Tree Seed Workers. F. Bonner. March 1985. English and Spanish editions.
22. A versatile, low-cost Drying Kiln for Opening Pine Cones. A.M.J. Robbins. March 1985.
23. Climbing into the Crown Directly. Methods of Access into the Crown of Canopy Trees. Donald R. Perry and John Williams. April 1985.
24. Safe Tree Climbing in Forest Management. April 1985 (Re-issued March 1995).
25. Seed Cleaning with a Winnowing Chamber. G.E. Chaplin. June 1985.
26. A Machine for Freezing Seed of Chemicals. Finn Stubsgaard. November 1985.

#### Books

Guide to Forest Seed Handling. R.L. Willan. FAO Forestry Paper 20/2. 1985. Out of print.

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### 1986:

#### Technical Notes

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##### *Neem Network*

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| 2 | <i>Acacia auriculiformis</i> | Indochina Tree Seed Programme; IFSP, Indonesia |
| 3 | <i>Acacia mangium</i>        | Indochina Tree Seed Programme; IFSP, Indonesia |
| 4 | <i>Acacia mearnsii</i>       | NTSP, Tanzania                                 |

5	<i>Acacia senegal</i>	
6	<i>Azelia xylocarpa</i>	Indochina Tree Seed Programme
7	<i>Albizia lebbek</i>	NTSP, Tanzania
8	<i>Alnus nepalensis</i>	Indochina Tree Seed Programme
9	<i>Alstonia scholaris</i>	Indochina Tree Seed Programme; IFSP, Indonesia
10	<i>Anacardium excelsum</i>	CATIE, Costa Rica
11	<i>Anacardium occidentale</i>	Indochina Tree Seed Programme IFSP, Indonesia
12	<i>Azadirachta indica</i>	NTSP, Tanzania
13	<i>Azadirachta excelsa</i>	
14	<i>Casuarina equisetifolia</i>	Indochina Tree Seed Programme; IFSP, Indonesia
15	<i>Grevillea robusta</i>	NTSP, Tanzania ; Australian Tree Seed Centre
16	<i>Guazuma ulmifolia</i>	CATIE, Costa Rica
17	<i>Neolamachia cadamba</i>	Indochina Tree Seed Programme
18	<i>Swietenia mahagoni</i>	
19	<i>Acacia tortilis</i>	NTSP, Tanzania
20	<i>Cedrela odorata</i>	CATIE, Costa Rica
21	<i>Balanites aegyptica</i>	
22	<i>Ceiba pentandra</i>	CATIE, Costa Rica; IFSP, Indonesia
23	<i>Cinnamomum camphora</i>	Indochina Tree Seed Programme
24	<i>Quercus humboldtii</i>	CONIF, Columbia
25	<i>Cordia alliodora</i>	CATIE, Costa Rica
26	<i>Dalbergia cochinchinensis</i>	Indochina Tree Seed Programme
27	<i>Dovyalis caffra</i>	NTSP, Tanzania
28	<i>Faidherbia albida</i>	
29	<i>Senna siamea</i>	Indochina Tree Seed Programme; IFSP, Indonesia
30	<i>Swietenia macrophylla</i>	CATIE, Costa Rica; IFSP, Indonesia
31	<i>Azelia quanzensis</i>	NTSP, Tanzania
32	<i>Astronium graveolens</i>	CATIE, Costa Rica
33	<i>Swietenia humilis</i>	CATIE, Costa Rica
34	<i>Acacia seyal</i>	
35	<i>Pentaclethra macroloba</i>	CATIE, Costa Rica
36	<i>Pterocarpus angolensis</i>	NTSP, Tanzania
37	<i>Pterocarpus indicus</i>	IFSP, Indonesia
38	<i>Vitex keniensis</i>	NTSP, Tanzania
39	<i>Vochysia guatemalensis</i>	CATIE, Costa Rica
40	<i>Pinus caribaea</i>	Indochina Tree Seed Programme; CATIE, Costa Rica; IFSP, Indonesia
41	<i>Pterocarpus macrocarpus</i>	Indochina Tree Seed Programme
42	<i>Chukrasia tabularis</i>	
43	<i>Cunninghamia lanceolata</i>	
44	<i>Syrax tonkinensis</i>	
45	<i>Tamarindus indica</i>	
46	<i>Calophyllum brasiliense</i>	CATIE, Costa Rica
47	<i>Hyeronima alchorneoides</i>	CATIE, Costa Rica
48	<i>Maesopsis eminii</i>	
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**Newsletter from 'The Project on Handling and Storage of Recalcitrant and Intermediate Tropical Forest Tree Seeds'.**

No.8 March 2001

No.9 October 2001

**Danida Forest Seed Centre NEWS**

No.6 December 2001

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62. People's Participation and the Role of Governments in Conservation of Forest Genetic Resources by Lotte Isager, Ida Theilade and Lex Thomsen. May 2002.

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Indonesian edition published by Indonesia Forest Seed Project, 2002.

**Co-publications of FAO, IPGRI/SAFORGEN, DFSC and ICRAF**

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50	<i>Vitellaria paradoxa</i>	
51	<i>Gliricidia sepium</i>	
52	<i>Illicium verum</i>	Vietnam Tree Seed Programme, VTSP
53	<i>Dipterocarpus alatus</i>	Vietnam Tree Seed Programme, VTSP
54	<i>Buddleja coriacea</i>	Banco De Semillas Forestales, Bolivia
55	<i>Tipuana tipu</i>	Centro De Semillas Forestales BASFOR – ETSFOR
56	<i>Prosopis alba</i>	Banco De Semillas Forestales, Bolivia
57	<i>Schinus molle</i>	Banco De Semillas Forestales, Bolivia
58	<i>Gonystylus bancanus</i>	Seed Technology Centre, Bogor, Indonesia
59	<i>Agathis loranthifolia</i>	Seed Technology Centre, Bogor, Indonesia
60	<i>Pinus merkusii</i>	Indonesia Forest Seed Project, IFSP
61	<i>Tectona grandis</i>	Indonesia Forest Seed Project, IFSP
62	<i>Gmelina arborea</i>	Indonesia Forest Seed Project, IFSP
63	<i>Milicia excelsa</i>	
64	<i>Shorea leprosula</i>	
65	<i>Dalbergia sissoo</i>	

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3. Evaluation of a provenance trial of *Acacia senegal* at Dori, Burkina Faso. Trial no 8 in the arid zone series. 2003
4. Evaluation of a provenance trial of *Prosopis* at Dori, Burkina Faso. Trial no 9 in the arid zone series. 2003
5. Evaluation of a provenance trial of *Acacia senegal* at Gonsé, Burkina Faso. Trial no 12 in the arid zone series. 2003
6. Evaluation of a provenance trial of *Prosopis* at Gonsé, Burkina Faso. Trial no 13 in the arid zone series. 2003

#### Danida Forest Seed Centre NEWS

No.7 February 2003

**Annex 5:  
List of Informal and Formal Collaborating Partners**

## Annex 5: List of Informal and Formal Collaborating partners

COUNTRY	ACRONYM	INSTITUTION
Australia	AFTSC	Australian Forest Tree Seed Centre
Australia	CSIRO	Commonwealth Scientific and Industrial Research Organization
Bangladesh	FRI	Forest Research Institute
Bolivia		Universidad Gabriel Morena
Bolivia	BASFOR	Centro de Semillas Forestales
Brazil	CENARGEN	CENARGEN-EMBRAPA
Brazil	CPATSA	Centro de Pesquisa Agropecuaria do Trópico Semi-Arido, Petrolina, EMBRAPA, Pernambuco
Brazil	EMBRAPA	Empresa Brasileira de Pesquisa Agropecuaria, Petrolina, Pernambuco
Brazil	IFSP	Instituto Florestal de Sao Paulo
Burkina Faso		Laboratoire de Biologie et d'Ecologie Végétales, Faculté des Sciences et Techniques, Université de Ouagadougou
Burkina Faso	CNSF	Centre National de Semences Forestieres, Ougadougou
Burkina Faso	IRBET	Institut de Recherche en Biologie et Ecologie Tropical, Ougadougou
Cambodia	CTSP	Cambodia Tree Seed Project
Chad	DFPE	Direction des Forêts et de la protection de l'Environnement
China		South China Agricultural University
China	CAF	Chinese Academy of Forestry
Colombia	Smurfit	Smurfit Carton de Colombia, Investigacion Forestal, Celulosa y Papel de Columbia S.A.
Columbia	CONIF	Corporacion Nacional de Investigación y Fomento Forestales
Congo	CNRF	Centre National des Recherches Forestieres, Pointe Noire
Congo	SNR	Service national de reboisement, Pointe Noire
Costa Rica	CATIE	Centro Agronomico Tropical de Investigación y Enseñanza, Turrialba
Denmark		Dept of Animal Science and Animal Health, RVAU
Denmark		Institute of Anthropology, UC
Denmark	CDR	Centre for Development Research
Denmark	DGISP	Danish Government Institute of Seed Pathology for Developing Countries
Denmark	DIPSS	Danish Institute of Plant and Soil Science, RVAU
Denmark	NIAS	National Institute of Animal Science, Foulum
Denmark	PD	The Plant Directorate
Denmark	RUC	Roskilde University Centre
Denmark	RVAU/KVL	The Royal Veterinary and Agricultural University
Denmark	TIS	The Tree Improvement Station
Denmark	UC	University of Copenhagen
Eritrea	TSP	Tree Seed Project
France	CIRAD-Fôret	Centre de la Coopération Internationale en Recherche Agronomique pour le Développement, Département Forestier
France	UPMC	University of Pierre et Marie Curie, Paris
Germany	IFP	Institut für Pflanzenbau
Ghana	FRI	Forest Research Institute
Holland	CPBRR	Centre for Plant Breeding and Reproduction Research
Holland	WAU	Wageningen Agricultural University
India		Raipur University
India	AFRI	Arid Forest Research Institute, Jodhpur
India	CAZRI	Central Arid Zone Research Institute, Jodhpur
India	FDK	Forestry Department Karnataka state, Bangalore
India	FRI	Forest Research Institute, Dehra Dun
India	ICFRE	Indian Council of Forestry Research and Education, Debra Dun
India	IFGTB	Institute of Forest Genetics and Tree Breeding, ICFRE, Coimbatore, Tamil Nadu
India	NARI	Nimbkar Agricultural Research Institute, Phaltan
India	JNAU	Tamil Nadu Agricultural University, Coimbatore
Indonesia	IFSP	Indonesia Forest Seed Project
Indonesia	Inti Indorayon	PT Inti Indorayon PT Inti Indorayon Utama, Factory Desa Sosor Ladang
Indonesia	Kiani Sakti	PT Kiani Sakti PT Kiani Sakfi Forest Company, Takengon, Sumatra
Indonesia	RDCB	Research & Development Centre for Biotechnology



Italy	FAO	Food and Agriculture Organization of the United Nations, Rome
Italy	IPGRI	International Plant Genetic Resources Institute, Rome
Ivory Coast	SODEFOR	Société de développement des forêts, Abidjan, Côte d'Ivoire
Kenya	ICRAF	International Centre for Research in Agroforestry
Kenya	IPGRI-SSA	IPGRI-Regional Office for Sub-Saharan Africa
Kenya	KEFRI	Kenya Forestry Research Institute, Nairobi
Kenya	UNEP	United Nations Environment Programme, Nairobi
Lao PDR	DF	Department of Forestry
Lao PDR	LTSP	Lao Tree Seed Programme
Malawi	FRIM	Forestry Institute of Malawi
Malaysia	FRIM	Forest Research Institute Malaysia
Mali	IER	Institut d'Economie Rurale
Myanmar	FRI	Forest Research Institute
Nepal	FRSC	Forest Research and Survey Centre, Kathmandu
Nepal	HMG/TISC	HMG/Danida Tree Improvement and Silviculture Component, Kathmandu.
Niger	DE	Direction de l'Environnement
Nigeria	FDF	Federal Department of Forestry, Garki, Abuja
Nigeria	FRIN	Forest Research Institute, Ibadan
Pakistan	PFI	Pakistan Forest Institute, Peshawar
Phillipines	ERDB	Ecosystems Research and Development Bureau, Los Baños, Laguna
Senegal	DRPF	Direction des Recherches sur les Productions Forestières, ISRA Dakar
Senegal	ISRA	Institut Sénégalais de Recherches Agricoles, Dakar
Senegal	LNERV	Laboratoire National d'Elevage et de Recherches Vétérinaires, ISRA, Dakar
South Africa	Sappi	Sappi Forest (Pty) Limited, Republic of South Africa
South Africa	UN	University of Natal
Sri Lanka	CF	Conservator of Forests, Battaramulla
Sudan	ARC	Agricultural Research Corporation
Sudan	FRC	Forest Research Centre, Soba
Swaziland	Usutu Pulp	Usutu Pulp Company Ltd., Bunya, Mbabane
Tanzania		Faculty of Forestry and Nature Conservation, Sokoine University of Agriculture
Tanzania	NTSP	National Tree Seed Programme, Morogoro
Thailand	ASEAN-FTSC	ASEAN Forest Tree Seed Centre
Thailand	RFD	Royal Forest Department
Uganda	NTSP	National Tree Seed Project, Namanve
United Kingdom	OFI	Oxford Forestry Institute
United Kingdom	RBG	Royal Botanic Gardens Kew
USA	CAMCORE	Central America and Mexico Coniferous Resources Cooperative
Vietnam	FSI	Forest Science Institute of Vietnam Research Centre for Forest Tree Improvement), Chem, Tu Liem, Hanoi
Vietnam	ITSP	Indochina Tree Seed Programme Vietnam Tree Seed Project
Zambia	FD	Forest Department, Ndola
Zimbabwe	FRC	Forest Research Centre (Forestry Commission), Highlands, Harare

**Annex 6:  
Summary on DFSC Project Support: 1993 – 2003**

## **ANNEX 6: Summary on DFSC Project Support: 1993 – 2003**

The information given here for each programme or project is based mainly on notes provided by DFSC staff.

- **DANIDA (and predecessor) projects**

### **Tanzania: National Tree Seed Programme (NTSP)**

The NTSP started in 1989. Danida supported the first three phases of the programme, which ended in 2000. It now continues as the Tanzania Tree Seed Agency (TTSA) – a semi-autonomous enterprise financed partly by the Government of Tanzania and partly from its own incomes, mainly sale of seed. There are three regional centres in Morogoro, Iringa, and Lushoto. Some funding has come from the CIDA-funded SADC Tree Seed Centre Network.

DFSC assisted with the design of the original project, and has provided consultancy and extensive training support. A partial assessment of the NTSP by the current review is part of the main report.

### **Nepal: Tree Improvement Programme (TIP)**

The TIP started in 1990 and ended in 1998. It built on previous involvement of DFSC starting in 1987.

DFSC contributed to preparation of TIP, and provided a series of consultancies on seed handling. The TIP activities were incorporated into the TISC (see below).

### **Nepal: Tree Improvement and Silviculture Component (TISC) of the Natural Resources Management Sector Assistance Programme (NARMSAP).**

TISC forms part of the wider natural resources programme, NARMSAP, started in 1998. DFSC has been involved in developing the programme, provision of consultancies, and the formulation and development of a DFSC/TISC Partnership Programme concerned with the domestication and use of multipurpose trees for the benefit of smallholders in Nepal.

The long (and continuing) period of DFSC's involvement in the Nepal seed sector has given rise to many documents associated with DFSC's work. A list indicates some 180 documents, of which approx 150 were published in the last 10 years.

Nepal appears to have provided DFSC with a wide range of experience, especially in the context of community forestry. As with other programmes, there is a continuing challenge to develop an effective decentralised approach and to embrace new species for use on farms. Also, development of appropriate silvicultural practices and extension are particular challenges.

### **Nicaragua: Tree Improvement and Seed Centre**

Danida initiated a forest tree seed programme in 1983, which continued until 1990. The programme was evaluated, and a new project was started in 1991 to establish a seed centre and associated field activities.

DFSC was involved in the preparation of the project, appraisals, reviews, and consultancies.

Due to problems of securing land for the centre and seed sources, the project had to be terminated in 1996.

### **PROSEFOR, Central American Tree Seed Network**

The Centre hosted this regional project for Tropical Agriculture Research and Education (CATIE) in Costa Rica. It became operational in 1992 with the arrival of a Danish Coordinator. The project aimed at supporting national tree seed programmes in Costa Rica, Guatemala, Honduras, El Salvador, Panama, Nicaragua and the Dominican Republic.

A baseline study was carried out in 1992 and a plan of operation made in 1993. The project was reviewed in 1995 and an updated plan of operation was made in 1999. A second phase from 1998 to 2001 included new agroforestry and master programme components. The second phase was finalised early 2002.

DFSC helped with project preparation, provision of all consultancies, and has collaborated with PROSEFOR in the production of many Spanish language publications.

Concluding progress reports noted that the regional network on tree seed and genetics was effective and a lot of knowledge had passed through it when it was donor supported, but it was difficult to continue without donor support because the subject of tree seed was too narrow to 'carry' such a network.

It was also noted that operation of national tree seed banks (centres) without financial support from the governments was difficult.

### **Eritrea National Tree Seed Programme (ETSP)**

The ETSP originated as a UNDP project in 1994/95, but was included in the 1996-2001 Agricultural Sector Support Programme (ASSP) and started in 1996. Danida support to Eritrea was officially terminated in June 2002 for political reasons.

DFSC support was based on a twinning agreement with the ASSP, and included preparation of the project and re-design under ASSP, provision of a technical advisor (1996-1998), 15 consultancies (9 by DFSC staff), and training.

DFSC considered that the inclusion of the ETSP in the ASSP was well justified, helping to integrate forest seed activities with those in the agricultural sector. It indicates that there is potential in the future under the ASSPs.

### **Burkina Faso: Production des Semences et conservation des ressources forestieres dans les terroirs villageois (PSFV).**

This project started at the end of 1998 and is part of on-going collaboration between the Centre National de Semences Forestieres (CNSF) and DFSC, which started in 1990. The aim is to improve community based integration of seed production and gene conservation in 20 villages.

DFSC assisted CNSF in project preparation, provision of consultancies, and training in seed programme management.

Outputs have largely been achieved, and include a national seed source and conservation strategy, participatory selection and management of seed stands, and training and extension of appropriate technology.

Future collaboration between CNSF and DFSC has been proposed concerning domestication and promotion of multipurpose trees for benefit of smallholders in Burkina Faso.

### **Indochina Tree Seed Programme (ITSP)**

The ITSP was identified and formulated during 1996-7, and started in 1998. It is a regional capacity building programme covering Cambodia, Laos and Vietnam.

The Programme comprises three national projects (Cambodia Tree Seed Project (CTSP), Lao Tree Seed Project (LTSP) and Vietnam Tree Seed Project (VTSP)) as well as a regional component. The Laos and Vietnam projects and regional component began late 1998 / early 1999. The Cambodian project began in 2001.

The ITSP was first reviewed in 2000 and the importance of developing the national capacities was emphasised. The national tree seed sectors are different in terms of structure and institutional set-up, and tree-planting activities are at different levels. There has been an increased focus on decentralised seed supplies. A second review in 2002 recommended continuing the ITSP until 2004 (but ending the Laos national component).

DFSC was indirectly involved in the ITSP identification, and has seconded two long-term advisers. A large part of the training has been planned and implemented by DFSC. There has been consultancy support and the provision of publications.

An assessment of the Vietnam project by the current review mission forms part of the main report.

### **Indonesia: Tree Seed Source Development Project (TSSDP)**

The TSSDP started in 1993 and continued until 1997. It was supported by a combined grant/soft loan package from the Nordic Development Fund (NDF) / Nordic Development Bank (NDB). Danagro A/S implemented the project.

DFSC was involved in the preparation and negotiation of the project; the provision of approx. 60 % of international consultants, and a part of these provided inputs to approximately 70 % of the training courses implemented by TSSDP. Counterparts attended the DFSC Management Course. DFSC seconded one long-term adviser, and another long-term adviser continued working with DFSC after working 2 years with TSSDP. Several DFSC documents were translated into Bahasa Indonesia.

The final report indicated constraints in baseline studies, initial institutional analysis, fulltime counterparts, collaboration with provincial authorities, and budgetary procedures.

### **Indonesia Forest Seed Project (IFSP)**

The IFSP started in 1998 as a continuation of the TSSDP, funded by Danida. The project is expected to end in 2004.

The primary target groups are the Directorate of Forest Tree Seed in the Ministry of Forests (MoF) and the six regional tree seed centres/offices in Sumatra, Kalimantan, Sulawesi, Maluku, Bali and Java. The

secondary group includes other institutions involved in tree seed activities (research institutes, universities, NGOs, etc.).

DFSC inputs included preparation of the project document and appraisal report, provision of 5 of 6 long-term advisers, 10 consultants, and several publications has been translated.

DFSC has noted that classroom training had limited success and a change was made in 2000 towards on-the-job-training with training topics directly related to the daily work of the trainees.

Since the project cannot effectively reach NGOs and farmer groups directly, the project has financed a sub-project 'Strengthening Germplasm Security for NGOs and Smallholders in Indonesia' for implementation by ICRAF (Bogor), running from 2000 to 2004. This will provide support to this target group while at the same time strengthen three of the six regional seed offices in their outreach activities targeting the NGOs and the farmer groups.

- **Other Projects**

### **Thailand: Forest Genetic Resources Conservation and Management Project (FORGENMAP)**

FORGENMAP originates from Danish co-operation with the Thai Royal Forest Department (RFD), during which there was more than 25 years of support from Danida until 1990, partly through the DFSC. This initially concentrated on aspects of tree improvement, gene resource conservation and seed procurement of pines and eucalyptus as well as teak and other hardwood species. There was, however, limited impact on forestry activities and an inappropriate institutional setting.

FORGENMAP was designed as an institutional capacity building project to address these issues. It was implemented by RFD and started in 1997 supported by DANCED (now Danida). Technical assistance was contracted to Scanagri Denmark a/s. Short-term consultancies were sub-contracted to DFSC.

A mid-term review in 2000 recommended an extension, but due to ongoing, severe institutional changes in RFD the project had to be closed in 2002.

### **Sudan Tree Seed Project (STSP)**

The project started in 1990 and finished in 1996. It was funded by UNSO. DFSC helped prepare the project document on behalf of UNSO, supported UNSO in appointing the CTA's (2 Swedes) and the 2 interim CTA's (Danish), and was the technical backstopping agency providing the majority of consultancies. DFSC publications were made available.

The project was phased out quickly in 1996, due to the political situation in Sudan, which made it difficult for Danida to support the country.

A three-year work plan was made in 1991, covering the period up to 1993. The project followed the UN reporting system by making half yearly 'Project Performance Evaluation Reports'. The project was reviewed in 1992. An updated work plan was prepared in 1993 for the period 1993-1995.

The project was a 'traditional' and centralised seed procurement project, with a major training and construction components (4 regional seed centres). DFSC noted the following issues: continuity of qualified advisers; institutional sustainability; decentralisation; appropriateness of technology; and government ownership of project.

### **Uganda Tree Seed Project (UTSP)**

The project started in 1992 and terminated in 1996, while funded by UNSO. DFSC acted as technical backstopping institution. NORAD financed a second phase of the project from 1998 to 2002 DFSC provided only a few consultancies to the project during the second phase.

The termination report raised the following issues: The remote location of the seed centre from Kampala; the need for more awareness raising and training; the benefit obtained similar projects in the region (East Africa); the importance of extension material.

### **Ethiopia: National Tree Seed Improvement Project**

The project started in 1992. The United Nations Sudano-Sahelian Office (UNSO) provided financial support, which was subject to cutbacks. DFSC acted as technical backstopping institution, helping to prepare the project document, appointing an adviser. DFSC staff undertook 6 of the 10 consultancies.

The project supported the already existing tree seed centre in Addis Ababa, which was placed under Forest Research Centre in the Ministry of Agriculture. The seed centre set-up in Ethiopia was centralised, and seed producing and seed delivery oriented.

During 1992-1997, UNSO also supported tree seed projects in Somalia, Sudan and Uganda. Yearly coordination meetings were held between the four projects, the NTSP in Tanzania and DFSC. In 2003 the tree seed centre in Addis Ababa is still in operation.

In respect of the above, DFSC has observed that: success or failure of projects depends on the adviser(s) working on projects; sustainability depends on the extent to which activities are institutionalised into the government structure before and during the project. In Ethiopia tree seed activities were institutionalised in the government structure before the project started; and initiation of regional collaboration is difficult unless participating organisations see a clear advantage or incentives in starting the collaboration.

**Annex 7:  
CTA Questionnaire**

## ANNEX 7: CTA Questionnaire

### **Thematic Review of Danida Forest Tree Seed Centre (DFSC) – 2003**

During 2000 and 2001, an evaluation of Danida-funded development research was undertaken by the Hernes Commission (Danida, April 2001). A comprehensive reorientation of support to Danish development research is currently being implemented as a follow-up to the Hernes report. The Hernes report identified a number of weaknesses in the previous allocation of research funds. Therefore, the reorientation will emphasise both (1) the introduction of performance contracts that can raise the quality and efficiency of the research and (2) a more direct link between Danida's sector programmes and the research projects so that research support makes a more direct contribution to assistance efforts.

At its meeting 15-16 January 2002, the Technical Advisory Committee (TAC) of DFSC recommended that Danida undertake a thematic review of tree seed related projects and that this review imply both a review and a forward-looking assessment that would help guide DFSC future role. While this recommendation has been found relevant, Danida furthermore finds it beneficial to undertake a broader forward-looking assessment with point of departure in the overall Danish support to natural resource management and the role of trees in this context.

A reorientation of Danish sector research in general is also underway. A review of Danish sector research was undertaken in the spring 2002 (Danmarks Forskningsråd, May 2002). Subsequently, an interministerial working group has prepared a set of objectives and principles for future sector research in Denmark in order to renew the sector research and support a more coherent and well-functioning research system in Denmark (Ministeriet for Videnskab, Teknologi og udvikling *et al.*, Oct. 2002). These objectives and principles may also to some extent affect development research supported by Danida. An important objective is to ensure a critical mass of competences and promote synergy.

Danida has in this context expressed an interest in assessing the present organisational structure and institutional setting of DFSC. One option proposed would be to integrate DFSC into the future Centre for Forestry, Landscape and Planning which will be established as a result of a merger between the Forestry School (Skovskolen), the Research Centre for Forestry and Landscape (Forskningscentret for skov og Landskab) and relevant parts of the Institute for Economics, Forestry and Landscape of the Royal Veterinary and Agricultural University. The future Centre will become a special institute within the Royal Veterinary and Agricultural University.

Danida has therefore decided to implement a broad thematic review of Danida Forest Seed Centre which should consider the current reorientation of support to Danish development research as well as the overall objectives and principles underway for Danish sector research. The objective of the review is to provide the analytical background for an assessment (impact and relevance) of DFSC performance since 1993 and its future role within development and environmental assistance as well as the future institutional set-up of the institution.

The review is carried out in three phases: 1) A desk study in Denmark, 2) a field 'impact/sustainability' study (visits to Danida supported projects in Tanzania and Vietnam and international collaborative institution - IPGRI, ICRAF and FAO) and 3) finally the preparation of a draft review report and a final review report.



### **Looking Back**

What is your knowledge of/relation to DFSC?

What is your assessment of DFSC's work in terms of relevance, impact and sustainability (with regard to support to forest seed centres, research activities and short-term consultancies)?

### **Looking forward**

What are – in your opinion – the core competencies of DFSC?

Do you have additional suggestions to new technical forestry related focal areas for DFSC/the new Centre for Forestry, Landscape and Planning?

Do you see a need for the present or future competencies of DFSC/ the new Centre for Forestry, Landscape and Planning in “your” own or in other Danida sector programs?

**Annex 8:  
DFSC Annual Workplan 2004 (a)  
and Implementation Schedule 2003-2007 (b)**

**Annex 8(a): DFSC PROPOSED ANNUAL WORK PLAN 2004**  
**(Projects/Activities highlighted are firm DFSC commitments)**

Category/activity	Total		Base-funding		External funding	
	MM	DKK	MM	DKK	MM	DKK
<b>1. PROGRAMME MANAGEMENT</b>						
a. Base program management (plan, manage, co-ordinate and monitor DFSC activities)	16	560.000	16	560.000	-	-
b. Book-keeping and secretarial assistance	15	525.000	15	525.000	-	-
c. Training of DFSC staff	2	125.000	2	125.000	-	-
d. Library	5	175.000	5	175.000	-	-
e. Office expenditures	-	820.000	-	820.000	-	-
<b>2. PUBLIC SERVICE FACILITY – WORLD INFORMATION SERVICE</b>						
a. Edit, publish and distribute publications	8	600.000	8	600.000	-	-
b. DFSC homepage	3	200.000	3	200.000	-	-
c. Answer requests for advice and guidance	4	140.000	4	140.000	-	-
d. Seed bank – maintain seed bank and dispatch free seed lots for research purposes	2	70.000	2	70.000	-	-
e. Training	4	250.000	4	250.000	-	-
<b>3. PROJECT AND SECTOR PROGRAMME SUPPORT SERVICES</b>						
a. Implementation of project support services	12	500.000	-	-	12	500.000
b. Plan, monitor and quality assurance of project support services	2	70.000	2	70.000	-	-
<b>4. RESEARCH AND DEVELOPMENT ACTIVITIES</b>						
<i>4.1. Focal area 1: Integrated tree seed programmes</i>						
<b>a. ISSAAC – Improved seed supply for agro-forestry in African countries (collaboration with ICRAF, partners in Malawi, Uganda and Burkina Faso)</b>	7	350.000	7	350.000	-	-
<i>4.2. Focal area 2: Quality seed to tree planting farmers</i>						
<b>a. PETREA - People, Trees and Agriculture in Africa (partners from Burkina Faso, Tanzania and Denmark)</b>	10	1.700.000	7	600.000	3	1.100.000
<b>b. Organisation, sustainability and farmer benefits of tree seed programs</b>	2	100.000	2	100.000	-	-
<b>c. Commercial distribution of tree seed in small bags (with TISC, Nepal)</b>	2	100.000	2	100.000	-	-
<i>4.3. Focal area 3: Conservation of forest genetic resources for future use</i>						
a. Conservation activities in collaboration with partners	4	200.000	4	200.000	-	-

Category/activity	Total		Base-funding		External funding	
	MM	DKK	MM	DKK	MM	DKK
<i>4.4. Focal area 4: Enhanced use of the diversity of tree species</i>						
a. Seed leaflets (many partners)	3	105.000	3	105.000	-	-
b. Under utilised species leaflets	3	200.000	3	200.000	-	-
<b>c. Coordination of IPGRI/DFSC project on recalcitrant seed (many participants)</b>	<b>1</b>	<b>50.000</b>	<b>1</b>	<b>50.000</b>	-	-
<b>d. Finalize reporting of FAO co-ordinated Arid Zone trials (many partners)</b>	<b>3</b>	<b>105.000</b>	<b>3</b>	<b>105.000</b>	-	-
<b>e. WAFI – Increasing productivity and quality of West African teak plantations using genetic diversity and sustainable management (EU funding, Ghana, Ivory Coast, France, Italy)</b>	<b>3</b>	<b>150.000</b>	-	-	<b>3</b>	<b>150.000</b>
<i>4.5 Focal area 5: Outreach</i>						
a. Developing of extension material with partners	5	250.000	5	250.000	-	-
<b>5. TOWARDS A CENTRE FOR FOREST AND LANDSCAPE PROGRAM – TREES FOR DEVELOPMENT</b>						
a. Strategy and 5-year work program (performance contract)	4	140.000	4	140.000	-	-
b. Establish working relations within the centre, move to new physical location, others	3	200.000	3	200.000	-	-
c. Establish business contacts and develop new activities with partners (Danida, companies, RUF, EU, etc.)	7	300.000	7	300.000	-	-
<b>TOTAL COMMITTED PROJECTS/ACTIVITIES</b>	<b>28</b>	<b>2.555.000</b>	<b>22</b>	<b>1.305.000</b>	<b>6</b>	<b>1.250.000</b>
<b>TOTAL</b>	130	7.985.000	112	6.235.000	18	1.750.000

Assumptions:

1. Total number of man-months is 130 (=maintenance of current staff), divided to advisors 96 MM and secretarial assistance 34 MM
2. 1 MM = 35.000 DKK (fixed rate for all categories of staff, incl. salary, holiday, person contributions, insurance)
3. Accumulated overheads from project support services in previous years will be used to cover base funding deficit of approx. 235.000 DKK.
4. A submitted proposal to the Council of Development Research on Application of shade trees in cocoa plantations is not included in the AWP2004.
5. A pipeline proposal to EU on domestication of native tree species is not included in AWP2004. If successful, it will only start late 2004.

**Annex 8(b): DFSC PROPOSED ACTIVITY IMPLEMENTATION SCHEDULE 2003-200**

Category/activity	2003	2004	2005	2006	2007
<b>1. PROGRAMME MANAGEMENT</b>					
a. Base program management (plan, manage, co-ordinate and monitor DFSC activities)					
b. Book-keeping and secretarial assistance					
c. Training of DFSC staff					
d. Library					
e. Office expenditures					
<b>2. PUBLIC SERVICE FACILITY – WORLD INFORMATION SERVICE</b>					
a. Edit, publish and distribute publications					
b. DFSC homepage					
c. Answer requests for advice and guidance					
d. Seed bank – maintain seed bank and dispatch free seed lots for research purposes					
e. Training					
<b>3. PROJECT SUPPORT SERVICES</b>					
a. Implementation of project support services					
b. Plan, monitor and quality assurance of project support services					
<b>4. RESEARCH AND DEVELOPMENT ACTIVITIES</b>					
<i>4.1. Focal area 1: Integrated tree seed programmes</i>					
<b>a. ISSAACS – Improved seed supply for agro-forestry in African countries (collaboration with ICRAF, partners in Malawi, Uganda and Burkina Faso)</b>					
<i>4.2. Focal area 2: Quality seed to tree planting, farmers</i>					
<b>a. PETREA - People, Trees and Agriculture in Africa (partners from Burkina Faso, Tanzania and Denmark)</b>					
<b>b. Organisation, sustainability and farmer benefits of tree seed programs</b>					
<b>c. Commercial distribution of tree seed in small bags (with TISC, Nepal)</b>					
<i>4.3. Focal area 3: Conservation of forest genetic resources for future use</i>					
<b>a. Conservation activities in collaboration with partners</b>					

Category/activity	2003	2004	2005	2006	2007
<i>4.4. Focal area 4: Enhanced use of the diversity of tree species</i>					
a. Seed leaflets (many partners)					
b. Under utilised species leaflets					
<b>c. Coordination of IPGRI/DFSC project on recalcitrant seed (many participants)</b>					
<b>d. Finalize reporting of FAO co-ordinated Arid Zone trials (many partners)</b>					
<b>e. WAFI – Increasing productivity and quality of West African teak plantations using genetic diversity and sustainable management (EU funding, Ghana, Ivory Coast, France, Italy)</b>					
<i>4.5 Focal area 5: Outreach</i>					
a. Developing of extension material with partners					
<b>5. TOWARDS A CENTRE FOR FOREST AND LANDSCAPE PROGRAM – TREES FOR DEVELOPMENT</b>					
a. Strategy and 5-year work program (performance contract)					
b. Establish working relations within the centre, move to new physical location, others					
c. Establish business contacts and develop new activities with partners (Danida, companies, RUF, EU, etc.)					

**Annex 9:  
DFSC Activities as per Workplan 2003**

**Annex 9: DFSC activities (as per workplan 2003):  
-Classified according to the DFSC 2000 Strategy and S&L Integrated Program Proposal**

	Base Programme				Project Support	Project Services	
	Integrated	Quality	Conservation	Diversity			Outreach
<b>Seed Handling and Genetic Resource Management</b>	<ul style="list-style-type: none"> <li>Preparation of FAO workshops: "Assess the status of forest genetic resources and to develop regional plans of action"</li> </ul>	<ul style="list-style-type: none"> <li>TISC (communitybased marketing, distribution of seed in small bags)</li> </ul>	<ul style="list-style-type: none"> <li>Guide book<sup>2</sup> in collaboration with IPGRI and FAO</li> <li>National and regional Conservation Strategies in Indochina (ITSP)</li> </ul>	<ul style="list-style-type: none"> <li>20 new seed leaflets in collaboration with TISC, IFSP and ITSP<sup>3</sup></li> <li>Study on native species with FAO and Tropenbos</li> <li>Neem Network</li> <li>Publishing of 26 reports on "Arid and semi-arid zones" (selected species)</li> <li><i>Seed testing manual</i> in collaboration with IFSP and LTSP</li> <li><i>Recalcitrant and Intermediate tropical forest tree seed</i> in collaboration with IPGRI</li> <li>WAFI<sup>4</sup></li> <li>Publishing of 8 trail analysis reports (<i>Pinus Kesyra</i>)</li> <li>Review of Provenance research (<i>Gmelina arborea</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Collect and review existing extension materials and information</li> <li>Development of extension tools for future use</li> </ul>	<ul style="list-style-type: none"> <li>ITSP</li> <li>TISC</li> <li>IFSP</li> </ul>	<ul style="list-style-type: none"> <li>Information</li> <li>Seed supply</li> <li>Training</li> </ul>
<b>Community Based and Participatory Forest Management</b>			<ul style="list-style-type: none"> <li>PSFV<sup>5</sup></li> </ul>				
<b>Income Generating Activities, Timber and Non-timber Products</b>	<ul style="list-style-type: none"> <li>ISSAAC in collaboration with ICRAF (Implementation of future work-plan regarding agro-forestry tree seed supply)</li> </ul>	<ul style="list-style-type: none"> <li>Petrea phase II</li> <li>Tree Seeds Programmes and Rural People (Identification of the target group)</li> </ul>					
<b>Domestication Processes</b>							
<b>Environmental Services</b>							

<sup>2</sup> "Conservation and Management of Forest Genetic Resources for Present and Future Use – A practical Guide"

<sup>3</sup> 5 of the new leaflets are on "Under-utilised Species"

<sup>4</sup> Increasing productivity and quality of West African Teak plantations using genetic diversity and sustainable management

<sup>5</sup> Production de semences et conservation des ressources forestières dans les terroirs villageois



