

April 2003

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والزراعة  
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联合国  
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Food  
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Organisation  
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Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

## COMMITTEE ON COMMODITY PROBLEMS

### JOINT MEETING OF THE THIRTY-SECOND SESSION OF THE INTERGOVERNMENTAL GROUP ON HARD FIBRES AND THE THIRTY-FOURTH SESSION OF THE INTERGOVERNMENTAL GROUP ON JUTE, KENAF AND ALLIED FIBRES

Salvador, Brazil, 8-11 July 2003

### COMMODITY DEVELOPMENT PROJECTS FINANCED BY THE COMMON FUND FOR COMMODITIES

## I. OVERVIEW

1. This document reports the progress of four regular projects, two on sisal one of which commenced in 1998 and the other due to commence soon, one on abaca which commenced in 1998 and one on coir which commenced in 1999. In addition, three "fast track" projects are either active or recently completed, and the document also reviews the status of two proposals which have been endorsed by the Group in the past but which have yet to be endorsed for funding by the Common Fund for Commodities (CFC).
2. The document incorporates information available to the Secretariat at the time of its preparation. Additional information that becomes available will be provided to the Joint Meeting. It is expected also that delegates from those countries where projects are active will be able to inform the Meeting of their progress. Delegates might report on the impact which completed projects have had and on activities which have been conducted following their completion.
3. The Intergovernmental Group (IGG) on Hard Fibres, in its capacity as the Supervisory Body, is requested to review the progress of the following projects, and to offer guidance on issues raised.

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## **II. ACTIVE REGULAR PROJECTS**

### **A. PRODUCT AND MARKET DEVELOPMENT OF SISAL AND HENEQUEN PRODUCTS**

4. The main objectives of this project are to (i) establish the techno-economic feasibility of using sisal fibre in various grades of paper; (ii) develop new varieties of sisal that will be suitable for various end-uses; (iii) develop processes for commercial valorization of sisal wastes; (iv) establish market outlets for the new products and evolve strategies for penetrating such markets; and (v) disseminate widely the technology and market information from the project, and promote commercial adoption of the new technologies.

5. Project activities commenced early in 1998. A mid-term evaluation was conducted in October 1999. The mission visited project sites in Kenya and Tanzania and made a number of recommendations aimed at re-juvenating the project. Some of the recommendations of the Mission related to project management, which included strengthening the offices of national project officers in Tanzania and Kenya and eliminating the post of Chief Technical Advisor. The project was subsequently extended by two years, and is now to terminate at the end of 2003.

6. Activities in the past year have included:

a) In Tanzania:

- Continuing trials testing plant density, harvesting time, suitable varieties for pulp production and fertiliser applications and particularly trials on alternative production systems, including high-density planting and whole-of-plant harvesting;
- Promotion of smallholder production;
- Experimentation to develop procedures and practices for meristematic tissue culture, and establishment of nurseries;
- A machine to recover flume tow has been designed and fabricated for testing;
- Research on fibre extraction has continued, with equipment being designed and tested in Tanzania, and with pulp testing in Europe.

b) In Kenya:

- Variety trials have continued, studying growth characteristics and responses to diseases, pests and climatic factors. Data on four varieties are being analysed;
- Meristematic tissue culture trials have continued, involving mass multiplication in the laboratory, establishment of field nurseries, and laboratory experimentation;
- A publication has become available from this project: SISAL: Past Research Results and Present Production Practices in East Africa, CFC Technical Paper No 8.

### **B. CLEANER INTEGRAL UTILISATION OF SISAL WASTE FOR BIOGAS AND BIOFERTILISERS**

7. This activity was originally seen as forming part of the project, "Product and market development of sisal and henequen products". It has now been approved by the Fund as a separate grant-funded project, with the objective of establishing at pilot level the technical and economic viability of the production of gas and fertiliser from sisal waste. Activities are to include the construction of a pilot demonstration facility to produce biogas, which will be used to produce electricity, and the formulation of a national strategy for sound and environmentally-friendly

utilisation of sisal gas for energy production. Utilisation of waste from bio-gas for the production of fertiliser is to be studied. Total costs are budgeted at US\$950 600, with US\$581 500 of this to be provided by the Common Fund, US\$171 600 from UNIDO, the Project Executing Agency, and the remainder being counterpart contributions. The three year project is expected to commence soon.

### **C. ABACA: IMPROVEMENT OF FIBRE EXTRACTION AND IDENTIFICATION OF HIGHER YIELDING VARIETIES**

8. This project was formulated to comprise three components: (i) design, production and testing of improved fibre extraction equipment; (ii) exchange of, and field trials with, high yielding disease resistant varieties in the Philippines; and (iii) technical support, project management and dissemination of project results. It was originally intended that Ecuador would participate in the project, but, after some negotiation, Ecuador did not wish to be involved.

9. Project activities commenced in the Philippines in 1999. Activities in the past year have included ongoing work on variety trials and on the development and fabrication of fibre extraction equipment. Progress with the variety trials was inhibited by high mortality rates due to unusually dry conditions.

#### *(i) Design, production and testing of improved fibre extraction equipment:*

The project developed and manufactured five hand tuxying tools, and conducted tests in the field. Two were considered promising for further prototype development, and performance tests by skilled operators are under way.

Drawings of a semi-mechanised (not motorised) machine have been prepared, but no prototype manufactured.

A motorised tuxying machine was built, tested, and modified several times to overcome imperfections revealed. Further modifications and testing are continuing, and the machine is then to be tested in the field.

#### *(ii) Exchange of, and field trials with, high yielding disease resistant varieties:*

Pre-selections of the best varieties were made during 1998 and 1999, from which virus-free material was selected in 2000 and propagated in 2001, distributed and planted in the three regions, starting in December 2001. The outcome of these trials is expected to lead to valuable results with respect to yield performance and the susceptibility to virus diseases, mainly mosaic and bunchy top virus. While it appears that no resistant selection is available, differences in disease susceptibility, as well as yield, are observable between varieties.

An evaluation mission visited the Philippines late in 2002, and recommended that the project be extended for at least an additional 12 to 18 months, so that the results from the trials may be exploited as much as possible.

### **D. COIR-BASED BUILDING AND PACKAGING MATERIAL**

10. The objective of this project is to demonstrate the potential of the application of a specific technology for the production of high quality fibreboards, by making use of the high content of lignin in coir fibre. The project, which is to be executed by Institute ATO-DLO in the Netherlands, was approved by the Executive Board of the Common Fund in July 1997. Agreements were signed in mid-1999, and project activities have been under way since the beginning of 2000. The first phase of the project, laboratory-scale work in the Netherlands, was completed early in the year 2002, in which a simple process was used to produce a board successfully from coconut husk, and its mechanical properties have been tested.

11. The second phase of the project which is now under way largely in the Philippines, involves the scaling up of fibre milling and board producing technologies. As activities move away from the laboratory, factors such as the effect of humidity and climate and of husk storage time are being investigated, together with the effect of prolonged soaking on the strength of the board.

#### **E. IMPROVEMENT IN DRYING, SOFTENING, BLEACHING, DYEING COIR FIBRE/YARN AND PRINTING COIR FIBRE**

12. This project concluded with the publication in 2002 of the technical report: "Coir Processing Technologies" as CFC Technical Paper Number 6.

### **III. FAST TRACK PROJECTS**

#### **A. INTERNATIONAL SYMPOSIUM ON COIR**

13. An International Symposium was held in Colombo, Sri Lanka, 13 and 14 June 2002. Support from the CFC amounted to US\$20 000 plus assistance for participants from countries in the region to travel to the convention. The objectives of the Convention were to provide a comprehensive overview of the global coir industry and to review the needs for technology and market development to improve industry competitiveness, then to develop the outline of an action program for joint research and development involving industry, research institutions and government. The Convention was attended by around 150 people from 10 countries, and a set of proceedings is being edited for publication.

#### **B. COMPOSITE APPLICATIONS USING COIR FIBRES IN SRI LANKA**

14. This fast-track project has the objective of reviewing the technological and economic potential of coir-based composite products. The project is expected to result in the production of prototype products and culminate in a workshop where the results can be disseminated. This project commenced late in 2002, and is scheduled to run for 6 months with a grant of US\$60 000 from the CFC and an additional US\$30 000 in counterpart contributions.

#### **C. SEMINAR ON ALTERNATIVE APPLICATIONS FOR SISAL AND HENEQUEN**

15. Following a request made by the Project Coordinating Committee of the project Product And Market Development Of Sisal And Henequen Products, the Common Fund agreed to support a one-day seminar on 14 December 2000 as part of the previous Joint Meeting of the IGG on Hard Fibres and the IGG on Jute, Kenaf and Allied Fibres. Under this "Fast Track" project, the Fund provided US\$30 000 to allow various experts to present papers to this seminar. The proceedings of the Seminar were published in 2001 as CFC Technical Paper Number 14, "Alternative applications for sisal and henequen".

### **IV. PROJECT PROPOSALS IN THE "PIPELINE"**

16. Sisal Agriculture Business Project in North Eastern Brazil. This proposal was first endorsed for further development by the Joint Meeting of the IGG on Hard Fibres and the IGG on Jute, Kenaf and Allied Fibres in December 1998 and was reviewed again and endorsed in December 2000. It was first considered by the Consultative Committee of the CFC in 1999, and the CFC subsequently provided support for a consultant to further develop the proposal. It was considered again by the Consultative Committee in January 2002 and was scheduled to be considered again by the Committee in January of this year, subsequent to the preparation of this

document. In its current formulation, the proposal has three substantive components:

- Establishment of the technical and economic viability of producing sisal composite for the building materials industry;
- Development of new outlets for the sisal fiber in geo-textiles applications;
- Technical and economic evaluation of the utilization of sisal for reinforcement of thermoplastic composites.

17. Biotechnical Upgradation and Coir Mechanisation for Coir Spinning. This proposal, from India and Sri Lanka, was endorsed in principle by the Joint Meeting of the IGG on Hard Fibres and the IGG on Jute, Kenaf and Allied Fibres in December 2000. After further re-development it was submitted to the Consultative Committee of the CFC in January 2001. The Committee appeared to view the proposal with some favour, and while it was not approved at that time, the Committee agreed to consider a revised proposal at a future meeting. The CFC agreed to provide a consultant to undertake the re-development of the proposal, and following discussion at the International Coir Convention in Sri Lanka, June 2002, terms of reference were drawn up for a consultant.

## **V. FURTHER NEW PROPOSALS**

18. Further project ideas might be sent to the Secretariat in advance of the Joint Meeting for consideration by the Group at the session. Any project ideas that receive the approval of the Group would need to be developed into more detailed proposals.

19. In considering any new proposals for submission to the Common Fund, it should be noted that the Fund's ability to continue to make grant finance available is limited, and that the CFC is keen to increase the proportion of project activities funded by loans. The Fund has a policy of directing grant finance only to least-developed countries, although as many fibre-producing countries fall into this category, this policy will be of less consequence for hard fibres than for many other commodities. The CFC continues to stress the importance of co-financing from other sources and particularly wishes to see indications of tangible interest from the commercial sector. As a general rule, it will not provide more than 50 percent of the budget for grant-financed projects.

Table 1. Summary of Hard Fibres Common Fund Projects

Table A: Summary of RARE Fibres Common Fund Projects							
Fibre	Title	Value US\$			Location of project activities	Start Date	Completion Date
		Grant From CFC	Loan from CFC	Total Budget			
1. Active Regular Projects							
Sisal	Cleaner Integral Utilisation of Sisal Waste for Biogas and Biofertilisers	581 500		950 600	Tanzania	2003	2006
Sisal	Product and Market Development of Sisal and Henequen Products	2 570 000	1 250 000	5 374 966	Tanzania, Kenya	mid-1997	mid-2002
Abaca	Improvement of Fibre Extraction and Identification of Higher Yielding Varieties	841 240		1 456 134	Philippines	November 1998	End 2002
Coir	Coir-based Building and Packaging Material	1 398 000		1 698 000	Netherlands, Philippines	End 1998	End 2003
2. Fast-Track Projects							
Coir	International Coir Convention	20 000 +			Colombo, Sri Lanka	2002	2003
Coir	Use of Coir in Composites	60 000		90 000	Sri Lanka	late-2002	mid-2003

Table 1. (cont.) Summary of Hard Fibres Common Fund Projects

Fibre	Title	Value US\$			Location of project activities	Start Date	Completion Date
		Grant From CFC	Loan from CFC	Total Budget			
<b>3. Completed Projects</b>							
Sisal	Seminar on Alternative Applications for Sisal and Henequen	30 000		42 000	Rome	Late 2000	2001
Coir	Improvement in Drying, Softening, Bleaching, Dyeing Coir Fibre/Yarn and Printing Coir Fibre	416 000		996 000	India, Sri Lanka	Mid 1995	October 1998
Coir	Product and Market Development of High Value-Added Coir Products	282 048		474 780	India, Sri Lanka	Late 1994	June 1998
<b>4. Proposed Projects “in the pipeline”</b>							
Sisal	Sisal Agriculture Business Project in North Eastern Brazil	1 640 000		3 325 000	Brazil		
Coir	Biotechnical Upgradation and Coir Mechanisation for Coir Spinning	974 610		1 949 220	India and Sri Lanka		