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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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COMMON FUND FOR COMMODITIES
Project CFC/FIGHF/07

Product and market development of sisal and henequen

Evaluation of Smallholder Farming Systems

Project completion report/Addendum A.4

Tanzania, January 1997–December 2004

UNIDO

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SISAL

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Evaluation of Smallholder Farming Systems

Tanzania
January 1997–December 2004

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna, 2006

Project Completion Report preparation: National and international experts and consultants involved with the project, with contributions and support from the national teams.
General guidance and consolidation: Ms. Mayra. Sanchez Osuna, Project Manager.
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Common Fund for Commodities (CFC)
Stadhouderskade 55
1072 AB Amsterdam
P.O. Box 74656
1070 BR Amsterdam
The Netherlands
Telephone (++31 20) 575 4949
Fax (++31 20) 676 0231
e-mail: managing.director@common-fund.org
website: www.common-fund.org

United Nations Industrial Development Organization
Vienna International Centre
P.O. Box 300
A-1400 Vienna
Austria
Telephone (++43 1) 26026 3945
Fax (++43 1) 26026 6819
e-mail: M.Sanchez-Osuna@unido.org
website: www.unido.org

Food and Agriculture Organization of the United Nations
Commodities and Trade Division
Via delle Terme di Caracalla
00100 Rome
Italy
Telephone (++39 06) 5705 4201
Fax (++39 06) 5705 4495
e-mail: esc-registry@fao.org
website: www.fao.org

Project Completion Report

Sub-component A.4
"Evaluation of Smallholder Farming Systems"

CONTENTS

Abbreviations and Acronyms

ACDI-VOCA	Agricultural Cooperative Development International – Volunteers in Overseas Cooperative Assistance
ARI	Agricultural Research Institution
BADEA	Arab Bank for Economic Development in Africa
CFC	Common Fund for Commodities
IFAD	Food and Agricultural Development Organization
IGGHF	Inter-governmental Group on Hard Fibres
Mara-FIP	Mara Region Farmers' Initiative Project
MTR	Mid-term Review
NCC	Project National Coordinating Committee
NPO	National Project Officer
PCC	Project Coordinating Committee
PSI	Private Sector Initiative
SISO	Sisal Smallholder and Outgrower Farming
SWOT	Strength/Weakness/Opportunities/Threats
TSA	Tanzania Sisal Authority
TSB	Tanzania Sisal Board
TZS	Tanzanian Shilling
UHDS	Unwashed hand decorticated sisal
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services

I. Project sub-component Summary

1. Title: Evaluation of Smallholder Farming Systems

2. Location: Tanzania (Sisal Estates and Mara Region)

3. Starting Date: January 1997

4. Completion Date: December 2004

5. Sub-component external financing – excluding counterpart contributions

Total subcomponent cost:	US$ 9,510
Of which:	
CFC Financing (Grant):	US$9,510

II. Background and context in which the sub-component was conceived

II.1 Background

During the preparation of the project, it was noted that smallholder sisal farming was not fully developed to the extent of farmers dedicating part of their land as was done in commercial sisal estates.

Sisal, nevertheless, was found to be useful to the subsistence economy of the farmers. It used to be planted as hedges to protect crops and homesteads from livestock and served as a firebreak. Hedge sisal was found to have contributed significantly to East African fibre production. It reached an all time high of 30,000 tonnes (30% of production) in Kenya and around 8,000 tonnes in Tanzania, following the fibre price increases in 1974, but collapsed when prices returned to previous low levels in 1975.

The fibre being a part time activity in small farms was used in the artisanal industry for rope making, bags and decorative mats. Production of Kiondo bags for local and export markets had developed into a substantial cottage industry in Kenya. Sisal leaf waste was eaten by livestock and contributed to the survival of farm animals in times of drought. Smallholders carried out leaf harvesting mainly during the dry season and not during the main cropping season.

The erratic trend of sisal fibre prices and production affected orderly production, fibre collection by traders, marketing and quality of the fibre. It was also in conflict with the steady daily supply for an industrial process.

II.2 Brief description of the context

When the project was conceived, the Tanzania Sisal Authority (TSA), then responsible for the sisal industry development, had initiated a mixed-crop trial at Kimamba Fibres in Kilosa District of Morogoro Region involving 200 smallholder farmers. The project decided to study the trial's impact on cost reduction as well as how it could be used to develop smallholder/outgrower schemes for estates. During the same period, IFAD agreed to finance a complementary pilot smallholder scheme in Mara Region within its Mara Region Farmers' Initiative Project (Mara-FIP).

The Mara-FIP project was to prepare land, provide planting materials, train farmers and provide processing and market support. Planting materials were to be varieties grown by large estates and the supplier was to be the Agricultural Research Institution(ARI), at Mlingano. Originally 12 farmers were to be selected to plant 48 hectares in the four Mara Region districts. One Sisal Agronomist was to undergo a short course on sisal at Mlingano in nursery management, sisal agronomy and on-farm research. This was to be followed by training of extension workers and farmers. Field staff and field enumerators' allowances were to be financed by the project over a 6-year period. Physical and chemical analysis of the sisal products was to be done and data on farm management collected and processed by the enumerators. The project was also to finance sisal harvesting and post harvest processing. This was to involve the construction of watering troughs and of drying yards, the hire of a tractor

and of a mobile decorticator from TSA and hire of a pulper from Kibo Match Group in Moshi.

To the project sub-component A.4 "Evaluation of Smallholder Farming Systems" was added sub-component A.6, not originally included in the Appraisal Report, to cover some activities in the Mara Region. The monitoring and supervision of the Mara- FIP project was undertaken through A.4 budget.

II.3 Objectives, outputs and targeted beneficiaries

The specific objectives of sub-component A.4 and sub-component A.6 were as follows:

- To investigate farming system approaches suitable for sisal smallholder cultivation;
- To evaluate how farming systems could optimize returns to labour and capital while preserving the soil;
- To evaluate estate management practices and particularly a new approach to harvesting.

The expected outputs included a report on smallholder sisal farming system in the Mara Region depicting an independent smallholder operation with sets of input-output coefficients, economic viability and recommendations for follow-up. It was also planned to prepare a report on an appropriate smallholder sisal farming system for sisal estates depicting smallholders as outgrowers to estates with sets of input-output coefficients, economic viability and recommendations for follow-up.

The targeted beneficiaries were the various stakeholders involved in sisal:

- Smallholder farmers in rural areas especially those in the drought prone areas;
- Farmers living near sisal estates, workers in the sisal estates and people living in urban areas interested in investing in sisal farming;
- Companies involved in sisal growing and processing into finished products;
- Traders involved in sisal fibre and sisal products locally and overseas;
- Village and District Councils where sisal can be grown.

III. Implementation and results achieved

The sub-component A.4 started its activities by evaluating the Smallholder Sisal Systems in Brazil, Mexico and China.

In Brazil, the smallholder sisal system involves people with 6 hectares and above. The structure of the industry is such that smallholder farmers grow sisal to extract the fibre and to feed animals with the remaining green matter. Most farmers do not have decortication facilities. People owning decortication machines that provide the service undertake the task of cutting and decortication. These then sell the fibre to transporters that, in turn, sell the fibre to brushing and baling facilities. The organizations with brushing and baling facilities are normally the exporters who sell the fibre in the international market and to local mills for processing into products. Some mill owners have their own sisal farms, decorticating machines, and transport facilities. There are also some cooperatives, which have been established and cater for brushing, baling, spinning and weaving activities for their members. The Brazilian sisal smallholder scheme has a lot of similarities with the Mara-FIP scheme.

In Mexico the smallholder and outgrower scheme involves smallholders who grow sisal on their own farms and carry out fibre extraction at a stationary decorticator owned by private companies. Fibre decortication tests are undertaken before the farmers' leaf is processed and the yield in terms of fibre is therefore agreed upon before production commences. This is very similar to what is being done with smallholders in estates in Tanzania.

The sisal smallholder scheme in China involves sisal farmers with one hectare to look after, located in state-owned farms. The local government owns the farms and the processing facilities. The farmers receive money to live on while waiting for harvesting to start. The money advanced is then deducted from the farmers when harvesting starts. Extension services are also provided by the government

III.1. Implementation and results achieved in Sisal Smallholder and Outgrower (SISO) farming in estates

In 1997 Mr. Gideon Seng'enge, an agronomist, member of TSA staff, was contracted to prepare a report on smallholder sisal farming and submitted his report in 1998. The report reviewed the smallholder sisal farming development starting from 1964 when the President of the United Republic of Tanzania issued a directive to allocate land for sisal growing to that smallholder farmers living near established sisal estates. The report also reviewed the use of hedge sisal in the Lake Victoria zone and the scheme started by TSA at Kimamba Fibres in 1994. The report also contained briefs on the Mara-FIP funded by IFAD and smallholder schemes in tea and sugarcane growing.

The report outlined the Katani sisal smallholder farming scheme started at Kilosa, Pangawe (Kingolwira) and Ngombezi estates, including justifications and obligations of the parties and the expected benefits to the farmers. The report also highlighted the modalities of implementation and the organizational structure. The report also explained the basis for pricing of the leaf produced by the farmers.

The report produced the following broad recommendations:

- The minimum area allocated to each family or applicant should be 4 hectares.
- During the initial years land preparation by farmers should be subsidized.
- It recommended mobilization of medium-term loans for land preparation, seed, and sisal field maintenance.
- Mini-decorticators should be developed for farmers far from estates.
- Farmers acting as outgrowers for sisal estates should sell the leaves.
- Family labour should be used for planting, maintenance of farms and cutting leaves.
- Farmers should adopt mixed cropping for food self supply and to reduce the labour requirements.
- Promotion of sisal growing should be accelerated in the Lake Regions.
- Brushing/baling facilities in Shinyanga, Mwanza, Mara and Kagera should be revived.
- The Tanzania Sisal Board (TSB) (the successor of Tanzania Sisal Authority) should assist Mara-FIP farmers in marketing their fibre.

TSA started smallholder sisal farming at Kimamba Fibres in Morogoro Region in 1994 and later introduced it at Kingolwira Estate. After the privatization of TSA in 1998 Katani Ltd. continued with the scheme and more estates introduced it. In Katani estates the Private Sector Initiative (PSI) of Dar-es-Salaam conducted some workshops and a study was carried out by ACDI-VOCA (Agricultural Cooperative Development International – Volunteers in Overseas Cooperative Assistance) a Non-Governmental Institution from Washington, USA, in collaboration with Katani personnel in 1999.

Planting started in 1999 at Mwelya Estate and Kingolwira Estate. In 2001 the minimum area allocated to each farmer was increased from four to six hectares based on analysis of labour requirements made. By end of 2004 nine estates had shown interest in the scheme and 2,485 applicants were allocated 21,070 hectares. By December 2004 farmers had planted 1,811 hectares on seven estates. Details on planting and farmers response are provided in Annex 1.

The first harvest on smallholder farms in estates started in 2002 at Kingolwira Estate in Morogoro Region while in Tanga Region at Mwelya Estate owned by Katani Ltd the first harvest was carried out in April 2003. The first harvest at Kingolwira Estate done in October 2002 produced 124 meters whose yield was 49 meters per ton producing 2.5 tonnes of fibre, earning the smallholder TZS 434,000 (US$ 434). The second harvest at Mwelya Estate was carried out in 2003 but at Kingolwira it was deferred to 2004 due to prolonged drought. By December 2003 farmers at Mwelya had sold to the estate 1,814 meters of sisal leaf earning TZS 6,555,774 (US$ 6,244). From January to December 2004 smallholder farmers at Mwelya, Magunga and Ngombezi estates sold 6,119 metres earning TZS 26,090,125 (US$ 24,848).

Farmers also harvested food crops from inter-cropped areas and pure standing areas. In 1999 a total of 396 tonnes of maize were produced, 1,762.6 tonnes in 2000 while in 2001 a total of 2,197 tonnes were produced and in 2002 it was 2,169.2 tonnes. Due to low rainfall in 2003 and 2004 production was only 1,724.4 tonnes and 1,456.1 tonnes

respectively. Table 2 (Annex 1) shows details of maize and legume production and the relative yields.

The sisal smallholder and outgrower farming system in estates was organized on a voluntary basis with each applicant applying for a minimum of six hectares to be developed over a ten-year period through contractual arrangements. The applicants were encouraged to form groups and primary cooperative societies for self-regulation. Estate and head office management promoted and monitored the scheme regularly and the project provided a modest amount of money for evaluation each year.

III.2. Implementation and results achieved in Mara Region (Mara-FIP)

Traditionally peasant farmers have grown sisal in Mara Region as a hedge on farm and homestead boundaries. Available hedge sisal in Mara Region has been estimated at 1,294.5 hectares with a potential fibre production of 2,589 tonnes per annum. Sisal fibre had until 2002 been locally extracted from hedge sisal using primitive tools and later sold to Asian traders and cooperative unions.

As anticipated, smallholder sisal growing on small plots was initiated by the Mara-FIP project funded by IFAD, the Belgium Survival Fund Grant and the Government of Tanzania[1]. The project started in 1996 and finished in 2003. The scheme involved 76 smallholder farmers in five sites. The five sites, totaling 48 hectares, were located in the four districts of Mara Region. These were 12 hectares at Burunga Village in Serengeti District, 12 hectares at Nyanduga Village in Tarime District, 12 hectares at Tairo Village in Bunda District, six hectares at Kiabakari Village and six hectares at Kabegi Village both in Musoma Rural District. Land preparation, seed supply, planting and maintenance of plots was financed by the Project until 2000. The farmers were encouraged to form groups and primary cooperative societies for self-regulation.

In March 1997 Agave Sisalana bulbils obtained from Tanga were planted on a one-hectare nursery plot at Burunga Village in Serengeti District and transplanted in October and November 1998 to a 12-hectare plot prepared near the nursery on village government land. In Musoma Rural District, Agave Sisalana bulbils were planted on a one-hectare nursery at Seka at the same time. In December 1998 a total of 40,000 sisal seedlings were transplanted to six hectares at Kiabakari Village while at Kabegi Village transplanting of 36,000 sisal seedlings was carried out in March 1999. Both plots were on privately owned land. In Tarime District H.11648 bulbils obtained from Tanga were planted at a 1.25-hectare plot at Nyanduga Village in November 1996 and June 1997. Sisal seedlings at Nyanduga Village were transplanted to a 12-hectare plot in January 1999 on village government land. In Bunda District, Agave Sisalana bulbils obtained from Tanga were planted on a one-hectare nursery at Tairo

[1] The Mara-FIP project was financed as follows:

Total project cost	USD 19.44 million	of which:
IFAD loan	USD 14.37 million	
IFAD grant	USD 0.06 million	
Belgium Survival Fund grant	USD 2.19 million	
Government of Tanzania	USD 2.17 million	
Beneficiaries (in cash and kind)	USD 0.65 million	

Village. In January 1999, sisal seedlings at Tairo nursery were transplanted in a 12-hectare plot on double rows on forestry department land.

The spacing used in all the plots in Mara Region was 4 metres + 1 metre x 1 metre giving a density of 4,000 plants per hectare. French beans, sorghum, maize, sunflower and simsim were inter-cropped with sisal in most plots in 1999, 2000 and 2001.

In July and August 1999 a Mid-term Review Mission (MTR) was conducted by IFAD and the questions raised were not given satisfactory answers by either the project staff or the sisal smallholder farmers. The mission observed that, "The sisal pilot scheme has lost its way, in terms of purposeful research activity and the (international) managers of the overall enquiry should be contacted without delay to reinvigorate the collaborative effort. Participating farmers must be free to market the production to the best advantage."

Following this report the National Coordination Committee (NCC) and Project National Coordination Committee (PCC) directed close follow up on developments in Mara Region to put the sisal component back on course. A mission led by the Executive Secretary of TSB accompanied by the National Project Officer (NPO) and one agronomist was mounted in February 2000. The mission made the following broad recommendations:

- Ownership of the sisal farms should be with individual farmers instead of with the project.
- The Brazilian organizational structure should be adopted by Mara-FIP. In Brazil, smallholders grow sisal. Mobile decorticators owners process leaves to produce fibre and sell to buyers with transport facilities. Buyers with transport facilities sell to mills with baling and brushing machine owners in turn sell to local processing mills or overseas buyer.
- Brushing, baling and other technologies for conversion into finished products should be set up.
- Sensitization of farmers, leaders and investors should continue with vigour.
- The remaining funds should be determined and IFAD be asked to extend the project through 2003.

In March 2000, the International Food and Agricultural Development Organization (IFAD) and the United Nations Office for Project Services (UNOPS) undertook a supervision mission, in which the TSB Executive Secretary and the National Project Officer participated. The mission noted with satisfaction the efforts made in putting the sisal component back on course. It was agreed to support the ownership of farms by smallholder farmers. It was also appreciated the effort made on marketing and organizational issues and agreed in principle on the financing of mini-decorticators, training and field visits by farmers and project staff to Tanga and Brazil. TSB and the Project requested the mission to allocate US$ 16,000 for mobile decorticators and US$ 3,000 for training of farmers and extension officers in Tanga.

In August 2000 the TSB Executive Secretary accompanied by the NPO and Mr. Shabani Hamisi of ARI Mlingano visited the project in Mara Region. The team made broad recommendations on better maintenance of plots, ownership and farmer

commitment. They recommended that at Kiabakari and Kabegi where the sisal plots had been established on land privately owned ownership issues be sorted out urgently. Continued mobilization of farmers, increased farmer commitment, waiver of levies on sisal production was recommended.

Four mobile decorticators were supplied to Mara-FIP during the years 2001-2002. The farmers were trained on how to use and maintain them. Results of trials by some smallholder farmers showed the decorticators were capable of producing up to 500 kg of dry fibre per day compared to the manufacturer's stated capacity of 400 kg of dry fibre per day. The farmers found the machines very suitable for the work.

At Kiabakari in Musoma Rural District, 1.25 hectares were partly harvested in 2003 producing 700 kg of fibre. A number of businessmen showed interest in buying sisal fiber from the farmers including Mohamed Enterprises, Katani Limited and Kibo Match Group as well as businessmen from Kenya. Between January and March 2004 a total of 5 tonnes of fibre was produced at Kiabakari using the mobile decorticator.

At Tairo in Bunda District, two hectares were harvested in 2002 yielding 2 tonnes of fibre. In May 2003 a total of 15 rows were harvested yielding 380 kg of fibre. Harvesting trials on 4 hedges yielded 214 kg. Farmers stopped harvesting for a while due to low prices offered compared to their costs. Farmers were offered TZS 150 (US$ 0.14) per kg while their costs were around TZS 250 (US$ 0.25) per kg. By December 2003 unwashed hand decorticated sisal (UHDS) prices were TZS 400 (US$ 0.38) per kg. Between January and March 2004, a total of 5 tonnes of fibre was produced at Tairo using the mobile decorticator.

Problems relating to facilities for brushing and baling were experienced. The brushing and baling facilities in Musoma remained closed and TSB continued to press the regional authorities to sort out the matter.

The Mara-FIP Project ended in 2002. Follow-on activities were adversely affected, as the District Councils had no financial means to oversee the project activities. At the end of 2003 however, an Egyptian (Fintecs) firm was awarded a contract to implement the BADEA (Arab Bank for Economic Development in Africa) Project: "Feasibility study for development of hedge sisal production and processing in Lake Victoria Region covering Mara, Mwanza and Shinyanga Regions". The project activities included a survey in the Districts of the three regions, the promotion of smallholder sisal growing, of mobile decortication and of small scale processing into finished products and a market study on the fibre and potential value added products. These would increase interest in sisal growing extending it to the Shinyanga and Mwanza Regions.

Total expenditure in the sisal pilot scheme in Mara-FIP from 1996 to June 2002 amounted to US$ 92,881.68. As reported earlier, monitoring, data collection and visits to Mara by staff from the main project and Mlingano were financed from funds allocated to A.4.

III.3. Group formation, registration and financing

In sisal estates a total of 43 groups were formed and the groups at each estate joined together to form one cooperative. Five cooperative societies were started and applied to the Government for registration. Each group has a Chairman, Secretary, Treasurer and an Executive Committee. By December 2004, only one cooperative had been registered. Estate and company management provided technical backstopping and followed up the developments by collecting data on membership, planting, and maintenance, harvesting and processing of smallholder sisal.

In Mara Region a total of four groups were formed two of which were registered as savings and credit cooperative societies by the end of December 2003. Kiabakari Sisal Production Cooperative Savings and Credit Society was registered in 2002 and the group of nine members opened an account at National Micro-finance Bank in Musoma. Each group has a Chairman, Secretary, Treasurer and an Executive Committee. The groups aim at starting savings and credit societies for self-financing.

In Mara Region data collection was conducted through the village extension officers, the Mara-FIP authorities and visits by project staff using funds from sub-component A.4.

III.4. Trainings in sisal estates (SISO farming)

In 1999, the PSI conducted prosperity workshops. The first prosperity workshop involved Katani directors and line managers during the first week of June 1999. This was followed by another workshop involving all estate management personnel and mill managers in the last week of June 1999. Topics included the logical framework for technology adoption, economic growth development, and the functional chart. Linking small-scale farmers to the market, opportunities and risks for farmers and companies, contract farming, surveying supply and demand, choosing the area, specification of roles of farmers and companies involved, putting the SISO project into operation, minimum and maximum area, and pricing structure were the other topics. The draft SISO contract between farmers and estates was discussed and improved upon.

During the workshops, five areas were identified as pre-project activities:

(i) Definition of the SISO project
(ii) Raising public awareness and identifying pioneers
(iii) Contracting with pioneers and preparing business plans
(iv) Mobilization of resources
(v) Defining SISO project log frame, managerial and organizational set up.

This was accomplished between July and October 1999 when PSI Ltd together with Katani staff conducted prosperity workshops in all Katani estates. At the prosperity workshops prospective farmers were appraised on the measures of prosperity, how to make good use of earnings, saving, thrift and how to achieve goals. A SWOT (Strength/Weakness/Opportunity/Threats) analysis of sisal growing was presented to

the prospective farmers and the aim of converting them into commercial farmers explained.

In September 1999, ACDI-VOCA a U.S. based private nonprofit development organization, sent a consultant to Tanzania for one month to evaluate the sisal smallholder and outgrower scheme and prepare a feasibility study. Based on the consultant's recommendations and in-house work by Katani Ltd., the scheme was set up. In 2003 a total of 28 farmers received further training on sisal, funded by the Tanzania Sisal Board. A Swahili manual for sisal smallholder farmers was launched at the Sisal Stakeholders meeting in February 2003.

Katani and TSB contributed significantly to the project, including the training activities, as shown in the table below:

Table 1: Counterpart contributions by end 2004

ENTITY	HECTARES	COST (TZS)	COST (USD)
Hale Farmers	159.00	31,800,000	28,909
Kibaranga Farmers	51.00	10,200,000	10,200
Kingolwira Farmers	12.00	2,400,000	2,182
Magoma Farmers	262.75	65,050,913	59,137
Magunga Farmers	220.50	122,551,500	111,410
Mwelya Farmers	1,004.00	286,376,250	260,342
Ngombezi Farmers	501.85	250,925,000	228,114
Training/studies by Katani/ACDI-VOCA		19,800,000	18,000
Stakeholders meetings/Training by TSB		27,093,540	29,881
Total	**2,211.10**	**816,197,203**	**748,175**

III.5. Trainings in Mara Region

In 1997 an agricultural officer from Mara Region underwent a special course at ARI, Mlingano, on sisal agronomy. In December 1998, sub-component managers and village extension officers were trained at Bunda by Mr. Gideon Seng'enge of Katani Ltd on agronomic practices pertaining to sisal as a cash crop for smallholder farmers in Mara Region. In August 2000, sixteen smallholder farmers, five village extension officers and five Regional and District Officers from Mara Region underwent a one-week course at ARI, Mlingano conducted by staff from ARI Mlingano, TSB and Katani Limited. While in Tanga they toured a number of estates and spinning mills. Thereafter, 64 other beneficiaries were trained through exchange visits.

III.6. Results achieved

Location	Planned Activities	Targets Achieved	Status
Mara-FIP	Select 12 farmers for the project	76 farmers selected and allocated land in six sites	Completed
	Plant four nurseries	Four nurseries planted 1997/1998	Completed
	Prepare land and plant 48 ha.	48 hectares planted at six sites in four Districts in 1998	Completed
	Maintain planted areas to maturity	48 hectares maintained during 1998 – to-date	Completed
	Harvest and process leaves from the plots	More than 13.3 tonnes produced	Continuing
	Train farmers and extension officers	One agronomist trained in 1997, 16 farmers and 10 officers in 2000 and 64 farmers in 2000-2001.	Completed
	Procure equipment for Mara-FIP	Four mobile decorticators were delivered to Mara Region.	Completed
Estates	Evaluate SISO scheme in three sisal estates	Evaluation carried out regularly in seven estates.	Ongoing
	Promote SISO scheme	2,485 farmers allocated 21,070 hectares	Ongoing; high land demand
	Train farmers and estate staff	Prosperity workshops in estates in 1999 and 28 farmers in 2003	
	Plant sisal and maintain	1,811 hectares planted by December 2004 at a cost of US$ 637,294.	Ongoing
	Print Swahili Manual	The Swahili manual was printed and distributed.	Completed
	Harvest sisal leaves and sell	2002, 2003 and 2004 a total of 238.1 hectares were cut producing 8,057 metres, which earned farmers TZS 33,079,899 (US$ 30,072).	Ongoing
	Disseminate project results	Dissemination was done through 10 NCC and 10 PCC meetings, dissemination workshop in 1998, sisal stakeholders meetings in 2000, 2001, 2002, 2003 and 2004, press releases and three newsletters.	

III.7 Dissemination of results

Information on project results in the sub-component were disseminated from time to time through three newsletters, reports at the project dissemination workshop in 1998, reports at 10 NCC and PCC meetings, sisal stakeholders meetings in 2000, 2001, 2002, 2003 and 2004. The results were also reported upon at various meetings of the Sisal Association of Tanzania, at various TSB meetings and to the Intergovernmental Group on Hard Fibres (IGGHF). They were also reported in the press and at various seminars to smallholder farmers. The results achieved were presented at a

dissemination workshop held in Tanga in February 2003 and at the project final dissemination workshop held in Tanga in November 2004.

A manual in Swahili for the smallholders was prepared and published in 2003. The manual has been translated in English, but the English version has not been published yet.

IV. Lessons learned

IV.1 Development lessons

The original project design was modified to include sub-component A.6, Mara Region activities, which were not foreseen in the Appraisal Report. The sub-component proved very effective in contributing to alleviate poverty within the farmers' community.

IV.2 Operational lessons

From the experience gained and from the arguments presented during the project final dissemination workshop in November 2004, it is evident that the smallholder and outgrower farmers in the Estates and in Mara Region need title to the land where they are growing sisal. This will widen ownership and contribute to poverty eradication in the rural areas where all the sisal estates are located.

The scheme is already contributing to increased employment opportunities in the rural areas and thus reducing migration to urban centres. The scheme has contributed to food production and increased farmers' incomes and reduced sisal and food production costs. As the income of the farmers increases, the central and local government levies will also increase, thus enabling them to provide services to the economic infrastructure in a more efficient manner.

In organizing the farmers, cooperative groups have been formed to enhance the cooperative spirit and mobilize savings for investment and economic development. Plans are underway to make farmers shareholders in the processing units thus widening ownership further and ensuring that farmers get all the benefits arising from technological improvements and increased demand. Katani Limited has handed over all mature sisal areas to smallholders. Tanzania Sisal Board will henceforth hold the master lease for estate land excluding built up and factory areas, and each smallholder will hold a sub-lease for the land allocated to him/her. Increased production and lower costs of production will make the sisal industry more vibrant and more competitive in the market place.

The scheme has significantly reduced fire outbreaks affecting all estates in the sisal industry, for example in 1999 Katani Ltd. lost 1,000 hectares valued at TZS 450,000,000 (US$ 600,000) through fires.

Projected earnings to smallholders in Katani Limited from 2005 to 2015 are US$ 31 million. By the end of December 2004 smallholder farmers had invested the equivalent of US$ 637,294 in planting and maintaining the 1811 hectares allocated to them.

The following are the key lessons learnt during the implementation process:

1. Capacity building through participatory approaches and training are necessary for success.

2. There exists a great potential in self-help development, which could bring faster development and cost effectiveness.
3. A multidisciplinary approach is necessary for successful development of new ideas.
4. The commitment and full cooperation of political leaders is necessary for smooth implementation.
5. Development financial institutions are crucial but are lacking in Tanzania and need to be established urgently. Agricultural loans at affordable interest rates are required for the revival of the sisal industry. Commercial financial institutions in Tanzania are cautious in financing agriculture due to its dependence on rains. Sisal can survive with little rain but very few people know this.
6. Ownership must be clearly spelt out from the beginning and beneficiaries should contribute in the form of labour, materials and cash for project sustainability.
7. Successful implementation takes time and promoters need patience and close follow up.
8. Sisal has proved it is indeed an insurance crop as when weather conditions were adverse farmers survived on the proceeds from sisal.
9. Wood fuel is still by far the largest source of energy in the rural areas and the development of small biogas plants will contribute significantly to improving women's access to labour saving technologies, health and the environment. Less than 10% of the Tanzanian population is connected to electricity and alternative sources of energy using agricultural waste are in great demand.
10. Subsidies and incentives in the form of reduced taxes, exchange rates, costs of diesel, power and employment are required in promoting new ideas.

V. Conclusions and recommendations

Most crops in Tanzania have received soft loans and grants from the Government and donors amounting to billions for their revival and increased production. Such assistance has been extended to coffee, tea, cotton, cashew nuts and other crops. Sisal is the only crop where Tanzania has excelled internationally and despite its decline, the country can re-attain its position much more quickly if the Government increased moral and financial support to smallholder sisal farmers. The Government has declared its intention to support the industry. In April 2004, the Regional Commissioner met with sisal stakeholders in Tanga Region. Resulting from this meeting a Task Force was set up to chart out the quick revival of the industry and identify problems requiring Government intervention. The first report has been submitted.

Financial assistance is required as a package covering the following areas:

1. Soft loans to sisal smallholder and outgrower farmers as well as large-scale farmers in land preparation, procurement of seeds, maintenance of sisal fields, procurement of farm tractors and tools/equipment for cultivation and transport.
2. Affordable loans for processing factories so as to increase their demand for fibre and increase the utilization of the sisal plant to add value to sisal.
3. Financial assistance for training and for research on and development of new products.
4. Assistance for promotion and expansion of markets for sisal products in the local markets, East African Community markets, SADC, Middle East and Far East markets.
5. Put in place policies, which attract investments in sisal growing and processing.
6. Establish savings and credit societies leading to establishment of a Sisal Bank.

It is further recommended that efforts be continued in fostering self-driven initiatives among farmers by strengthening the cooperative groups, providing legal status, providing education to the groups on participatory planning, monitoring, evaluation and organization.

Annex 1. Smallholder sisal planting and example of inter-cropped food production

Table 1: Smallholder sisal planting 1999 – 2004

Estate	Farmers	Ha * taken	1999 Ha	2000 Ha	2001 Ha	2002 Ha	2003 Ha	2004 Ha	Total Ha
Hale	412	3,276	0	0	23	45	18.50	72.50	159.00
Kibaranga	226	4,092	0	0	51	0	0.00	0.00	51.00
Magoma	207	1,105	0	0	53	47	30.00	132.75	262.75
Magunga	528	4,004	0	20	80	45	17.00	58.50	220.50
Mwelya	274	1,750	20	132	159	310	230.00	153.00	1,004.00
Ngombezi	292	4,007	0	21	48	100.5	108.25	224.10	501.85
Total Katani	**1939**	**18,234**	**20**	**173**	**2415**	**547.5**	**2406.75**	**2644.85**	**2,199.1**
Kwalukonge	20	200	0	0	0	0	0	0.00	0.00
Ubena	54	150	0	0	0	0	0	0.00	0.00
Kingolwira	104	454	12	0	0	0	0	0.00	12.00
Kimamba	176	985	0	0	0	0	0	0.00	0.00
Total Others	**354**	**1,789**	**12**	**0**	**0**	**0**	**0**	**0.00**	**12.00**
TOTAL	**2,293**	**20,023**	**32**	**173**	**414**	**547.5**	**403.75**	**640.85**	**2,211.1**

* Hectares

Chart 1: Sisal planting by estate 1999 – 2004

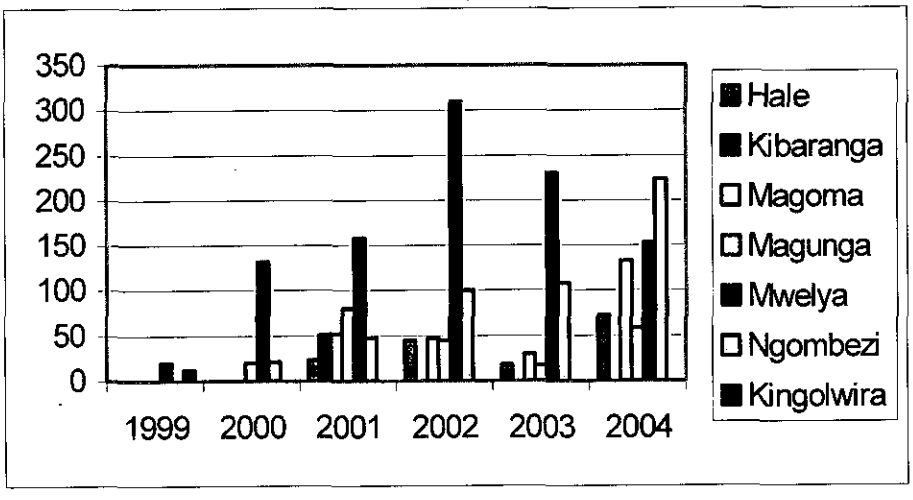


Table 2: Smallholder hectares and meters cut in estates

ESTATE	MONTH/YEAR	HECTARES CUT	METRES CUT	VALUE IN TZS
Kingolwira	October 2002	12.0	124	434,000
	Subtotal 2002	**12.0**	**124**	**434,000**
Mwelya	April 2003	3.5	127	444,500
	May 2003	1.0	32	112,000
	June 2003	5.5	252	882,000
	July 2003	9.0	350	1,225,000
	August 2003	8.5	308	1,078,000
	September 2003	7.5	302	1,057,000
	October 2003	8.0	318	1,264,254
	November 2003	3.0	85	330,500
	December 2003	1.0	40	162,520
	Subtotal 2003	**47.0**	**1,814**	**6,555,774**
	January 2004	10.3	309.0	1,200,500
	February 2004	12.0	395.0	1,608,500
	March 2004	15.0	529.5	2,286,000
	April 2004	8.3	248.5	1,039,250
	May 2004	16.0	480.5	1,702,250
	June 2004	28.0	842.5	3,481,250
	July 2004	12.0	380.0	1,614,945
	August 2004	7.5	225.5	1,010,250
	September 2004	9.0	271.5	1,096,597
	October 2004	16.0	363.0	1,846,652
	November 2004	8.0	149.0	721,249
	December 2004	19.0	775.0	3,812,300
	Subtotal 2004	**161.1**	**4,969.0**	**21,419,743**
TOTAL		**220.1**	**6,907.0**	**28,409,517**

Table 3: Hectares planted, inter-cropped and pure stand food production and yield at Mwelya Estate in 2002 – 2003

Crop	Hectares Planted		Production (Tonnes)		Yield/Ha (Tonnes)	
Year	2002	2003	2002	2003	2002	2003
Inter-crop maize	502	282	418.4	235.2	0.83	0.83
Pure stand maize	972	768	1,214.3	686.4	1.25	0.89
Total maize	**1,474**	**1,050**	**3,634.7**	**921.6**	**2.08**	**1.72**
Inter-crop beans	0	250	0	115.0	0	0.46
Other legumes	0	61	0	36.6	0	0.60
Total legumes	**0**	**311**	**0**	**151.6**	**0**	**1.06**
Total all crops	**1,474**	**1,361**	**1,632.7**	**1,073.2**	**2.08**	**2.78**

Table 4: Food crops production (bags of 100 kg each)

Estate	1999		2000		2001		2002		2003		2004	
	Ha.	Bags	Ha.	Bags	Ha.	Bags	Ha.	Bags	Ha.	Bags	Ha.	Bags
Magoma	0	0	0	0	150	1,500	40	400	80	640	300	2,400
Magunga	*0*	*0*		*9,500*		*10,500*		*13,800*		*11,000*		*9,000*
Mwelya	165	3,960	384	8,126	500	9,970	471	7,492	456	5,604	449	3,161
Total	**165**	**3,960**	**384**	**17,626**	**650**	**21,970**	**511**	**21,692**	**536**	**17,244**	**749**	**14,561**

Chart 2: Hectares planted in 2002 – 2003

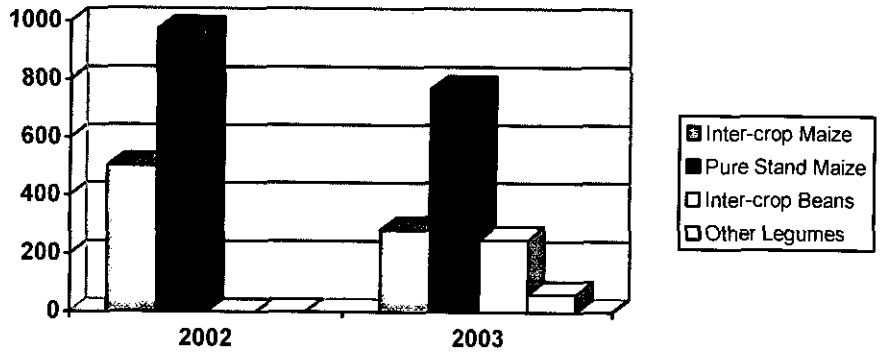


Chart 3: Inter-cropped and pure stand food production in 2002 – 2003 (Tonnes)

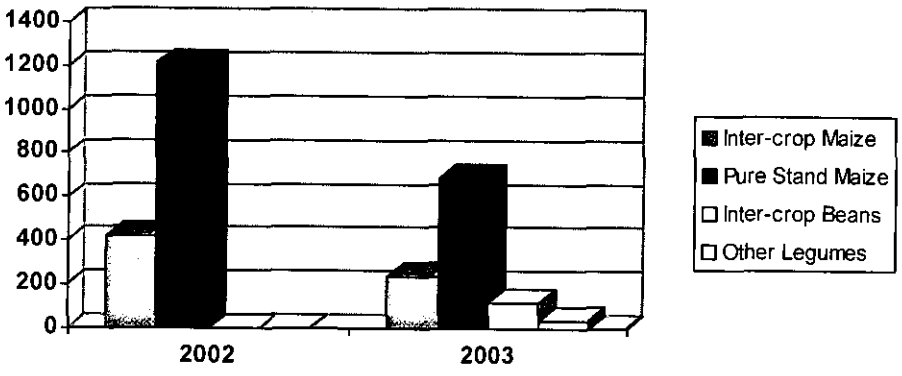
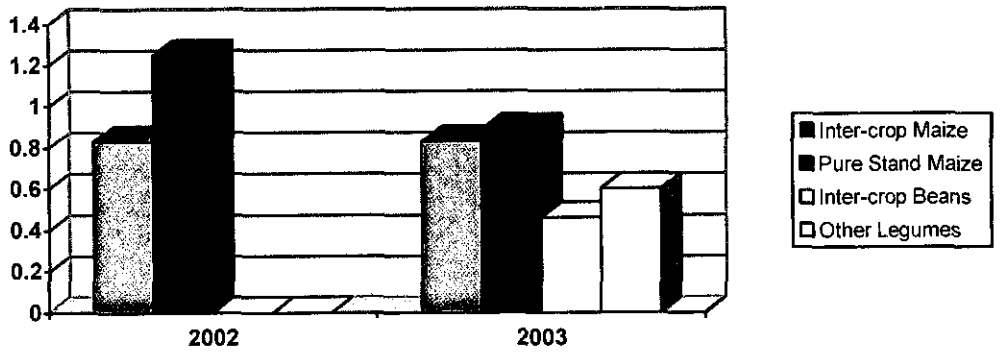


Chart 4: Inter-cropped and pure stand food production yield in 2002 – 2003 (Tonnes)



Annex 2. Agreement to grow sisal in Katani Sisal Smallholder and Outgrower Scheme (SISO)

AGREEMENT TO GROW SISAL IN KATANI SISAL SMALLHOLDER AND OUTGROWER SCHEME

This **AGREEMENT** is made this day of ..... of the month of .....year ..... between **KATANI LIMITED** of P.O. Box 123 Tanga (hereinafter referred to as **KATANI**) and **MR/MRS/MISS** ..... of **P.O. Box.....,** ..... (hereinafter referred to as **OUTGROWER**).

PREFACE:

WHEREAS sisal is one of the major crops contributing to the economic development of the United Republic of Tanzania

AND

WHEREAS it is the Policy of the Government of the United Republic of Tanzania to encourage small holders to participate in the cultivation of the sisal crop as **OUTGROWERS** for economic well being of the people and the country's economy as a whole

AND

WHEREAS KATANI is offering part of its land to **OUTGROWERS** for purposes of growing sisal

NOW THEREFORE

The parties to this **Agreement** agree as follows: -

1. The **OUTGROWER** will be sub-leased land amounting to.... **hectares (in words..... hectares)** at ..... **Sisal Estate** for a period not exceeding **10 (ten) years** from the date of the signing of this agreement. The sub-lease may be renewed after every **10 (ten) years** at the mutual consent of the parties concerned. **KATANI** and the **OUTGROWER** may review the lease arrangement after every 2 years within the lease period. The area of land sub-leased to the outgrower will remain the property of **KATANI** at all material time.
2. During each and every year in which this agreement remains in effect, the **OUTGROWER** shall cultivate the land and plant up to **25% (twenty five percent)** of the land area with sisal. The specific amount to be cultivated each and every year shall be determined by **KATANI**, and the **OUTGROWER** shall be informed prior to each year, the amount however not exceeding **25% (twenty five percent)** per year. Failure to conform to this stipulation will constitute legal justification for the termination of this agreement.
3. The area of the land sub-leased to the **OUTGROWER** shall be shown in the sketch to form part of this agreement.

4. The **OUTGROWER**, under the general guidance of an agricultural officer provided by **KATANI** will be allowed to plant any short term crops in the area which has not been planted with sisal, or within the area which has immature sisal up to two years old. The **OUTGROWER** will not be allowed to plant any long-term crop or any crop, which may harm the smooth growth of the sisal plants.

5. The **OUTGROWER** shall plant and maintain sisal, in accordance with proper sisal husbandry practices as may be directed by the Estate Management.

6. The sisal planted in the land sub-leased to the **OUTGROWER** will be the property of the **OUTGROWER**.

7. The **OUTGROWER** will sell all sisal leaves harvested in the scheme to **KATANI** at a price based on the prevailing world market prices of East African UG fibre as may be agreed between the parties concerned. In the event **KATANI** is unable to purchase the sisal leaves, the **OUTGROWER** will be authorized in writing to sell the sisal leaves elsewhere.

8. **KATANI** and the **OUTGROWER** shall amicably agree on how and when to undertake activities involving cultivation, planting, weeding and harvesting of sisal leaves so as to remove any competition between the estate and the sisal outgrowers. Any party contravening the agreed arrangement will lead to the revocation of this Agreement.

9. **KATANI** will have power to revoke this Agreement by giving 3 months notice in writing if the **OUTGROWER** fails to honor the provisions of this agreement.

10. In the event of the revocation of this agreement due to clause 8 above, the **OUTGROWER** will have the right to harvest all harvestable sisal he has planted before the revocation.

11. Where **KATANI** revokes this contract for reasons other than those covered under clause 8 above, **KATANI** will issue a one-year notice to the **OUTGROWER** of its intention to revoke the Agreement. A notice given under this provision will forbid the **OUTGROWER** from planting any new sisal in the scheme. The **OUTGROWER** may however continue to harvest mature the sisal within the notice period and will be compensated for any mature and immature sisal remaining at the end of the notice period.

12. The **OUTGROWER** may likewise issue a 3 months notice to revoke the Agreement. **KATANI** may re-allocate the land vacated by the **OUTGROWER** to any other party.

13. Each party to this agreement shall sign the contract witnessed by either the District Commissioner for the area, a Magistrate, an Advocate, a Member of Parliament for the area or a Commissioner for Oaths.

14. Upon the death of the **OUTGROWER**, the administrators of his/her estate may inherit all assets and liabilities of the deceased after the parties have verified and agreed on the value of such assets and liabilities.

15. This agreement together with the rights and obligations of the parties will be subject to the laws of the United Republic of Tanzania.

16. The parties to this agreement shall settle all disputes arising amicably or by referring such disputes to an arbitrator.

17. The commencement of this Agreement shall take effect from the date, on which the parties sign and deliver the Agreement in either Swahili or English languages but having the same meaning and interpretation.

Signed and Delivered by KATANI LIMITED:

Signature: .....

Title/Name: .....

Address: .....

Date: .....

Witnessed by:

Signature: .....

Title/Name: .....

Address: .....

Date: .....

Signed and Delivered by the OUTGROWER:

Signature:.....

Title/Name:.....

Address:.....

Date: .....

Witnessed by:

Signature: .....

Title/Name: .....

Address: .....

Date: .....

Annex 3. Photos

Three-year old smallholders sisal harvested at Mwelya estate (March 2004)

Two-year old smallholders sisal intercropped with maize at Mwelya (March 2004)

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Telephone: (+43-1) 26026-0, Fax: (+43-1) 26926-69
E-mail: unido@unido.org, Internet: http://www.unido.org