

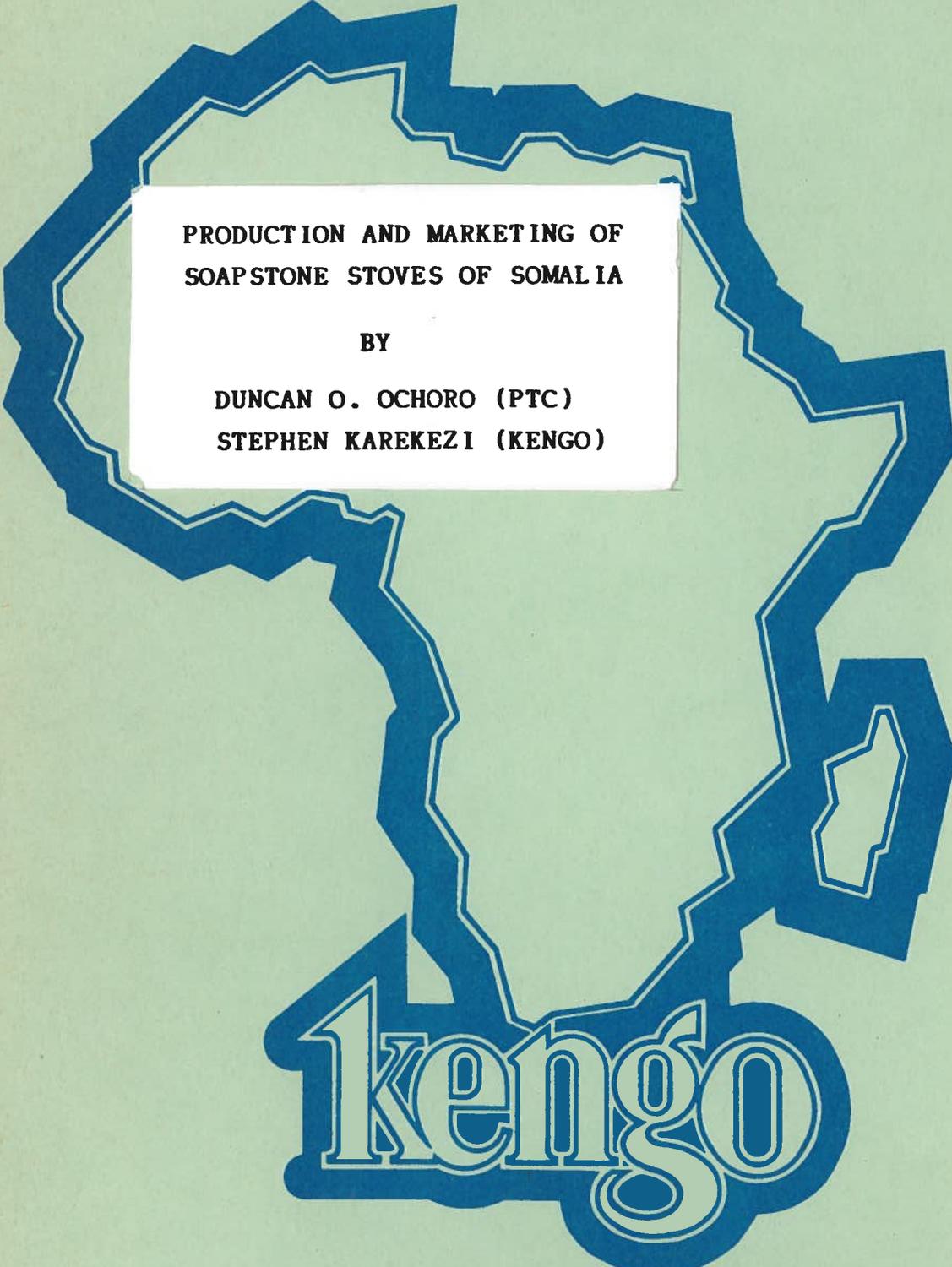
# REGIONAL WOOD ENERGY PROGRAMME FOR AFRICA

**PRODUCTION AND MARKETING OF  
SOAPSTONE STOVES OF SOMALIA**

**BY**

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**A KENGO REGIONAL WOOD ENERGY PROGRAMME TECHNICAL STUDY**

**BY**

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**This study was sponsored by KENGO Regional Wood Energy Programme for Africa, which is supported by AID through its REDSO-ESA office.**

**SEPTEMBER, 1987.**

**ACRONYMS AND ABBREVIATIONS**

<b>AID</b>	- Agency for International Development, USA
<b>CARE</b>	- Cooperative for American Relief Everywhere, US PVO
<b>DESCON</b>	- Consultative Group for Desertification Control, UNEP
<b>EIA</b>	- Energy Initiatives for Africa, AID Regional Project
<b>GOS</b>	- Government of Somalia
<b>GTZ</b>	- German Agency for Technical Cooperation
<b>IBRD</b>	- International Bank for Reconstruction and Development, the World Bank.
<b>KENGO</b>	- Kenya Energy and Environmental Organizations, NGO Kenya
<b>NGO</b>	- Non-Governmental Organization
<b>NRA</b>	- National Range Agency, Somalia
<b>NWP</b>	- National Woodstoves Programme, Somalia
<b>PTC</b>	- Professional Training Consultants, Kenya
<b>PVO</b>	- Private Voluntary Organization
<b>SRSP</b>	- Somali Revolutionary Socialist Party
<b>UNEP</b>	- United Nations Environment Programme
<b>UNSO</b>	- United Nations Sudano-Sahelian Office
<b>USAID</b>	- AID country Mission
<b>VITA</b>	- Volunteers in Technical Assistance, US PVO
<b>WCS</b>	- World Church Services

1 US \$ = So. Shs. 99.00

## **ACKNOWLEDGEMENTS**

The authors of this report would like to acknowledge the assistance and information provided by the National Woodstove Programme (NWP) of Somalia. Without the generous logistical assistance provided by the NWP, the authors would not have been able to complete this study. Special mention should go to Mr. Mohamoud Hassan Abokor, NWP Director, Mr. Mohammed Ali Nur, NWP Technical Director, Mr. Mohamed Ali Jinah, NWP Head of Promotion and Abdullahi Sharif Adan, NWP Head of Extension.

Many thanks to the Chairman, Mr. Nur Ali Sheik and members of the Ceel Bur Cooperative whose cooperation was instrumental in the successful completion of this study. Thanks also go to the NRA, USAID, Church World Services, Care-Somalia and the Energy Planning Department of Somalia's Ministry of Planning for the assistance extended to the authors of this report throughout the duration of their stay in Somalia.

**STEPHEN KAREKEZI.**

**DUNCAN O. OCHORO.**

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## **KENGO AND PROFESSIONAL TRAINING CONSULTANTS (PTC)**

Since 1982, the Kenya Energy and Environment Organizations (KENGO) has been called upon by agencies mostly in Eastern, Central and Southern Africa to provide training, information, technical assistance and support in the areas of improved cookstoves technologies. Countries KENGO has assisted include Lesotho, Botswana, Malawi, Rwanda, Uganda, Zimbabwe, Madagascar, Ghana, Zambia, Sierra Leone, Ethiopia, Tanzania, Sudan, Somalia and Burundi.

Based upon this demonstrated demand and perceptions of certain donors, KENGO commenced the Regional Wood Energy Programme for Africa in early 1986, with the goal of reducing woodfuel consumption in Sub-Saharan countries by improving the efficiencies of cookstoves. The purpose of the Regional Programme is to initiate an Africa-wide improved stove coordination and support programme that utilises as many local personnel and as much local expertise as possible. The programme's objectives are to:

- \* Assist individuals and agencies within Sub-Saharan Africa to identify, develop, promote, disseminate and market improved stoves;
- \* Train groups and individuals in stove evaluation (i.e. testing and quality control);
- \* Improve stove information exchange between local groups and individuals, and
- \* Identify local donor support for continued stove development, improvement and marketing.

The initial focus of the Regional Programme is improved cookstoves; eventually, the programme will encompass other closely related areas such as charcoal production, briquetting of biomass residue, fish drying, agroforestry and promotion of indigenous trees.

KENGO believes that most people working with improved stoves in Africa know considerably less about what their African colleagues are doing in this field than they do about work being carried in Europe and America.

This factor has hindered and impeded the development of most African stove programmes. The Regional Programme aims, among other things, to reduce this information gap and to serve as an indigenous "clearing house" in this field. To pursue its stated objective of supporting local indigenous institutions the KENGO Regional Wood Energy Programme for Africa approached a local agency, Professional Training Consultants (PTC) to assist it carry out this study of the soapstone stoves industry of Somalia. This was in response to a request for material, training and technical assistance from the National Woodstoves Programme (NWP) of Somalia.

PTC is a Kenyan firm of consultants with professional qualifications and long experience in the development and management of both local and international enterprises and agencies. The diversified team of consultants associated with PTC includes professional trainers and practising personnel in general and specialist management areas and levels.

PTC provides consultancy services in the following major areas:

- \* Research and development in market resource utilization, market research, financial analysis, project evaluation and project feasibility studies
- \* Rural socio-economic planning, development and appraisal
- \* Personnel management and specialist (technical) training
- \* Information technology
- \* General Project management

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## 1.0 EXECUTIVE SUMMARY

Largely as a result of unfavourable rainfall pattern and until recently uncontrolled use of precious biomass resources, Somalia is now faced with a daunting deforestation and desertification problem. The National Range Agency (NRA), under the auspices of the Ministry of Livestock, Forestry and Range, is the lead agency in the battle against deforestation and desertification in Somalia. Deforestation threatens the single most important source of energy in Somalia -Biomass energy.

The National Woodstoves Programme (NWP), which operates under the auspices of the NRA, is the key agency in the development and promotion of energy-efficient cookstoves in Somalia. Since its inception in 1983, the NWP has played a pivotal and commendable role in working towards its goal of arresting deforestation by reducing woodfuel consumption through the introduction and wide scale dissemination of fuel conserving cookstoves.

NWP's success is largely due to the dynamic and tireless commitment of its Director and his motivated technical and support staff. One of NWP's outstanding achievements has been the development and dissemination of improved soapstone stoves. Between January, 1986 and September, 1987, over 15000 improved soapstone stoves were disseminated. The soapstone stoves are produced by the Ceel Bur Cooperative which is 370 kms North-East of Mogadishu (the capital of Somalia), right in the middle of one of Africa's largest deposits of soapstone. The NWP has played a key role in channeling external technical, material and financial assistance to Ceel Bur Cooperative and promoting the improved soapstone stove. A number of development agencies have assisted the Ceel Bur Cooperative and NWP in the development, production and marketing of the improved soapstone stove. The most notable being the Government of Somalia, the Ministry of Livestock, Forestry and Range, NRA, USAID, VITA, and World Church Services (WCS).

In 1986, the NWP held discussions with KENGO Regional Wood Energy Programme for Africa on the possibility of the Regional Programme providing material assistance to the Ceel Bur Cooperative and conducting a study that would address the problems of production and marketing of improved soapstone stoves. This study was conducted immediately after KENGO delivered its material assistance to the Ceel Bur Cooperative. KENGO hired a marketing expert from a local Kenya agency, Professional Training Consultants (PTC) to assist conduct this study of the traditional and improved soapstone stove industry of Somalia.

This study addresses the following:

- \* Historical development, organization and function of the Ceel Bur Cooperative and the NWP
- \* Production of soapstone stoves
- \* Development of the improved soapstone stoves
- \* Marketing and transportation of soapstone stoves
- \* NWP role in promoting the improved soapstone stove, in particular its subsidy system

The study was conducted primarily through personal interviews, direct observation of stove production and marketing activities and review of existing information on improved soapstone stoves. Findings, conclusions and recommendations were drawn mainly through qualitative analysis of data collected.

The results of the study would assist the government of Somalia, the NWP and other concerned development agencies in determining what is required to strengthen current efforts to promote improved soapstone stoves.

#### SOMALI SOAPSTONE AT A GLANCE

Largest town:	Mogadishu	
Most popular urban stove:	Soapstone stove	
Producer:	Ceel Bur Cooperative	
	Traditional Stove	Improved Stove
- Cost of Production: So. Shs.	170	So. Shs. 260
- Cost of Metal Grate So. Shs.	-	So. Shs. 110
- Annual Production (est).	32000	8000
- Proportion sold in Mogadishu.	24000 (60%)	7200(90%)
- Market price per unit So. Shs.	350-500	So. Shs. 500-600

The study findings have revealed problems in:

- \* NWP's marketing subsidy of improved soapstone stoves which has a direct bearing on the promotion of the stoves.
- \* Reliable supply of metal grates for improved stoves.
- \* Soapstone mining and production in Ceel Bur, in particular working conditions and safety.
- \* Ceel Bur administrative and financial management.

The study's key recommendations are:

- \* Termination of NWP's marketing subsidy of improved soapstone stoves; the study presents a strategy for ending the subsidy with minimum disruption of the improved stoves sales.
- \* Increasing promotion of the improved soapstone stoves
- \* Ensuring a reliable of supply of metal grates for improved stoves.
- \* Coordination of assistance to the Ceel Bur Cooperative, task which the NWP is well placed to undertake.
- \* Improving the safety and working conditions of the Ceel Bur soapstone mines and workshop.
- \* Expanding the Ceel Bur Cooperative storage
- \* Minimising the cost of producing improved soapstone grates
- \* Enhancing the administrative and financial management of the Ceel Bur Cooperative
- \* Exploring potential exports markets for improved soapstone stoves.

## 2.0. INTRODUCTION

### 2.1. SOMALIA

Somalia (population 5.8 million - 1984 World bank estimate) is located in the Horn of Africa where it fronts the Indian Ocean and Gulf of Aden and border Djibouti, Ethiopia and Kenya. Most of Somalia consists of a low plateau covered by savannah shrub bush and grass. The climate is characterised by monsoon winds, hot temperatures and scarce irregular rainfall (100-200 millimetres per annum) with the exception of Southern Somalia (the drainage area of Somalia's two major rivers, the Shabeelle and the Juba) and the Northern highlands where annual rainfall totals of over 500 millimetres have been registered. Only 13% of the country's total area is suitable for agriculture but adverse rain and water supply pattern has confined agriculture to only 9% of potentially arable land. A large proportion of Somalis (50% -World Bank estimate) depend on livestock for their livelihood.

Largely as a result of an unfavourable rainfall pattern and, until recently, uncontrolled use of precious biomass resources, Somalia is now faced with daunting deforestation and desertification problems. The Government of Somalia (GOS), Private Voluntary Organizations (PVOs), bilateral and multilateral aid agencies in Somalia have identified prevention of deforestation and desertification as one of the most important challenges facing Somalia today. With a GNP per capita of only US \$250 (1983 - World Bank) and imports of crude oil petroleum products accounting for the equivalent of 40% of the country's total exports of goods and services (1984 World Bank), the commercial energy sector is beset with problems. This has resulted in shortages and steep price increases of petroleum products and electricity, thus intensifying the pressure on biomass resources and aggravating the wood energy crisis.

### 2.2. THE RESPONSE TO THE WOOD ENERGY CRISIS-NRA AND NWP

The National Range Agency (NRA), under the auspices of the Ministry of Livestock, Forestry and Range, is the lead agency in the battle against deforestation and desertification. Deforestation threatens the single most important source of energy in Somalia-Biomass Energy. The World Bank estimated that in 1984, biomass energy (wood, charcoal and agricultural residues) accounted for 87% of the country's total national energy consumption.

Wood and charcoal are the two major household fuels in Somalia. In 1980, about 2.8 million tons of wood and 0.9 million tons of charcoal were consumed. In 1984, a World Bank Energy Team estimated the total consumption of fuelwood to be four million m<sup>3</sup>. Wood is largely a rural fuel, 86% of total household woodfuel is consumed in rural areas. Charcoal, on the other hand, is principally an urban fuel. Virtually all the charcoal produced in Somalia is consumed in the urban areas.

With household energy requirements accounting for an estimated 92% of Somalia's biomass energy consumption, the introduction of improved cookstoves would ease the pressure on existing biomass energy resources. The National Woodstoves Programme (NWP), under the auspices of the NRA, is the principal organ in current efforts to introduce improved cookstoves.

### 2.3. BACKGROUND TO THE STUDY

In contrast with many other African countries, Somalia has a wide variety of indigenous traditional stoves. In Mogadishu, the charcoal soapstone (meerschaum) stove is the most popular. In Southern Somalia (lower Shabeelle) ceramic wood stoves are predominant while in South-West Somalia (Gedo) the three stones hearth is the most common.

Soapstone stoves, which dominate the Mogadishu stove market, are produced by Ceel Bur Cooperative which is 370 kms North-East of Mogadishu, right in the middle of one of Africa's largest deposit of soapstone. Soapstone stoves from Ceel Bur are exported to Djibouti, Kenya and Yemen.

The traditional soapstone stove has one major advantage -an exceptionally long lifetime (up to 25 years). Its disadvantages are numerous, the most serious being the absence of a rational draft system. The traditional soapstone stove has neither a grate nor a door. Without a grate, charcoal ash rapidly accumulates with use thus inhibiting self-sustained combustion. The small and uneven base of the traditional soapstone stove renders it unstable hence susceptible to breakage and dangerous spills of boiling cooking pot contents.

To pursue its objective of combating the twin problems of deforestation and desertification, the NWP (National Woodstoves Programmes) of Somalia, developed in the early 1980's an improved soapstone stove that was more energy efficient than the traditional model. The improved model has a superior damper system that facilitates combustion and regulation of stove power output. The NWP introduced the improved soapstone stove design to the Ceel Bur Cooperative. By Sept, 1987, over 15000 improved stoves had been produced and sold. The improved model has received an enthusiastic reception from Mogadishu consumers.

Despite the above successful record, the NWP and the Ceel Bur Cooperative still face several obstacles, especially in the marketing of soapstone stoves. There has been a dire shortage of reliable marketing information on both traditional and improved soapstone stoves i.e.

- \* Production volumes of traditional and improved soapstone stoves.
- \* Stove production costs.
- \* Comparative production costs of mining and working soapstone.
- \* Producer, wholesale and retailer prices.
- \* Quantity discounts, if any, offered by producers and wholesalers.
- \* Comparative transport costs.

In late 1986, the NWP held discussions with the KENGO Regional Wood Energy Programme on the possibility of providing material assistance to Ceel Bur Cooperative and conducting a marketing study that would address the aforementioned problems. In line with its policy on utilising existing African expertise, KENGO Regional Wood Energy Programme hired a Marketing expert from a local Kenyan agency, Professional Training Consultants (PTC) to assist conduct this study of the traditional and improved soapstone stoves industry of Somalia.

#### **2.4. PURPOSE OF STUDY**

The purpose of this study was to determine how the soapstone industry works with respect to the production and marketing of soapstone stoves. The results of the study would be used by the Ceel Bur Cooperative, NWP, KENGO and other interested development agencies in determining what is required to assist current efforts to promote the improved soapstone stove.

## 2.5. TERMS OF REFERENCE

The study lasted for ten (10) days in Somalia and addressed itself to the following broad areas of the Ceel Bur Cooperative and NWP activities:

- \* Historical development, organization, and operations of the Ceel Bur Cooperative and NWP.
- \* The production of soapstone stoves and other products and any bottlenecks encountered and how they can be overcome.
- \* Marketing and transportation of soapstone stoves.
- \* Price structure of soapstone stoves at every point from mining/production to eventual retail sales.
- \* NWP's stove subsidy system and other efforts to promote the production, marketing and use of the improved soapstone stove.

The results of this study answered the following questions:

- \* What is the role of the Ceel Bur Cooperative and NWP in the production and marketing of soapstone stoves?
- \* How are soapstone stoves produced ?
- \* Who should market the soapstone stoves ?
- \* Where are the stove markets ?
- \* How does marketing of stoves take place ?
- \* Who are the soapstone wholesale and retailers ?
- \* What is the cost of production of soapstone and revenue earned from the sale of stoves ?
- \* Who transports the stoves ?
- \* What are the alternatives for improving production and marketing of improved stoves ?

During the study, the authors of this report contacted Ceel Bur Cooperative, NWP and other concerned development agencies in Somalia.

### **3.0. METHODOLOGY**

#### **3.1. DATA COLLECTION**

The methodology for collecting primary data was through open-ended questions and personal interviews by the authors of the report. Interviews were kept as informal as possible. The secondary data was collected by reviewing existing documents from various individuals and/or organizations. Wherever necessary existing records on production and marketing of soapstone stoves and other products were verified.

Production and marketing activities were observed at the Ceel Bur production centre and Mogadishu marketing sites in order to collect information relevant to the study.

#### **3.2. GROUPS CONTACTED/INTERVIEWED**

The following target groups were contacted/interviewed:

- \* The NWP Director and other NWP officials.
- \* The management staff and members of the Ceel Bur Cooperative.
- \* Artisans involved in the mining of raw soapstone and production of soapstone stoves.
- \* Transporters of finished soapstone stoves.
- \* Wholesalers of soapstone stoves.
- \* Retailers of soapstone stoves.
- \* Selected users of soapstone stoves.
- \* Other relevant local Somali and development agencies such as the NRA, Church World Service (CWS) and CARE-Somalia.

Questions designed to focus on the structures and functions of the Ceel Bur Cooperative and NWP and production, distribution and pricing of soapstone stoves were developed to guide personal interviews and observations. Sample questions are found in Appendix A.

#### **3.3. DATA ANALYSIS**

Data collected from interviews and observations were analysed qualitatively to reach the report's conclusions and recommendations.

## **FINDINGS**

### **4.0. THE NATIONAL WOODSTOVES PROGRAMME (NWP)**

#### **4.1. BACKGROUND**

The NWP was created in 1983 to develop and promote fuel conserving cookstoves. Prior to the implementation of this programme, there was no national conservation effort and localized programmes were directed solely to refugees, which attempted to develop local solutions to the mounting national deforestation problem (Source: NWP 1987 Annual Workplan).

NWP was initially funded by USAID and the Somali Government. Unfortunately, USAID funds ceased in December, 1985. VITA (Volunteers in Technical Assistance), USAID implementing agency phased out its activities at the same time as the USAID assistance terminated. NWP is now funded through the Somali Ministry of Finance domestic development budget (Source: NWP 1987 Annual Workplan).

The goal of the NWP is to reduce the rate of deforestation by introducing fuel conserving cookstoves and educating the public on energy conservation measures. The specific objectives of the NWP are:

- \* Production and dissemination of improved soapstone, ceramic and metal stoves in the community to reduce consumption of charcoal and firewood.
- \* Training of stove producers, retailers and extension agents.
- \* Improving public awareness on fuel wood conservation.

#### **4.2. STRUCTURE OF NWP**

The NWP, under the auspices of the NRA, is the principal organ in current efforts to introduce improved cookstoves in Somalia. The NRA is the lead agency in Somalia in the battle against deforestation and desertification. The NRA operates under the auspices of the Ministry of Livestock and Range.

NWP has a total staff of 22 technical and administrative personnel. The NWP can be divided into two major functional departments:

- \* Technical department
- \* Administrative department

The Technical Department is composed of:

- \* Technical Director
- \* Head of Extension
- \* Head of Production and Promotion
- \* Head of Marketing
- \* Four (4) Extensionists

The Administrative Department is composed of:

- \* Administrative Assistant cum Secretary
- \* Accountant
- \* Four (4) drivers, two (2) office cleaners and three (3) watchmen.

The NWP detailed structure is illustrated in Appendix B. It is interesting to note that the Administrative Department accounts for 50% of the entire NWP staff. To enhance its technical and extension capabilities, the NWP could investigate the possibility of expanding the roles of its administrative staff to encompass technical and extension functions. For example, the drivers could be trained to act as extension assistants while out in the field.

#### 4.3. NWP ACTIVITIES

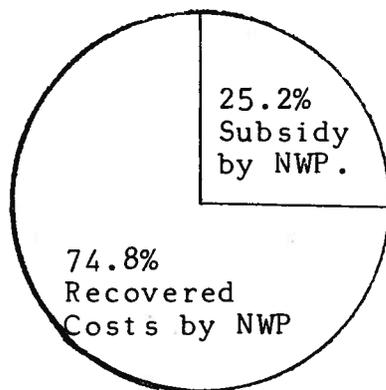
The NWP activities since its inception have been in the areas of:

- \* Prototype development of improved soapstone, ceramic and metal cookstoves.
- \* Production and marketing of improved stoves.
- \* Extension and public<sup>c</sup> education in the areas of energy conservation and improved cookstoves.

As the leading Somali agency in improved cookstoves, the NWP has been the conduit for channeling external technical, material and financial assistance to the Ceel Bur Cooperative, the sole producer of soapstone stoves in Somalia.

To encourage the adoption of improved soapstone stoves, the NWP with assistance from VITA (Volunteers in Technical Assistance) resorted to subsidising the production, transportation and marketing of improved soapstone stoves. Largely as a result of the inadequate market information, the NWP's subsidy-based stove dissemination strategy has stifled rather than encouraged self sustained development and marketing of improved soapstone stoves. In a nutshell, the subsidy system has placed a heavy and unnecessary financial and managerial burden on the NWP and has not benefited the most important actors in the stove production/marketing network—the producers and/or the buyers.

**National Woodstove Programme Subsidy.  
(Cost of Production & Marketing).**



Source: NWP.

It is imperative that NWP withdraws from active participation in the production and marketing of improved soapstone stoves. In particular, NWP should phase out its subsidy on the marketing and transportation of improved soapstone stoves as soon as possible. This means that the improved soapstone stove would require more of NWP's attention particularly in publicity and promotion; because it is increased demand for improved stoves, that would eventually convince wholesalers and retailers of traditional soapstone stoves to switch to the new improved model.

Unfortunately, NWP's scarce human and financial resources are currently spread thinly in a bid to simultaneously promote improved metal, ceramic and soapstone stoves. It appears that ceramic stoves are occupying a disproportionate share of NWP's staff time and effort.

While there is no doubt that the metal and ceramic stoves have the potential to attaining wide-scale dissemination in the long term, the improved soapstone stove is on the threshold of attaining self-sustained wide-scale dissemination. In view of its short to medium funding constraints, the NWP should consider concentrating its scarce personnel and financial resources in the stove model which is a certain winner - the improved soapstone stove.

## 5.0. CEEL BUR COOPERATIVE

### 5.1. BACKGROUND

The soapstone mining industry started over five generations ago (120 years). During this period, soapstone was exploited by individuals running their enterprises in their homes. The Ceel Bur Cooperative was started in 1972 with 35 founder members. The primary objectives of the Cooperative were:

- \* To bring the individual soapstone artisans together in a cooperative.
- \* To raise the income of soapstone artisans by pooling their resources and skills.
- \* To share the cost of inputs and revenue of outputs in soapstone products and their bargaining power.

Since 1972, the Cooperative membership has expanded to 300 bona fide members who are directly involved in the management of the Cooperative and the mining and production of a variety of soapstone products—stoves (traditional and improved), incense burners, ash-trays, lampshades, animal carvings, etc.

The basic requirements for joining the Cooperative are:

- \* A member must be at least 18 years old, and
- \* Must be skilled in both mining and working of soapstone.

However, people without skills undergo six (6) months training which terminates in a practical examination conducted by senior members of the Cooperative. Should the candidate fail, he is given an additional three (3) months training after which he becomes a member on passing the second test. Cooperative members are also allowed to bring their children to Cooperative workshop during their school holidays to acquire skills in working soapstone. Currently, the bulk of members are relatively young with many having completed secondary school education.

## 5.2. STRUCTURE OF THE CEEL BUR COOPERATIVE

The administration/management of the Cooperative is composed of:

1. A Cooperative Committee of eight (8) members including the Chairman.
2. Two (2) Sub-Committees:
  - \* An Executive Committee composed of five (5) persons i.e. the Chairman (who also chairs the Cooperative Committee), the Vice-Chairman and three (3) Cooperative members.
  - \* An Inspection and Quality Control Sub-Committee composed of three (3) members - Chairman, Vice-Chairman and one Cooperative member.
3. Two ex-officio members of the Cooperative Committee who hold the posts of Accountant and Store-keeper.

Elections to the Cooperative Committee are held every two years and the incumbent members of the Committee can defend their seats. All the members elected to the Cooperative Committee must be skilled soapstone aritsans who are fully involved in the mining and production of soapstone products. The Chairman is expected to be the most skilled, disciplined and committed member of the Cooperative. For example the current Chairman of the Cooperative, Mr. Nur Ali Sheikh, has been a soapstone artisan for 15 years (since 1962). He is now in his third term of office ( 5 years) as Chairman of the Cooperative.

Major changes that have occurred in the Cooperative since its inception are:

- \* The introduction of improved soapstone stoves
- \* The training of members as apprentices before joining the Cooperative.
- \* The increase in membership from the initial 35 to a record 300 members.
- \* Higher incomes accruing to members largely due to the expansion of the stoves market and introduction of the improved stove.

### 5.3. CONTACT WITH OTHER AGENCIES

When the Ceel Bur Cooperative was formed in 1972, it received a lorry from the Government of Somalia (GOS). The Cooperative later received a grant of So. Shs. 30,000 to cover maintenance and repair costs of the lorry. The lorry was used to transport Cooperative members to and from the soapstone mines and for transporting finished soapstone products to Mogadishu. After 13 years of service, the lorry broke down and was abandoned. The Cooperative maintains close links with GOS agencies. The Cooperative participates in all development projects (contributes approximately 50% of the areas development investment). for example, the Cooperative contributed So. Shs. 500,000 towards the establishment of a local school.

The Ceel Bur Cooperative is affiliated to the National Cooperative Movement. For every soapstone stove sold, the Ceel Bur Cooperative contributes So. Shs. 3.00 to the National Cooperative Movement. Services received from the Cooperative Movement include:

- \* Advice and assistance in financial and general management of the Cooperative.
- \* Training of the Cooperative members.
- \* Participation in National Cooperative Movement seminars.

The National Cooperative Movement has in the past also granted to the Ceel Bur Cooperative So. Shs. 20,000 for maintenance and repair of the lorry which was donated by the GOS.

The Ceel Bur Cooperative has also received 100 bags of cement from OXFAM, a British aid agency, to assist it build a workshop and two water tanks.

Between 1983 and 1985, the Cooperative indirectly benefited from the activities and funds of USAID through VITA which helped to establish the National Woodstoves Programme (NWP). The NWP has assisted the Cooperative in:

- \* Design and development of energy-efficient soapstone stoves.
- \* Production of improved stoves.
- \* Marketing of improved stoves through subsidies in transportation, storage of stoves and manufacture of metal grates.
- \* Publicity and promotion of improved stoves.

VITA involvement in NWP's activities ended in December, 1985 when USAID funding terminated.

The Church World Service (CWS) of Somalia has also provided assistance through the NWP in promotion and dissemination of improved soapstone stoves.

CARE-Somalia, established in 1983, plans to provide assistance to the Ceel Bur Cooperative. In mid-1987, two CARE officials carried out a needs assessment of the Ceel Bur Cooperative. According to CARE-Somalia Country Director, Ms. Margaret G. Tsitouris, CARE plans to extend Ceel Bur Cooperative workshop and warehouse building and provide tools and equipment including a core sampler which would facilitate identification of suitable mining pits.

There appears to be a significant number of development agencies interested in providing assistance to the Ceel Bur Cooperative. To avoid duplication of efforts and resources it is important that all assistance to Ceel Bur are coordinated. The NWP is the best placed agency to coordinate assistance to the Ceel Bur Cooperative given their long-term links with the Cooperative, concerned government ministries and other development agencies.

## 6.0. DEVELOPMENT OF THE IMPROVED SOAPSTONE STOVE.

The mining of soapstone for the manufacture of stoves and incense burners started in the Ceel Bur area as back as 120 years ago. Since then, the production of soapstone stoves has been transformed from highly individualized, informal and uncoordinated enterprises to a medium scale craft industry that supports a thriving community of 3,000 inhabitants. The Cooperative has established exacting skill requirements and precise standards of craftsmanship. The soapstone stove is not only easthetically appealing, it is also a prime example of excellent functional design of an essential household appliance.

Made from a material with good refractory characteristics, the soapstone stove is more efficient than the metal stoves that are found in most African cities. The soapstone stove is made as a large, inverted cone, hollowed to accommodate charcoal, mounted on a smaller cone-shaped base. Two sets of pot rests are carved on the inside wall of the stove to accommodate different sizes of cooking pots and two handles on the outside wall of the stove ensure portability. Water boiling tests carried out by the NWP indicate that the traditional soapstone stove can register efficiencies of up to 20%. Soapstone stoves of 25 years are common- a testimony to their durability. With careful handling, there is really no limit to the lifespan of a soapstone stove.

However, the traditional soapstone stove design has one major drawback. It has no rational air control system making lighting and combuston of charcoal difficult. This drawback was the first problem tackled by NWP's technical staff. They first developed a prototype which divided what was originally a single fire chamber into two chambers by means of a carved soapstone grate. A rectangular hole was cut out of the wall of lower chamber to allow in external air supply. A soapstone damper was added to provide greater air inflow control thus providing controllable cookstove power output. According to the NWP, the improved stove model had an efficiency of close to 40%, almost double that of the traditional design. See diagrams overleaf illustrating the two kinds of stoves.

The improved soapstone stove prototypes were designed to allow for partial sinking of cooking pots. Production of the partially-sunk stove models proved to be difficult. Very large block of soapstones, which are difficult to obtain, were required to manufacture the stoves. The design was modified by eliminating the top of stove and abandoning the idea of a partially-sunk cookstove. Tests carried out by NWP showed that there was a negligible loss of efficiency while stove production was greatly facilitated.

DIAGRAMS OF TRADITIONAL AND IMPROVED SOAPSTONE STOVES

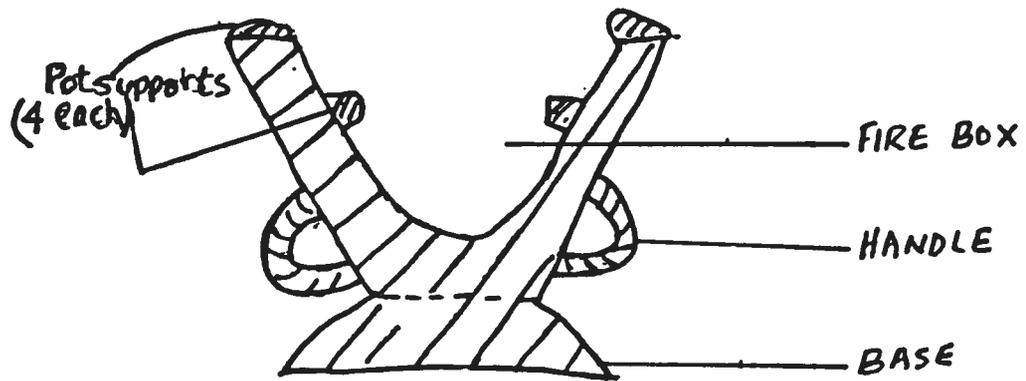


Figure 1 - Cross-section of traditional stove

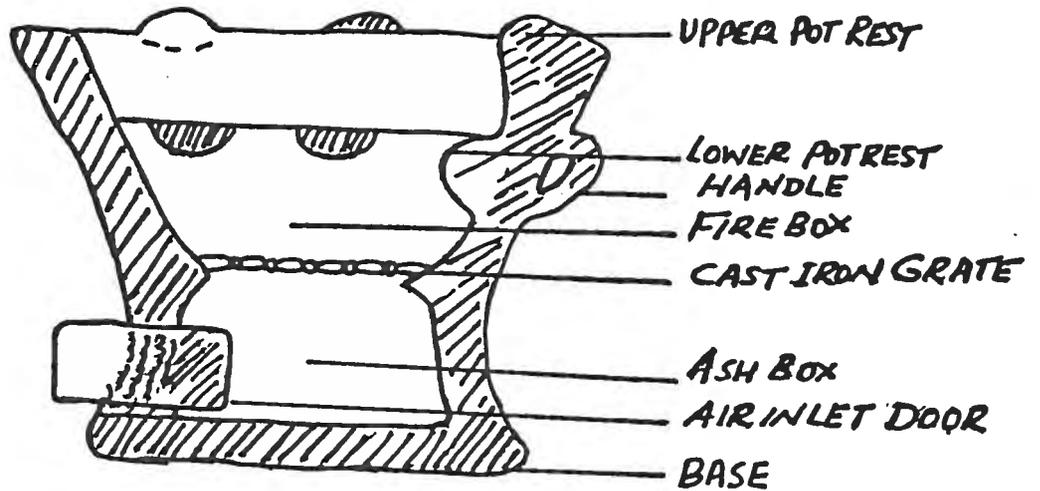


Figure 2 - Cross-section of improved stove

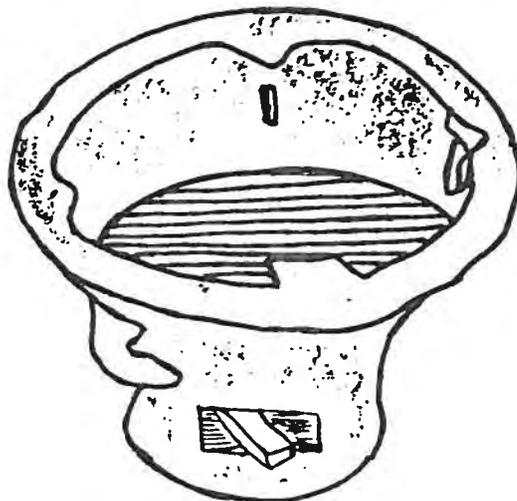


Figure 3 - Three-dimensional diagram of improved stove

Information from field trials and improved soapstone stove users indicated that there was a problem with the soapstone grate. It was collapsing after relatively short periods of use. NWP technical personnel developed a cast iron grate of greater durability but supply from local foundries in Mogadishu was erratic and unreliable. NWP has now developed a simple metal grate made from welded steel rods. It is made by local metal artisans who respond quickly to orders made by the NWP.

The above development of the improved soapstone stove was only one component of the NWP's improved stove prototype development activity which effectively commenced in march, 1983. The initial survey and pilot production phase was funded by VITA. Three types of improved cookstoves were developed:

- \* Charcoal burning soapstone cookstoves
- \* Wood burning ceramic stoves
- \* Charcoal burning metal stoves.

Work on ceramic and metal stoves is an important component of NWP's programme but since it is somewhat tangential to the scope of this report, discussion of developments in this area shall be deferred to the main study report that will follow this study.

## 7.0 MINING AND PRODUCTION OF SOAPSTONE STOVES

### 7.0 MINING SOAPSTONE

The Ceel Bur Cooperative has two soapstone mines located three (3) and seven (7) kms from the central Cooperative workshop which is adjacent to the centre of the Ceel Bur township. The raw soapstone mining process goes through the following steps:

- (1) Potential soapstone deposits are surveyed by Government geologist to determine their viability vis a vis soapstone mining.
- (2) Once a site has been identified by the geologist, trial pits of a depth of up to three (3) metres are dug. The pits are examined by Cooperative members who are specially skilled in identifying pits with soapstone of the required quality. Suspect pits are abandoned. The tools used in digging trial pits are chisel bars, shovels, buckets and natural fibre rope.
- (3) Once a pit is deemed to be of good potential, digging continues until the soapstone layer is reached. Miners then cut out raw soapstone blocks using chisels-shaped tools and sledge hammers. The raw soapstone blocks are then lifted out to be the top surface using natural fibre rope.
- (4) Using carving axes, the raw soapstone is pre-shaped and excess stone is discarded. This process also removes excess weight thus easing transportation to the Cooperative workshop.
- (5) The final step is transportation of pre-shaped blocks from the mining site to the Cooperative workshop site. The Cooperative hires a truck to transport the raw soapstone blocks to the workshop. It costs So. Shs. 2000 to hire a truck from the mining sites to the workshop. This is usually done once a week.

Soapstone mining is a year long activity that is not disturbed by climatic and weather changes. In fact the rainy season makes the extraction of soapstone easier in that water softens the soapstone rock and makes it easier to cut into blocks.

The soapstone mine site that is three (3) kms from the Cooperative workshop occupies an area of about one acre and has been worked for over six years. There exists no reliable estimates of the mines productive lifespan.

The Ceel Bur Cooperative has 300 members. While 150 work in the mines, the other 150 work in the workshop. Every year the crews interchange (the mining crew shifts to the workshop and vice versa). Mining of soapstone is a labour intensive and dangerous task. Miners work in hot and dusty conditions with no protective clothing. The mining shafts are connected by tunnels without adequate reinforcements and can easily collapse thus endangering the lives of miners. In early September, 1987, a soapstone mine tunnel collapsed on a miner. Fortunately, he was dug out by his work mates and saved from almost certain death. Mining of soapstone is unsafe. The work environment is hot and dusty. There is an urgent need to enhance the safety of soapstone mines.

On average, five (5) blocks of soapstone are produced by each miner every day. The working day starts at 8.00a.m to 4.00 p.m., with one (1) hour lunch break, 6 days a week. Somalia being a predominantly Muslim country, Friday is a non-working day.

## 7.2. PRODUCTION OF SOAPSTONE STOVES

The production of soapstone stoves involves the following steps:

- (1) Pre-shaped soapstone blocks are received from the mining site.
- (2) The pre-shaped blocks are placed in special pits adjacent to the Cooperative workshop and watered to keep them soft. The pits also provide storage for work-in-progress stock.
- (3) The blocks are removed from the pits as and when needed by the artisans in the Cooperative workshop.
- (4) Rough cutting of the pre-shaped blocks is the first stage of the soapstone stove shaping process. Carving axes of different dimensions are used to shape the soapstove to the desired form. No measurements or templates are used during the entire production process. A feel for the right measurements is developed through experience. Shaping of the soapstone stove involves the following detailed steps;
  - \* Cutting and shaping both upper and lower pot rests using carving axes.
  - \* Shaping the top edge of the stove using a carving axe.
  - \* Shaping the firebox using a specially designed inverted L-shaped carving knife.
  - \* Shaping the outside wall of the stove using carving axes.

- \* Shaping the bottom part of the stove which is then assembled to the top section using three nails. In the case of improved stoves, a larger block of soapstone is used because it is carved as one whole unit unlike the traditional stove which can be made up from two parts - the bottom and the top, which are nailed together. The ash box and damper door of the improved stove are carved out using carving axes and knife.
  - \* Shaping handles using arrow shaped carving tools and knife.
  - \* Smoothing both the fire-box and outside walls of the stove using a carving knife.
  - \* Cutting out diagonal lines on the pot rests to provide greater grip for cooking pots.
  - \* Decorating the top edge of the firebox using a knife to enhance the stove's aesthetic appeal.
- (5) Sun drying the stove, for approximately one (1) day.
- (6) The stoves are then stored in the Cooperative warehouses awaiting collection by buyers.

During all stages of soapstone stove production, water is used whenever necessary to soften the soapstone material thus making it easy to cut and shape. Occasionally wood glue is used to attach broken parts of the stove that have been inadvertently chipped off during the production process.

The traditional stoves are often made from two separate units- the top and the bottom. As explained earlier, improved stoves have to be made from whole soapstone blocks which are too difficult to mine thus increasing production costs of improved stove models.

The NWP should consider the possibility of designing an improved stove which is composed of two assembled discrete components.

Tools and materials used in soapstone stove production are:

- \* Carving axes of different sizes for first-cut shaping.
- \* Knives and concave inverted L-shaped carving knives for smoothing and stove decoration.
- \* Files for sharpening axes and knives.
- \* A small hammer for nailing the top and bottom of the traditional stove as well as fixing and repairing other tools.

- \* Nails for holding the top and bottom parts of the traditional stoves, as well as the door for the improved stove.
- \* Wood glue for repair work.

The tools used in cutting and shaping soapstone are razor sharp. Given the lack of protective clothing such as gloves and inadequate physical conditions, the artisans are exposed to injuries of hands and fingers. During the authors' visit, a number of artisans were injured, most of them hand injuries. There were no simple first-aid facilities available.

In terms of sheer physical work, mining soapstone is reported to be the more arduous task in stove production, while shaping of stoves is more demanding in terms of skill and attention to detail.

At the time of the visit there were 50 artisans in the Cooperative workshop, majority of whom were young boys of less than 18 years old. According to the Mr. Nur Ali Sheikh, the Cooperative Chairman, most of them were schoolboys on holidays who were learning the skills of soapstone working. Many of the older artisans were working in the mines or outside the workshop under two makeshift tents (some of the senior artisans were unable to work inside the dim workshop due to poor eyesight).

The physical working conditions in the production workshop are inadequate. insufficient ventilation, crowding and lighting of the workshop are the most serious problems. As mentioned earlier, a number of the older artisans work outside the workshop. Ironically, they were also directly exposed to the glaring light reflected by loose soapstone material within the workshop compound--another eyesight hazard.

According to the Cooperative, the artisans make five (5) traditional stoves a day or three (3) improved stoves a day i.e. approximately 1.5. hours for the traditional stove and 2 hours for the improved model. This appeared a rather conservative estimate since a direct observation of the production of one traditional stove indicated a time span of 45 minutes, half the Cooperative figure. It is assumed that five (5) stoves figure quoted by the Cooperative is what the artisans need to produce to satisfy the market demand rather than the capacity of a skilled artisan.

Perhaps the Cooperative deliberately understates its stove production rate to justify the price it charges the NWP for improved stoves (So. Sh. 260). A method analysis and time study of soapstone stove production would determine the correct stove production rate of a skilled artisan. Should the study show that the cost of production is not as high as initially thought, a more reasonable price of the improved stove can be established. This would contribute to the promotion of the improved soapstone stove to consumers and could raise the volume of improved stoves sold by the Ceel Bur Cooperative. Increased sales could lead to a net revenue increase accruing to the Cooperative members.

During the authors' visit to the Ceel Bur Cooperative, approximately 12 wholesalers, many of whom were women, had congregated on the workshop premises to purchase stoves. Senior Cooperative members were busy packing and bringing stoves out of the Cooperative warehouses.

Storage space for Ceel Bur Cooperative soapstone products is limited and is not effectively used. The Cooperative warehouses have no racks and stoves are simply stacked on top of each other, which could result in unnecessary breakages.

## 8.0. MARKETING SOAPSTONE STOVES

### 8.1. THE PRODUCT

#### 8.1.1. COST OF PRODUCING STOVES

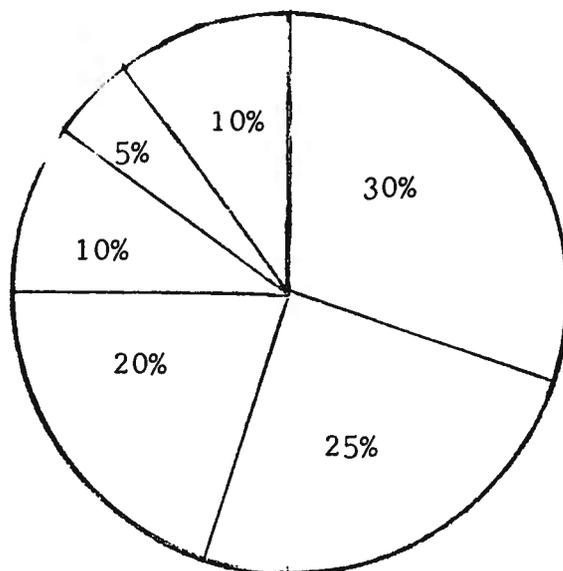
There are no records within the Ceel Bur Cooperative on how much it costs to produce either a traditional or an improved soapstone stove with or without a soapstone grate. However, the authors of the report managed to obtain the following information vis a vis sharing of proceeds accrued from the sale of soapstone stoves to the NWP:

	TRADITIONAL STOVE (So. Shs.)	IMPROVED STOVE (So. Shs.)
* Price paid by to the Cooperative by the NWP for the one improved soapstone stove	170	260
* Shared equally between miner and carver of stove i.e. So. Shs. 120 each for an improved stove and So. Shs. 75 for a traditional stove	150	240
* Balance kept by the Cooperative to cover its core costs	20	20

Source: Ceel Bur Cooperative

### 8.1.2. PROFIT SHARING

The accumulated Cooperative annual profits are shared out as follows:



**Legend:**

- \* 30% - Paid out to members
- \* 25% - Administrative expenses incurred by the Cooperative ie. transportation of raw soapstone from the mines to the workshop, stationery, taxes and cess paid to the National Cooperative Movement at the rate of So. Shs. 3.00 per stove sold.
- \* 20% - Cooperative investment
- \* 10% - Training of new members
- \* 5% - Welfare expenses of members ie. medical expenses
- \* 10% - Reserves carried forward every year

Source: Ceél Bur Cooperative.

Current Ceel Bur Cooperative production rates are estimated to be in the region of 4000 stoves (traditional and improved) a month. The average monthly income of a Cooperative member is estimated to be So. Shs. 8000 - 9000 a month, based on 24 working days.

Since there are no records available from the Cooperative on how much it costs to produce soapstone stoves (both traditional and improved), it was not possible to determine the profit margin of Ceel Bur Cooperative from the sale of stoves. However, the estimated income of each member (So. Shs. 8000-9000) is an indication that the members benefit from their production activities is significant. This is over and above other short-term benefits such as training, welfare, and future potential investments.

NWP should consider providing financial and management training and assistance to the Ceel Bur Cooperative aimed at streamlining its management and financial accounting. The establishment of a financial records system would assist the Cooperative plan both short-term and long-term production and marketing strategies.

## 8.2. PRICING

Prices charged by the Ceel Bur Cooperative are:

	So. Shs.
i) For traditional stoves	170.00
ii) For improved stoves (without metal grates)	260.00

According to the management of the Ceel Bur Cooperative the above prices are constant, irrespective of the size of the stove.

### Expenses Incurred in Handling Soapstone Stoves:

	Traditional Stoves	Improved Stoves
-Price of one stove So. Shs. at Ceel Bur:	170.00	So. Shs. 260.00
- Price of one grate in Mogadishu:	-	So. Shs. 110.00
- Transport and Handling:	70.00	80.00
- Taxation:	2.00	- *
- Storage:	2.50 +	18.00**
TOTAL	244.50 ++	468.00**

\* NWP being a government agency is exempted from tax

\*\* NWP hires a store in Mogadishu at the rate of So. Shs. 144.000 per annum (So. Shs. 12,000 per month) and stores 8000 units of stoves in the same period i.e. it costs So. Shs. 18.00 to store one unit.

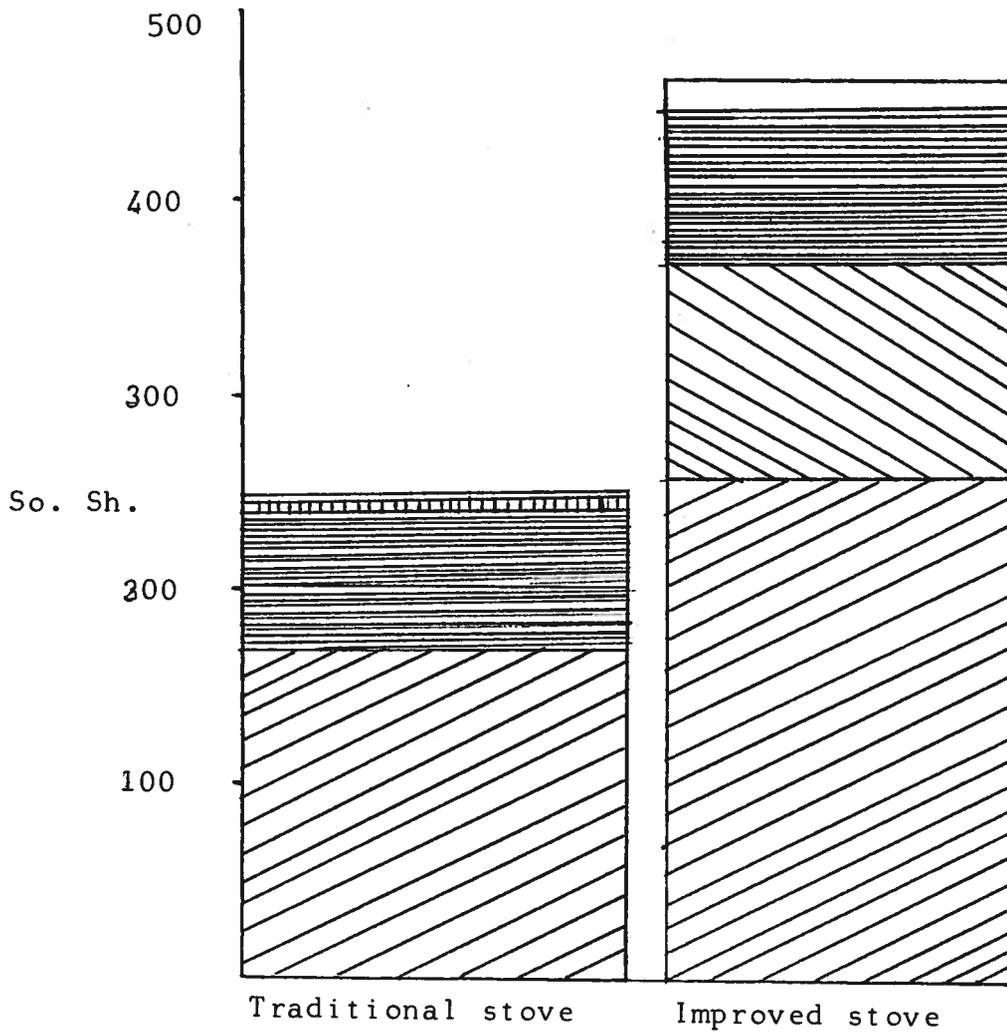
\*\*\* Does not include other expenses incurred by NWP such as travelling, food and accommodation of NWP staff etc.

+ Storage charges are fixed at So. Shs. 2.50 irrespective of the length of period.

++ Does not include personal expenses of the traders such as travelling, food, accommodation etc.

Sources: NWP, Ceel Bur Cooperative, and Traders Interviewed.

The relative expenses is illustrated in the diagram below:



Legend:

-  Price of stove
-  Price of one grate
-  Transport & Handling
-  Taxation
-  Storage

Prices of traditional and improved soapstone stoves at different points in the marketing network are:-

	So. Shs.
<b>TRADITIONAL STOVES</b>	
. Cooperative to Wholesalers	170.00
. Wholesalers to Retailers	300.00 - 350.00*
. Retailers to Consumers	350.00 - 500.00*
<b>IMPROVED STOVES</b>	
. Cooperative to NWP	260.00
. NWP to Wholesalers	350.00
. Wholesalers to Retailers	350.00 - 450.00*
. Retailers to Consumers	500.00 - 600.00*
. NWP to Retailers	350.00
. NWP to Consumers	350.00

\* At the retail end of the market, prices vary with stove size and negotiation between the buyer and seller.

**Source:** NWP. Ceel Bur Cooperative and traders interviewed

In Hargeisa which is in the North of Somalia, traditional stoves are sold by wholesalers direct to consumers at So. Shs. 350.00 per stove.

From the information available, NWP's subsidy on improved soapstone stoves is estimated to be a minimum of So. Shs. 118 per stove (So. Shs. 468 - 350). This subsidy includes the cost of purchasing stoves in Ceel Bur, packaging, transportation, storage, purchasing of metal grates and selling to retailers in Mogadishu. With this subsidy in place, retailers continue to realise substantial profit margins from the sale of improved soapstone stoves. These margins are estimated to be between 43% to 71% since the retailers purchase the stoves from NWP at a fixed price of So. Shs. 350 irrespective of size, and sell them at So. Sh. 500-600 each depending on the size of the stove. The retailers selling improved stoves are even exempted from the So. Sh. 2.00 market fee.

NWP should seriously consider reducing and eventually phasing out the subsidy system, Wholesalers should gradually be persuaded to purchase improved stoves directly from Ceel Bur once the problem of metal grates supply is overcome. This would allow NWP to concentrate its scarce resources on publicity, promotion, improvements in design and production and provision of technical and financial management assistance.

### 8.3. DISTRIBUTION

The cost of transporting traditional stoves is borne by wholesalers mainly from Mogadishu, Northern regions and Kismayu. Approximately 40 wholesalers, majority of whom are women, collect stoves from Ceel Bur monthly. The wholesalers travel to Ceel Bur whenever they are out of stock. In case of unexpected high demand for stoves which exceeds the considerable stock kept by the Ceel Bur Cooperative, more artisans are mobilized for production. The traders are usually willing to wait for two to three days in Ceel Bur for their orders instead of travelling back without the stoves. This is so because the distances between Ceel Bur and stove markets are very long. For example the the distance from Ceel Bur and Mogadishu is close to 800 kms round-trip journey.

The mode of transport for soapstone stoves is by lorries which also bring in essentials and other manufactured commodities to the district of Ceel Bur. Wholesalers rarely hire a truck just for transporting stoves. Their scale of operation is too small to justify such an expenditure. The cost of transporting stoves from Ceel Bur to Mogadishu has increased from So. Shs. 20.00 a stove in 1986 to So. Sh. 50 a stove in 1987. In effect transport charges have more than doubled over a period of 12 months.

On average, wholesalers travel to Ceel Bur once a month to replenish their inventory of soapstone stoves. The number of stoves bought by wholesalers vary in line with the individual's liquid cash position but generally each wholesaler would purchase 100-200 stoves per trip.

The number of wholesalers and retailers (selling both traditional and improved stoves) continues to increase every year. In 1987, it was estimated that there were 300 traditional and improved soapstone stoves retailers spread in the 10 major markets of Mogadishu. The estimated 300 excludes retailers spread out in the small shopping centres and streets of Mogadishu which would bring to total to an ever larger number.

As mentioned earlier, the NWP bears the cost of transporting to and storing improved stoves in Mogadishu. The continued subsidizing of transportation, handling and storage expenses of improved stoves by NWP from Ceel Bur to Mogadishu is a contributing factor to wholesalers' unwillingness to collect improved stoves directly from the Cooperative in Ceel Bur.

From 1972 to 1985, the Ceel Bur Cooperative used to transport its stoves using a truck donated by the Government of Somalia. The Cooperative had a warehouse and a selling outlet in Mogadishu. But this soon stopped when the truck broke down in 1985. The Cooperative has since closed its warehouse and outlet in Mogadishu.

The local market for soapstone stoves in Ceel Bur is negligible largely due to the sparse nomadic population that inhabit the district of Ceel Bur and the long lifespan (up to 25 years) of soapstone stoves which keep the replacement market small.

### 8.3.1. PACKAGING

The traders to Ceel Bur Cooperative for both traditional and improved stoves select the stoves they want and the Cooperative members pack the soapstone stoves in pairs using carton material, loose pieces of cloth and stout string.

The cost of packaging traditional and improved stoves is borne by wholesalers and the NWP, respectively. Once loaded, any breakages on transit are borne by the buyer at any one point in the distribution system.

According to wholesalers and the NWP, the rate of breakage on transit is:

* Wholesalers	0.0% - 5.0%
* NWP	0.8% - 2.0%

It costs NWP approximately So. Shs. 80.00 to transport and handle one improved soapstone stove from Ceel Bur Cooperative to Mogadishu. This is part of the NWP subsidy system which should be reduced gradually and eventually discontinued. It also includes an estimated So. Shs. 18.00 which NWP spends on storage of one soapstone stove in the hired warehouse in Mogadishu before collection by market retailers.

### 8.3.2. EXPORT MARKET

Currently no improved soapstone stoves have penetrated into the export market. The traditional stoves and other soapstone products such as incense burners and astrays are sold by traders to Djibouti and Yemen. According to Mr. Jinah, NWP Head of Production and Promotion, there is potential for sales of improved soapstone stoves in Djibouti, Northern Kenya, Yemen and even Saudi Arabia.

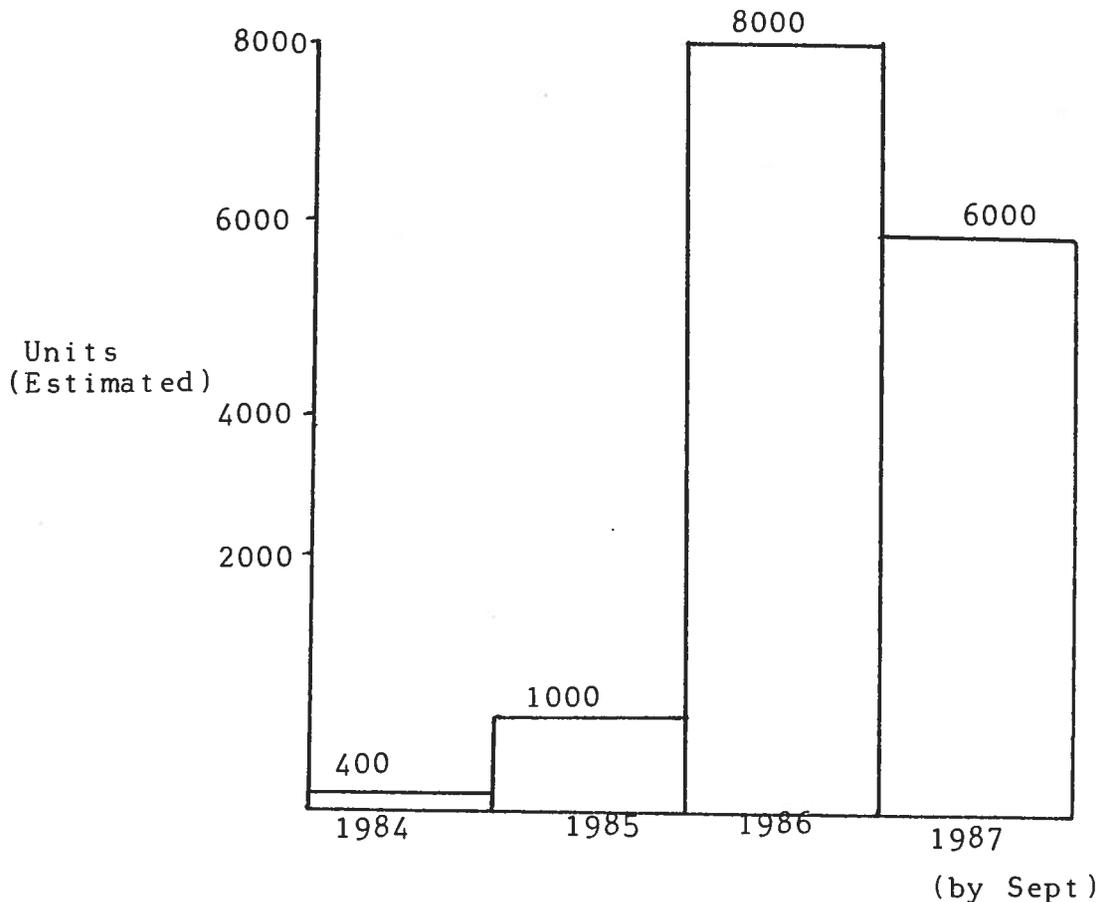
The same sentiments were expressed by Mr. Nur Ali Sheikh, Chairman of the Ceel Bur Cooperative. He emphasized the need for a survey of potential exports markets and for technical assistance and funds to exploit identified export markets.

The sale of traditional stoves and other soapstone products in neighbouring countries is an indication that there is also a potential for improved soapstone stoves to break into the export market. However, currently the beneficiaries of the export markets are traders and not the producers at Ceel Bur.

#### 8.4. PROMOTION

The promotion of traditional soapstone stoves has been largely passive. It is mainly in the form of display in front of selling outlets in markets and commercial areas of major towns of Somalia. According to Mr. Nur Ali Sheikh, Chairman of the Ceel Bur Cooperative, total production and sale of stoves (assuming negligible handling, transportation and storage) are in the region of 4000 stoves a month, which is equivalent to 48000 stoves a year.

Since the introduction of improved soapstone stove, annual production has grown as illustrated in the diagram below:



Source: NWP.

From 1983 to 1984 (when VITA was assisting the NWP), the emphasis was on improved soapstone stoves market testing and production. Since then, the NWP has shifted its activities to promotion and publicity of the improved soapstone stove. This strategy is justified by the substantial increase in production and sale of improved stoves from 1000 units in 1985 to 8000 units in 1986. It is estimated that the 1987 sales are likely to be higher. This sales increase was achieved mainly through the establishment of two important functional positions in 1985 within the NWP structure:

- 1) Head of Production and Promotion, a post that is currently held by Mr. Mohammed Ali Jina whose previous post was Socio-economic and Production Officer up to end of 1984.
- 2) Head of Extension, a post held by Mr. Abdullahi Sharif Adan whose duties include field orientation and information dissemination on the advantages of improved soapstone stoves and importance of energy conservation. There are four (4) regions- Gedo, Hiran, Lower Shabeelle and Mogadishu.

According to NWP's Head of Extension, Mr. Abdullahi Sharif Adan, the demand for improved soapstone stoves can be as high as 1000 stoves over a period of two - three weeks. In 1984, 45% of improved stoves were sold in Mogadishu, by August 1987, the proportion had jumped to 90%, according to NWP's Director, Mr. Mohamoud Abokar Hassan.

Since the establishment of the above two posts, the promotion of improved soapstone stoves has increased appreciably in the last three years particularly in Mogadishu area. The following market promotion tools have been developed and are used to promote the sales of improved soapstone stoves as well as create public awareness on the importance of woodfuel conservation

- \* Features in the newspapers of Somalia.
- \* Programmes in national television and radio stations.
- \* Special newsletters and magazines which are distributed to various communities.
- \* Posters and charts with catchy cartoons and diagrams.
- \* Public demonstrations by the NWP staff on advantages of improved soapstone stoves and how to use them. These demonstrations are conducted in market places, retail shops, and community centres.

- \* Displays of improved stoves in market and retail stove selling points.
- \* Display of improved soapstone stoves by NWP at the Mogadishu Trade Fair.
- \* Education of retailers and wholesalers on the product knowledge of the improved stove design for onward transmission to the consumers.
- \* Follow-up of buyers a few days after the purchase to assess their satisfaction/dissatisfaction and to collect data for further improvement of soapstone production and marketing.

Demonstrations are normally conducted within the 13 districts of Mogadishu by the three NWP extensionists (two ladies and a man) and Mr. Abdullahi Sharif Adan, the Head of Extension. The Head of Production and Promotion, Mr. Mohamed Ali Jinah also participates in demonstrations activities occasionally. Demonstrations are usually held in community centres and market places. Promotions (demonstrations and information briefs) are always done in close conjunction with the local district commissioner of the area.

The aim of demonstrations is to introduce the improved stove to the public and create consumer demand for the improved soapstone stove.

The frequency of demonstrations is once every week and this is normally repeated several times at one site. One complete demonstration lasts approximately 30 minutes and includes comparison of the energy efficiency of improved stoves vis a vis traditional stoves in terms of:

- \* Rate of charcoal consumption
- \* Time taken to bring equal quantities of water to the boiling point.
- \* Amount of charcoal consumed during the demonstration.

Accompanying demonstrations are information briefs which focus on:

- \* Importance of energy conservation through the saving of charcoal and reduced cooking time.
- \* Conservation of the country's forests through reduced woodfuel consumption.
- \* Money saved by users of improved stoves (use less charcoal).

- \* Safety of improved soapstone stoves.
- \* Cleanliness and convenience of improved stoves.

The publicity and promotional activities of the NWP have contributed significantly to the creating of public awareness and demand for the improved soapstone stoves. While NWP has access to Somalia's mass media (television, radio and newspapers) at preferential rates, a significant proportion of its funds are used in the design, production and distribution of promotional packages, the most expensive being posters. NWP needs financial assistance to expand its promotional campaign and maintain public interest in and demand for the improved soapstone stove. The success of a product critically depends on consumer awareness and acceptance of the product's positive features and attributes.

Other reasons for the increase in demand for the improved soapstone stove in Mogadishu has been attributed to:

- \* Government of Somalia (GOS) involvement and encouragement especially at Government orientation centres.
- \* Campaign by the government to persuade public and civil servants to use improved stoves as a strategy for conserving energy.
- \* High profit margins realised by wholesalers and retailers estimated to be in the region of 43% to 72%.
- \* Increased prices of charcoal which has indirectly promoted the sales of fuel conserving stoves since consumers are keen to reduce their household fuel expense.

According to NWP, the market share of the improved soapstone stove in Mogadishu at the time of this report is 30% and is increasing.

The source of MWP funds for publicity and promotion of improved soapstone stoves have mainly been from:

- \* The Government of Somalia
- \* The Church World Services (CWS)

Wholesalers' and retailers' contribution to promotion of sales, in addition to displays, has been through personal contacts and relationships with customers. In Mogadishu, wholesalers promote traditional stoves by selling to retailers on favourable credit terms and recovering their money after retailers have sold the stoves to consumers. Credit sales to retailers is largely based on personal trust. It has the advantage of eliminating storage costs that would be incurred by the wholesalers.

The Ceel Bur Cooperative promotes the sales of both traditional and improved stoves by offering discounts on large orders and occasionally giving some to prospective traders as presents.

In February 1986, the NWP granted to the National Cooperative Movement in the Northern region, 2000 improved soapstone stoves on credit to be paid after sale to consumers. This created substantial demand for the improved soapstone stoves which were selling at over So. Shs. 600 in an area that was previously dominated by traditional metal stoves. Within one year, the whole stock had been sold but the National Cooperative Movement was slow in remitting back the money to the NWP despite the profits they had made.

A request to the NWP from the National Cooperative for an additional 2000 stoves for the Northern region was turned down due to the Cooperative's poor past record and pressure to satisfy the increasing demand from Mogadishu. In addition, the cost of transporting stoves to the North is prohibitive and has dissuaded the NWP from exploiting the markets in the Northern regions.

According to Mr. Mohamed Jinah, NWP Head of Production and Promotion, once the problems of the manufacture and supply of metal grates is permanently solved, the NWP plans to expand the market for improved soapstone stoves to other regions such as:

- \* Bay region
- \* Lower Juba region
- \* Northwest region
- \* Central region

The promotion of improved stoves by the NWP's extension department also includes the promotion of improved ceramic woodstoves which are mainly used in the regions outside Mogadishu. In Mogadishu, the focus is still on improved soapstone stoves since according to NWP sources, 85% of charcoal produced in Somalia is consumed in Mogadishu.

#### 8.4.1. BOTTLENECKS IN PROMOTION - GRATES

Despite the high and increasing demand of improved soapstone stoves in Mogadishu, there are still persistent bottlenecks in the manufacture and supply of metal grates which were originally made of cast iron by local foundries. The NWP overcame the above problem by designing metal grates that could be manufactured by local artisans who respond quickly to orders.

Initially, the metal artisans could not ensure a steady supply of metal grates due to frequent power failures. This has since improved substantially and the supply of grates is now satisfactory.

The latest model of metal grate is made out of cut and bent metal rods which are assembled using an electric welding machine. NWP provides the artisans with the correct design and specifications.

The second problem has been the unwillingness of wholesalers to buy the improved stove from Ceel Bur without the metal grates (i.e. incomplete) since the grates are made in Mogadishu.

The third bottleneck is concerned with quality. The first models of improved stoves had soapstone grates but these proved to be too weak. The grates were collapsing after relatively short periods of use. In 1986, the NWP signed an agreement with the Ceel Bur Cooperative to stop production of improved stoves with soapstone grates. To date, the Cooperative has not adhered to the agreement because of enticing orders from wholesalers who continue to deal in improved stoves with soapstone grates.

It should also be noted that grates account for a substantial proportion of NWP soapstone stove subsidy. NWP buys metal grates for So. Shs. 110 each. This component of the subsidy is unsustainable and needs to be phased out. Measures should be taken to ensure that either the Cooperative or wholesalers/retailers take over the purchase and assembly of metal grates of improved soapstone stoves. A microstudy would shed light on the best strategy for ensuring self-sustained production and marketing of metal grates and termination of NWP active participation in the purchase and distribution of metal grates.

## 9.0. CONCLUSIONS AND RECOMMENDATIONS

### 9.1. NATIONAL WOODSTOVES PROGRAMME

It is recommended that the NWP considers the following:

#### 9.1.1. Subsidy

NWP expenses on improved stoves indicates that the NWP sells the improved soapstone stove to Mogadishu wholesalers/retailers below cost price. It costs an estimated So. Shs. 468 to buy improved stoves from the Ceel Cooperative, handle, transport and store in Mogadishu and purchase metal grates for the stoves. The NWP sells the stoves to wholesalers/retailers for So. Shs. 350. For every improved stove that the NWP sells, it loses a minimum of So. Shs. 118. Since sales of improved stoves are estimated to be in the region of 8000 units a year, the NWP is losing close to a million shillings a year. As NWP promotional efforts continue to generate demand for the improved stoves, the subsidy burden will get heavier. In addition the subsidy does not benefit the most important actors in improved stoves -producers and/or consumers, the subsidy is increasing the already significant profit margins of middlemen-the wholesalers and retailers.

It is imperative that the NWP phases out its subsidy system and withdraws from the marketing and distribution of the improved stove. The aim should be to use the same network used by traditional stoves dealers to disseminate the improved stove. The NWP could consider utilising the following strategy as a technique for gradually easing out of the subsidy trap:

- \* Identify reliable wholesalers and/or retailers
- \* Offer the selected wholesalers/retailers a sales guarantee that is in line with the cost price of improved stoves.
- \* If the wholesalers are unable to sell the improved stoves, the NWP undertakes to buy the stoves at the agreed sales guarantee price.

To strengthen its marketing strategy, it is recommended that the KENGO Regional Wood Energy Programme considers organizing a Marketing Improved Stoves Study tour of Kenya for either the NWP Director or one of NWP's senior staff member.

The above strategy would protect wholesalers/retailers from losses. Once sales of improved stoves picks up and wholesalers start to procure the improved stoves and grates on their own volition, the NWP would be left with an easy route for withdrawing from the marketing of improved stoves. It is important that the sales guarantee scheme should have a clear cut expiry date. The sales guarantee should only be renewed if sales are deemed to be still too low. On final expiry, the NWP should disengage from active participation in the marketing of improved soapstone stoves.

At the moment, the few retailers who deal in the improved soapstone buy it from the NWP for So. Shs. 350 and sell it to consumers for approximately So. Shs. 500 to realise a handsome profit margin of So. Shs. 150. In the informal sector, it is generally true that the traders who deal in a new product expect high profits to compensate for the risk in selling a relatively unknown product. But as sales increase and word gets round that the improved stove is profitable, competition begins and the price of the improved stove starts to diminish as sales continue to climb. Unfortunately, in the case of improved soapstone stoves, that has not happened. The first reason is the NWP's subsidy system discussed in the previous section. The second reason is the direct sale of improved stoves by the NWP directly to customers at the wholesalers price of So. Shs. 350. This undercuts retailers and stifles the sales. It is therefore recommended that the NWP stop selling directly to individuals and direct all requests for improved soapstone stoves to retailers.

#### **9.1.2. Promotion**

With phasing out of the subsidy system, the NWP needs to substantially increase its publicity and promotion of the improved soapstone stove to counteract the inevitable short-term drop in sales that would follow the withdrawal of the subsidy system. Currently, NWP's efforts are spread thinly in its efforts to promote all the three types of improved stoves it has developed—metal, ceramic and soapstone cookstoves. It is recommended that the NWP de-emphasize promotion of metal and ceramic stoves and focus its scarce personnel and financial resources in the publicity and promotion of the improved soapstone stove. To further strengthen its publicity efforts it is recommended that the NWP request financial assistance, from development agencies for the promotion of the improved soapstone stove.

### **9.1.3. Grates**

There is an urgent need for a regular and reliable supply of metal grates for improved stoves. The current supply is heavily dependent on the NWP active intervention. It is recommended that a micro-study on the design, production and marketing of metal grates is carried out to determine the most effective strategy for ensuring a self-sustaining production, procurement and use of metal grates for improved stoves. The micro-study should answer the following questions:

- \* Is the production of metal grates in Ceel Bur technically viable ? Does the Cooperative possess sufficient metal skills required to produce metal grates ?
- \* Is there regular supply of electricity (for welding) and raw materials ?
- \* Is the manufacture of metal grates in Ceel Bur economically feasible ? Are the associated transport costs excessive ?
- \* Would an initial grant of grates provide enough incentive to the Ceel Bur Cooperative to start manufacturing or procuring metal grates for its improved stoves ?

## **9.2. CEEL BUR COOPERATIVE**

### **9.2.1. Coordination of assistance**

To avoid duplication of efforts and resources by different development agencies interested in assisting the Ceel Bur Cooperative, it is recommended that all assistance to the Cooperative is coordinated by the NWP given their long relationship with the Cooperative, concerned government ministries and other development agencies.

### **9.2.2. Safety of soapstone mines and workshop**

To enhance soapstone mines and workshop operational safety, it is recommended that the NWP conduct a work safety study of the Ceel Bur mines and workshop to be followed by safety seminars for Ceel Bur Cooperative members. It is recommended that the Cooperative considers using some of its investment funds and/or reserves for purchase of protective clothing, mines tunnels reinforcement materials and first-aid kits.

### **9.2.3. Production cost**

To reduce the cost of producing improved soapstone stoves, it is recommended that the NWP considers the possibility of developing an improved stove design that is composed of two assembled parts. The two-part improved stove would be cheaper because it would not require difficult-to-mine single large blocks of soapstone.

### **9.2.4. Work study**

It is recommended that the NWP consider the possibility of carrying out work study (method analysis, time study, work place layout and flow) of the production of traditional and improved stoves. The work study will most probably yield considerable savings in production time and cost which would translate into cheaper improved stoves.

### **9.2.5. Workshop expansion and working condition**

There is an urgent need to expand the existing Ceel Bur Cooperative workshop which is severely congested. Measures should also be taken to improve the currently inadequate levels of ventilation and lighting (an ergonomics study would be ideal).

### **9.2.6. Warehouse**

The Ceel Bur Cooperative needs additional warehouse space. It is recommended that development agencies are approached for assistance. In the short term the Cooperative should endeavour to utilise existing storage space more effectively i.e. construct racks.

### **9.2.7. Financial management**

At the moment the financial records of the Ceel Bur Cooperative are inadequate. It is recommended that the NWP considers the possibility of providing the Cooperative with training and technical assistance in the maintenance and analysis of financial records for effective medium to long term production and marketing planning.

### **9.2.8. Export markets**

It is recommended that a study is conducted, preferably in conjunction with the NWP, to investigate the potential export market for improved soapstone stoves. There appears to be potential markets in Djibouti, Yemen and Northern Kenya.

APPENDIX A  
SAMPLE QUESTIONS USED  
IN THE INTERVIEWS

## I. DEVELOPMENT, ORGANIZATION AND FUNCTIONS OF CEEL BUR COOPERATIVE.

1. When was the Cooperative formed ?
2. What are the objectives of the Cooperative ?
3. How many members are there in the Cooperative ?
4. How does one become a member ?
5. What is the functional structure of Ceel Bur Cooperative ?
6. What major changes have taken place in the Cooperative from its inception upto the present ?
7. What is the relationship between Cell Bur and various government agencies both at the local and national levels ?
8. Who produces the soapstone products within Ceel Bur Cooperative ?
9. What is the impact of soapstone production to the socio-economic development of Ceel Bur community ?
10. (i) Has Ceel Bur benefitted from any external aid/ assistance in the past ?  
  
(ii) If yes, which one(s) and in what form(s) ?

## II. PRODUCTION

1. Examine how soapstone has evolved and currently takes place to answer the following questions:
  - i) By what methods is soapstone mined and worked ?
  - ii) What tools are used ?
  - iii) What is the division of labor in all aspects of on-site production and working ?
  - iv) Do the producers perceive that production and working techniques could be improved ?

- v) Can they be improved using time and work study techniques ?
- vi) What does network analysis of the work flow reveal ?
- vii) Are there production bottlenecks and can they be overcome ?
- viii) What is the optimum manner of deploying KENGO Materials Assistance ?
- ix) How is the product line (eg. raw soapstone, stoves, incense burners, handicrafts, etc) determined ?
- x) Who decides what products are produced and in what amounts ?
- xi) Does production vary throughout the year, or over periods of time ? If so, why (e.g. rains, seasonal availability of labour, etc. ) ?

### III. MARKETING

1. Who markets the raw soapstone produced by Ceel Bur ?
2. Who markets the soapstone products produced by the Cooperative; particularly the stoves and incense burners ?
3. What proportions of finished products are marketed in:
  1. Local community ?
  2. Mogadishu and other urban centres ?
  3. Abroad or overseas—give names of countries exported to currently.
4. Are there wholesalers ? If yes, then:
  - (i) Where are they located ?
  - (ii) How are they contacted ?
  - (iii) How many are they ? (approximately)
  - (iv) What information do they have on soapstone products they sell ?
  - (v) How are they supplied by the products ?
5. Are there retailers ? If yes; then:
  - (i) Where are they located ?
  - (ii) How are they contacted ?
  - (iii) How many are they (approximately)
  - (iv) What information do they have on soapstone products they sell ?
  - (v) How are they supplied by the products ?
6. Does Ceel Bur sell some of its products directly to consumers ? If yes, explain the procedure or If No, explain why not.
7. How does Ceel Bur promote its products, particularly soapstone stoves ?

8. Are there possibilities of increasing the number of wholesalers, retailers and any other product outlets. If yes, explain how.
9. Based on past experience, what are the prospects for expanding the export markets.
10. What problems are encountered in the marketing of soapstone stoves by Ceel Bur Cooperative ?
11. What steps has the cooperative taken to overcome 10 above ?

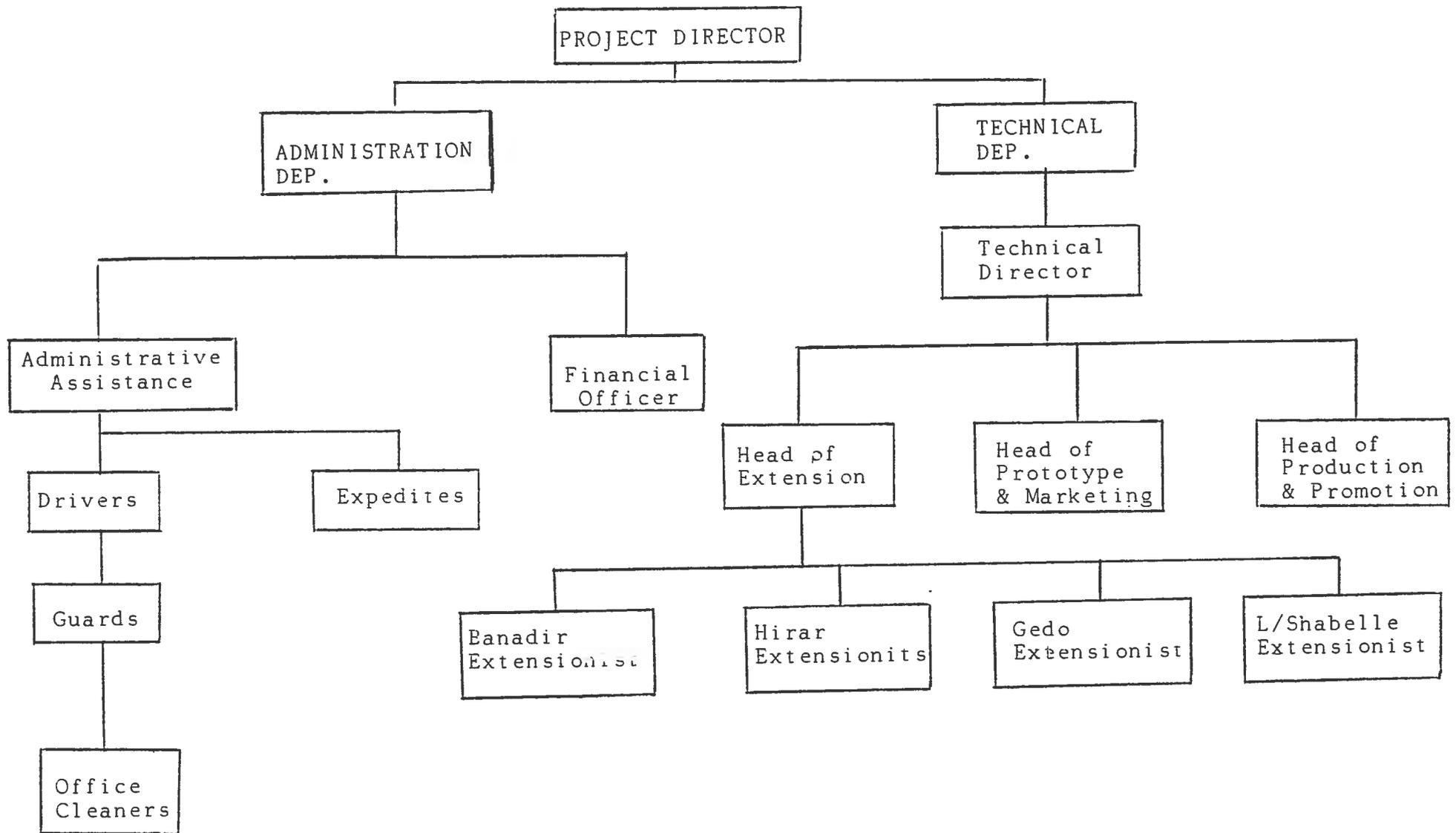
#### IV. TRANSPORTATION.

1. How is transport organised from raw soapstone production to the ultimate consumers of the products ? i.e. what proportion (if any) of transportation is done by :
  - i. Ceel Bur Cooperative
  - ii. Wholesalers
  - iii. Retailers
  - iv. National Cooperative
  - v. Other independent transporters.
2. Is there any transport differentiation by product stage or type i.e.
  - i. Transporters of raw soapstone only.
  - ii. Transporters of finished products only.
  - iii. Transporters of both raw soapstone and finished products ?
3. What are the reasons for differentiation (If any) in transportation ?
4. Does transport vary during the year ? If yes why ?
5. What are the problems encountered during transportation of raw soapstone and finished products ? i.e.
  - i. Breakages of products
  - ii. Loss of products
  - iii. Delays (if any) & why
  - iv. Lack of enough storage facilities
  - v. packaging
  - vi. Weather conditions e.g. rains
  - vii. Physical conditions e.g. rough roads and/or long distances.
6. What steps has the cooperative taken to overcome some of the problems if not all ?

## V. PRICING

1. What is the total cost of producing an improved soapstone stove ? i.e.
  - a. Cost of labour
  - b. Cost of material from raw soapstone to finished product.
  - c. Cost of tools and other related materials.
  - d. Overhead costs.
- (ii) What is the profit margin imposed by the Cooperative ?
2. What is the cost of transporting finished products at different stages ? i.e.
  - (i) From Ceel Bur to Wholesalers
  - (ii) From Wholesalers to Retailers
  - (iii) From Ceel Bur directly to Retailers (if any)
  - (iv) From Ceel Bur directly to Users (consumers) if any.
3. What are the prices of finished products (stoves) at every point ? i.e.
  - (i) At production point at Ceel Bur
  - (ii) Price charged by wholesalers to retailers
  - (iii) Prices charged by retailers to consumers etc.
  - (iv) Prices charged by Ceel Bur directly to users (if any)
4. (i) What are the taxes imposed in production and working of soapstone and soapstone products ?
  - (ii) Who collects the taxes ?
5. How does the price of finished products affect demand of the stoves by users at different points ?
6. Are there price variations of finished products i.e.
  - (i) Between rural and urban communities ?
  - (ii) Seasonally during the year ?
  - (iii) Due to differences in distances from point of production to point of sale.?

APPENDIX B  
NATIONAL WOODSTOVE PROGRAMME  
ORGANIZATION STRUCTURE



**APPENDIX C**  
**LIST OF AGENCIES/PERSONS CONTACTED**

1. NATIONAL WOODSTOVES PROGRAMME (NWP)  
P..O.Box 3405  
Mogadishu TEL: 81635      TELEX 745      CROCESUD      MOG  
Somalia

Mr. Mohamoud Abokor Hassan, Director  
Mr. Mohamed Ali Noor, Technical Director  
Mr. Mohamed Ali Jinah, Head of Production and Promotion  
Mr. Abdullahi Sharif Adan, Head of Extension  
Ms. Safiya Ali, Extension/Storekeeper  
Ms. Saciido Khaliif, Extension/Storekeeper

2. CEEL BUR COOPERATIVE  
Ceel Bur  
Somalia

Mr. Nur Ali Sheikh, Chairman  
Mr. Doria Oman Ali, Vice-Chairman  
Mr. Botan Essa Shuriye, Cooperative Accountant  
Mr. Salad Mohamed Robleh, Cooperative Member

3. SOMALI REVOLUTIONARY SOCIALIST PARTY (SRSP)  
Ceel Bur  
Somalia

Mr. Yusuf Dubad, Acting Party Secretary

4. CHURCH WORLD SERVICES  
P.O. Box 2991,  
Mogadishu  
Somalia

Mr. Razafinanja Gaston, Director

5. CARE-INTERNATIONAL IN SOMALIA  
P.O. Box A-406  
Medina - Mogadishu Telex: 745 CROCESUD MOG  
Somalia

Ms. Margaret G. Tsitouris - Country Director

6. USAID - SOMALIA  
Mogadishu Tel; 80009/81541  
Somalia

Mr. Dan Vincent, Chief Engineer

7. MINISTRY OF NATIONAL PLANNING  
Energy Planning Department (EDP)  
P.O. Box 1742,  
Mogadishu Tel; 80384 ext. 62 Telex: 715 SPC MOGA  
Somalia

Mr. Mohamed Muse Issak, Director of EPD  
Mr. Isse Ali Ahmed, EPD

8. STOVE TRADERS CEEL BUR  
Ceel Bur  
Somalia

Mr. Mohamed Hersi Hayle, Trader  
Mr. Faduma Abukar Malin, Trader

9. NATIONAL RANGE AGENCY (NRA)  
P.O. Box 639 Tel: 30754 (Private)  
P.O. Box 1759 Tel: 30710 (Office)  
Mogadishu  
Somalia

Dr. Abdullahi Ahmed Karani, General Manager

**APPENDIX D**  
**DOCUMENTS REVIEWED**

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**APPENDIX E**  
**KENGO REGIONAL PROGRAMME BROCHURE**

KENGO believes that most people working with improved stoves in Africa know considerably less about what their African colleagues are doing in this field than they do about work being carried in Europe and America.

This factor has hindered and impeded the development of most African stove programmes. The Regional Programme aims, among other things, to reduce this information gap and to serve as an indigenous "clearing house" in this field.

The initial focus of the Regional Programme is improved cookstoves; eventually, the programme will encompass other closely related areas such as charcoal production, briquetting of biomass residue, fish drying, agroforestry and promotion of indigenous trees.



Usika — Uganda



Tree planting

For further information please contact:

The Programme Manager,  
KENGO Regional Wood Energy Programme,  
K.E.N.G.O.  
P.O. Box 48197,  
NAIROBI  
Telephone: 749747/748281  
Telex: 25222 KENGO KE

# REGIONAL WOOD ENERGY PROGRAMME FOR AFRICA

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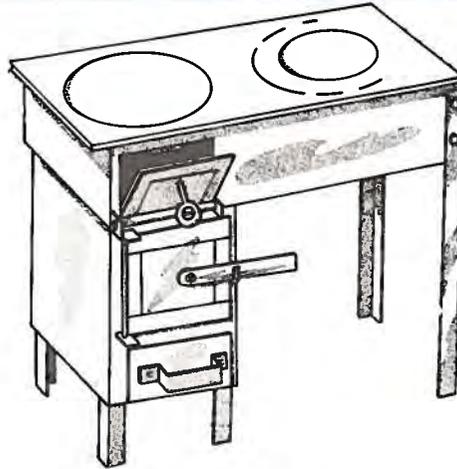


Kenya Energy and  
Environment Organizations

## Regional Wood-Energy Programme for Africa

Since 1982, KENGO has been called upon by various individuals and agencies throughout Eastern and Southern Africa to provide training, information, technical assistance and support in the area of improved stoves technologies. Countries KENGO has assisted include Lesotho, Botswana, Malawi, Rwanda, Uganda, Madagascar, Ghana, Zambia, Tanzania, Sudan, Somalia and Burundi.

Based upon this demonstrated demand, and perceptions on the part of certain donors, KENGO commenced the Regional Wood-Energy Programme for Africa in early 1986, with the goal of reducing woodfuel consumption in Sub-Saharan countries by improving the



Mabottle — Lesotho

efficiencies of cookstoves. The purpose is to initiate an African-wide improved stove coordination and support programme that utilises as many local personnel and as much local expertise as possible. The programme's objectives are to:

- Assist individuals and agencies within Sub-Saharan Africa to identify, develop, promote, disseminate and market improved stoves;
- Train groups and individuals in stove evaluation (e.g. testing and quality control);
- Improve stove information exchange between local groups and individuals; and
- Identify local donor support for continued stove development, improvement and marketing.



El Duga — Sudan



Kenya Ceramic Jiko (KCJ) — Kenya



Zingaminkwi — Rwanda

APPENDIX F  
PTC BROCHURE

#### April

- 6th — 10th Supervisory Development Course (Mombasa)  
13th — 17th Financial Management Seminar  
20th — 24th Production Planning and Control (Mombasa)  
27th — 29th Organization Re-design and Change Seminar for Senior Executives.

#### May

- 4th — 8th Stores and Supplies Management  
11th — 15th Supervisory Development Course (Eldoret)  
18th — 22nd Marketing and Sales Seminar (Eldoret)  
25th — 29th Financial Management Seminar (Mombasa)

#### June

- 3rd — 5th Report Writing and Presentation  
8th — 12th Stores and Supplies Management (Eldoret)  
15th — 19th Personnel and Industrial Relations Seminar  
22nd — 26th Management Development Seminar (Mombasa)

#### July

- 6th — 10th Plant Maintenance Course  
13th — 15th Report Writing and Presentation  
20th — 24th Stores and Supplies Management  
27th — 31st Staff Performance Appraisal

#### August

- 3rd — 7th Personnel and Industrial Relations Seminar (Eldoret)  
10th — 21st Training of Trainers Course  
24th — 28th Safety and First Aid in Industry

#### September

- 30th August  
— 4th Sept. Management Development Seminar (Eldoret)  
7th — 11th Plant Maintenance Course (Mombasa)  
14th — 18th Marketing and Sales Seminar  
21st — 25th Management Development Seminar

#### October

- 5th — 9th Secretarial Management Course (Mombasa)  
12th — 16th Training Officers/Managers Seminar  
26th — 30th Safety and First Aid in Industry

#### November

- 2nd — 6th Personnel and Industrial Relations Seminar  
9th — 13th Staff Performance Appraisal Course  
16th — 20th Report Writing and Presentation  
23rd — 27th Computer Applications Seminar for Managers

#### December

- 30th Nov. — 4th Dec. Supervisory Development Course  
7th — 11th Creativity and Discretionary Decision Making for Senior Executives (Mombasa)



## *Professional Training Consultants*

### **1987 SCHEDULED TRAINING PROGRAMMES**

**COMMITTED TO**

**“EFFICIENCY”**

**“PRODUCTIVITY”**

**AND**

**“DEVELOPMENT”**

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NAIROBI — KENYA.  
Tel: 744042

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Professional Training Consultants (PTC), is a local firm of consultants with professional qualifications and long experience in both private and public sector management and development locally and internationally. The diversified team of consultants associated with PTC includes professional trainers and practicing personnel in general and specialist management areas and levels.

PTC believes that Efficiency, Productivity and Development of both private and public industry can come through effective training, management and utilization of the human resource.

It is for this reason that PTC was incorporated with the commitment to improve Efficiency, Productivity, Development and Utilization of individuals, organizations and the whole nation through modern research, training and application of productive management techniques and skills.

PTC provides consultancy services in the following major areas:

1. Personnel Management Training
2. Specialist (Technical) Management Training
3. General Project Management Consultancy
4. Information Technology
5. Rural Socio-Economic Planning, Development and Appraisal
6. Research and Development (R&D)

Below is a detailed breakdown of the major areas to help identify specific areas of interest in consultancy services:

#### **1. Personnel Management Training:**

- Executive (Top) Management
- Middle Management
- Supervisory Management
- Operatives.

#### **2. Specialist (Technical) Management Training:**

- Production; Marketing; Transport;
- Finance; Stores and Supplies;
- Industrial Relations;
- Public and Customer Relations;
- Safety and Hygiene in Industry;

- First Aid;
- Shipping, Clearing and Forwarding;
- Training of Trainers (for Instructors);
- Training Management (for Training Officers/Managers)
- Secretarial and Clerical.

#### **3. General Management Consultancy:**

- Personnel Policy Documents
- Training Policy Documents
- Job Descriptions and Specifications
- Personnel Appraisal Tools
- Recruitment and Selection
- Organization and Methods (O&M)
- Work Study, etc.
- Project Planning, Development, Management and Appraisal (Industry)

#### **4. Information Technology (Training & Consultancy):**

- Systems Analysis, Design, Development & Implementation
- Management Information Systems (MIS)
- Word Processing, Financial Modelling, Database Management Systems.

#### **5. Rural Socio-Economic Development:**

- General Education & Vocational Training
- Adult Education
- Youth Development
- Women's Income Generation Projects
- Livestock Management
- Agroforestry, Soil and Water Conservation
- Public Health
- Small Business Management
- Project Planning, Development, Management and Appraisal (Rural)

#### **6. Research and Development:**

- Project Feasibility Studies
- Project Feasibility Studies
- Market Resources Utilization
- Market Research
- Financial Analysis
- Project Evaluations.

Unlike many consultancy firms, it is the philosophy of PTC to work jointly with your relevant staff (be it in training or general consultancy) as much as possible. This way, we believe eventually your staff will be more independent and only engage our consultants where necessary. To us, this is more practical, realistic, progressive, long lasting and eventually cheaper on your side. Training and general consultancy without effective follow-up and evaluation is a dead end!

It is our professional commitment to manpower development that we should in the long-run work ourselves out of your job for your personnel to replace us, or work jointly with us.

#### **In-House Programmes**

PTC conducts special in-house programmes for various organizations. It is PTC's policy to ensure that our clients' management are involved in the design of their in-house training programmes to ensure the relevance of such programmes to their operational needs.

Besides the included scheduled general programmes, our clients' management and training managers are invited to contact us for inclusive in-house programmes.

#### **1987 Scheduled Training Calendar**

\*All courses will be held in Nairobi unless otherwise indicated as scheduled below:

##### **January**

- 12th — 16th Supervisory Development Course
- 19th — 23rd Secretarial Management Course
- 26th — 30th Management Development Seminar

##### **February**

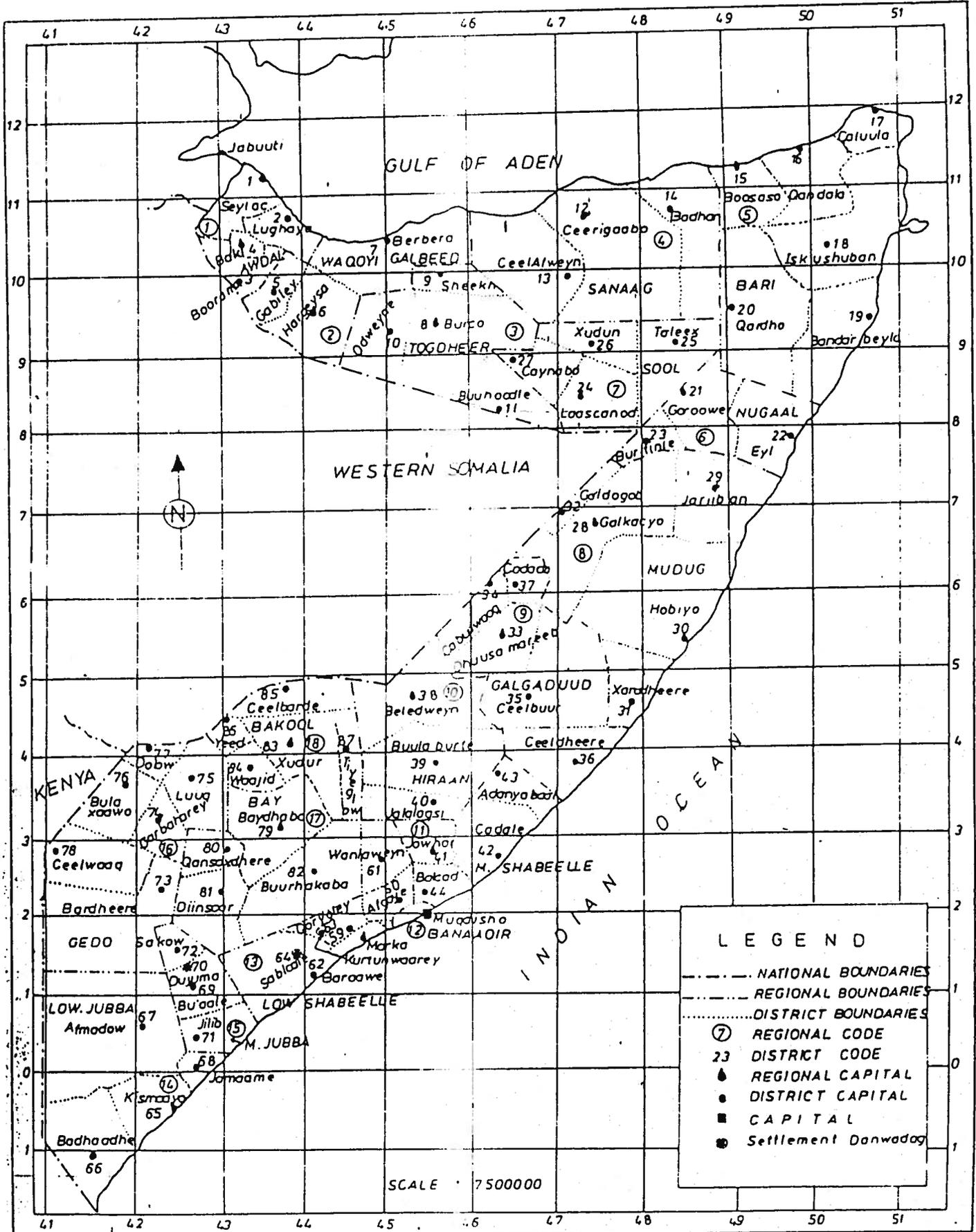
- 2nd — 6th Marketing and Sales Seminar
- 9th — 13th Production Planning and Control Seminar
- 16th — 20th Senior Clerical Course
- 23rd — 27th Secretarial Management Course

##### **March**

- 2nd — 6th Training Officers/Managers Seminar
- 9th — 20th Training of Trainers Course
- 16th — 20th Computer Applications Seminar for Managers
- 23rd — 27th Marketing and Sales Seminar

APPENDIX G  
MAP OF SOMALIA

# SOMALI DEMOCRATIC REPUBLIC



APPENDIX H

ITINERARY

ITINERARY 9 - 20 SEPTEMBER, 1987

WEDNESDAY 9/9/87

PM - Mogadishu airport

THURSDAY 10/9/87

AM - NWP, Director

- NWP, Head of Extension

- Church World Services, Director

PM - Review documents

FRIDAY 11/9/87

AM - Review documents

PM - Review documents

SATURDAY 12/9/87

AM - Purchase KENGO material assistance

PM - Travel to Bullo Burti

SUNDAY 13/9/87

AM - Travel to Ceel Bur

- Ceel Bur officials

- Soapstone mines

MONDAY 14/9/87

AM - Cooperative officials

- Ceel Bur Workshop, production of stoves

- Soapstone stove traders

PM - Travel back to Mogadishu

TUESDAY 15/9/87

AM - NWP, Head of Production and Promotion

PM - Report writing

WEDNESDAY 16/9/87

AM - NWP warehouse

- Mogadishu markets, stove stalls

- Metal artisans, stove grates production

- NWP office

- CARE/Somalia, Director

- USAID/Somalia, Chief of Engineering

PM - Report writing

THURSDAY 17/9/87

AM - Ministry of Planning, Energy Planning Department, Director

PM - Report writing

FRIDAY 18/9/87

AM - Report writing

PM - NWP, Director

SATURDAY 19/9/87

AM - Report Writing

PM - Report Writing

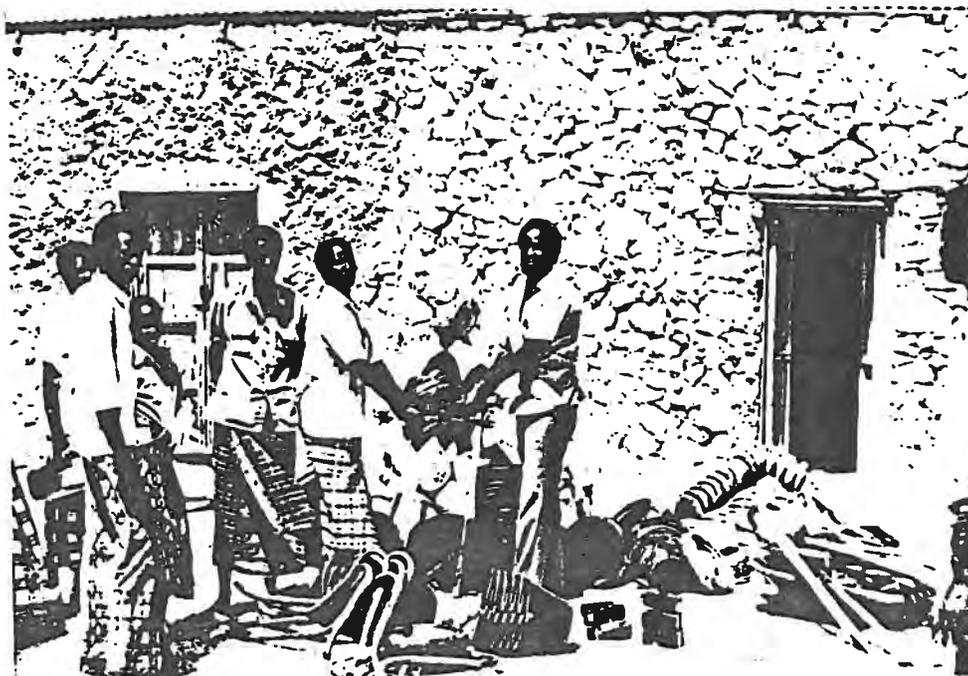
SUNDAY 20/9/87

AM - Handover report to NWP

PM - Departure for Nairobi

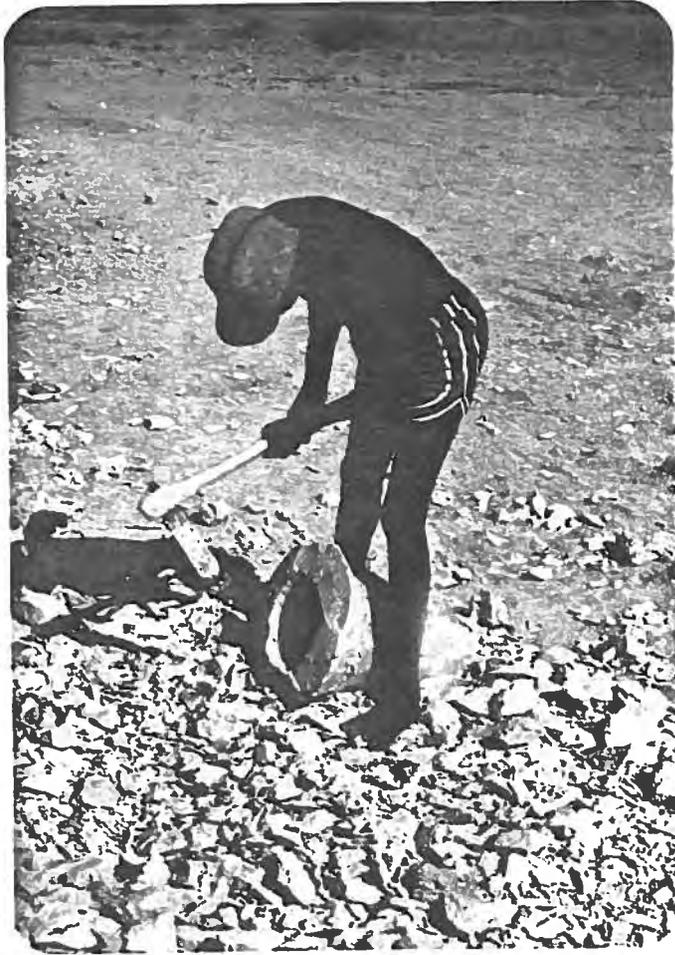
APPENDIX I  
ILLUSTRATIONS

HANDING OVER OF KENGO MATERIAL  
ASSISTANCE TO CEEL BUR COOPERATIVE



MINING OF SOAPSTONE





PRODUCTION OF SOAPSTONE STOVES



PRODUCTION OF SOAPSTONE STOVES CONT.





# VITA

## VOLUNTEERS IN TECHNICAL ASSISTANCE

HAXAA SAMEEYAY ISKAASHATADA FARSHANKA EE CEEL-BUUR, QAABKANA HAXAA  
KA KAALMEEYAY VITA IYO MASHRUUCA JIKO XAABEEDKA QARANKA.  
WAXAANDU SOO DHAWEYNEYNAAN WIXII TALO IYO TUSAALE AH EE AAD HAYSO.

MANUFACTURED BY: EEL-BUR CO-OPERATIVE SOAPSTONE CARVERS WITH DESIGN  
ASSISTANCE BY VITA (VOLUNTEERS IN TECHNICAL ASSISTANCE) FOR THE  
SOMALI NIP (NATIONAL WOODSTOVE PROGRAM)  
WE WELCOME YOUR COMMENTS AND SUGGESTIONS.

### VITA

BOX 3403

Mogadishu, Somalia

1985

# ISTICMAAL JIKOOYINKA CEEL-BUUR EE HABEYSAN

a VITA publication



## USE NEW IMPROVED EEL-BUR STOVE

## ISTICMAAL JIKO CEELBUURTAN CUSUB EE HABEYSAN

JIKADANI WAXAY LEEDAHAY DHOOR FAA' IDO KANA MID YIHIIN. ISTICMAALID DHUXUL YAR, BADBAADINTA DHIRTA, WAX KU KARSI SAHLAN, SHIDIDDEEDA OO DHIB YAR. ALBAABKA HAWADA HA U FURNAADO SI DHAKHSO DHUXUSHA UGU SHIDANTO.



## USE NEW IMPROVED EEL-BUR STOVE

YOUR NEW IMPROVED SOAPSTONE JIKO OFFERS YOU SEVERAL BENEFITS OVER THE TRADITIONAL STOVES. IT IS MORE CONVENIENT TO COOK WITH, SAVING YOUR TIME AND WORK. LIGHTING THE JIKO IS QUICK AND EASY WITH A GRATE. IT USES LESS CHARCOAL TO COOK WITH, SAVING YOUR MONEY AND SAVING SOMALIA'S PRECIOUS TREES.

FUR ALBAABKA HAWADA, HUBI INAAN DAMBAS KU JIRIN JIKADA. DHUXUSHA KU SHUB INTA U DHAXEYSA SALKA HOOSE EE JIKADA IYO SHABAQA JIKADA.



OPEN THE DRAFT CONTROL AS WIDE AS YOU CAN. CHECK THAT THE GRATE AND ASH-BOX ARE CLEAN AND FREE OF ASHES. FILL THE FIRE-BOX (THE SPACE BETWEEN THE GRATE AND THE COVER POT REST) WITH COAL.

DUSUDDA YAR-YAR DUL SAAR GANAHA (LAKABKA) HOOSE EE JIKADA,  
KUWA WAAWEYNA GANAHA SARE.



MARKA BIYUHU KARAAN ALBAABKA HAWADA XIR SI AAN DABKA U BASIN.



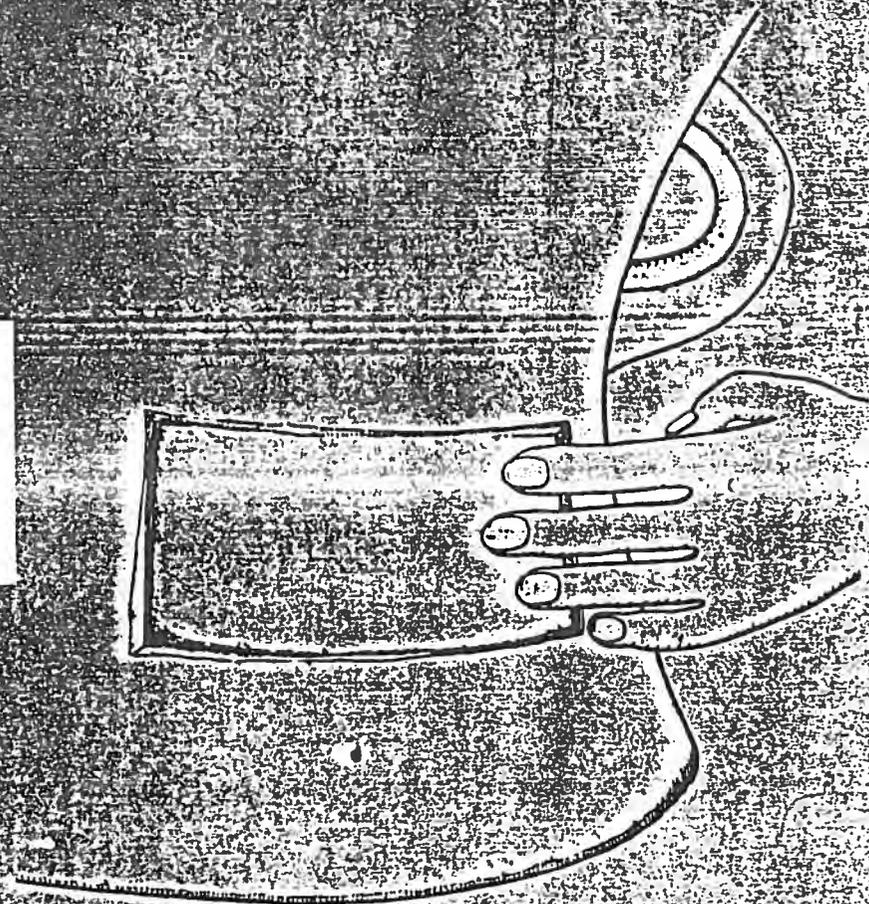
SMALLER POTS SIT INSIDE THE JIKO ON THE LOWER POT-REST. LARGER  
POTS SIT UP ON THE HIGHER POT-REST.

WHEN WATER BOILS, CLOSE THE DOOR. THE FIRE WILL STAY QUITE HOT  
FOR A LONG TIME.

DHAMMAANTIISBA ALBAABKA HAWADA XIDH SI CUNTADU U BISLAATO.  
 (CUNTADA HAQTIGA DHEER QAADANEYSO WAXA LOO BAAHAN YAHAY IN  
 ALBAABKA LOO XIRO SI JIKADU U YEELATO AWOOD WAX KARINEED OO  
 U SAHLAYO INAY KEYDSATO KULKA KU JIRA)

JIKADANI WAXAY TASHIISHAA DHUXUSHA. SI AAD UGU KAALMEYSO  
 TASHIILIDDEEDA BIYO KU RUSHEE DHUXUSHA SI AAD DABKA U  
 BAKHTIISO MAR KALENA U ISTICMAASHO.

-72-



THIS STOVE SAVES THE CHARCOAL. TO ASSIST FUEL SAVINGS, WHEN  
 COOKING IS FINISHED SPRINKLE WATER ON THE COALS UNTIL THEY ARE  
 EXTINGUISHED.

GANAHA SARE

UPPER POT-REST

GANAHA HOOSE

LOWER POT-REST

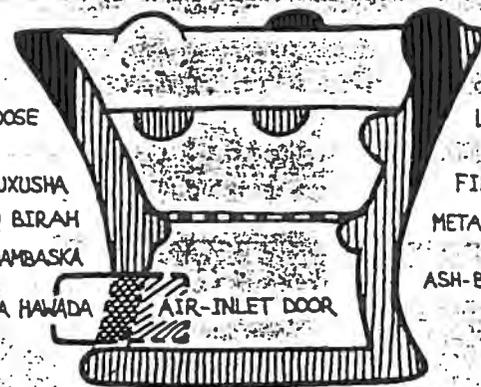
GODKA DHUXUSHA  
 SHABAQ BIRAH  
 GODKA DAMBASKA

FIRE-BOX  
 METAL-GRATE

DALCOOLKA HAWADA

AIR-INLET DOOR

ASH-BOX



CLOSE THE DOOR COMPLETELY TO SIMMER FOOD.

# ISTICMAALKA JIKADA CASRIGA AH, IYO ABUURISTA GEEDUHU WAXAY HA KIYAAN NABAAD GUURKA

USING IMPROVED STOVES AND PLANTING TREES WILL DELAY RAPID DEFORESTATION



Jiko aan Casri ahayn  
Traditional three-stone  
stove plus cutting trees



Jarista  
Geedaha



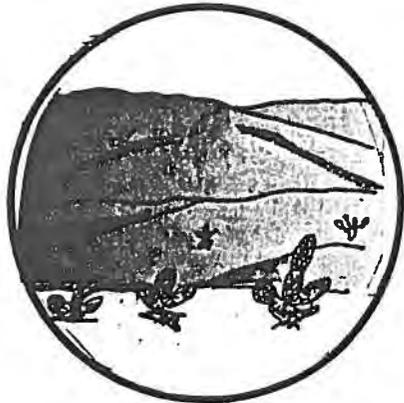
Abuurista  
Geedaha



Jiko Casri ah

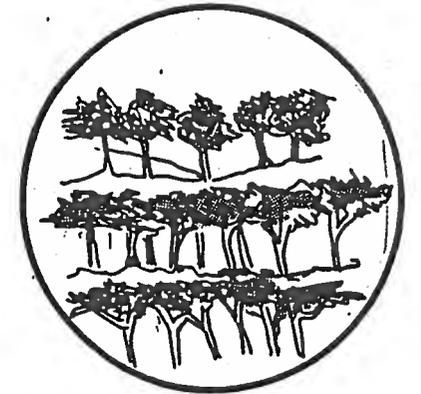


Planting trees plus Using improved stove



Will cause  
deforestation

Nabaad Guur



Dhul Dhireysan  
Will conserve  
forests.

**CWS**

Guura Woria service

**NATIONAL RANGE AGENCY**

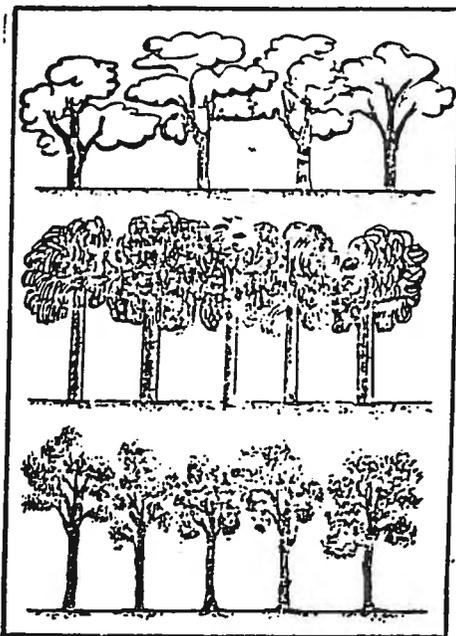
NWP

# TASHIILKA XAABADU WAA TARMINTA DHIRTA

CONSERVING FUELWOOD MEANS SAVING TREES



**Dhir beer oo badbaadi deegaanka**  
Plant trees to save the environment



**Dhul dhireysan**  
Forestry.



**Isticmaal Jikada Casriga ah**  
Use the improved stove

Church World Service  
CWS

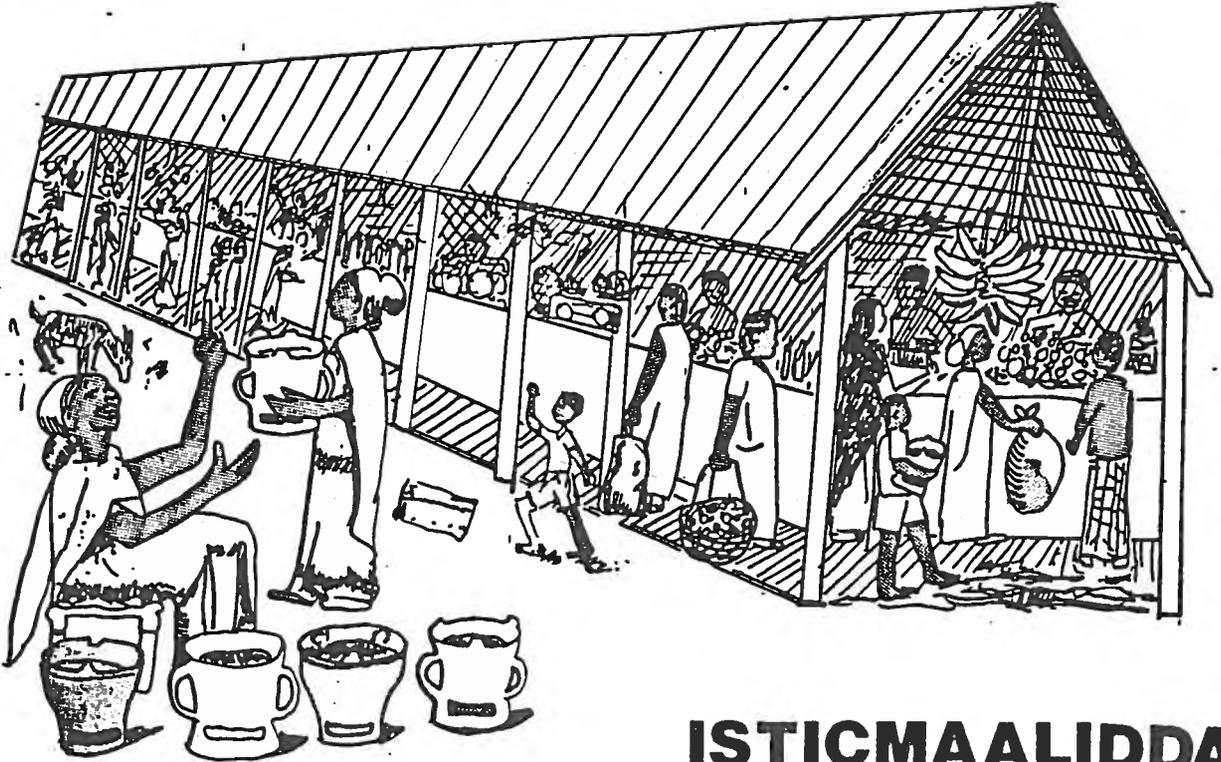
National Woodstove Program  
NWP

Wakaaladda Daqa Qaranka  
WDQ

# MASAAFADA DHEER EE SOO URURINTA

## XAABADA, IYO DHIBAATADA

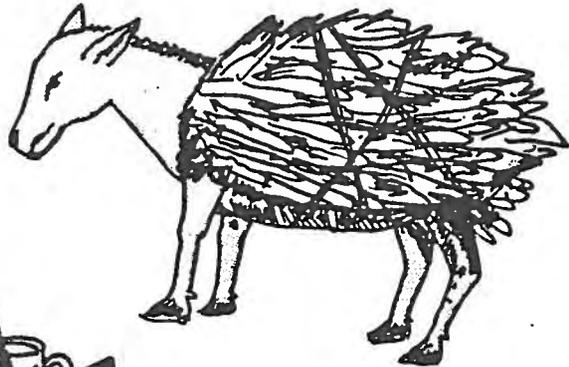
TO NEGLECT THE LONG TRIPS OF COLLECTING FIREWOOD AND PROBLEMS OF



### ISTICMAALIDDA

## SADDEX DHAGAX SI AAD UGA BAXDO;

USING THREE-STONE STOVE, TRADITIONAL STOVE,



## SUUQA TAG OO SOO IIBSO BURJIKOORYINKA CASRIGA AH.

GO TO THE MARKET AND BUY IMPROVED STOVES.

NATIONAL RANGE AGENCY

**CWS**

Church World Service

NWP  
NATIONAL WOODSTOVE PROGRAM

