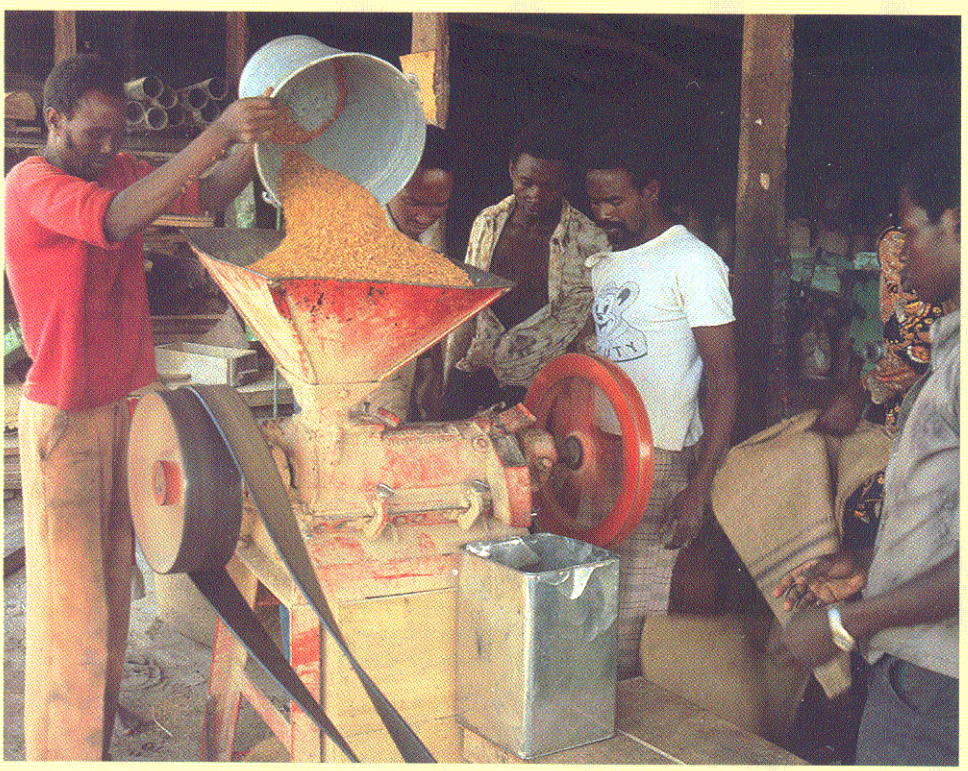
Centre Technique de Coopération Agricole et Rurale ACP-UE
Technical Centre for Agricultural and Rural Cooperation ACP-EU
CTA

Small-scale food processing in Mozambique, South Africa and Zambia

Addressing information and communication management needs for sector development

Study Report



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Addressing information and communication management needs for sector development

A study commissioned by the
Technical Centre for Agricultural and Rural Cooperation (CTA)

STUDY REPORT

by

Keith Atkinson, Oliver Saasa, Maria José Cardoso and Nora Hill

Technical Centre for Agricultural and Rural Cooperation (ACP-EU)

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States.

CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in these areas. CTA's programmes are organised around four principal themes: developing information management and partnership strategies needed for policy formulation and implementation; promoting contact and exchange of experience; providing ACP partners with information on demand; and strengthening their information and communication capacities.

CTA, Postbus 380, 6700 AJ Wageningen, The Netherlands

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Foreword

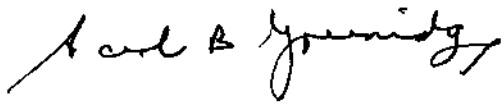
Under the stimulus of continuing economic liberalisation policies, the agricultural development priorities of African, Caribbean and Pacific (ACP) countries have shifted from efforts aimed mainly at increasing agricultural productivity towards improving welfare in rural areas. CTA is responding to this wider challenge by devoting an increasing share of its resources to work supporting the promotion of market-led development.

A key aspect of CTA's work under the general theme of market-led development deals with the formulation of information and communication management strategies which facilitate the development of small-scale food processing enterprises in ACP countries. Between 1997 and 1999, CTA embarked on a series of studies on this topic, which are now being published in three separate reports. This publication presents the findings of studies carried out on Mozambique, South Africa and Zambia. The second publication will deal with studies on Benin and Senegal, and the third with studies on Tanzania and Uganda.

This report highlights the potential contribution that small-scale food processing enterprises can make to the overall development of the agricultural sector in Mozambique and Zambia. The major constraints hindering the development of small-scale processing enterprises in these countries are: the high cost of capital and limited access to finance, limited technical and managerial skills, lack of technical and market information, lack of diversified markets, inadequate business premises and infrastructure, and an unfavourable regulatory environment. For each country, this report recommends approaches for improving the operating environment for food processors in order to increase their productivity and competitiveness. It also underlines the need for a strategic approach at national level to give direction and focus to the development of the small-scale food processing sector. In South Africa, the small-scale processing sector is diverse but insignificant. It therefore makes a negligible contribution to the formal economy in terms of the GDP.

The report notes that improving the flow of information to small-scale food processors is crucial to their future success. A key recommendation on information management relates to the establishment of business support centres in Mozambique and Zambia, drawing on South Africa's experience in running two Manufacturing Advisory Centres (MACs) which were established in 1998. The key areas in which the South African MACs provide services are business management skills, products and process improvement, quality and design improvement, technology upgrading, human resources and training, and information support and marketing. Although the MACs do not focus specifically on food processing, they provide a useful institutional model for addressing the information and communication management needs of small-scale food processing enterprises.

This report should therefore be of interest to a large spectrum of actors, including government departments, training and research institutions, business associations and food processing enterprises themselves.



Carl B. Greenidge
Director, CTA

Summary

Objective of the study

The overall objective of this study was to formulate information and communication management strategies which would facilitate the development of small-scale food processing enterprises in African, Caribbean and Pacific countries. The specific aim was to conduct a critical review of the small-scale food processing sector in Mozambique, South Africa and Zambia which would highlight constraints relating to information and communication management issues.

This report examines the broad issues affecting the operations of small-scale enterprises – in particular, food processors – in the three countries, both at the generic and the specific level. Illustrative examples of the issues discussed are presented in box format.

Key findings

Mozambique

The food processing sector is considered by the Government of Mozambique as one of the priority sectors for the development of the national economy, given the importance of processing and adding value to the country's agricultural products. The most important products in this sector are beer, sugar, processed cashew nuts, carbonated soft drinks, tea, frozen shrimps, maize meal, wheat flour, cooking oil and bread. Beverage production in 1997 accounted for 50% of the total output of the food processing industry.

The main constraints affecting small-scale food processing enterprises are: packaging, obsolete equipment, electricity (power cuts, high prices) and a lack of raw materials and the funds to buy them. These enterprises also have little, if any, access to relevant market information. Most of them buy their raw materials and inputs locally, directly from the producer. They sell their products to retailers or directly to the public in urban and village markets. Few of them export their products to regional and overseas markets.

The most important information which the small-scale food processing sector needs for development is market information and technology and production process information.

South Africa

The food processing sector (excluding beverages) as a whole is important to the South African economy. It contributes 2.4% to the gross domestic product (GDP) and 3.2% to total

exports, and accounts for 15% of the manufacturing sector and 2.6% of total employment. Beverages contribute 1.34% to GDP. Small-scale food processors, however, account for only a small part of this contribution.

The South African food sector faces unique challenges. Lower tariffs and freer trade have forced sectoral players to become more competitive, whilst consumers are demanding better quality, convenience, health protection and variety. The sector is also expected to promote 'food security' and to assist in reducing malnutrition by feeding the poorer sections of the population. In addition, the sector is expected to contribute to economic growth through job creation and the provision of support to small businesses, especially in the rural areas.

The major constraints to the development of small-scale food processing enterprises are:

- High cost of capital and limited access to finance;
- High level of crime and stock thefts;
- Lack of technical and market information;
- Limited managerial and administrative skills.

The information required by small-scale processors covers a wide area and has to be obtained from many different sources. Their information needs are often modest, but highly specific. In their quest for commercially useful information, they are frustrated by difficulties and delays or buried under a mountain of data, which they are unable to analyse or assimilate.

The seasonality of raw materials remains the main supply constraint, except for the bakery subsector which does not obtain its primary inputs directly from the agricultural sector. This is further compounded by limited storage capacities.

Zambia

The range of Zambia's manufacturing sector's products is narrow and there appear to be very few linkages with other productive sectors in the economy. The major weakness has been the failure to diversify the country's export base away from the declining copper sector. In recent years, however, some headway has been made in the horticulture and floriculture sector.

The geographical distribution of food processing industries in Zambia suggests that the majority of small-scale operations are in the Lusaka province. The sectoral distribution seems to indicate that approximately 65% of these industries are in grain milling, while 7% are in meat preparation and preservation and another 7% in vegetable and animal oil production. About 6% of the firms are involved in manufacturing food products.

Despite the policy of liberalisation, manufacturing firms, particularly those in the small- and medium-scale categories, continue to face liquidity problems and a lack of funds for investment, whereas trading has become more attractive than it was previously. Inflation and

exchange rate depreciation, as well as a lack of support services, have also neutralised the anticipated positive outcomes of fiscal measures. Other difficulties include: limited technical and managerial skills; inadequate business premises and infrastructure; lack of diversified markets and market information; lack of technology and access to relevant technological information; unfavourable regulatory environment, including legal restrictions; and inadequate institutional framework.

There are several institutions in Zambia that attempt to provide a variety of support services in the form of training, financial assistance, technology, export assistance and business information. Most of these have capacity constraints, however, stemming from a host of problems, such as financial scarcity and an unsupportive economic environment. As a result, producers, particularly small-scale ones, have not sufficiently benefited from their support.

The domestic market is the main outlet for products from food enterprises, with very insignificant quantities going to the regional market and none sold overseas. A large majority of the enterprises sell their products directly to the public without using intermediaries and most of the enterprises have no problem with demand for their products, although many of them suffer from a lack of market, price, production and general business information.

Recommendations on information and communication management

A strategic development plan is required in all three countries to give direction and focus to the development of the small-scale food processing sector. In South Africa, although the sector is very diverse it makes a negligible contribution to the formal economy in terms of the GDP. In Zambia, the sector faces a wide range of constraints, not least of which is the inability to compete effectively in a liberalised trade environment where imported processed foods are capturing an increasing share of the market. In Mozambique, the sector is emerging from a background of State ownership of many of the food processing enterprises, as well as severe infrastructure and service constraints. As a result, the small-scale operators have few specific programmes aimed at their needs; where these do exist they tend to be location and product specific – for example, edible oil processing in Manica Province, which is supported by Africare, a non-governmental organisation (NGO). There is no adequate market information service targeting the needs of small-scale food processors in any of the countries.

For each country this report puts forward recommended approaches for improving the operating environment for food processors in order to increase their productivity and competitiveness. These country-specific recommendations are presented in this report in Chapter 5. Some recommendations are common to all three countries, and some apply at the regional level. The aim of these recommendations is to establish a clear strategy that would have three main objectives:

- To promote industrial efficiency and global competitiveness, industrial expansion and the creation of employment within the sector;

- To achieve increased levels of production of value-added products within the sector;
- To generate wealth for the stakeholders in the industry on a fair basis through the creation of an enabling environment.

The main generic recommendations are:

- *Development of a regional network for information exchange.* In each country there are several service providers of varying resources and capabilities. The resources, if networked and coordinated on a regional basis, could make a significant, positive contribution towards meeting small-scale food processors' technical, managerial and information needs, but the development of such a network will require effective project management.

- *Establishment and development of Business Support Centres (BSCs).* The concept of BSCs was reviewed with particular reference to those established in South Africa. Two South African Manufacturing Advisory Centres (MACs) were established in March 1998 and have come through their pilot phase with flying colours (*see* Box 7, page 29). This is a concept that could be emulated in the other two countries, while in South Africa specific programmes supporting the food processing sector could be channelled through the MAC network. The key prerequisites would include a suitable institution prepared to host the BSC or a partnership of institutions prepared to establish such a host. There would need to be access to technical, financial and information support in order to provide advisory services in these three areas. There would also need to be a suitable group of small and medium-sized enterprises (SMEs) to be supported, preferably with a sector focus. Confidence and support would also be needed from the general industrial community in order to develop relevant programmes. Country-specific research would need to be undertaken to assess the feasibility, mechanics and implications of developing such BSCs in Mozambique and Zambia, and expanding the current MACs in South Africa to include food processing SMEs. Assuming a positive outcome to the research, pilot programmes would be designed to bring the concept to fruition.

- *Development of an information support system for food processing SMEs at the national level.* The country case studies show that there is a serious gap in the delivery of suitable market, technical and business information to the food processing sector. This situation should be addressed through a process of dialogue and programme development. Interested parties, including government departments, training and research institutions, business representative associations and the SMEs themselves, would need to be coordinated and advised on the process of setting up a suitable, sustainable information system. This system must be demand-driven to suit the needs of the SMEs, and be timely, accurate and user-friendly. A strong element of capacity building is likely to be required at the institutional level to ensure that such an information system operates efficiently and effectively. The key outputs of the system could include market prices, market trends and opportunities, food processing regulations, technology information, opportunities for training, information on sources of finance, and business advisory services.

Chapter 1

LITERATURE REVIEW

During the course of the three country studies a considerable amount of background research was undertaken, specific to the three countries and also of a more general nature. Highlights of this research are described here.

Definition

Food processing is generally defined as the secondary processing of agricultural products. Agro-processing, on the other hand, is the primary processing of agricultural products. For example, wheat milling and bread making are regarded as primary and secondary processing, respectively. From these definitions, food processing can be seen as the production of the end product (ready for consumption) of any agricultural commodity. Thus, the production of honey would be classified as food processing although from a technical point of view it falls into the agro-processing category.

Relationship between agriculture and food processing

The survival of small-scale food processors is based on backward and forward linkages to agriculture. Food processing results in a high-value food product, which represents the outcome of a sequential series of investments, activities and decisions.

The process starts with the articulation of consumer demand and leads to decisions by farmers and fishermen to produce certain crops, rear certain livestock or catch particular fish. This is followed by a series of activities to transform the crop or animal product in form, time and place to meet consumer demand.

Food processing is therefore the physical and economic bridge that links raw material production and consumer food purchases. This requires a set of interdependent decisions, investments, institutions, resource flows and physical and business activities. It also requires producers, manufacturers, marketing agents and consumers to fulfil certain functions simultaneously:

- *Stimulation and support of raw material production.* Food marketing stimulates raw material production at farm level. This requires communicating the right information to producers regarding what type of product and when to produce it, providing financial and other incentives to produce food items for sale, facilitating farmer access to production resources, and reducing transaction costs between producers and consumers.

- *Balanced commodity – supply and demand.* The food marketing institutions provide the organisational framework for the coordination of production and consumption. This framework balances the supply and demand for raw materials and commodities, not only in quantitative terms but also in terms of quality, time and place. This calls for logistical and informational tasks, transactions for current or future supplies, quality control measurers and the physical transformation of the raw materials and commodities themselves.

- *Stimulating demand and enhancing consumer welfare.* The process of marketing high-value food products cuts across several different industries and markets. Food marketing promotes increased demand, consumption and consumer welfare by introducing new products, improving product quality, reducing consumer costs, and making food available on a more consistent basis. These tasks require the dissemination of market information and the development of processing and logistics technologies and efficient mechanisms for the exchange of goods.

There is a high degree of technical and economic interdependence between many of the activities that are essential in food processing, and all these activities are linked through a network of exchange relationships and coordinating mechanisms. The need for suitable market information for these activities to function properly cannot be over-emphasised.

Market information

Market information is the most important support service tool in facilitating the smooth operation of the marketing process. Market information promotes the flow of goods and services to places where they are most needed. Therefore, this information needs to be relevant, reliable, timely and available to the end-users:

- *Private sector.* The major users in the private sector are traders, farmers, processors, importers and exporters. The needs of private sector users relate to planting, production, selling, buying, transport and storage.

- *Public sector.* The major public sector users are ministries of agriculture, planning, finance and commerce, research institutes, parastatal organisations and donors. The needs of public sector users are varied, but are aimed primarily at facilitating effective planning, policy decision-making and legislating.

Information needs of farmers

Farmers require information on the prevailing wholesale prices in nearby urban markets. This becomes the basis for negotiations with traders – the input prices and price trends for

various crop commodities – to facilitate better market-oriented decisions on production. Information on prevailing retail prices is useful with regard to selling small amounts of produce at nearby local markets.

Information on post-harvest technologies and practices is not often available to the smallholder farmer. For example, maize storage losses can reach 6–15% over a period of 8–10 months; the losses are much higher (35–45%) if the period is taken from physiological maturity to final consumption. Losses in vegetables and fruits tend to be higher than for food grain crops due their high moisture content, which makes them susceptible to mechanical damage during post-harvest handling, thereby increasing their vulnerability to microbial attack. There is a need, therefore, to provide information on:

- Pre-harvest activities;
- Harvesting activities;
- Post-harvest treatments.

Information needs of food processors

Food processors need information on market prices and conditions. They also need information on market price trends for various products in major producing and consuming areas across the country and/or in external markets. This will help in decision-making on where, when and what to produce and sell.

Box 1
Entrepreneurs and their needs

In a survey on the inherent capacity of the micro, small and medium-sized business enterprises (MSMEs) to sustain economic development in the Mhluzi Township in Middelburg, South Africa. Almost all the 200 entrepreneurs surveyed complained of a lack of access to start-up capital and know-how. The study also highlights the excessive reliance of the MSMEs on public sector assistance, and the tendency to blame the government for almost every shortfall, from crime to unemployment. Most entrepreneurs, particularly in the informal sector, have almost no knowledge of business registration procedures, principles of contract, taxation or value-added tax. Transport, not crime, was the major problem confronting entrepreneurs in the informal sector.

The study indicates that much remains to be done to extend enterprise education and centralise the development of MSMEs in locally based 'one-stop-shop' operations that supply most of the practical needs of the entrepreneurs. A major problem for the MSMEs, the study suggests, has to do with the simple lack of information. Frankel notes that Mhluzi is unusual in that corporate sponsorship has backed a virtual 'census' of its existing enterprises. For the most part, there is a lack of even rudimentary knowledge of what is 'out there', business-wise, in the historically disadvantaged areas.

Information needs of service providers and government ministries

Both these parties require background information on market prices and marketing trends for major agricultural commodities and inputs across the country in order to formulate effective strategies to ensure the smooth operation of the marketing process and the acquisition of up-to-date information on market prices and the supply-and-demand situation for the major food staples. Such information is useful in evaluating the impact of existing agricultural policies on the market prices of major food staples and agricultural inputs, and in monitoring the effect of changing regulations on market prices.

Extensive studies have been conducted on market information delivery systems for small-scale food processing enterprises in Eastern and Southern Africa. At a workshop held to discuss 'Strategies for strengthening small-scale food processing enterprises in Eastern and Southern Africa', Fellows (1998) stated that the main purposes of market information are that:

- It can be used for the operation, management and profitability of a company;
- It can be used to meet the needs of retailers, customers and consumers.

He added that market information should be appropriate, accurate, understandable, timely and specific to the product type, location and market niche of the manufacturer. Such information can be collected by processors themselves and private sector or non-commercial market information specialists.

With regard to information required by processors, Fellows divided this into two categories:

- Information about supplies to the enterprise – availability, quality and prices of raw materials, ingredients, packaging and equipment.

- Information on sales of products – product quality, price, presentation, value for money, amount sold weekly, seasonality of demand, information from retailers or other sellers, retailers' needs in terms of different types of customers, market niches, sale volumes and consumption trends.

Market information is useful only when it meets the specific needs of food processors, and they must believe that the benefits of having useful information outweigh the costs of procuring it.

Small-scale food processing: linkages to agriculture

For small-scale processors to remain viable there need to be strong linkages to agriculture. Processors tend to rely on traders for the supply of raw materials and have no control over the prices charged each day or the seasonal price fluctuations.

The problems encountered by small-scale processors include:

- No control over raw material post-harvest activities, resulting in poor quality;
- Lack of reliable transport arrangements for timely deliveries;
- Lack of finance to purchase large quantities of raw materials;
- Competition with traders when purchasing raw materials;
- Unable, because supplies are seasonal, to obtain sufficient raw materials for production to meet targets;
- Limited access to, or awareness of, available marketing information in order to address some of the problems; often, small-scale processors rely on informal channels for their information (for example, finding out through word of mouth where cheap materials are available).

However, small-scale processors are in a position to source their raw materials direct from farmers. This arrangement can be beneficial to the processor, as there is greater control over the price, amount and quality of raw materials.

Traders tend to support large-scale processors when it comes to supplying raw materials, but they are useful to small-scale processors in that they may also provide informal credit for seed fertiliser and chemicals. Few small-scale processors have access to finance from banks.

Chapter 2

BACKGROUND ON THE SOUTHERN AFRICAN REGION

Southern Africa has been the focus of international attention for several decades. The ongoing cross-border conflicts and the bloody civil wars in which many thousands have died have dominated the world view. The relative peace that has descended on the region recently means that the major obstacles to development have been removed, but the path to greater well-being will be long and arduous. Inadequate social provisions, especially in relation to health and education, rapid population growth, slow growth in food production, lack of skilled administrators, low levels of investment, under-utilised and out-dated industrial capacity and the high occurrence of AIDS are only some of the problems facing the region.

Despite these problems, the countries of Southern Africa have made important advances in their attempts to improve economic performance over the past 10 years. One of the key factors in this has been the Economic Structural Adjustment Programmes (ESAPs) that abound in the region. These programmes concentrate on deregulation, trade liberalisation, macro-economic policies and social dimensions. Although their impact remains to be seen, they are creating a climate that is more attractive to both local and foreign entrepreneurship. Investment is almost certain to increase, thus providing competition for large, inefficient firms and making available start-up capital for small-scale indigenous entrepreneurs.

As yet, the economic developments that have taken place have failed to profoundly change the distribution of the ownership of resources within the region. Ownership of most of the region's resources lies in the hands of governments or oligopolistic corporations. Protected markets and inefficient production have resulted. The high population growth continues to outstrip economic growth, unemployment is high and migration is placing a great strain on the basic infrastructure. Equally disturbing is the exploitation of natural resources and the environmental degradation that is occurring throughout the region.

The region needs real growth of at least 5% per year in the foreseeable future if it is to satisfy the expectations of its people. With South African growth estimated to reach no more than 3–4% over the next few years, this imposes a burden on the private and public sectors, international institutions and donors in their efforts to help create the conditions conducive to stability and prosperity.

Growth through the private sector, with development aid helping to prime the engine, is the only long-term sustainable solution for the region. Such growth should be centred on the region's competitive advantages, which include resource-based industries, tourism and a young population that wants jobs and opportunities. Value-added food processing is

increasingly viewed as an important element of this economic development because it can be based on local resources, satisfy the demands of increasingly urbanised populations, and provide products for the rapidly growing tourism sector, for cross-border trade and, in some instances, for international markets.

With the implementation of trade liberalisation programmes, the role of State corporations has been significantly reduced in recent years. Plans are generally under way to privatise or restructure them based on commercial principles. In most countries, they are being retained as parastatals for the marketing of strategic commodities and for operating core infrastructural services.

South Africa has a well-established private sector, consisting of a few major corporations and a large number of small to medium-sized companies. The country has been characterised by enormous conglomerates controlling a major part of the economy. Six major conglomerates control at least 75% of the companies listed on the Stock Exchange. Four of these companies are controlled by local South African families, and the other two are controlled by South African financial institutions. These private oligopolies have been cited as one of the factors that have held back greater initiative and entrepreneurial spirit in the South African corporate world. Recently, these conglomerates have dismantled their empires to some extent, for commercial and anti-trust reasons.

Other countries in the region are making a conscious effort to strengthen their private sector by improving the business climate, privatising state-owned enterprises and attracting foreign investment. In Zambia, more than 140 companies are to be privatised under the Privatisation Act. In Mozambique, the total assets being privatised are worth US$1.5–2 billion. In both countries, food processors have been at the forefront of privatisation schemes, with new entrants in large industries such as milling and brewing.

Policy environment for food processors

All three countries are going through a transition period of liberalising their economies, with each country at a different stage of implementing the reform programme. The small-scale food processing sectors in the three countries are easily identifiable within the economy as having the potential to contribute towards the national GDP and pave the way for employment creation.

There is a considerable amount that needs to be done by the respective governments in terms of designing regulatory frameworks that incorporate the interests of small-scale food processors and, through suitable mechanisms, provide financial support for those organisations involved in providing tailor-made market and business information for small-scale processors. This needs to run in tandem with the liberalisation of the economies since all the governments have identified the importance of the sector in their economies.

Box 2
Effects of deregulation and liberalisation

In theory, deregulation is assumed to contribute to the development of small-scale enterprises at two levels: productive gains through improved efficiency; and lateral expansion due to the enabling environment created for the establishment of small-scale enterprises. These two benefits are derived from such liberalisation policies as the relaxation of protracted investment approval procedures; price deregulation; freeing of labour market regulations; and removal of restrictive local government by-laws. Import liberalisation has facilitated increased access to the sector's required raw materials. Currency devaluation measures, in turn, have resulted in imports being more expensive, thus creating demand for products produced by small-scale enterprises.

Similarly, the open competitive trading system has resulted in the availability of, and/or easier access to, better quality inputs which should allow small-scale enterprises to improve or diversify their areas of activity, thus creating new production opportunities for the sector. This also allows for easier adjustment to changed market conditions. Perhaps the main concern now is the extent to which the governments' elimination of trade restrictions may have led to a crowding of the domestic market with competing imports, a phenomenon generally assumed to threaten the survival of local industries. While competing imports may be harmful to small-scale enterprises in the short-term, the Zambian experience so far suggests that this is the case only for particular sectors.

Under these conditions, it appears that although the long-term benefits of the policy of liberalisation are clear, the short-term adverse effects of exposing small-scale enterprises to full-scale competition (including competition with incoming imports) have remained a major challenge for Zambia. In view of this, there is growing recognition that the process of creating a fully fledged competitive market in Zambia would take time, especially under conditions where private sector development, particularly as it relates to small and medium-sized enterprises (SMEs), has been characterised in the past by an inhospitable policy environment. SMEs' income levels have generally remained low and many of them are closing down because liberalisation in Zambia has entailed a sudden increase in input expenditure almost across the board, following government withdrawal from providing inputs and credit facilities.

Generally, the constraints to the development of small-scale food processors and the sustainability of these enterprises in a liberalised economy tend to be common to all the countries studied and do not deviate much from the findings of other studies in Eastern and Southern Africa. To address the constraints, the major input should come from governments through defining 'small-scale food processing' as a sector and housing the sector in a particular ministry with the capacity to provide the necessary support.

For continuity and sustainability, this move should be driven by the private and donor sectors, with support from the government. Additional funding should eventually come from the small processors as part of payment for services. This is an on-going learning process whereby the processors have to be educated to see the benefits of the services; at the time of the study, the processors appeared not to understand the need to pay for such services.

The market information system

One of the major conclusions reached in this study is that it is necessary to establish a market information system (MIS) which addresses the needs of small-scale food processors. This MIS should be used to set guidelines and focus the direction of both the public and private sectors in their promotional efforts; it would also enable service providers to offer more meaningful service packages aimed at enhancing the productivity of small-scale food processors.

A key finding was that the information available is not targeted at small-scale processors. The information tends to be aimed at large-scale food manufacturers who, over a period of time, have sourced and prepared their own specialised information which is not readily available to others. Because of their educational limitations, most small-scale food processors cannot access information from service providers or analyse available data. Although some providers do have a mandate to assist small-scale processors, few have the institutional framework or funding to fulfil this mandate. Governments therefore need to support service providers and incorporate them within the framework of the liberalised economies.

Box 3
Theory versus reality in market information in Mozambique

In Mozambique, a comparison between what is required and what currently exists in terms of market information reveals the following:

- The information available focuses on price data. These data, however, do not have the same value for different target groups. Farmers are more likely to know the prevailing prices at the nearest markets than at the district level, whereas small- and medium-scale traders may be more interested in prices in the major markets in a particular province or bordering provinces. Larger-scale traders may be interested in prevailing prices in major provincial markets throughout the country.
- Knowledge of international and subregional prices, price trends and seasonal price patterns is essential for large traders, processors, policy-makers and bankers. This information is not relevant for farmers and may be of limited relevance for small and medium-scale traders.
- The current information systems do not provide information on trade data, tariffs, logistical costs, policy issues, port handling and domestic transport costs. This information is essential for brokers, processors and large-scale traders.
- Information on crop/market forecasts and trends is essential for all market participants, including the small-scale farming sector (which would acquire this information from extension services). Such information, however, is not available on a regular basis, nor to the extent required.

The market and trade information requirements differ considerably from one group to another. No single information system can provide all required information in a timely and regular manner to all participants at the same time. What is needed, therefore, is a demand-driven and focused approach.

Box 4
Who needs which type of market and trade information?

TARGET GROUP	SHORT-TERM INFORMATION REQUIREMENTS	LONG-TERM INFORMATION REQUIREMENTS
Farmers	Market structure; commodity and input prices (nominal prices in nearby markets); crop/market forecast and related price trends	Credit terms; technology (crop diversification, post-harvest, storage issues); seasonal price patterns
Small/medium traders	Commodity and input prices (nominal prices in district/provincial and national level markets; crop/market forecast and related price trends; supply and demand, transport costs; exchange rates (border areas); credit terms	Seasonal price patterns; market infrastructure development
Import/export traders, brokers, processors	Commodity and input prices (nominal and real prices in district/provincial/ subregional and international markets); crop/market forecast and related price trends (national)/subregional/inter-national); supply and demand; stocks; transport/shipping costs; port handling costs; storage costs; food aid policies/ arrivals/utilisation; trade/tariff policies (national/subregional); credit terms	Seasonal price patterns; legal issues; implications of bilateral and multilateral trade agreements
Policy-makers	Crop/market forecast; price development; stock position	Production and market trends; competitiveness; market performance
Researchers/ policy analysts	Crop/market forecast; price development; stock position	Production and market trends; impact of policy changes (national/ subregional)
Transporters	Volume; fuel prices	Road development
Extension service	Market structure; commodity and input prices (nominal prices in nearby markets); crop/market forecast and related price trends	Credit terms; technology (crop diversification, post-harvest, storage issues); seasonal price paterns
Bankers	Prices; profitability; risk trends; market and trade performance	Production, market, trade trends; competitiveness; market performance

Source: DNCI/Ministry of Industry, Commerce and Tourism, 1997

Importance of agriculture and food processing

Mozambique

Agriculture is the backbone of Mozambique's economy. It employs 80.7% of the Mozambican workforce of 7 million people (of which over 60% are women). Although it contributes only 25–30% to the GNP, about 70% of aggregate export revenue is derived from agricultural produce and renewable natural resources.

The main food products are maize, rice, sorghum, cassava, peanuts, citrus fruits, beans, leafy vegetables and onions. The total production marketed by the food processing sector grew by an estimated 33.1% in 1996 and 16.9% in 1997; there was a marked growth in the production of all the main staples, apart from citrus and cassava in 1996 and peanuts in 1997 which registered a decrease of 27.4%, 13.2% and 19.2%, respectively. The performance of the country's food processing sector indicated that, in terms of wages, it accounted for 43.3% of the manufacturing industry and 19% of the economy as a whole. About 47% of the output of the manufacturing industry came from the food processing sector, and it employed 48% of the manufacturing industry workforce and 20% of the country's total workforce. These data relate to 1991 when the last detailed statistical analysis was undertaken. More recent information shows that, from 1996 to 1997, the value of the production of food and beverages increased by 48% in constant prices.

The most important products in the food processing sector are beer, sugar, processed cashew nuts, carbonated soft drinks, tea, frozen shrimps, maize and wheat flour, poultry feed, cooking oil, bread, biscuits and cakes. The main export products are frozen shrimps, tea, sugar and processed cashew nuts. The most significant increases between 1996 and 1997 were in the volume of production of edible oils, maize meal, wheat flour, beer and wine. The main products exported are fish and crustaceans (US$82 million, 36.5% of total exports). These are followed by cashew nuts and sugar (US$29 million and US$12.8 million, respectively), and then cereals (US$ 12.5 million, 5.6% of total exports).

Infrastructure problems constitute a major constraint. Telephones, electricity and running water are non-existent for most people, even urban dwellers. Only an estimated 11% of the urban population have access to telephones. The poor transport infrastructure is a serious constraint to marketing and export activities. It is difficult to transport goods from the interior to the coastal areas because of the lack of available vehicles and the poor roads. The volumes offered for distant markets are small and thus the transport costs are high.

South Africa

South Africa's agricultural sector (agriculture, forestry and fishing) accounts for 3.7% of the GDP, 4.5% of the country's exports and 12.2% of direct employment (852,000 people).

Agricultural domestic production in 1996 amounted to R48,342 million. The value of agricultural domestic demand was R45,040 million. Imports and exports of agricultural products were valued at R3,067 million and R6,368 million, respectively.

The food processing sector (excluding beverages) is important to the South African economy as it accounts for 2.4% of the GDP, 3.2% of exports, 15% of the manufacturing sector and 2.6% of total employment. The sector consists of 11 downstream agricultural subsectors. Meat processing is the largest food subsector, accounting for 25% of total food production, followed by the grain milling and animal feeds subsectors (13% and 10%, respectively). The other eight subsectors each account for 4–9% of overall food production.

The beverage sector contributes 1.34 %, 0.87% and 0.46% to the South African GDP, exports and employment, respectively. The distilleries and wineries subsector provides 31% of the beverage sector contribution to the GDP.

While domestic production in the food processing sector saw negative growth over the period 1991–1996, production was set to grow during the period 1997–2001, with the sugar and wine subsectors expected to enjoy the highest rates of growth.

It should be noted that the small-scale food processing sector plays a relatively insignificant part in the South African economy, accounting for about 0.1% of the GDP, but its growth potential is well recognised.

Zambia

Over 60% of Zambia's population derive their livelihoods from agriculture. Farm labour in smallholder agriculture, accounting for 51% of the economically active rural population, peaked at 2.6 million in 1987–1988 but fell to 2 million in 1993–1994 (farm labour in the smallholder subsector is not included in official employment statistics; thus, agriculture's contribution to formal sector employment is only about 14%). The significance of the smallholder sector's contribution to the national economy is not easily reflected because the labour and land productivity of small-scale farming is low. It follows, therefore, that any sustainable growth in agricultural development, with important equity and food security implications, cannot occur unless the smallholder subsector is developed.

Agriculture's contribution to the GDP in most years is only about 12%, but reached 20% in the late 1980s. However, the contribution to the economy beyond agricultural production itself (that is, in terms of backward and forward linkages) may be larger than this. The World Bank document *Prospects for Sustainable Growth* (1995) estimates that Zambia's agriculture and food system encompasses at least 50% of the economy. This includes input supply, agro-processing, food wholesaling and retailing, and farming itself. Agro-processing accounts for about half the manufacturing sector, which in turn accounts for about 35% of the economy.

In terms of value-added production, maize, oilseeds and small grains are the most important crops in Zambia, and there are positive growth indicators for horticulture and spices. In terms of exports, the major food crops are sugar, soya beans, fresh vegetables and paprika. All these products showed a steady export growth in the late 1990s, with processed foods earning about US$50 million for the country in 1997.

Chapter 3

KEY THEMES FOR DEVELOPMENT

The development of agro-industry

Accelerated development of the agro-industrial sector would seem to be the key to socio-economic progress in the three countries studied, because of the sector's importance and potential comparative advantages in a wide range of agro-related industrial products capable of addressing the region's crucial needs.

Achieving a rapid economic transformation requires the integration of the industrial and agricultural production structures in the region. In most African countries the share of processed to total agricultural production is only 10–15%, whilst in developed countries this proportion is typically higher than 80%. The link between agriculture and industry in developed countries adds a value of US$184 for each ton of agricultural raw material; in developing countries it adds only US$40.

Clearly, industrial development is complementary to agricultural development and there is no conflict between the development needs of these two sectors. Providing incentives, extension services and infrastructural development is crucial for enhancing food production in the three countries studied. In Mozambique and Zambia these needs are greater than those in South Africa, which has a far stronger economic infrastructure.

Strategic objectives

The main objectives of accelerating agro-related industrial expansion in the three countries are to:

- Ensure food security;
- Increase agricultural productivity;
- Enhance external resources flows and competitiveness;
- Add value to agricultural production.

Food security

The region has been severely affected by food crises over the past two decades. Per capita caloric intake is low and per capita food production has been declining. Dependence on food imports is reaching undesirable levels. The problem is primarily one of a lack of effective

demand. Marginalised countries, such as Mozambique, cannot afford to purchase the food they want and need.

A clear distinction should be made between food availability and food access. From an industrial perspective, food security can be defined as 'the achievement and maintenance of a system of production and distribution which ensures that all individuals continuously have access to and are able to afford the food they want and need' (statement made during the meeting of the UNIDO Intergovernmental Committee of Experts of the Whole Industrialisation of Africa, 19–23 May 1997, in Accra, Ghana).

The focus here is not only on increasing the supply response or achieving self-sufficiency in food production, but also on developing the manufacturing sector as a dynamic force that can enhance the long-term resilience of sustainable living patterns. This is feasible only when people's needs are backed by purchasing power, and this power is in turn derived from employment creation, income generation and stable macro-economic environments.

Because of the economic disparity within the region, there has been a trade-off between promoting food grain production in the national interest at the expense of the international competitiveness of these industries. It is envisaged that the accelerated development of the agro-related industrial sector would reduce the constraints inherent in the poor food security situation, and that true competitive advantage would be realised.

Table 1
Foreign direct investment (FDI) share, agricultural production and food security levels in Southern African Development Community (SADC) countries

Country	% share of FDI in GDP 1993–95	Agricultural production (%) 1993–95 (av. yield/ha in cereals, roots and pulses; av. for Africa = 100)	Food security levels 1994 (daily calorie supply/capita; index = 100)
Angola	3.51	38	59
Botswana	-2.23	54	73
Lesotho	1.41	108	70
Malawi	0.13	92	58
Mauritius	0.59	272	86
Mozambique	2.71	51	54
Namibia	–	103	62
South Africa	0.2	181	87
Swaziland	4.74	97	75
Tanzania	1.07	115	–
Zambia	2.17	113	62
Zimbabwe	0.68	92	64

Agricultural policy and food security

A fundamental reorganisation of the food production and distribution system is required. There are two aspects of food security:

- Food availability over space and time (quality, quantity, safety and nutritional value);
- Access to food.

Food availability involves industrial production (equipment for crop production and crop processing), storage, transportation, packaging, distribution and trade. Access to food entails both a transportation system by which food can reach the marketplace and the purchasing power to buy the food (Jaffee and Morton, 1995).

The expansion of food processing activity is important for increasing inter-sectoral linkages and, more importantly, for improving food security. Urbanisation resulting from industrialisation has led to a major shift in food patterns. For example, imported rice and wheat are increasingly being substituted for locally produced coarse grains, even by poor urban dwellers. Processing coarse grains into products that can be substitutes for wheat and rice (for example, maize meal) and be acceptable to urban populations requires increased processing facilities for these crops. This would reduce the foreign exchange gap for imported foods to a large extent. Stimulating coarse grain processing requires providing price incentives and addressing supply-side constraints. Reducing milling costs through technological upgrading and new equipment and establishing credit appear to be particularly important. This has been shown to be the case in Zambia, where the deregulation of the milling industry has led to the rapid growth of the small-scale grain milling industry.

Increasing agricultural productivity

Agricultural productivity will not increase while industrial output declines, and vice versa. Using data on the wheat-equivalent output for the region, agricultural productivity has been calculated in physical terms. This shows that marginal physical productivity has increased over time but marginal value productivity has declined, mainly because of the vulnerability of commodities to the vagaries of world prices. Without an increase in productivity in value terms, an increase in income is not sustainable.

Degrees of preservation through appropriate post-harvest strategies and enhanced value added through processing activities could contribute to an increase in both employment and income levels. The sustainability of gains in agricultural productivity depends on careful management of fragile soil systems and other natural resources. Applied agricultural research and increased use of inputs will contribute significantly to productivity growth, but future production strategies will need to be increasingly more sensitive to the environmental effects of using new technologies and farm-management practices. Increased output

supported by a suitable enabling environment for the food processing sector will lead to higher value addition. The converse of this situation can be seen in the cashew nut industry in Mozambique, where policy changes have undermined the local processing industry (*see* Box 5).

Box 5
Liberalisation or de-industrialisation – a Catch 22 situation

The World Bank recommended that the Mozambique Government adopt a liberalisation policy in the cashew sector, gradually reducing the export tax on raw cashew nuts. This tax represented the only means of protection for the industry. Liberalisation caused prices of raw cashew nuts to rise for the producer, and the cashew nut processing companies could not compete with exporters.

Defenders of the policy of protecting national industries state that 'losses to the State from the liberalisation of the cashew sector are enormous, reaching about US$12 million in the last four years: only in the difference in price between exported processed and raw nuts. For every tonne of raw nuts exported, the country loses $150. The indirect effects in fiscal losses are also considerable, as salaries of about 55 thousand million MT fail to enter the economy. With de-industrialisation, the country is at the mercy of the only world buyer of raw cashew nuts: India. After the latest harvest (1998), India offered extremely low prices for Mozambican cashew nuts. If India became self-sufficient in raw materials and stopped importing from Mozambique, there would be no buyers at all.'

In response to this problem, the Ministry of Industry, Commerce and Tourism commissioned Deloitte & Touche in 1997 to carry out a study of the impact of the liberalisation of cashew exportation on the Mozambican economy. This study recommended that Mozambique adopt a policy of re-industrialisation. The Ministry therefore proposed that Parliament approve a law to re-industrialise the cashew nut industry.

Defenders of the policy recommended by the World Bank say that the liberalisation of the cashew nut export trade would result in a significant increase in the price to the farmer. The current price situation is as follows: the price per kg increased from $0.23 to $0.32 during the 1995–1996 harvest, and to $0.38 in 1996–1997. In 1997–1998 and 1998–1999 the average prices paid to the farmer were about $0.36 and $0.40, respectively. Another argument put forward is that liberalisation would make small processing companies more competitive than the large factories, which is in fact the case. However, these small companies do not have the funds to buy raw materials. Banks refuse to give them credit as they do not believe the money will be paid back.

In April 1999, the International Monetary Fund (IMF) encouraged the Government not to approve the law to re-industrialise the cashew industry. Approval of this law, according to the IMF, would 'nullify the Government's efforts to increase rural income levels and to liberalise commerce'. The IMF also felt that 'the re-industrialisation law would benefit local industry in a primary phase due to the prohibition of exports, while thousands of rural workers would be negatively affected by the imposition of a minimum price. When administrative prices are imposed, the workers do not have the incentive to invest in better technology to increase production and improve quality. In the medium and long term, the industry will not be sustainable due to a total lack of investment.'

Enhancing external resource flows and competitiveness

The dependency on aid cannot go on indefinitely. Success stories in Africa, such as Uganda, Botswana and Mauritius, have drawn on non-aid factors to boost their success but they have nevertheless been reliant on technical assistance before becoming successful. This implies that aid was targeted at what was likely to prove most beneficial to the country. To make this aid make a difference required government commitment and strong policies. In other words, it was not the amount of aid, but the quality of the management of that aid that mattered.

Official development aid (ODA) funds could be restructured to facilitate agro-related industrial development, creating new opportunities in conjunction with the liberalisation and globalisation policies being initiated in many SADC restructuring programmes. ODA should therefore focus on improving food security, productivity capacity and micro-economic efficiency. To stimulate private sector investment, ODA can be used for the re-capitalisation of industrial financial institutions and the enhancement of newly created capital markets.

International resource flows require export promotion, especially if competitiveness is to be created, maintained and eventually increased. In the current global environment, export diversification for value-added products is a necessity, not an option, especially if falling commodity prices are to be countered. Global markets are undergoing extensive change and Southern African countries need to reposition themselves in this shakeout phase; this they can do if sound management, effective resource allocation and the supply of accurate information can be achieved in the short-term. Lower tariffs are being set to increase trade diversification and the most affected countries will be those that are highly dependent on cash crops, raw material exports or processed fruits (such as Mozambique and Zambia).

There will also have to be a considerable shift in thinking with regard to labour usage. The region's wage structures offer opportunities for labour-intensive production (particularly in Mozambique), but competitiveness is not a static phenomenon, and in the long term technological advantages will count for more than the current comparative advantage in the use of labour. It is thus imperative that the three countries reassess their strategic markets and strengthen technology transfer and human resources development so as to keep labour competitiveness high. Training and education costs are lower in this region than in the developed world, and resources should be secured to improve educational levels in order to reduce reliance on external technical assistance. Education has multiplier effects for resource development, and if managed properly soon leads to sustainability and self-sufficiency.

Development of small and medium-sized enterprises

There are many advantages to be gained from incorporating a food processing SME strategy into the broader industrial strategy for each of the three countries studied. The main advantages would be:

- *To build support industry services for large industry production requirements.* The SME focus could provide major industrial producers with secure, well-run suppliers, allowing large industries to shed their excess divisions and refocus on their core activity. Smaller specialised firms would concentrate on providing the large industries with the central inputs, components and raw materials they needed. This would not only create more efficient industrial practice at the macro-level, but also increase specialisation and diversification of the industrial base at the micro-level, creating greater competitiveness and efficiency within the economy.

  The development of SMEs also reduces the reliance of large industry on purchasing inputs from external markets, where prices are often higher than would be the case in internal markets because of devalued exchange rates and the lower purchasing power of industries in the region. Import liberalisation policies are effective in giving industry the support it needs in alleviating supply constraints, but it would be more beneficial if such supplies were available domestically as this would enhance comparative advantage.

- *To create higher employment levels.* Each of the countries studied suffers from the problems caused by high unemployment levels. The development of SMEs would create new employment opportunities as the industrial and manufacturing sector diversified, specialised and expanded.

- *To increase the competitiveness of the domestic market.* A stronger SME base would enhance domestic market competition and thus lead to greater competitive advantage in the global marketplace as suppliers and producers moved from essentially monopolistic and oligopolistic market structures to a competitive market structure. This continues to be one of the most serious problems in the economies of the region. Although previous monopolistic parastatal bodies have been privatised, the short-term result has been the creation of a private sector monopoly, often without the socio-economic constraints placed upon it when it was government owned. When countries are also faced with high interest rates and low foreign direct investment, the domestic private sector often lacks the capacity in the short to medium term to invest in major capital developments to challenge the status quo (such as in integrated dairy processing). On the other hand, where production can be undertaken by mini-plants (such as in grain milling), there has been a rapid supply response by the SME sector to deregulation, with the consequent benefits to the consumer.

- *To increase the diversification and specialisation of the industrial base.* In line with increased competition, an important advantage of SME development is increased diversification and specialisation of the industrial base, which will lead to increased welfare within the broader macro-economy.

- *To take advantage of niche markets.* As industrialisation increases within Mozambique, South Africa and Zambia, the chain of production which has been oriented to the requirements

of large-scale industry has developed gaps or weak links because of the inability of larger firms to respond to the changes in market demand. The effect of these changes can be quite significant, and because the large industrial firms are already stretched to the limit in most cases, with many of them facing capacity constraints, these marginal inefficiencies will eventually cause stagnation in the macro-economy. The large firms are also under pressure from changing global markets and are being forced to focus on their core businesses and to serve their markets more efficiently, leading to neglect of these smaller links in the production process. SMEs are able to fill the gaps and develop the niches so that efficiency is restored. These enterprises also create value added for the end products as their contributions to the manufacturing and production processes are taken into account.

- *To accelerate adaptation to changing market demands.* Because of their smaller size, SMEs are an effective tool for reorienting the economy in response to changing market demands at the domestic or international level. This flexibility can be enhanced by developing SME sectors that show potential competitiveness in world markets; the necessary restructuring would take far less time than that required by larger industrial firms, the costs would be lower and the effects less painful.

Strategy implications

The advantages of developing SMEs within a broader strategy of industrial development, as outlined above, have the following strategy implications:

- All economic policy considerations need to take socio-political and environmental factors into account if the policy is to be effective. With regard to social factors, the obvious benefits are increased welfare and more efficient allocation of welfare resources, but this in turn will have social demands. SMEs and their contribution to diversification and specialisation need to be supported by human resources development if the gains are to be sustained. There must be mechanisms for ploughing gains back into the support areas for these new 'engines of growth'. Specifically, these areas are education and training. Specialisation requires increased knowledge of market developments, and the labour force needs to be equipped with this knowledge if long-term sustainability is to be achieved.

- The environmental effects of SME development must be analysed before a strategy is implemented. If environmental degradation results from mismanaged SME development, the gains will quickly be eroded. Suitable impact analysis complemented by a sound regulatory environment can avoid such potential pitfalls.

- There is considerable scope for regional cooperation, information exchange and the development of linkages built around a programme of action for the SME sector.

Regional networking and cooperation

In order for the SADC region as a whole to move forward as an efficient world market player, there will be an increasing need to establish collaborative networks that can transfer experiences and knowledge between the different countries, with a particular focus on export competitiveness. A fundamental mind-shift is required. Companies and countries in the region need to realise that they are presently a very small slice of the global market. Collaborative effort will not 'lose market share' because the market is so vast that the individual countries' combined output in manufacturing will not significantly change the situation for a considerable time to come. Success in international markets in processed foods is a relatively rare phenomenon except in the case of South Africa, and knowledge and skills transfer (in both the public and private sectors) from those who have been successful to those who are struggling would be a major progressive step. Subsectors such as wine in South Africa, paprika in Zambia and edible nuts in Mozambique could take a leading role in this process, given suitable channels to transfer skills for the benefit of all parties concerned.

Food processing as an investment priority

Fieldwork in the private sector in Southern Africa has shown that the sectors which business people consider most capable of succeeding are, in descending order: agro-industry; tourism; mining; and light engineering (*see* Table 2).

Table 2
Major sectors of interest to SADC industry (private sector priorities)

Country	Tourism	Agro-industry	Mining	Services	Building materials	Light engineering
Angola	–	1	4	5	3	2
Botswana	1	2	3	3	4	4
Lesotho	1	2	–	–	3	–
Malawi	1	2	2	–	–	–
Mauritius	1	2	–	2	–	1
Mozambique	2	1	3	–	3	3
Namibia	1	3	2	4	–	–
South Africa	2	1	2	4	2	3
Swaziland	1	2	3	–	–	1
Tanzania	2	3	1	–	4	–
Zambia	2	2	1	4	2	3
Zimbabwe	2	1	4	–	5	3

Note: 1 = high priority; 5 = low priority
Source: Metra Sofres/Imani interviews in the private sector

Table 3
Sector ratings of absorption potential in SADC countries

Country	Agro-industry, including fisheries food processing and forestry	Country	Agro-industry, including fisheries food processing and forestry
Angola	2	Botswana	2
Lesotho	3	Malawi	5
Mauritius	3	Mozambique	4
Namibia	5	South Africa	6
Swaziland	5	Tanzania	5
Zambia	5	Zimbabwe	5

Note: 1 = lowest absorption capacity; 6 = highest absorption capacity
Source: Metra Sofres/Imani interviews in the private sector

An overall assessment of the absorption potential within the region was conducted and the results are given in Table 3. These are inevitably subjective and the ratings reflect a qualitative assessment. They take into account:

- The strength of a country/sector's comparative advantages in terms of:
  - *resources/raw materials:* available economically and on a viable basis;
  - *the market:* will the product (which results from investment or other cooperation input) find a ready market, in the quantity and at the price which the venture requires? Is there a demand?
  - *distribution:* does the infrastructure exist to take inputs to manufacturers and goods to potential customers and enable the suppliers to profit from the latent demand?

- The speed at which the venture, once agreed, can be established, which again depends on a combination of factors:
  - investment regulations and other bureaucratic hurdles to overcome;
  - access to funding if required.

The above factors are not just elements of some theoretical economic equation; they are weighted by local knowledge and experience. Account has also been taken of political and other factors that would impact on absorption.

Service providers and small-scale food processors

The distinction between services to agriculture (on-farm production) and those to agri-business (post-harvest processing) often overlap in the region. There are also numerous cases where the farmer or farming organisation is also a processor and so the services provided

have an impact on the whole operation. Nevertheless, some broad distinctions have emerged from the survey. It is also worth noting that there is an increasing shift in donor resources towards NGOs or private sector bodies and away from government departments.

Service users tend to use three generic types of service – financial, training and management. The most commonly used is financial. Most feasibility studies have tended to focus on the financial viability of a project in order for the project sponsor to access loans or development capital. There appears to be a rather hit-and-miss approach towards accessing such services. Often it is by word of mouth. Large commercial processors usually turn to their accountants for assistance, but they also use donor-supported facilities such as that provided by the APDF. There is anecdotal evidence of the frustration felt by companies that find themselves caught in the 'aid net'. Bureaucratic procedures and lengthy approval processes are among the problems cited.

Under the training umbrella one can include extension services. Small commercial operators are increasingly using small business training programmes provided by Chambers of Commerce, NGOs and the like. The communal and informal sectors rely on donor programmes and public sector extension services.

The area of management is very diverse. Marketing and production are the most commonly sought-after services. In South Africa there is a relatively large base of local technical services, but in Mozambique and Zambia such services are usually provided by foreign consultants. Small firms tend to struggle to access to such services due to the high expense. Retired executives programmes run by some donor countries have helped fill the gap.

In general, the agri-business and food processing sector in the region is quite used to a trial-and-error approach, particularly as public sector research services are increasingly unable to provide a satisfactory service. The exchange of ideas tends to happen on a fairly informal basis within farming unions or trade associations. Structured information networks both for trade and technical data are not well developed in the region, although again South Africa is more advanced in this regard, particularly at the institutional level.

Agriculture

The range of services in the three countries include some or all of the following:

- *Extension services.* Usually provided by a government department, often with donor support; increasing signs of strain are evident in terms of efficiency and effectiveness;
- *Agricultural finance.* Usually provided by a financial institution set up especially for this function; often poorly capitalised;
- *Research institutes.* Often a government department or part of an international research project; public sector bodies are showing increasing signs of resource limitations;

- *Input suppliers.* In many cases, these private sector suppliers include technical assistance to the farmers on the utilisation and servicing of the products being bought; an increasing number of private sector consultancy services are available;
- *Food security and rural development.* Usually part of a donor and government project targeted at the poor rural sectors of the economy.

Box 6
Difficulties with AMIS: the Zambian case

The impact of the agricultural market information system (AMIS) in Zambia is mixed. On the one hand, it appears to provide a fairly good service to some stakeholders, particularly those interested in price information. Beyond this type of data, however, it does not appear to be of much help to producers. One of the weaknesses of the AMIS vis-à-vis the agro-processing industries is that it has failed to provide objective and reliable data on stores of agricultural produce and, with the exception of maize meal, very little data are generated and disseminated on other processed foods of interest to small-scale agro-processing enterprises focusing on livestock, fish, vegetable oils, etc. Since most processors obtain their raw materials locally, information on local storage is equally important to small-scale food processing enterprises for they need to plan how much to keep in stock. Without data on the amounts of stocks available from which sources, and at what cost in terms of transportation, food processing enterprises face two disadvantages:

- They are forced to keep in stock large quantities of raw materials, when storage is costly;
- They are required to mobilise huge finances to buy raw materials in bulk, a costly exercise for enterprises already suffering from serious capital scarcity (they may have to cut down on some of their operations as funds are diverted to purchase raw materials).

Another problem with the AMIS in Zambia is that there is little, if any, information on transport costs. Transportation costs from the point of production to the point of processing are important, considering that most processing facilities are in urban areas, away from the points of production in the rural areas. The transaction costs of trying to find the cheapest source of raw materials in terms of transportation could be reduced or eliminated if this information was made available through the AMIS.

For those who find the AMIS data useful, the service has not been without problems. One is poor funding, which affects timeliness of dissemination because of disruptions in communication. Data from districts to the AMIS are transmitted by mail, telephone and fax, but this communication system is poor because of inadequate funding. Sending data by post to Lusaka, for example, has been affected. Disrupted telephone services because of non-payment of bills has also contributed to the late delivery of data.

Clearly, there is no formalised, well-established MIS for small-scale processing in Zambia. And yet it is widely recognised that an adequate and reliable MIS is crucial in a liberalised agricultural sector if government officials, producers and traders are to make sound business decisions. Such an information system would give farmers and processors reliable market signals to which they need to respond promptly if they are to meet the competitive challenges of a liberalised market.

Box 7
MACs – a potential way forward?

The National Manufacturing Advisory Centres (MACs) Programme is a partnership established between Ntsika (the implementing agency of South Africa's Department of Trade and Industry's small business development strategy), the Council for Scientific and Industrial Research (CSIR) and the National Productivity Institute (NPI) to set up two pilot regional centres in Port Elizabeth and Durban. The programme is funded by the Danish International Development Agency (DANIDA) and South Africa's Department of Trade and Industry.

MACs are regional centres which help micro, small and medium-sized enterprises (MSMEs) access services to improve their productivity and competitiveness. The partnership will draw on resources and expertise from relevant service providers nationally to improve the performance of MSMEs and build a network of services. Implementation will be driven at the local level. MACs will facilitate clustering and cooperation amongst firms, foster big-small business linkages, and help MSMEs become more export oriented. The objectives of MACs are to:

- Provide advisory services to improve the growth and performance of target MSMEs;
- Provide technical support to MSMEs;
- Provide information support to MSMEs;
- Help MSMEs conform to quality and product standards.

The MACs will be located in areas where there are a large number of MSMEs. For a MAC to render an effective and efficient service, it needs to interact with institutions whose resources can be utilised. These include universities and colleges, local and provincial government bodies, industrial associations, small business support organisations, local development groups and labour organisations.

Technical extension and business management needs will be provided by a network of specialist services providers. To enable extension officers to act as a link between MSMEs and these service providers, methods for improving productivity and performance will be devised. Information technology support by the MACs will also play a crucial role in business linkages and other information support needs of MSMEs.

Agri-business

The range of services in nearly all cases overlap with those available to the manufacturing sector as a whole:

- *Finance*. Provided through normal commercial bank lending or donor-supported concessional lending for approved projects; venture capital funding is beginning to emerge in the region;

- *Technical advice*. Usually provided through a national business organisation, small business advisory unit or retired executives programme;

- *Information databases.* Very poorly developed in the region, with the exception of South Africa; there is some donor activity in this area, and access to the Internet may help in the future;

- *Standards.* All three countries have a Standards Bureau which provides technical advice and a product testing and registration service; in Mozambique and Zambia, however, there are resource constraints;

- *Management consultants.* The number of private providers of business consultancy services is increasing, but they are often beyond the financial resources of small-scale enterprises;

- *Trade promotion.* Usually provided by a quasi-public sector body or Ministry of Trade; increasing donor and private sector involvement has resulted in some improvement in services.

Chapter 4
NEEDS ANALYSIS

Macro-economic issues

Structural adjustment and democratisation programmes have been initiated in Mozambique, South Africa and Zambia in response to the need to boost their economies and bring about sustained growth. The programmes have contributed to a period of high inflation, devaluing currencies, retrenchment and high unemployment, limited capital, confusion in the ranks of civil servants and some privatisation of government-owned enterprises. These difficulties tend to be more acute in Mozambique and Zambia than in South Africa, but they all exist to some degree in all three countries. The countries are at various stages of trying to address the problems. There is a need for improved planning and policy analysis in both the private and public sectors to cope with the changing economic circumstances. In South Africa there is the added complication of the need to redress the harsh socio-economic imbalances of the past.

Micro-economic issues

In addition to the difficulties outlined above, there are specific difficulties facing small-scale food processing enterprises in their start-up phase and when they are expanding. Again, there are many issues which are common to each of the three countries to a greater or lesser extent. These include the need for coordinating information to assist the new entrepreneurs. People know that different organisations can help but they are unclear as to where these organisations are, what they do and how they can assist. There is a general shortage of appropriate market intelligence information and technical assistance in marketing strategies.

Zambia and Mozambique suffer from a shortage of affordable industrial space, which does not necessarily affect micro businesses but certainly affects small to medium-sized firms. The micro and small enterprises also suffer from a lack of affordable office services (typewriters, computers, printers, telephone hook-ups, photocopiers, fax machines, vehicles, etc). These needs do not tend to be met by the type of donor technical assistance available in the region.

The smaller entrepreneurs need assistance with writing business plans, arranging financing and developing managerial skills. South Africa has a wide variety of local educational programmes to meet these needs, but such programmes do not exist in the other two countries. The larger companies also need programmes to help their managers with marketing and customer services, skills that were not required when the markets were protected and there was little competition. All three countries are aware that exporting is the only means of earning the foreign exchange needed to generate economic growth. The small

enterprises do not know how to prepare their products for export markets or how to market products in competitive foreign environments. Mozambican enterprises have the additional constraint of needing to master the English language so that they can participate in technical and business meetings and analyse programmes in surrounding countries.

Basic infrastructure is also lacking to a greater or lesser extent in each country. As one moves from urban centres to rural areas, roads are often poor, electricity non-existent and telephones either not available or not working. These shortcomings add to production costs. The food processing enterprises in the informal sector tend to be small and are often operated by women from their homes. They cannot rely on new technologies to expand their businesses because they lack the basics, such as electricity. In the formal sector, companies in South Africa in urban environments are relatively well off in terms of infrastructure compared to those in Mozambique and Zambia, where infrastructural investment is often lacking.

Entrepreneurs in all three countries commented on the lack of business incentives provided by the governments. Often, this was blamed on civil servants' lack of understanding about on how the private sector operates. In addition, the retrenchment of employees and rationalisation of government departments is causing confusion among State employees. The need for information capacity building is apparent in private and public sector institutions.

The most common and serious impediment to development is the cost of what little capital is available. Emerging businesses lack the collateral to acquire a loan or the ability to afford loan terms. In Mozambique and Zambia there is a severe shortage of domestic capital. This is less acute in South Africa, where there is greater monetary stability and financial resources. There needs to be a wider spread of financial instruments that can take on risk. The banking sector offers a poor range of financial services and very conservative lending policies. Thus, although there is some technical and managerial training in the three countries, there is limited capacity to implement what has been learnt because of the lack of finance.

The main services required by food processors include: short-term technical assistance; short- to medium-term management support; grants or matching grants for technical assistance, training, product development, research and business travel; matchmaking services; investment facilitation; library and data access services; and market and product research services. The beneficiaries of these services should include processors, traders and input supply companies, trade and commodity associations, and farmers interested in new product lines.

In all three countries the following areas require additional support if the small-scale food processing sector is to develop:

- Training needs
  - developing integrated training courses that are skills based and market/product oriented;
  - training educated, dedicated and competent trainers to implement the programmes;
  - providing training programmes for the self-employed.

- Gender issues
  - revising marital and other laws governing women's ownership rights;
  - supporting organisations involved in the training of women;
  - revising wage differentials and the job opportunities open to women;
  - helping women obtain access to land and finance.

- Business development
  - encouraging sub-contracting and networking partnerships between large corporations and smaller businesses;
  - developing sources of affordable finance for small enterprises;
  - centralising information for easy access by entrepreneurs;
  - developing practical training programmes;
  - increasing participation by private sector technical service providers;
  - developing streamlined delivery mechanisms for technical assistance;
  - revising the regulations regarding business definitions and practices so as to provide easier access to the markets for the emerging businesses.

- Service providers
  - encouraging, as a matter of urgency, capacity building in all relevant organisations;
  - initiating staff development programmes so that staff understand what is required of them and what they are capable of providing;
  - developing technologies so as to build a comprehensive database of information on such subjects as finance, technical assistance, training schemes, NGOs and exporting.

Box 8
Gender issues in Mozambique

There are some 27% more women than men in Mozambique, a direct result of the war and of the migrant labour that has long been a feature of the country. The situation of these women is made worse by the following factors:

- They have no land rights;
- They receive less pay than their male counterparts;
- About 27% of women over the age of 15 have had no education at all, and the vast majority of them have had little in the way of formal instruction.
- On average, they fall pregnant at an early age, reducing their mobility and ability to work outside the home.

Women make up the bulk of micro-enterprise owners. Their operations are usually home based because of their dual roles as single parents and business women. Their representation in the business sector falls as the businesses increase in size. The main areas in which they are involved are agriculture, food processing, hairdressing, sewing and other light industrial processes

Specific areas for intervention

There is no shortage of specific projects that could be targeted at food processing SMEs. During the study the constraints hampering the development of this sector were identified as:

- *Weak institutions.* These include policy-making government departments, private sector business associations, national promotion agencies and information services.

- *Inadequate entrepreneurial skills in the private sector.* Although very innovative on the whole, the private sector could benefit from an injection of international skills to enhance its performance in the competitive environment being created by ESAPs and to boost the creation of new wealth and jobs. Many aspiring people are entering the business world from diverse backgrounds but most of them lack business management skills.

- *Inappropriate formal education.* The education system in considered by the business sector to be too academic and lacking in entrepreneurial orientation, with the result that few graduates become entrepreneurs and, because of the lack of job opportunities, many of them leave the region for perceived greener pastures elsewhere. There is general agreement that more practical commercial skills need to be introduced into the official curricula. The cultivation of entrepreneurial skills and of an awareness of career opportunities also needs to be introduced at secondary school level.

- *Training gaps.* Training those people who have entered the world of business is vital. There are a number of training schemes in the three countries targeted at this group, but these schemes need to be supplemented both in content and number, as there are several gaps. The main areas of need at present are marketing skills and business techniques in a competitive environment.

- *Poor access to finance.* Access to finance by businesses and potential businesses is hampered by two main factors:
  - high interest rates on loans; this primarily affects established businesses wanting to expand; these businesses tend to be in the medium to large category.
  - lack of collateral to obtain loans; this primarily affects those entering the business world at the micro-, small- and medium-scale levels; most of these businesses have to start with loans from families and friends, or are financed from personal savings, because they are unable to satisfy the collateral requirements of banks.

- *High cost of industrial premises.* The lack of affordable industrial space limits the growth of small enterprises. Many businesses are run from home because of the lack of affordable space. This, however, places them out of the reach of many potential customers and limits marketing and growth opportunities. It also largely inhibits the formalisation of businesses in the informal sector.

- *Lack of centralised information facilities.* One of the greatest problems in all three countries, highlighted throughout the interviews, is the scattered nature of available information. There are a variety of programmes offering a wide range of services for aspiring business people but because of the fragmentation the information is difficult to access. State-of-the-art databases such as those at the Council for Scientific and Industrial Research (CSIR) in South Africa tend to be available only to other well-funded institutions.

Problems faced by small-scale food processing enterprises

The constraints to small-scale food processing enterprise development in the three countries can be divided into two categories: those that are external to the enterprise, and those that are internal (within the control of the enterprise) and require assistance to be overcome.

External problems

- There is no transparency or clear government policy to support small enterprises despite the fact that governments see these enterprises as pillars for employment creation;
- The liberalisation of the markets means that there is stiff competition from imports although some are of lower quality;
- There are problems obtaining the required finance, which in most cases is expensive because of very high interest rates;
- If finance is available, it covers operational costs mainly and there is little capital funding for purchasing such items as equipment, packaging and processing chemicals;
- Service provider assistance is often short-lived and there are seldom plans for continued support and sustainability;
- Donor funding is limited; where it is available, it is for short-term purposes; the resulting shortcomings are evident in Zambia, for example, where the MIS started on a firm footing with donor funding but gradually lost momentum as the funds dried up;
- Poor road networks;
- Poor power connections;
- Unreliable telecommunications.

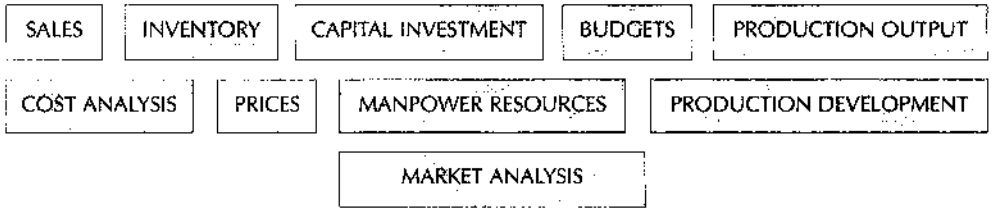
Internal problems

- Small-scale processors are not equipped with enough skills to make their enterprises functional and viable;
- The populations generally have low purchasing power;
- There is a lack of understanding of the backward and forward linkages in processing; small-scale processors should know about the movement of raw supplies from source, including the role of middlemen, prices and quality of supplies, storage and delivery arrangements, market and consumer requirements, and competition from imports;

- Poor marketing skills and lack of suitable market information are characteristic of the small-scale processing sector;
- Lack of access to appropriate technology, resulting in poor food technology know-how;
- Obsolete technologies are often used, leading to poor product quality; equipment is difficult to acquire and maintain, and imported equipment is often inappropriate in scale or degree of automation;
- The capacities for research, development and adaptation are limited and the technical infrastructure for the supply of spares and maintenance is poorly developed;
- The deregulation of trading and the inadequate storage facilities mean that small-scale processors are unable to cope with fluctuations in prices and irregular supplies;
- Obtaining reliable information on markets for raw materials and finished products in terms of volume, prices, locations and transport availability is a problem for small-scale entrepreneurs, who have to rely on informal channels (word of mouth) for information.

The way forward

The country studies illustrate a complex set of interrelated opportunities and constraints, some of which apply to all economic activities, while others are more specific to manufacturing and small-scale enterprises. Few issues are specific to food processing, but a sector-focused approach does provide a basis upon which to move forward, rather than being overwhelmed by the magnitude of the needs. At the small-scale enterprise level, the main requirement is to improve the decision support systems so that the owners can make effective decisions about their businesses. The key inputs in an effective information system relate to:



With knowledge about some or all of these inputs, planning can be undertaken. The specific areas where assistance is needed are:

- *Business management training:* all aspects of information management;
- *Production output:* technology transfer and production improvement information;
- *Capital investment:* information on sources of private sector-oriented development finance;
- *Manpower resources:* training programmes for improving skills and productivity;
- *Product development:* information on new technologies, market opportunities and product improvement;
- *Market analysis:* timely, accurate and usable information on domestic and export markets, prices, trends, competitors, input suppliers, regulations and opportunities.

Chapter 5

COUNTRY CASE STUDIES: KEY FINDINGS AND RECOMMENDATIONS

Mozambique

The liberalisation process in Mozambique is slow but there has been some progress. The government's major concern is to rehabilitate the infrastructure destroyed in the war, and thus provide the impetus for liberalisation. In 1997 the government formulated an industrial policy aimed at promoting the development of SMEs, including food processing enterprises. However, no ministry has specific responsibility for this policy. The National Directorate of Industry is the only government body with the capacity to set up a department for SMEs.

Characteristics of small-scale food processing enterprises

This sector is represented mainly by edible oil processors, bakeries and grain mills (hammer mills). The enterprises operate throughout the country, and most are owned by Mozambican nationals. On average they employ 20 workers. Apart from the cashew nut industry, women are not greatly involved in food processing. In general, the enterprises use low to medium-level technology and most of the workers are unskilled, but enterprises producing goods (processed fish and cashew nuts) for export use medium to high-level technologies. The main constraints are poor roads, inadequate packaging, obsolete equipment, high cost of electricity, power cuts, and a lack of raw materials and the funds to buy them. Only about 50% of installed capacity is being used. Labour represents only about 25% of production costs.

Small-scale enterprises have great difficulty obtaining bank financing, usually because they lack collateral or the amount they wish to borrow is lower than the minimum established by the bank. Two public institutions – the Institute for Development and Local Industry and the Fund for Development of Small Industry – and some private institutions, such as the Society to Support Small-Scale Investments, have been set up to facilitate access to credit for SMEs.

Most small-scale food processing enterprises buy their raw materials and inputs locally, directly from the producers. They sell their products to retailers or in urban and village markets. Few of them export their products to regional and international markets. The raw materials and products are transported mainly by road. The main marketing constraint is the lack of market and price information; information on technology and production processes is also needed. Small-scale processors rarely use trade fairs to exhibit their products and gather information about competitors and technologies, and few belong to business associations.

Characteristics of service providers

Despite some improvements in recent years, support services for small-scale food processing enterprises are still weak. In the colonial period, agricultural research and support services focused on large-scale cash crops, such as cotton and sugar cane, and on the livestock sector (mainly cattle). After independence, the quantity and quality of these services declined.

In recent years, research and support services have received increased attention from the government, private sector and bilateral and multilateral donors. This attention has focused on extension, training, seed production, consultancy, animal breeding and information systems. There is still relatively little focus on market research, and thus there remains a need for the systematic collection, assimilation and analysis of data to assist small-scale enterprises in decision-making and identifying market opportunities. The success of such activities is constrained by inadequate human resources and the lack of practical experience and funding.

There are no service providers that support small-scale food processors exclusively, although a few do provide limited service components to small industrial units and some NGOs provide assistance for the small-scale production of particular crops such as sunflowers, cashew nuts and cassava. These NGOs provide crop packages that include inputs, ready markets and an extension advisory service. There is a need to form a network of relevant service providers and to assess how they could assist small-scale processors and facilitate the collection of market information and its dissemination to producers and processors.

Market information systems

Existing market information systems (MISs) are targeted at policy-makers, traders, farmers, NGOs and financiers, and do not cater specifically for small-scale food processors. The agricultural market information system, SIMA, is housed in the Department of Economics, Ministry of Agriculture and Fisheries and is funded by the United States Agency for International Development (USAID). SIMA activities focus on institutionalisation and sustainability; staff training; decentralising information collection; and information analysis and dissemination at provincial level. SIMA collects price data on basic food and non-food commodities (maize meal, white and yellow maize, wheat flour, sugar, cotton, rice, beans). It covers commodities only, and therefore is of limited value to processors.

Through the National Directorate of Internal Trade in the Ministry of Industry, Commerce and Tourism, steps are being taken to standardise data collection, analysis and dissemination. However, this is public sector driven, and there is a need for private sector involvement in this area. Responsibility for assessing the market information needs of small-scale processors should be given to a body which would also be tasked with providing meaningful assistance to this sector. Existing institutions are not capable of providing such services.

The key conclusions and recommendations for Mozambique are given in Box 10.

Box 9
Key conclusions and recommendations for Mozambique

CONCLUSIONS	RECOMMENDATIONS	IMPLEMENTATION
Role of the National Directorate of Industry (DNI)/Ministry of Industry, Commerce and Tourism (MICTUR): no department is dedicated to the small-scale food processing sector at the level of the DNI/MICTUR Objective: focus on developing the small-scale food processing sector	The DNI/MICTUR should create a department dedicated to the development of the small and medium-sized food processing sector; the department's key staff should be trained in development policies for small-scale food processing enterprises; donors could fund this training	Immediate
Financial benefits for investment: Mozambicans often lack access to finance; rates of interest are still too high (despite the reduction in inflation and the re-discount rate) and finance is generally not granted for sufficiently long terms Objective: create a more efficient financial sector and develop instruments more attuned to the financial needs of the small-scale food processing sector	CoM should provide a suitable environment to establish innovative credit procedures and sustainable micro-finance institutions throughout Mozambique GoM needs to encourage financial institutions to lend for longer terms and establish credit lines specifically aimed at small and medium-sized food processing enterprises	Short and medium term Short and medium term
Incentives for investment: the procedures for obtaining investment benefits are slow and highly bureaucratic Objective: encourage small-scale food processing enterprises to apply for incentives by simplifying the procedures and documents required	GoM should simplify the procedures for obtaining investment benefits for the small-scale food processing sector Development of local incentives setting up investment projects outside the main urban areas	Immediate Short and medium term
Role of service providers: none of the service providers in Mozambique is specifically geared towards the small-scale food processing sector Objective: focus on developing the small-scale food processing sector	Institute for the Development of Local Industry (IDIL) should have greater coverage, and should create a division for the small-scale food processing sector IDIL should identify favourable finance mechanisms, promote management courses for small businesses, provide technical information for small-scale food processors. Key personnel should be trained with financial help from donors	Immediate Short and medium term

CONCLUSIONS	RECOMMENDATIONS	IMPLEMENTATION
Role of service providers (continued)	GoM and NGOs should encourage the creation of associations for the small-scale food processing sector to disseminate management information to members and collaborate with IDIL to promote members' information needs; the associations should also serve as financial intermediaries for credit institutions; donors could finance training and supply materials necessary to strengthen the associations	Short and medium term
Poor infrastructure; roads, telephones, energy, water services poor in urban areas, almost non-existent in rural areas	GoM should allocate more budgetary funding for rehabilitating and maintaining roads, mainly secondary and rural roads	Short and medium term
Objective: attract investment and establish small industries in rural areas	Private sector should enter into the electricity and water supply markets	Immediate
Improve enterprise management: most small-scale food processing enterprises are poorly managed due to low educational levels	Management training courses should be made available at low cost to small-scale food processors; an example is the ILO's 'Improve your business' course	Short term
Objective: to enable managers to interpret and utilise management information to allow them to make effective business decisions	Management capacity-building courses should be made available at low cost to small-scale food processors to enable them to interpret information; donors could provide financial support for training and capacity-building courses	Short term
Development of an MIS for small-scale food processing enterprises: no MISs in Mozambique are specifically aimed at this sector	DNI and DNCI should collaborate in implementing an MIS aimed at small-scale food processing enterprises	Short term
Objective: to improve management capacity of small-scale processors	IDIL and DNI should set up a technological information centre to examine the sector's needs for such information	Short and medium term
	Information for enterprises and associations should be disseminated through district and provincial MICTUR directorates and IDIL's provincial personnel	Immediate
	MIS from DNCI/MICTUR should be improved so as to reach greatest number of enterprises; information should be published weekly	Short term

CONCLUSIONS	RECOMMENDATIONS	IMPLEMENTATION
Development of an MIS for small-scale food processing enterprises (continued)	Capacity building to enable DNI staff to operate an MIS should be done with external support; donors could fund the training of key DNI staff; in the initial phase four subsectors of the small-scale food processing sector (maize mills, bakeries, oil producers, cashew nut processors) should be given priority; the MIS should be expanded to other subsectors as soon as appropriate conditions are established	Medium and long term

South Africa

The South African food processing sector is strong, with an annual turnover of R57 billion. It provides employment for about 185,000 people. There are strong backward linkages to agricultural raw material supplies for the processors. Moving away from single-channel marketing arrangements for a large number of commodities has opened up opportunities for small-scale food processors to operate in a free market environment. For example, there has been a remarkable increase in the number of small-scale maize millers since the dissolution of the Wheat Board in 1997.

There are, however, a number of constraints to the growth of the small-scale food processing sector:

- More than 60% of the people interviewed considered that accessing finance was a major limitation;
- Commercial lending is expensive and the small-scale processors feel discriminated against in terms of obtaining loans;
- The seasonality of raw materials is the main constraint in meeting supply requirements;
- Small-scale processors need market information to be more specifically targeted at them;
- There is a lack of technical and management skills;
- Most small-scale processors are represented by a trade association and membership is voluntary, but the membership fees for many are prohibitive.

Characteristics of small-scale food processing enterprises

The geographical location of the small-scale processing enterprises is influenced to a great extent by where most of the raw materials are produced. For example:

- Most small-scale wine makers are in Western Cape Province (where most vineyards are);
- Most small-scale fruit canneries are in the Northern Province (where fruit growing is important);
- Most small-scale millers are the located in the farming area stretching from the west of Johannesburg, through Kwazulu-Natal and along the coast to Cape Town.

The production and processing of meat, fish, fruit, vegetables, oils and fats accounted for 58% of the agro-processing contribution to the GDP, followed by grain mill products, starches and starch products and prepared stockfeeds (28%) and dairy products (14%). There are good communication networks and a good road infrastructure supporting the development of small-scale industry but the rural gravel roads in some areas are in a poor state.

The agro-industry manufacturing base is broad and complex, and is supported by a strong purchasing power. The South African fast-moving consumer goods market is poised for dramatic change and the retail market is being transformed through urbanisation and the rapid growth of informal retailing. However, small-scale processors face problems when they try to meet the challenge and enter the manufacturing sector:

- Small-scale food processing enterprises tend to be marginalised and fragmented, having usually emerged as a result of temporary opportunities;
- The entrepreneurs lack skills in management and administration;
- In the past, the agro-industry was controlled by marketing boards that regulated how much was grown and what crop prices were paid. These boards were responsible for marketing the crops and processed products, but they kept useful market information to themselves. They have now become associations, covering the large- and small-scale sectors, but the large corporations tend to get the most benefits;
- The small-scale processors are far more vulnerable than large units to fluctuations in the prices of supplies and other inputs;
- The small-scale processors lack the resources to import inputs when supplies are limited.

Characteristics of service providers

The service providers for small-scale processors in South Africa are classified under governmental and government-supported organisations. The services offered are technical assistance, market information and financial assistance. The government implements its small-scale enterprise policies through two divisions in the Department of Trade and Industry – the Ntsika Enterprise Promotion Agency Program and the Centre for Small Business Promotion. These two bodies provide the support services through local Business Support Centres (BSCs).

There are about 35 BSCs in the provinces in South Africa. They are accessible to emerging businesses and small-scale food processors, and offer a wide spectrum of support services,

including the facilitation of links between small and large business enterprises. The Thekwini Business Development Centre in KwaZulu-Natal is a good example of a development centre which also houses other service providers established to benefit small businesses.

There is insufficient funding available to support the government-sponsored organisations and thus they are unable to meet the clients' financial needs for operational and capital investment. Commercial banks do not generally see themselves as key lenders to the small-scale enterprise sector because of the perceived the risk involved in issuing loans to businesses with insufficient collateral. The trade associations are hampered by limited funding either for their own operations and for extending support to members, and are therefore not able to provide the same standard of information that used to be available through the marketing boards.

The effort to promote small-scale food processing should be both public and private sector driven. Networking should be encouraged as a way of boosting the combined efforts of service providers for the benefit of small-scale food processors and as a means of identifying the sector's needs with regards funding, resources, personnel, transport and institutional support.

Market information systems

The framework for an effective market information system (MIS) for small-scale food processors does exist in South Africa. What needs to be done is to work through and analyse the available data and then streamline it for use by the processors. Current market information is targeted at large-scale processing enterprises. Several public and private institutions offer market information to the small-scale processors but the information is not tailor-made for these enterprises.

The Department of Trade and Industry produces and updates a service providers' directory listing all the small business support enterprises in South Africa. Of particular importance has been the department's development of BRAIN, an information centre backed up by a Website. The centre functions as a point of reference for small businesses and potential buyers. The only limitation is that most small-scale processors are not in a position to access computers.

The Agricultural Research Council, working with other partners, has identified the need to reach small enterprises through the use of the South African Broadcasting Corporation (SABC) community radio stations. The use of local languages in broadcasting is important in improving communication.

Again, as in Mozambique and Zambia, the MIS in South Africa should move towards being more private sector driven so that in the long term it will provide tailor-made information

Box 10
The private sector as a market information provider

AGRIMARK is a private company in South Africa providing market information that suits a wide range of players in the manufacturing sector. The information is disseminated via faxes, photocopies, publications in agricultural and food processing magazines and the company's Website (www.agrimark.co.za). Information can be purchased on an *ad hoc* basis or users can subscribe to obtain the information throughout the year. If the subscription route is chosen, the user can opt to receive photocopies or will be given access to the relevant information via the fax system or the Website.

Most organisations in this field do not interpret their trade and market information (statistical data). Agrimark, however, provides in-depth analysis of the raw data, translating this data into meaningful information for unspecialised users. Among these users is the National Oil Producers' Organisation (NOPO), which buys the relevant information from Agrimark and distributes it free of charge to its members. NOPO also distributes the information to small-scale growers in rural areas after the information has been translated into the local language.

package services directed at small-scale processors. In a private sector environment, the stakeholders are active enough to source additional finance, arrive at decisions faster and implement them within the specified time frame. This will have a profound effect on the performance and productivity of small enterprises. The information required by small-scale processors covers a wide area and comes from different sources; a considerable amount is available but it needs to be analysed and streamlined to suit their needs.

Key recommendations

- Small-scale processing facilities could be established in the rural producing areas. The benefits arising from these would include the creation of employment opportunities in the areas where it is most needed; also, by producing, processing and eventually consuming a product within the same geographical area, market costs are reduced, thereby contributing to lower food prices and increased food security;

- The government should view the improvement of roads as one of its key infrastructural responsibilities. In the long term, rural and agricultural development will yield the benefits to justify this expense;

- Membership subscriptions to the various trade and industry associations should be made affordable to the owners of small-scale food processing enterprises. The government and donor agencies could support the activities of the associations so that they can charge a lower subscription fee to these enterprises;

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- Small-scale food processors need training in several market-related areas, including:
  - the interpretation and use of market information;
  - budgeting;
  - market costing and pricing;
  - technical aspects of the production process;
  - storage techniques;
  - administrative skills, such as bookkeeping, cash flow and record keeping.

  Courses need to be developed to meet these needs. Government and donor agencies may be able to assist private sector associations in developing such courses;

- The benefits of networking have not penetrated South African industry yet. During the sanctions period the customer base was very restricted, making competition within the country so fierce that few companies in the same industry shared information. It would now be appropriate to establish the formalised networking groups that have been so successful elsewhere;

- An MIS for small-scale farmers and processors needs to be designed, taking into account such factors as illiteracy and lack of access to advanced telecommunication facilities. Also, the information, whether it is technical or statistical, would need to undergo analysis before being disseminated to the target groups;

- There is considerable fragmentation in the small-scale processing sector. To develop a more cohesive, manageable base for this sector, the following recommendations are made:
  - identify and market the idea of a support structure for the existing trade and industry associations;
  - these associations should be made aware of the needs of the small-scale enterprises among their members and obtain and disseminate information suited to this group;
  - membership of these associations should be made easier for small-scale enterprises through subsidised membership fees and/or the free dissemination of material;
  - trade and industry associations need to be supported with relevant information when and if needed, possibly via the Internet;
  - small-scale enterprises that do not fall within an identifiable sector or group should be directed to a business organisation such as the local Chamber of Commerce which would provide the support similar to that provided by the sector associations.

Zambia

Characteristics of small-scale food processing enterprises

The small-scale food processing enterprises in Zambia tend to be concentrated in Central Province, including the urban and peri-urban areas of Lusaka, and are supported by a good agricultural production base. There are noticeable backward linkages with producers in the

provision of the raw materials for processing and a general improvement in the income levels of the rural poor.

Most of the raw materials are sourced locally; the remainder come from regional suppliers. The materials sourced regionally are maize, fat and cooking oil, yeast, fruit, spices and herbs, but in smaller quantities than the amounts of raw materials sourced from within the country. The few cases where the international market is the source of raw materials are for chemicals such as concentrates, enzymes and starter culture. Raw materials such as sunflower, flour, sugar, salt, soya beans, beef, milk, fish, chickens and pigs are sourced exclusively from within the country.

Most enterprises source their supplies directly, as opposed to going through traders and wholesalers. Small-scale processors rarely use middlemen to obtain their raw materials; if they do, they tend to prefer traders to wholesalers, which is odd because the latter tend to be cheaper. A possible explanation is that traders offer better payment terms, whereas wholesalers demand payment in full upon delivery of raw materials. Also, buying from traders is more convenient in that they cover a wide area, whereas warehouses tend to be centrally located.

The maize milling sector has received strong support and promotion from the government within the framework of a food security strategy. A significant number of small-scale millers, traders and retailers are involved in meeting most of the urban population's roller meal and breakfast meal requirements.

Most small-scale enterprises have low turnovers and lack the skills to manage and increase productivity. What is required is to utilise the available resources effectively and to strengthen production, management and marketing capacities. The constraints facing the small-scale food processing sector include:

- High interest rates;
- Competition from imported goods;
- Poor quality of finished goods;
- Uncompetitive prices;
- Lack of development funds;
- Limited managerial and technical skills;
- High prices of utilities, which increase production costs;
- Failure of the private and parastatal sectors to provide adequate market information.

Characteristics of service providers

The small-scale enterprise sector is endowed with a number of service providers, but because of an unclear policy framework and uncoordinated efforts it is very difficult for the sector to

benefit from this. In addition, there is little government support for the sector. A policy document in 1994, focusing on promoting efficient and sustainable industrial development through value-added linkages and support for internationally competitive industries, failed to incorporate the special interests of small-scale processors.

Most service providers are involved in technical, information, management and financial assistance. The major constraint highlighted by most people surveyed was the lack of, or inadequate, funding to meet operational and capital investment requirements. Often, the service providers themselves lack enough funding to cater for individual or company requirements. There is also a high demand for technical advice and training for food processors.

Market information systems

There is a strong need in Zambia for appropriate and timely market information which can be utilised to improve management and productivity. The agriculture market information system (AMIS) was established to provide and disseminate market information to producers of raw materials, traders, processors, and the public and private sector, including NGOs and donor organisations. This information is based on commodity prices and channelled through radio, television and weekly market bulletins, and has little specific relevance for small-scale food processors.

The system is poorly funded and not all data are collected from the field. There are no plans to address the shortcomings or to acquire additional funding to increase institutional capacity through training and transport for the field extension staff.

Private sector involvement should help in addressing some of these issues and shifting responsibilities gradually to the private sector in line with liberalisation of the economy.

Key recommendations

For the government:

- There is a need to support the growth of small-scale enterprises and the informal sector; in the short term this requires:
  - facilitating the entry of private sector small-scale entrepreneurs in processing and marketing in such a way as to complement State action in those areas where private sector interest has yet to be developed;
  - creating conditions that facilitate increased and long-term investment through the creation of a policy and institutional environment conducive to improving the capacity of institutions responsible for providing services to processing enterprises;

- In the medium term, there is a need to support the development and consolidation of the marketing infrastructure to encourage increased productivity through guaranteeing the cost-effective disposal of larger volumes of processed products from small-scale enterprises; the development of an effective AMIS is an important aspect of this, and the AMIS should therefore be adequately funded;

- In the long term, the capacity to design programmes for enhanced output should be developed through:
  - strengthening local capacity for research and policy analysis;
  - rationalising the operations of public and private sector institutions responsible for collecting and disseminating market information;
  - establishing mechanisms for the effective transfer of knowledge from external experts.

For service providers:

- In the short term, the government should provide innovative medium- to long-term lending schemes operated through service providers. These may include loan guarantee facilities and direct financial allocations for lending to small-scale enterprises;

- A collaborative approach should be adopted to develop a suitable MIS for small-scale enterprises, with a specific focus on the needs of the food processing sector. Pooling resources and expertise and establishing networks should be part of this approach.

For small-scale enterprises:

- A workshop for all those involved in processing should be organised to look at how best to organise operators in this area, raise the required finance and identify the type of support needed from the government, NGOs, training institutions and donors.

For donors:

- Networking between Zambia's institutions and their counterparts in the region and in developed countries should be facilitated with the aim of developing an MIS for food processors;

- Assistance is needed to improve the infrastructure (particularly with regard to feeder roads, telecommunications, and rural electrification) so as to facilitate market integration and production efficiency.

Chapter 6

STRATEGIC DEVELOPMENT PLAN FOR SMALL-SCALE FOOD PROCESSING

The development of the food processing sector is very much a national issue, but because of the similarities in the difficulties faced by small-scale food processors in Mozambique, South Africa and Zambia, there is some merit in looking at the regional situation. It is also possible to establish some broad principles upon which the development of the sector could take place within the context of overall industrial development.

Goals

The overall goals for a small-scale food processing development strategy should be to:

- Promote industrial efficiency, global competitiveness, industrial expansion and the creation of employment within the sector;
- Achieve increased levels of production of value-added products within the sector;
- Generate wealth for the stakeholders in the industry on a fair basis within an enabling environment.

Prerequisite for sector development

The prerequisite for the development of the sector is to create an enabling environment within which local and foreign investors can operate profitably. This environment should be characterised by:

- Suitable infrastructure;
- Adequate information (such as publicity, project and resource information);
- Relevant skills development;
- Harmonisation of incentives and legislative frameworks;
- Good governance and macro-economic stability.

Industrial support measures

In order to drive forward these strategies and achieve the overall goals, it will be necessary for the stakeholders to adopt a series of measures, including:

- Investment in human resources development at key national and regional institutions and through collaborative networking by training institutions. This human resources development programme should be related to the needs of the small-scale food processing sector;

- Development of financial support schemes and an enabling environment for SMEs, with a particular focus on the needs of women in business;

- Improved technology transfer among participating institutions and enterprises within the region and from elsewhere in the world;

- Deregulation of cross-border trade and investment, and encouragement of mergers, acquisitions, technology transfer and joint ventures at a regional level;

- Creation of an industrial programme of action which will support regional long-term coordination by all stakeholders in the public and private sectors, based on the market system;

- Provision of investment incentives and supportive regulations to encourage entrepreneurial participation in the food processing sector;

- Reduction of impediments to the physical movement of goods within the country and in the region, thereby lowering distribution costs for processed food products;

- Implementation of tariff reductions under the auspices of the SADC Trade Protocol in order to promote intra-regional trade and an industrial supply response;

- Removal of barriers to regional industrial development (such as restrictions on employing skilled nationals from within the region, restrictions on moving capital within the region for investment purposes, and quota and licensing restrictions on regional trade);

- Provision of resources to support anti-dumping measures and the prevention of unfair trade practices at the national and sector level.

Implementation prerequisites

In order for any of the support measures to be successful, it will be necessary to agree on the following implementation mechanisms at the outset:

- Sufficient and specific political support at the national level to develop the small-scale food processing sector as an important instrument of industrialisation and economic growth;

- A partnership between government, business and academia in garnering support for the sector;

- Minimal bureaucratic hindrances once the support programmes have been agreed;

- Appropriate technical support from cooperating agencies to implement the agreed programmes;

- Prioritisation of resource allocations by the public sector where appropriate;

- Establishment of suitable institutional mechanisms to coordinate implementation, particularly with regard to technology transfer and information exchange.

Implementation measures

There is a series of measures which could be put in place by the donor community in collaboration with relevant counterparts in the public, private and research sectors. The major measures include:

- Strengthening national Standards Bureaux with regard to processed foods;
- Quality improvement and development at the enterprise level;
- Development of trade, industry and technology information exchange and networking;
- Development of an SME technology programme;
- Research and development programmes for food processing;
- Business management skills development.

Additional measures which could be used to stimulate the development of small-scale food processing include:

- Harmonisation of regional intellectual property rights, giving protection to innovative technologies;
- Environmental standards for industry to encourage environmentally sound production practices;
- Industrial export enhancement through improved productivity, including productivity benchmarking and the implementation of manufacturing best practices;
- Private sector institutional development to support regional networking;
- Development of regional venture capital funds to provide innovative sources of capital to new industrial projects;
- Technological capacity enhancement in small firms to improve the capacity of industries to adopt improved technologies;
- Development of a regional information system focused on industrial development, competitiveness and productivity.

Based on the South African experience, it is suggested that BSCs be developed in Mozambique and Zambia. These would be one-stop facilities providing access to:

- Professionally credible business advice, mentorship and coaching;
- A permanent 'matchmaker' facility;
- Information on financing, training, subcontracting, etc.;
- A database of accredited and relevant service providers;
- User-friendly workspace;
- Market information.

In Mozambique, such a system could be built around a collaborative network involving the Institute for the Development of Local Industry, the Society to Support Small-Scale Investments, LINK and the women entrepreneurs' association, ACTIVA.

In Zambia, a new initiative is needed based on existing organisations pooling their resources and skills. Relatively successful organisations, such as the Export Growers' Association, have shown what is possible given sound management and sufficient technical and financial resources. The Zambia Confederation of Industries and Chambers of Commerce could take the lead in getting this initiative for small-scale food processors off the ground.

In South Africa, specific support programmes targeted at the small-scale food processing sector and implemented through the MACs and BSCs should be devised. Government agencies, research institutions, business service providers and NGOs would be able to network through this process, while enhancing coordination and the impact on the beneficiaries.

Clear and specific targets need to be set in terms of the frequency and quality of information provided, technology transfers achieved, market opportunities created, business linkages formed and the like.

Information management

The study has shown that improving the flow of relevant information to small-scale food processors is crucial to their future success. In this regard, the following steps are proposed:

- Distribute this study report to relevant authorities and institutions in Mozambique, South Africa and Zambia, as well as to collaborating institutions identified by CTA;

- Distribute the summary of the country case studies to individual enterprises and associations that participated in the study; this would provide feedback on the work undertaken and enhance their future involvement;

- Organise a workshop in Southern Africa to which key stakeholders would be invited to help design strategies and action programmes to implement the recommendations flowing from the case studies. This workshop would also provide an opportunity to disseminate and discuss the findings of the studies, and would be a useful opportunity for enterprise owners and service providers to interact and develop solutions to the constraints faced by the sector. The workshop could also act as the catalyst for the development of a regional information exchange network;

- Undertake further research on the concept of the BSCs as a mechanism for delivering suitable advisory and value-added information services to the small-scale food processing sector;

- Based on the outcome of the above actions, design a programme to create a relevant and sustainable information and advisory system targeting the small-scale food processing sector in selected countries. Suitable mechanisms for programme coordination would need to be put in place.

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Personal communications

Cole, D., Rutec (supplier of hand-operated ram presses), Johannesburg, South Africa
De Villiers, J., National Chamber of Milling, Centurion, Pretoria
Enslin, A., South African Grain Information Service, Pretoria, South Africa
Fowler, R., Small-Scale Oil Task Team, Institute for Grain Crops, Agricultural Research Council, Pietermaritzburg, South Africa
Keller, J. J., Irene Dairy Education Centre, Agricultural Research Council, Pretoria, South Africa
Khan, K., Department of Trade and Industry, Cape Town, South Africa
Lee, P., Southern African Macadamia Grower's Association, Tzaneen, South Africa
Nkomonde, P., Marketing and Communications Division, SEED Foundation, Johannesburg, South Africa
Phillips, M., Ithala Development Finance Corporation Limited, Durban, South Africa
Venter, W.J., South African Meat Industries Corporation, Pretoria, South Africa

Acronyms and abbreviations

AMIS	agricultural market information system
BSC	Business Support Centre
CSIR	Council for Scientific and Industrial Research (South Africa)
CTA	Technical Centre for Agricultural and Rural Cooperation
DANIDA	Danish International Development Agency
DNCI	National Directorate of Internal Trade (Mozambique)
DNI	National Directorate of Industry (Mozambique)
DTI	Department of Trade and Industry (South Africa)
ESAP	Economic Structural Adjustment Programme
FAO	Food and Agriculture Organisation of the United Nations
FDI	foreign direct investment
FFPI	Fund for the Development of Small-Scale Industry (Mozambique)
GAPI	Society to Support Small-Scale Investments (Mozambique)
GDP	gross domestic product
GNP	gross national product
GoM	Government of Mozambique
GoSA	Government of South Africa
GoZ	Government of Zambia
IDIL	Institute for the Development of Local Industry (Mozambique)
ILO	International Labour Organisation
IMF	International Monetary Fund
MAC	Manufacturing Advisory Centre
MICTUR	Ministry of Industry, Commerce and Tourism (Mozambique)
MIS	market information service
MSMEs	micro-, small- and medium-sized enterprises
NGO	non-governmental organisation
NOPO	National Oil Producers' Organisation (South Africa)
NPI	National Productivity Institute (South Africa)
ODA	official development aid
SABC	South African Broadcasting Corporation
SADC	Southern Africa Development Community
SMEs	small and medium-sized enterprises
UNIDO	United Nations Industrial Development Organisation
USAID	United States Agency for International Development