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THE REGENERATION OF ANGOLAN MANUFACTURING INDUSTRY WITH EMPHASIS ON AGRO-BASED INDUSTRIES*

Special reports on industrial rehabilitation

No. 2

Prepared by

Regional and Country Studies Branch

Industrial Policy and Perspectives Division

2/19

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PREFACE

As part of the programme of the Industrial Development Decade for Africa, UNIDO's Regional and Country Studies Branch is issuing a series of studies determining both the major problems of African manufacturing and the potential for regenerating the sector. The aim is to outline policies and measures that may result in overall improvements and to identify individual plants for assistance. While earlier documents in the series deal with key issues and continent-wide analyses, this report and a similar study on Zambia are the first in a series of country-level diagnostic surveys on the rehabilitation of African manufacturing industries.

The surveys are economic and policy diagnoses of the industrial sector in selected countries. They provide estimates of resource requirements for selected industrial plant rehabilitation, as well as assessments of expected results from such rehabilitation. The surveys also provide a contribution towards the formulation of sectoral, national and regional policy measures and institutional developments, and the identification of full feasibility studies and advisory services which may be required as part of the follow-up.

This report was prepared by a UNIDO field mission which visited Angola from 1 to 30 September 1988. The members of the team were UNIDO consultants: Mr. Tom Alberts, Mr. Björn Almquist, Mr. Jan Björk, Mr. Manenga Ndulo, Mr. John Scott (team-leader) and Mr. Graham Smith. Mr. Kiala Gabriel of the Technical Cabinet of the Angolan Ministry of Industry also served as a UNIDO consultant and member of the team.

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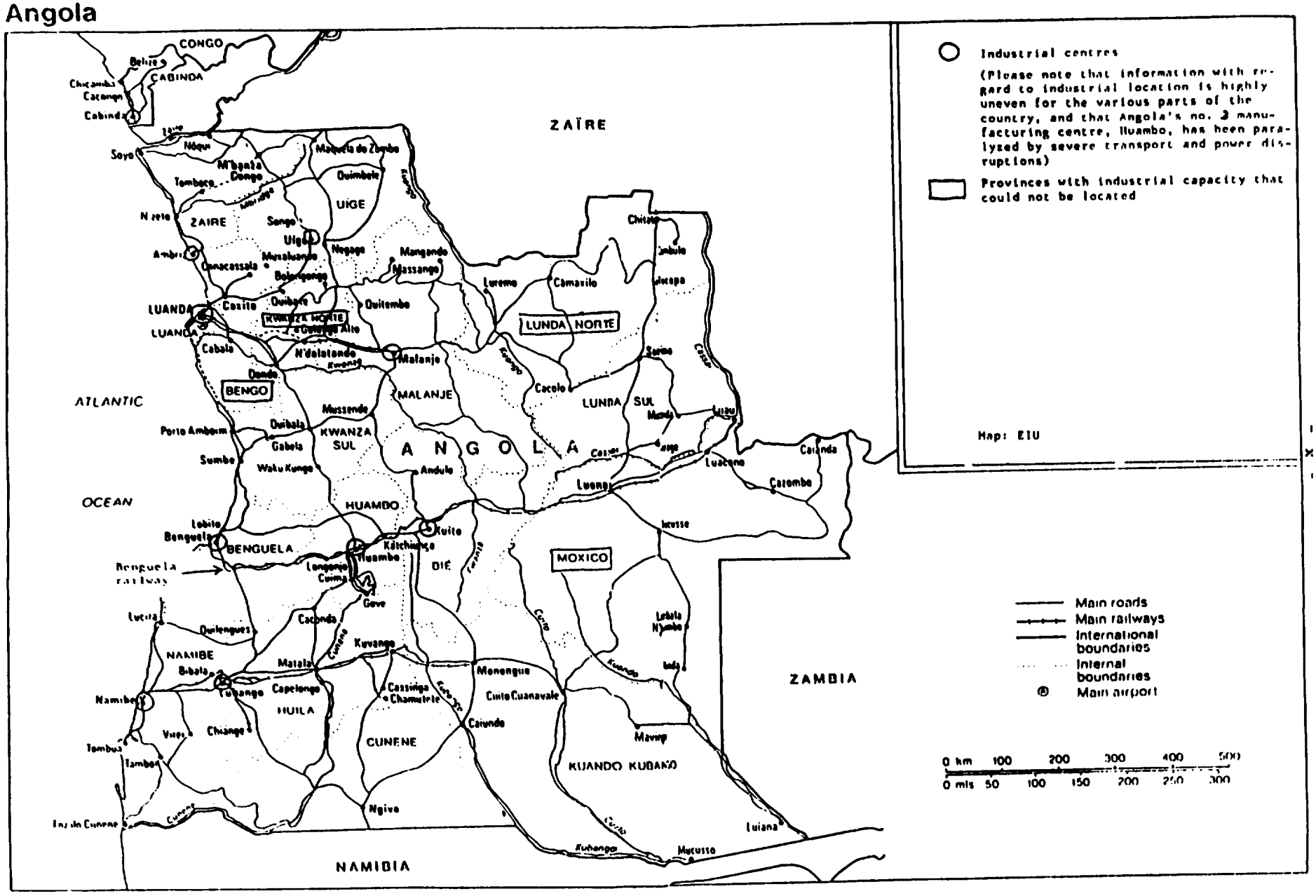
Angola


Industrial centres
(Please note that information with regard to industrial location is highly uneven for the various parts of the country, and that Angola's no. 3 manufacturing centre, Huambo, has been paralysed by severe transport and power disruptions)
Provinces with industrial capacity that could not be located
Map: EIU
Main roads
Main railways
International boundaries
Internal boundaries
Main airport
0 km 100 200 300 400 500
0 mls 50 100 150 200 250 300
ZAÏRE
CONGO
CABINDA
ZAIRE
UIGE
LUANDA
BENGO
KWANZA SUL
MALANJE
LUNDA NORTE
LUNDA SUL
MOXICO
HUAMBO
BENGUELA
NAMIBE
HUILA
CUNENE
KUANDO KUBANO
ZAMBIA
NAMIBIA
ATLANTIC OCEAN
Benguela railway
A N G O L A

GENERAL COUNTRY INFORMATION

AREA: 1,246,700 sq km

POPULATION: 9.1 million (1987 estimate)

POPULATION GROWTH RATE (1987 estimate): 2.8 %

POPULATION DENSITY (per sq km; 1984 estimate): 6.9

MAIN CITIES: Population in '000, 1983 estimate

Luanda	898	Huambo	203
Benguela	155	Lobito	150

1986 GDP AT CURRENT PRICES (Kz billion): 132.3

1986 GDP PER CAPITA (US $): 495

ORIGINS OF 1985 GDP AT FACTOR COST

Petroleum	30.9	Trade	9.8
Services	27.3	Agriculture & Livestock	7.8
Manufacturing & Mining	13.1	Transport & Communications	5.5
		Others	5.6

EXCHANGE RATE (OFFICIAL): Kz29.77 = US$1

FOREIGN AID PER CAPITA (1985): US$10

INFANT MORTALITY RATE: 16%

LIFE EXPECTANCY: 42 years

LITERACY RATE: 20%

EDUCATION:

	Pupils (1982)	Teachers (1981)
Pre-primary	292,457	
Primary	1,178,430	40,027
Secondary		
- general	124,858	3,870
- teacher training	3,141	
- vocational	3,919	410
Higher	2,674	374

LIST OF ABBREVIATIONS

ANGONAVE	Linhas Maritimas de Angola
BJAFCO	Bom Jesus Agro-Industrial Farm Co.
BNA	Banco Nacional de Angola
CIF	Cost, insurance and freight
CMEA	Council for Mutual Economic Assistance
CUF	Compania Unico Fabril
ECG	Empresa de Gorduras Centro
EEC	European Economic Commission
EMATEC	Empresa Abastecimento Tecnico Material
ENSUL	Empresa de Supermercados de Luanda
EPAN	Empresa de Panificao Nacional, UEE
ERMOAGEN	Empresa Regional de Moagen do Norte
FAL	Fabrica de Alimentos
FAO	Food and Agricultural Organization
FIBREX	Fabrica de Artigos de Fibras Sintéticas
FILDA	Feria Internacional de Luanda
GDP	Gross domestic product
ILO	International Labour Organization
IMF	International Monetary Fund
INDUVE	Industria Angolana de Oleos Vegetais
ISIC	International Standard Industrial Classification
Kz	Kwanza
Lda	Limitada
MPLA-PT	Movimento Popular de Liberatacao de Angola - Partido de Trabalho
MVA	Manufacture value added

NORSAD	Nordic-SADCC Fund
OECD	Organization for Economic Co-operation and Development
PTA	Preferential Trade Area
PVC	Polyvinyl chloride thermoplastic
QUIMIGAL	Quimica de Portugal EP
SADCC	Southern African Development Co-ordination Conference
SARL	Sociedad Anonima a Responsabilidades Limitadas
SATCC	Southern African Transport and Communications
SEF	Programa de Saneamento Economico e Financiero
SIGA	Sociedade Industrial de Groassarias
SNS	Sociedad Nacional de Saboes
SNS	Sociedade Nacional Saboes Lda
SONANGOL	Sociedade National de Combustiveis de Angola
UEE	Unidade Economica Estatal
UNDP	United Nations Development Program
UNIDO	United Nations Industrial Development Organization
UNITA	Uniao Nacionale para a Independencia Total de Angola
USAID	United States Agency for International Development

CHAPTER 1

BACKGROUND TO THE STUDY

1.1 Main aspects of the study

The basic objective of this study is to provide a diagnostic survey of plant rehabilitation needs in the agro-related branch of the Angolan manufacturing sector.

The key characteristics of Angola's economy and institutions, the international setting and the regional perspectives are described first. Subsequently, after examining Angolan manufacturing industry in general, the study concentrates on agro-related industries, particularly those belonging to the food manufacturing sub-sector. The regeneration of these industries has been accorded high priority under the recently introduced Angolan economic recovery programme, Saneamento Economico e Financeiro (SEF), while their rehabilitation is also among the sectoral priorities established by SADCC in its regional programme of action.

The food manufacturing sub-sector is further examined at the branch level. In this context, three branches, namely meat processing, vegetable oil seeds processing and flour milling are studied in detail. In addition, the package manufacturing branch is also discussed. This branch, while not strictly part of food manufacturing, is intimately linked to various branches of this sub-sector.

Subsequently, at the plant level, a detailed analysis is made of the rehabilitation needs of four firms in the Luanda area - Fabrica de Alimentos Lda (FAL); Quicolo mill, Ermoagens de Norte U.E.E; Industria Angolana de Oléos Vegetais S.A.R.L. (INDUVE); and Fabrica de Artigos de Fibras Sintéticas S.A.R.L. (FIBREX).

Finally, at the Government's specific request, an assessment is made of the regeneration potential of Bom Jesus, a disused agricultural estate and related agro-industrial complex also in the vicinity of Luanda. The need to make an assessment of this nature, which relates in the main to the regeneration of agricultural production and supplies for industrial consumption purposes, points to the case in agro-industrial rehabilitation studies of this kind to address the needs not only of industry, but also on occasion, and in the relevant economic circumstances, of comparable and complementary priorities in the agricultural sector. In the case of Angola, this has in fact been the general experience of donors concerned to assist with the rehabilitation of the agro-industrial sector both in Luanda and in the south western areas of the country.

Because of the heavy concentration of Angolan industrial activity in the Luanda area, it was decided that the study should focus on the problems of agro-industrial enterprises in this region, while taking account of relevant developments in other parts of the country. At the same time, it is the mission's view that the examination in this study of agro-industrial regeneration needs in the particular geographical area investigated may serve to demonstrate a diagnostic approach, which might subsequently be applied to

comparable situations in other parts of the country. If successful, the approach may then help to bring about a general process of regeneration of the manufacturing sector. This again would have a major positive impact on overall future growth in the economy.

The study concludes with recommendations of both a short and long term character, which address technical, financial, organisational, and market oriented problems and the related economic and industrial rehabilitation environment. However, the various recommendations made in the report regarding the rehabilitation of particular enterprises are not presented as feasibility submissions. The projects and programmes, which are outlined in this report, will generally require to be complemented by more detailed technical and economic studies to provide effective guidelines for subsequent implementation.

1.2 Consultations and discussions[1/]

In the preparation of this study, the mission were guided and assisted by the Minister of Industry and the SEF Secretariat, with whom detailed consultations were held in Luanda. Discussions were also held with senior officials from the Ministries of Industry, Planning, Finance and Trade and the National Bank of Angola, with the managers from the selected companies, as well as businessmen from other private, public and mixed enterprises. Contacts were established with SADCC structures and with a range of financing institutions and foundations having an actual or potential interest in Angola's agro-industrial development. These included the Banque Paribas, the Caisse Centrale de Coopération Economique, the European Investment Bank, the Gulbenkian Foundation, Lloyds Bank, Swedfund and the World Bank.

Discussions were also held with representatives of Angola's principal partners in the economic co-operation field, including the European Community, France, Italy and Sweden, as well as Brazil, The Netherlands, Portugal, Spain and the USSR. Wherever relevant, contacts were made with non-governmental organisations active in the agro-industrial rehabilitation field. In addition to normal consultations with UNDP and UNIDO field officers and experts, the team reviewed issues relating to agro-industrial rehabilitation in Angola with FAO, ILO and UNICEF officials, as well as with a mission from the UN Centre for Transnational Corporations (CTC), concerned with assisting investment promotion activities in Angola. Reports and data available at UNIDO headquarters, SADCC institutions, the Chr. Michelsen Institute, and the OECD Development Centre were also used extensively, the most important of which have been listed in the references.

1.3 Major elements in the Government's approach to industrial regeneration

Central to the mission's consultations in Luanda were a series of discussions on rehabilitation policy issues with the Minister of Industry, Mr. Henrique Carvalho Santos "Onambwe" and with senior officials of the Ministries of Industry, Agriculture and Planning including the SEF

1/ See Annex D for a list of organizations and persons visited.

Secretariat. On the 28 September 1988 towards the end of the mission's visit to Luanda, the Minister of Industry chaired a specially convened meeting on agro-industrial rehabilitation priorities at which he invited members of the team to present the initial conclusions of the mission. This presentation was made before a working group which included senior Angolan officials, directors and managers of the selected companies, and representatives of financing agencies and principal co-operation partners based in Angola. The purpose of this meeting was to sensitise the agencies and partners concerned, and to help lay the groundwork for the follow up action which would be required following the submisson of the team's report to UNIDO.

In briefing the team on the Government's approach to industrial regeneration priorities, the Minister of Industry placed these firmly in the context of Angola's economic recovery programme (SEF). Major elements in this programme, on which the mission were briefed in depth by senior officials of the SEF Secretariat in the Ministry of Planning, include:

* rationalisation of the productive sectors involving an increased role for private and mixed enterprises;

* enchanced financial autonomy for public enterprises;

* liberalisation of the price control system;

* adjustments in the value of the kwanza;

* more effective control of the money supply and changes in interest-rate policy to encourage savings through the banking system;

* a shift in agricultural and commercial policy towards support for peasant farmers and private traders, especially the retail level; and

* a general decentralisation of decision making in the economic field.

These and other related measures have been the subject of detailed investigation and analyses by Government, frequently in consultation with international financial institutions. In most instances, the relevant enabling legislation has now been introduced, which will permit Government to take the appropriate administrative and institutional action in the fields concerned. Of crucial significance in this context are initial political decisions to be taken within the next several months in the monetary area, notably in regard to the official exchange rate for the kwanza. Envisaged actions in this area are closely linked with arrangements now in train for Angola's accession to membership of the International Monetary Fund and the World Bank.

In the Government's view, and that of international financial agencies, the implementation of the SEF programme, which involves radical restructuring, liberalisation and stabilisation measures, should greatly facilitate regeneration activities in the agro-industrial field. In welcoming the UNIDO initiative in this area, the Government attaches particular importance to the proposed follow-up consultations within the general perspective of the forthcoming SADCC International Consultative Conference. This would be held in Luanda in early February 1989.

In the preparation of a financing programme, Government advised the mission to have particular regard to the fuller opportunities which now exist under the current redimensioning of the industrial sector for the involvement of foreign and private capital, and for investment through mixed enterprises and joint ventures. Also of significance in this context is the Government's appreciation of the urgent need for improved management and marketing practices in public enterprises. Against this background of institutional reform, Government considers that viable industrial rehabilitation proposals should take particular account of the need to increase value added and employment opportunities within the Angolan economy. This should be achieved through the enhanced utilisation of domestic agricultural inputs, more extensive down-stream processing activities, and the use of factor inputs and technology relevant to Angola's economic circumstances. Regeneration priorities, especially at Bom Jesus, were placed firmly within this perspective.

In this context, the Government attached particular significance to economic development now taking place in the secure south western provinces of Angola on the border with Namibia. Important rehabilitation programmes in this area are receiving substantial support from Angola's main co-operation partners. In a regional perspective, the Government attached special importance to the economic relationship between industrial regeneration priorities and the opportunities for sourcing and marketing within the SADCC group. Such opportunities should be greatly enhanced by the eventual rehabilitation of the Benguela railway, which would reopen surface transport links with southern Zaire and western Zambia. As regards industrial regeneration, the Angolan authorities have been closely following current developments in Mozambique, while in the agricultural rehabilitation field, it is considered that much of Zimbabwe's experience was relevant to the present circumstances of Angola.

1.4 Economic co-operation parameters

In the mission's discussions with representatives of Angola's main development co-operation partners, clear confirmation was received of the government's seriousness of purpose and commitment in formulating and implementing the SEF programme, and of its desire to accede to membership of the IMF and the World Bank. It was noted that it had been some concern, particularly in business circles, about the relatively slow start to the introduction of the SEF, which has been attributed in some quarters to rearguard action by opponents of reform.

However, in the view of informed donors, the real problem in this domain lay largely in the shortage of cadres with the necessary expertise to implement such a radical programme of economic change in a country facing great problems on every front. To a significant degree, the aid plans of major donors are based on the implicit assumption that the Angolan authorities will make continuing progress with the implementation of the SEF programme over the next several years. In this regard, Angola's co-operation partners have been particularly encouraged by experience gained through development and regeneration initiatives in the south west of the country. According to OECD sources, official development assistance (ODA) commitments from the DAC and OPEC countries, which have more than doubled over the past five years, are now

in the annual range of US$ 115 - 135 million (1985-86). More than three quarters of the ODA receipts have been in the form of grants. Italy and Sweden have been the largest bilateral donors, while significant multilateral assistance has come from the UN system, notably as food aid, and other relief measures for refugees and displaced persons.

Net non-concessional receipts by Angola from the same sources, comprising bilateral and multilateral flows with a grant element of less than 25 per cent, all official and officially-guaranteed export credits, private and official portfolio investment and private direct investment are currently in the annual range of some US$ 140 - 170 million (1985-86). These non-concessional receipts are largely associated with investment in the oil industry. Overall gross investment in the latter is projected to approach US$ 3 billion in the 1986-90 period.

In the aid field, the largest bilateral donor to Angola is now understood to be Italy, which announced a programme of grants and loans totalling US$ 304 million at a meeting of the Italian - Angolan joint commission in December 1987. In the agricultural field, Italy will be inter alia financing rural development projects in the green belt surrounding the capital. The other leading bilateral aid donor, Sweden, has recently indicated that its aid budget for Angola, which focuses on social and rural development, will rise 50 per cent in 1988-89 to US$ 23.5 million. French aid to Angola is provided through the Caisse Central de Coopération Economique (CCCE). This agency announced loans in 1987 of some US$ 10 million for agricultural development in south western Angola, largely to provide inputs for small peasant associations through agricultural development stations (EDAs). However, funds have also been made available under the CCCE and other aid programmes to provide consumer goods in the rural areas, thereby giving farmers an incentive to produce agricultural crops for the domestic market.

Also active in this field is the European Community, which has an EDF programme of some US$ 107 million with Angola for the period 1986-90 covered by Lomé III. In this framework, a sectoral import programme worth, US$ 38 million has now been established which will be used to secure inputs and incentive goods for farmers and for the fishing industry in the southwest. Small-scale manufacturing plants in this area, some of them agro-related, will also benefit under the European Community programme. For its part the European Investment Bank (EIB) has recently concluded an outline agreement with the Angolan authorities regarding the use of EIB resources in the Lomé III context. In recent years, the Angolan fishing industry and fish processing factories have received increased donor support, notably from the EEC and Arab funds, (Badea and Kuwait), with the latter making new commitments of some US$ 22.5 million in 1987 geared to both developmental and rehabilitation requirements.

In the view of Angola's main co-operation partners, the current security situation limits the potential for development and rehabilitation support in many parts of the country, and notably in the agricultural field. Nevertheless, it is recognised by donors, including international organisations, such as the UNDP and the World Bank, that there are many secure areas which could provide an immediate response to policy adjustment measures under the SEF. These embrace significant regions in the south and south west

of the country and also in the north and the north west of Angola, including Cabinda. The analysis contained in this report follows such international assessments in assuming that the current geopolitical situation would hold along such lines and the report's short-term recommendations rest essentially on these assumptions. So far as the longer-term recommendations are concerned, a qualitative indication is given, in relevant instances, as to the possible economic implications of significant progress towards national harmonisation and peace.

Finally from the mission's consultation in Luanda, it was apparent that Angola's co-operation partners were deeply aware of the economic problems confronting the country and the immediate relevance of these problems to the design of their respective aid programmes, notably in the rehabilitation field. Thus, processed food is now less than sufficient to feed the urban areas. Petroleum exports, which now constitute some 95 per cent of total exports, have been inadequate to meet the costs of internal security and foreign aggression, and at the same time to cover the costs of imports of spare parts, equipment and consumer and intermediate goods. As a direct result of this situation, maintenance activities have been discounted and high levels of idle capacity are apparent throughout the industrial sector. The surface transport system linking the various provinces has collapsed throughout many parts of the country, leaving the cities and towns largely isolated from surrounding rural areas. The nation's commercial system has reverted in large measure to barter transactions. In the following chapter, attention is directed towards the major reasons for this situation, which have important implications for industrial rehabilitation initiatives.

CHAPTER 2

KEY FACTORS AND TRENDS IN THE ANGOLAN ECONOMY IN THE CONTEXT OF REGENERATION

2.1 Factors and trends behind the current economic situation

In the nation's troubled transition to independence in the mid-1970s, economic activity in Angola was severely disrupted. During this period, the level of output fell dramatically in the non-oil economy. Although there was a certain modest recuperation in the 1977-81 period, GDP is considered to have remained relatively stagnant in the following years until 1986, when gross output once again declined significantly, partly on account of a down-turn in oil prices. Despite marked expansion in the oil industry, which is based largely in the north western Cabinda enclave, per capita income is undoubtedly significantly less than it was in the early 1970s.

It is generally recognised that the major economic problems now facing Angola, which have been summarised in the previous chapter, stem from three major factors. Firstly, the conflict in which the Angolan Government has been enmeshed, throughout virtually the entire 1975-88 period, with UNITA guerillas and invading South African forces. Secondly, major economic disruptions, created by the massive exodus of Portuguese settlers in the mid-1970s. Thirdly, shortages of local skills in the post-independence period which have resulted in certain shortcomings in economic management and the effective application of economic policies. To some extent, these problems have been offset by significant expansion in the petroleum sector, but the fall in international oil prices in the 1985-87 period tended to aggravate the critical economic situation.

2.2 Economic disruption created by war and destabilisation

The guerilla war enducted by UNITA, which has continued since Independence, has led to serious economic disruption in many parts of Angola. Furthermore, South Africa, in addition to affording the UNITA opposition active support, has invaded southern Angola on several occasions, and attacked important economic targets causing extensive damage and disruption.

The burden imposed on the Angolan economy has been exceptionally heavy, and has had a direct bearing on agricultural and agro-industrial production. Insecurity in many parts of the country has seriously reduced economic output, notably in the agricultural sector. The same conditions have served to intimidate foreign experts and technicians, and have led more than 600,000 Angolan peasants to move into the security afforded by the urban areas. A wide range of crucial infrastructure facilities has been destroyed or seriously damaged, including bridges, hydroelectric dams and power pylons, railway tracks, oil refining installations, mines, manufacturing plants and agricultural plantations. A substantial proportion of Angola's road and rail transportation system has been put out of effective use, including in particular the Benguela Railway which served the heartland of central Angola and provided a major access route to international markets and import sources for Zambia as well as southern Zaire.

The provision of agricultural products to urban areas from rural communities has been seriously affected resulting in a greatly increased reliance on imported foodstuffs. By the same token, major difficulties have been placed in the way of transportation and distribution of manufactures and other industrial products in the rural areas. For its part, the defence and security effort has required the deployment of very substantial resources, and at present accounts for more than two-fifths of total budgetary outlays and a substantial portion of Angola's external debt, currently estimated of some US$ 3.8 million. In addition, a significant proportion of Angola's limited cadres of technicians, managers and other skilled personnel have had to be diverted to service in the armed forces.

2.3. The general exodus of Portuguese settlers and its economic consequences

During the colonial years, the public, educational and social services and the productive operations in the modern economic sectors were run almost entirely by Portuguese settlers. These settlers, whose numbers had risen to some 340,000 by 1975, held virtually all the skilled positions and a large proportion of semi-skilled jobs. The level of education of the Angolan population was exceptionally low. In 1973, 85 per cent of the population was illiterate. The number of students in secondary and higher education accounted for only 1.2 per cent of the school age population (5 to 24 years), and a high proportion of these was drawn from the white settler community.

In the transition to Independence in 1975 and early 1976, some 300,000 Portuguese settlers fled from Angola. This exodus of pratically all administrative and technical personnel, managers, teachers, traders, skilled workers and craftsmen threw the public administration and the country's economic life into the most serious difficulties. At Independence, there were few Angolans who had the skills and professional qualifications necessary to run the enterprises abandoned by the Portuguese or to fill the positions previously held by them. To a large extent, this situation explains why in many sectors the general level of economic activity is still much lower than it was in the early 1970s. Despite the progress made by Angola in developing its human resources, there are still major difficulties in recruiting the skilled personnel needed in the modern sectors of the country. Foreign technical assistance has filled only a small proportion of the required demand for skilled workers.

2.4. The impact of economic policies

With the introduction of the SEF economic reform programme, it is now increasingly recognised by the Angolan authorities that the general decline in production, the scarcities in consumer goods and industrial input supplies can be attributed, in some measure, to shortcomings in economic management and to the application of inappropriate policies.

It is, for example, accepted in the SEF that the economy has been run largely by administrative dictat. Official prices have been maintained at artificially low levels, and the market has not been permitted to play an effective role in the country's economic system. The overvalued exchange rate

has led to the administrative rationing of all foreign exchange, and to the serious discouragement of all non-oil exports. Both public and private enterprises have had very limited operational autonomy, and have depended on Government decisions for the supply of essential inputs, for their pricing and their operating margins. The general efficiency of public enterprises has been affected by the absence of adequate performance incentives. Distortions in relative prices have rendered normal economic calculations almost impossible in many instances. Low official prices for agricultural commodities and the severely limited supplies of consumer and industrial goods in the countryside have seriously affected the willingness of peasant farmers to supply foodstuffs through official channels. The extensive gap between demand and supply at official prices has led to the rapid and extensive development of parallel markets.

2.5. The role of the oil industry

But there is a more positive side to Angola's recent history. The expansion of the oil industry, which since Angola's Independence in 1975 has become the second largest in sub-Saharan Africa, has important implications for rehabilitation initiatives. In 1985 approximately one third of official GDP was derived from the oil industry, as were more than half of Government revenues, and some 95 per cent of total export earnings. The oil industry is set to continue its rapid growth in the late 1980s and early 1990s, and through its expansion compensate for the loss of earnings from reduced world oil prices. In 1988 Angola will produce an average of at least 450,000 b/d (by the end of the year production could be as high as 490,000 b/d), compared with an average of 282,000 b/d in 1986 and 358,000 b/d in 1987. Production should be running well over 500,000 b/d in the early 1990s, and with exploration continuing, new discoveries are adding to identified reserves, which have more than doubled in the 1980s to an estimated level of 2.1 billion barrels.

Since petroleum production occurs within an enclave sector, its operations are partially cut off from other areas of the Angolan economy, and its effects on economic growth and rehabilitation are determined largely by the way in which Government uses its oil revenues. Because of financial obligations stemming from security requirements, the Government has had little alternative but to retain the oil windfalls in the defence field rather than to redistribute them to other programmes, such as economic rehabilitation. Nonetheless, the potential for doing so remains, and with the introduction of the SEF programme, may require to be reassessed in terms not only of foreign exchange availability, but also of technical and managerial capabilities. Like the armed forces, SONANGOL the state oil company is relatively well endowed with such capacities, and is understood to be interested in the possibility of deploying these more extensively in other areas of the economy. This constitutes a pattern which has been followed in other SADCC countries, notably in Zambia where the national mining group has, for example, made a useful contribution to agricultural and agro-industrial development.

2.6 International trade and payments

The rapid rise in oil production, of which all but 30,000 b/d goes for export, has more than offset the fall in oil prices since 1985. Current estimates suggests that Angola's total exports in 1987 rose to about US$ 2.3 billion (including US$ 2.1 billion from crude oil and nearly US$ 100 million from diamonds), as compared with only US$ 1.28 billion in 1986 and US$ 1.98 billion in 1985. Along with the expansion in oil production, the partial recovery in oil prices, as well as the revival of the diamond industry, which had virtually ceased operating in 1986, contributed to this resurgence. In 1988 oil prices have drifted downwards, but on conservatives assumptions the industry is still expected to earn more than US$ 2 billion this year. Other export products (refined petroleum, LPG, diamonds and coffee) should contribute some US$ 250 million, thus maintaining total export earnings around the US$ 2.3 billion level. Balance of payments pressures have been further eased, for the moment at least, by the recent bilateral debt rescheduling with Brazil, France, Italy, the USSR, and other creditors. However, debt service obligations still remain high over the 1988-89 period, and Angola will require further debt rescheduling arrangements, probably after accession to the IMF in the case of other western creditors.

2.7. Angola's economic potential

The role of the oil industry, involving extensive foreign and local investment, serves to underscore the country's underlying economic potential. Angola is the second largest state in Africa south of the Sahara, with a population of some 9 million people and a relatively low population density (7.2 persons per sq.km). The population is estimated to be increasing by some 2.5 per cent per annum, and the proportion of urban population is rising rapidly. The abundance of arable land and a diverse climate provide favourable conditions for the development of an extensive range of temperate and tropical agricultural crops, including cotton, coffee, sisal, sugar, tropical fruits, maize and other cereals, as well as livestock. In addition, there are relatively abundant fishing and mineral resources, notably diamonds. Angola's rivers afford the country a substantial energy and irrigation potential. Despite the war, the enclave oil sector has boomed over the past eight years, and although Angola's oil earnings are far behind Nigeria's US$ 6.1 billion, the needs of the country - assuming peacetime conditions - would also be much smaller, as Angola's population is less than one-tenth of Nigeria's. Infrastructure in the energy, industry, transportation and communication sectors was relatively well developed, particularly in the 1960s and early 1970s, but it has deteriorated significantly in recent years as a result of war conditions and deferred maintenance.

It is relevant to recall that during the pre-Independence period, there was a rapid expansion in a wide range of industrial, agricultural, fishing and mining activities. These, together with oil production contributed to an annual average growth rate in GDP of almost 7 per cent throughout the 1960s and up to the mid 1970s, and to the development of a diverse range of

exports. With the implementation of SEF programmes and the eventual realisation of domestic peace and national harmony, there may well be increasing scope for Angola to return to previous growth trends and to exploit its widely varied development opportunities. The starting point would be a major programme of reconstruction and rehabilitation. Given its significant endowment of natural resources, its complement of human skills, and its emergence as sub-Saharan Africa's leading oil producer next to Nigeria, Angola would probably again become generally attractive to foreign investors looking beyond the oil sector, although this attraction might well materialise only gradually as business confidence continues to be restored. Accession to the IMF and the World Bank, along with the implementation of the economic and financial restructuring programme (SEF), which already includes enabling legislation providing new guarantees and incentives for foreign investors, will be essential supportive features. To these economic policy elements in industrial regeneration, the report now turns.

CHAPTER 3

THE POLICY AND INSTITUTIONAL BACKGROUND TO REHABILITATION

3.1 The relevance of the SEF programme to industrial rehabilitation

The introduction of the Saneamento Economico e Financeiro (SEF) at the beginning of 1988 marks a significant new departure in Angola's development as an independent nation, and one which has led to new approaches on the part of the Angolan authorities to international institutions, bilateral agencies and foreign banks and companies, notably for increased support with the implementation of major rehabilitation programmes. For Angola's co-operation partners, and in particular for investors interested in supporting industrial rehabilitation initiatives, the detailed arrangements for implementing the SEF programme are of crucial significance, and action by the Government in this field constitutes an essential prerequisite for more intensive international economic support.

As has already been indicated in Chapter I, the broad parameters of the SEF programme, including the adoption of enabling legislation, have been formally introduced by the Angolan authorities, working in close consultation with international financing institutions, such as the IMF and the World Bank.[1/] Within this new legislative framework, certain initial actions have already been taken by Government, notably in regard to the partial liberalisation of prices, such as those for fruit and vegetables. However, as of September 1988 the major political decisions, administrative actions and institutional developments still lay ahead, particularly in the monetary and fiscal context. Nonetheless, in extensive consultations with the Minister of Industry, the head of the SEF Secretariat and representatives of Angola's co-operation partners, the mission was left in no doubt as to the Angolan authorities' intention of actively pursuing the detailed implementation of the national economic recovery programme. It was apparent to the mission that this would be done with political determination and technical skill, and that the phased introduction of the most significant measures in the monetary field would be pursued in close consultation with international financial institutions. It was the view of Angola's co-operation partners, notably the European Community, Sweden and Brazil, that the initial steps in the implementation of the SEF programme should be closely associated with arrangements for Angola's accession to membership of the IMF and the World Bank. Because of the importance of these economic reforms to effective action in the rehabilitation context, the major elements in this programme are set out below in some detail. For the most part, this analysis focuses on the relevant policy guidelines and enabling laws. As of September 1988, intensive work was still proceeding within Government on the administrative and institutional arrangements for the actual implementation of the SEF legislation.

1/ In this context, particular reference should be made to laws 4-5,7, and 9-13 of 1988 (qv Selected References).

3.2 Relationship between political structures, decision making, and economic policy formulation

Following its achievement of Independence in 1975, the new People's Republic of Angola declared itself to be a socialist country. Under the national constitution, state institutions came under the general direction of the ruling party, which in 1977 was renamed the MPLA-PT (Movimento Popular para a Libertacao de Angola - Partido do Trabalho).

Fundamental decisions relating to the structure of the economic system are taken by the MPLA through its Congresses, Central Committee and Political Bureau. The adoption of new economic strategies and the introduction of significant economic policy instruments all require approval at party level. In effect, the Government functions as an executive agency, implementing policies accepted by party institutions.

Within the MPLA, internal discussions on the implementation of socialist policies have been penetrating in their analysis of the economic problems confronting the country. In this regard the Second Party Congress in December 1985 provided a new point of departure in economic policy making. While reendorsing the validity of the socialist approach to development, the Second Congress accepted that, even allowing for the war and the shortage of skilled managers and technicians, the economic results achieved were less than satisfactory, and that significant alterations required to be made in both the economic system and in economic policy. The strategic guidelines adopted by the Congress insisted on improved methods in socialist planning and a more effective utilisation of prices in the country's economic management.

3.3. Structural reforms in the economic system under SEF

It was within the framework of these policy changes approved by the 1985 Congress that the Central Committee of the MPLA endorsed the SEF programme which was formally launched at the beginning of 1988, the first year of the Saneamento Economico e Financeiro. In the structural context, the SEF calls for a more significant role for the private sector, enhanced autonomy for public undertakings, a new approach to foreign investment and less centralisation in the planning field. The following review of the SEF programme is based on consultations with senior members of the SEF Secretariat, and of the UN Centre for Transnational Corporations (CTC).

3.3.1 An enlarged role for the private sector

Acknowledging inefficiencies and shortcomings in the performance of many public enterprises, the SEF proposes the introduction of improved conditions for private sector development. Smaller public undertakings would be transferred to the private sector, and state ownership confined in the main to key enterprises serving strategic economic purposes. New legislative measures prescribing regimes for different types of enterprise (condicionamento empresarial) are being introduced.

Such legislation will contain specific rules and guarantees for private investors, and enlarge significantly the productive sectors in which these undertakings would be permitted to function. Particular encouragement will be given to the reintroduction of private retail activities within the commercial sector. Private traders will have a very positive part to play in the cultivation of a more effective economic relationship between rural communities and the urban areas. Private undertakings would also receive particular encouragement in sectors such as road transport, building, repair services and handicrafts. Within these areas, enterprises presently operating in the parallel market would be legally recognised.

3.3.2 Enhanced autonomy for public enterprises

A leading objective of SEF legislation relating to public enterprises is to provide greater autonomy to the management of state undertakings. The activities of these enterprises would be based on their individual budget plans and their annual medium term programmes, which would be linked in an indicative sense to the macro-economic guidelines and targets contained in a new approach to national planning. Ministries will be expected to establish general regulations in regard to the productive sectors falling within their respective fields of competence, and to programme sectoral activities in an indicative sense. Ministries would not be encouraged to intervene at the enterprise level in specific management decisions. More autonomy would be accorded to enterprises in their price and labour policies, albeit under Government determined conditions for consumer and worker protection. Public enterprises will be subjected to greater competition because of their enhanced autonomy and also through the general encouragement of private sector initiatives.

Under the SEF arrangements, public enterprises will in addition be allowed greater financial autonomy. In contrast with the current system, such enterprises will be in a position to make and retain provision for depreciation, together with 50 per cent of their profits, although the actual use of these resources will be subject to some degree of control. Furthermore, enterprises are to be encouraged to operate along commercial lines, and to be informed that they may only expect Government subsidies if their activities are affected by circumstances outside their control, such as the effects of war. In addition, SEF introduces the possibility of subjecting non-viable public companies to financial liquidation and also the privatisation of other public enterprises. Nevertheless, for the moment it seems that relatively close ministerial control is to continue in terms of both planning and operations within public enterprises. In this regard, certain questions may still surround the operational freedom that public enterprise managers will enjoy, for example, in regard to the selection of their market outlets and supply sources.

3.3.3 Legislation relating to foreign investment

Under the SEF proposals relating to foreign investment, one of the main objectives of policy and legislation is to ensure that such investments make an effective contribution to the economic development of Angola, under an economic system where the more significant shortcomings and distortions of

recent years would be overcome. Another major policy objective is to introduce more attractive conditions for potential foreign investors. In this context, it is proposed to establish a new Institute for Foreign Investment which would actively seek to promote foreign investment in Angola, especially joint ventures with Angolan enterprises. Among its various tasks, the Institute would evaluate foreign investment proposals, co-ordinate negotiations with external investors, and help the latter with all the formalities and practical arrangements relating to their proposed commitments.

In this context, the various procedures for authorising foreign investment would be simplified, and there should be a significant enlargement of areas of economic activity in which foreign investment would be permitted. Only economic activities of strategic significance would be precluded to foreign investors. Previous limitations on the percentage of capital which may be held in particular enterprises by foreign investors, will be significantly modified, and foreign investors will be permitted to set up new enterprises which would be fully owned by them. They would also be allowed to purchase Angolan owned enterprises which are not producing or which are operating inefficiently, but which could be converted into viable activities. Under the new foreign investment arrangements, legal guarantees will be given as to the remittance of profits and proceeds from liquidation or eventual sale of investments, compensation to be provided in the event of expropriation or nationalisation, and access to domestic credit facilities and to Government sponsored incentive schemes.

3.3.4 Improvements in the planning system

Under the new arrangements, national plans would continue to be the principal mechanism for economic management. Government would seek to improve the planning system by modifying certain of its more significant features and mechanisms, and through substantial changes in the training and recruitment of professionals engaged in planning activities at the national, sectoral and enterprise levels. In the light of the hitherto unsatisfactory experience with detailed quantitative planning, there will be a significant reduction in the number of annual targets for the production and supply of particular goods and services. Annual plans will be based to a much greater extent on projections of key economic variables, and more attention will be accorded to macro-economic policies needed to ensure internal and external equilibrium in aggregate terms.

Prices and market forces will play a more important role in the planning process. The latter would be expected to influence the activities of leading productive sectors principally through general guidelines, incentive schemes and managerial accountability rather than through output targets.

Improved co-ordination will in future be sought between the annual plans, the state budget and the foreign exchange budget. In particular, the state budget and the foreign exchange budget would now be prepared and implemented within the indicative framework of the national plan. Investment programmes which are presently being executed will be reexamined and certain major projects may be curtailed, or their implementation slowed down. In decisions regarding new investments, more careful account would be taken both of

domestic financial constraints and the availability of foreign exchange. Enterprises will have greater autonomy in their investment decisions, if they can finance these from their own internal sources, or if they can secure domestic credits without Government support.

3.4 Liberalisation and stabilisation measures

Major economic policy initiatives under the SEF relate to the liberalisation of prices and markets and exchange rate adjustments. Other financial stabilisation measures announced under the SEF are: the diminuition of the state budget deficit, the identification of new approaches to the financing of this deficit, the financial restructuring of public enterprises and the general strengthening of the financial system. Further financial measures contained within the SEF include the reform of domestic credit policies and the rescheduling of external debts. These stabilisation measures are intended to contribute both to a mitigation in the external disequilibrium and in domestic inflationary trends, and also to the structural adjustments needed to attain greater productive efficiency and more rapid economic development.

3.4.1 Liberalisation of prices and markets under SEF

Among the first economic actions in the SEF programme will be an initial adjustment in a wide range of controlled prices, so as to give more adequate reflection to the substantial changes which have occurred in wages and input costs, and notably in the costs of imported inputs. A start has already been made in this direction with the freeing of prices of fruit and vegetables. Among the leading objectives of this price reform programme is the creation of conditions to ensure the adequate profitability of enterprises producing goods and services with controlled prices. Then at a second stage of economic reform in the pricing field, it is envisaged that enterprises whose products are subject to price control will enjoy greater autonomy in their price decisions, and will have broader opportunities to adapt their price levels to varying conditions of supply and demand. When that stage of price liberalisation is attained, the control of price levels would be determined largely through the application of macro-economic policy measures.

3.4.2 Exchange rate adjustments

Finally, and perhaps most significantly, the SEF envisages a devaluation of the kwanza, although it offers limited guidance on the criteria to be employed in formulating new exchange rate policies. The original explanatory statement on the SEF indicates that in anticipated debt rescheduling operations, Angola's creditors would probably seek a more substantial devaluation than that considered appropriate by the authorities in Luanda. The same statement refers to the fact that "the exchange rate will not be the most important adjustment of stabilisation". In this regard, it is envisaged that the curtailment of the budget deficit and greater flexibility in price levels will to some degree assume the role of the exchange rate in reestablishing equilibrium. However, the SEF concedes that, in a second reform stage, a crawling peg system for the exchange rate might be introduced, if it were considered relevant to stimulating the resurgence of Angolan

exports. In this general regard, the SEF reference to a significant devaluation of the kwanza constitutes a basic change in the monetary policy of the Angolan authorities. Until recently, the authorities have insisted on maintaining a fixed exchange rate against the US dollar without fully recognising the very great distortions resulting from this particular policy.

3.4.3 Reducing the state budget deficit

To realise a reduction in the budget deficit, the SEF proposes a series of reforms in the fiscal system and more effective control over budgetary expenditure. Proposals under consideration suggest that various tax rates should be raised, and exemptions from customs duties significantly reduced. It is envisaged that company taxation should be extended to public enterprises and to economic activities in the parallel market. In addition, greater incentives will be offered to tax collectors in the interest of fiscal efficiency. Over the medium term, technical studies will be initiated relating to the reform of the Angolan fiscal system, including an analysis of the potential advantages of introducing a value added tax and a unified income tax system.

For the moment, the financial requirements of defence and security constitute a major constraint on the possibility of reducing budgetary expenditure. Nevertheless, it is anticipated within Government that a significant contribution to public expenditure control could be provided by a lowering in subsidies and other transfers to public enterprises. It is envisaged that these reductions should be achieved through ensuring greater profitability in the public enterprises' activities and introducing new arrangements for financing their investments. It is proposed that such investments would be funded by the enterprises' retained earnings and by bank credits secured directly by them rather than by budgetary transfers.

Hitherto, Angola's budget deficit has been funded largely through monetary creation and also in part by external credits. To overcome the inflationary impact of money creation, it is intended to cover a larger proportion of the deficit by borrowing from enterprises and households in possession of substantial cash holdings. In this context, plans are being made to develop a financial market for public debt securities offering an attractive return to private savers. The SEF also makes the case for introducing an obligatory defence loan to be subscribed by wage and salary earners.

3.4.4 Financial restructuring in the public enterprise sector

A major objective of the SEF is to curtail the losses of public sector enterprises by restructuring certain of them, privatising others, and winding up those activities which do not offer the prospect of long-term viability. In addition, the profitability of those enterprises which are retained in the public sector will be enhanced through greater price flexibility and through the application of specific measures geared to raising the productivity of such enterprises. Where necessary, the financial position of existing public enterprises will be restructured by waiving a portion of their debts or by converting their debts into Government equity holdings. In addition, a

rescheduling of public enterprise debts is under active consideration, involving longer amortisation periods. A further SEF initiative relates to a proposal for a much stricter ex-post control of the financial transactions of public enterprises. In this general context, the Government, with technical support from an international commercial bank, has launched a number of studies which focus on the general financial restructuring of the public enterprise sector.

Among these investigations is an analysis of indebtedness between public enterprises, as well as between these enterprises and the state, with a view to effecting a more rational financial structure in the enterprises concerned. A further study now under way relates to the formulation of a methodology, geared to local parameters, for evaluating the viability of existing public enterprises.

3.4.5 General strengthening of the financial system

Under the SEF programme, it is planned to identify bad and doubtful debts in the assets of banking institutions and to transfer these to the State Treasury, in exchange, it would appear, for public debt securities. It is envisaged that this general clearing of the BNA's balance sheet would subsequently be complemented by a review of its intermediate margins, so as to enhance its overall profitability. In the commercial banking sector, greater flexibility and increased competition are envisaged under the SEF. Thus it is proposed that the central banking, development, finance and commercial operations of the BNA should eventually be handled by separate banking services, and that the BPA should be transformed into a commercial bank, which would be empowered to grant credits to enterprises. Consideration is also being given to the establishment of other banks in Angola, some of which might be owned either in whole or in part by foreign enterprises.

3.4.6 The reform of domestic credit policies

In the financial field, the SEF proposes not merely a reduction in the general proportion of credit finance made available to the Treasury from the banking system, but also an improvement in arrangements for providing credit to the productive sector. Thus it is proposed that interest rates on deposits and loans should be increased, in order to make the holding of bank deposits more attractive, and to discourage the excessive and unnecessary utilisation of credit. As has been indicated, the BNA's commercial banking activities will be separated administratively from its central banking responsibilities. The BNA will begin to make available long and medium-term credits to enterprises for the purpose of financing investment, and consideration is being given in the BNA system to the eventual formation of a separate development financing institution. For the moment, the BNA credit department is to be divided into two services: a planning department and a financial department, together with a short-term loan division and a division to provide credit to the agricultural and fishing sectors. Unless an explicit Government guarantee is provided, the approval of credit to public or private enterprises will depend on the bank management's assessment of the risks and profitability of the operations for which credit facilities are sought. The BNA is already closely supervising the use of credit by enterprises to ensure that the loans

in question are applied to projects and activities with a reasonable probability of yielding sufficient returns to the enterprises concerned to enable them to reimburse their outstanding obligations. According to preliminary SEF indications, it is envisaged that at a more advanced stage of the stabilisation programme, credit policy will be geared increasingly to interest rates and market forces, and less to mandatory rules. In addition, it is proposed that enterprises should be in a position to sell Government securities to each other, as an alternative method of financing.

3.4.7 External debt rescheduling

One of the leading objectives of the SEF is to provide relevant conditions for negotiations relating to the rescheduling of Angola's external debt. In this regard, the Angolan authorities are concerned not only to secure a workable solution to their current arrears problem, but to lengthen the maturity of their existing debt, so as to mitigate the burden of debt service obligations over the next several years. It is also the Government's declared intention to infuse a greater measure of discipline into the conduct of its debt management responsibilities in order to avoid the reemergence of severe foreign exchange constraints, which have adversely affected industrial production in recent years.

3.5 Allocation of foreign exchange

3.5.1 Existing arrangements

The economic system for allocating foreign exchange is of crucial significance in the industrial rehabilitation context, and the SEF's eventual intentions in this regard have still to be clarified in greater detail. In the present economic situation, which is characterised by drastic shortages of foreign currency, companies are not able to import goods i.e. raw materials, spare parts etc. according to their production capacities and requirements.

Current practice in regard to foreign exchange allocations is as follows. Each year the Planning Ministry, in consultation with the BNA, the Ministry of Trade, other Government departments, prepares a foreign exchange budget, as an integral component of the annual national plan. The foreign exchange budget sets ceilings for categories of imports in each economic sector. Import quotas are than allocated to individual enterprises, but these are subsequently reviewed on a quarterly basis, in the context of changes in the country's foreign exchange situation. For each external order, the company has to submit pro forma invoices and apply for a licence to import from the Ministry of Trade. Once the licence is granted, application for a letter of credit may then be made to the BNA, which for the moment discharges both central and commercial banking functions. Most imports are currently brought into the country by state trading companies specialising in foreign transactions. These include:

* IMPORTANG in the case of general imports, including food and other consumer goods;

* MECANANG which imports industrial machinery and equipment;

* MAQUIMPORT which handles imports of office equipment and computers;

* ANGOMEDICA which secures imports of pharmaceuticals for the Ministry of Health;

* EMATEC, under the Defence Ministry, handles the importation of military equipment and supplies;

* Regional export-import companies, such as UIGEMEX in Uige and CABIMEX in Cabinda, which have recently been set up under the economic decentralisation programme.

However, even at the moment, there is no state monopoly over the entire range of imports. Thus both SONANGOL and foreign oil companies enjoy considerable autonomy in the foreign exchange field, and bring in their imported equipment and supplies directly. In addition, import quotas are allocated to various private trading companies, the most significant of which are Lusolanda, which now forms part of the Lonrho group and Zuid (Casa Holandesa), a Dutch owned firm.

3.5.2 Envisaged developments under the SEF programme

The current official exchange rate of 29.918 Kz per US$, maintained unaltered since 1975, involves tight forex rationing. Exchange rate policy has been a major factor in the decline of agricultural exports and in creating serious distortions in relative prices. As is is indicated above, it appears to be envisaged by the Angolan authorities and international institutions that following a substantial initial devaluation of the kwanza, a strategy of successive steps would probably be required to attain an eventual equilibrium rate. In this context, it is foreseen that any attempt to move instantly to an equilibrium exchange rate would carry with it serious inflationary risks, if it were not accompanied by adequate monetary supply constraints. Consequently, there would appear to be a general understanding that the equlibrium rate should be approached gradually and in conformity with reductions in the budgetary deficit.

Thus in an interim period until the equilibrium exchange rate is reached, it is foreseen that foreign exchange would continue to be rationed by administrative procedures. Nonetheless, there is recognition within Government that the licensing of all imports and the administered allocation of foreign exchange would continue to be a potential source of production bottlenecks with serious consequences for industrial efficiency. International advice to the Angolan authorities is understood to suggest that during the interim period until equilibrium is attained, consideration should be given to the introduction of partial solutions for dealing with the difficulties created by the current economic situation. Possible solutions are, for example, addressed in a recent UNCTAD/GATT International Trade Centre (ITC) report on import programming and procedures, as well as in economic submissions from the World Bank/UNDP. It has been suggested, for instance, that such solutions might include administrative improvements in the existing system, together with measures such as the auctioning of import licenses, the imposition of import surcharges, the introduction of export retention schemes

and export subsidies for agricultural products, or a system of dual exchange rates. At the same time, it has been pointed out by international institutions that while none of these partial solutions are entirely satisfactory, they may be preferable to aspects of the existing system for the administrative allocation of foreign exchange. It is also foreseen that if any of these solutions were introduced, they might subsequently be gradually abandoned, as the exchange rate eventually moved towards equilibrium.

In this general context, references should also be made to technical studies currently under way within SADCC on export retention schemes, export revolving funds, intra-regional sourcing and credit arrangements. The results of these studies have been followed with particular interest by the Angolan authorities who see real possibilities for expanding and diversifying their exports, including agro-industrial products, with the phased introduction of more realistic exchange rates. From this discussion of foreign exchange arrangements available to Angolan industrial enterprises to finance essential imported inputs, the report now turns to questions relating to rehabilitation of Angola's manufacturing industry in its international context and regional setting.

CHAPTER 4

THE REHABILITATION OF ANGOLA'S MANUFACTURING INDUSTRY IN ITS INTERNATIONAL AND REGIONAL CONTEXT

4.1 The international background to industrial regeneration

Over the past 15 years, international events and regional conflicts have had a major impact on the Angolan economy, and not least on developments in the industrial and agricultural sectors. An appreciation of these factors is necessary not only to an understanding of current rehabilitation priorities, but also to an informed perception of the technical support which Angola now seeks from the international community in the economic regeneration context. This national interest is complemented at a regional level by the carefully programmed rehabilitation initiatives of the Southern African Development Co-ordination Conference SADCC, which has increasingly focused its member States' attention on both the strategic and practical aspects of economic regeneration, and on the formulation of regional actions which have come to command the financial support of SADCC's main co-operation partners, including the business sector. In a broader international setting, the current quadripartite negotiations, involving the Angolan, Cuban, South African and US governments, have important implications for the achievment of national harmony and peace, whose eventual realisation would undoubtedly lead to the introduction of major reconstruction programmes in Angola, requiring a new measure of international support.

At the end of the colonial period in the 1960s and early 1970s, Angola built up one of the largest industrial sectors in Africa based on the inflow of international capital and expertise, an economic phenomenon closely associated with a major influx of Portuguese immigrants. In the period following Independence in 1975, the manufacturing sector went into significant decline, as a result of the withdrawal of Portuguese skills and purchasing power, a major lack of trained Angolan personnel, the economic effects of external aggression fuelling domestic conflict, and policy shortcomings affecting industrial production and trade. Factories were abandoned, equipment and machinery were neglected, and industrial production moved into significant decline. As a result, Angola in 1988 has major rehabilitation requirements not only in the manufacturing field, but throughout most areas of the economy with the significant exception of the petroleum sector.

Under the Government's economic reform programme of the Saneamento Economico e Financeiro (SEF) formally introduced at the beginning of 1988, the regeneration of productive capacity has become a major, even dominant objective of Government policy. This new approach has in turn led the Angolan authorities to look increasingly to international organisations for technical support in the formulation of their policy reform measures. Thus in the rehabilitation policy field, Angola has sought significant assistance from international institutions in shaping new SEF strategies. In November/December 1987, at the request of the Government, a UNDP-financed economic mission, for which the World Bank served as executive agency, initiated an introductory economic review of Angola. As indicated in UNDP project document ANG/87/001 dated September 1987, the major objectives of this

review were to examine the structure and evolution of the Angolan economy and key sectors, and to provide recommendations on an economic rehabilitation strategy. A draft version of this report has recently been submitted by the UNDP to the Angolan authorities who are currently studying this report and its recommendations. In this general regard, it should be noted that the Government of Angola has recently applied for membership of the International Monetary Fund, accession to which would also enable Angola to become a member of the World Bank.

In the institutional field, Angola has in addition sought support from international organisations in establishing new structures and technical competencies for the implementation of its rehablilitation strategies. Thus in the Ministry of Planning, the Angolan authorities have requested technical support from the UN Centre on Transnational Corporations and the European Community in the development of specialised investment services, which will inter alia focus on rehabilitation requirements. In the National Bank of Angola (BNA), the African Development Bank is assisting with the formulation of financing programmes geared to rehabilitation priorities. At the Ministry of Industry, UNIDO[1/] has undertaken to provide technical support for a project identification and evaluation service which would be concerned with rehabilitation schemes. In the technical training field, rehabilitation demands are being addressed by the Ministry of Education with support from the ILO. The technical work of the international agencies in the rehabilitation field is complemented by the activities of bilateral institutions and foreign companies supporting Angola in this area both on development aid and commercial terms.

As regards economic resources for rehabilitation activities, they have been provided principally by Sweden, Italy, the Netherlands, France and the European Community. The latter has, for example, recently initiated a major inter-sectoral development programme in the south west provinces of Angola.

4.2 Angola, SADCC and rehabilitation

The Southern African Development Co-ordination Conference (SADCC) was established at a meeting between the heads of governments of nine Southern African countries (Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe) in Lusaka in April 1980. The Lusaka Declaration which created SADCC also extended on invitation to international institutions and countries outside Southern Africa to co-operate in implementing specific projects and programmes for the development and rehabilitation of the economies of the SADCC member states and the reduction of their economic dependence, particularly on the Republic of South Africa.[2/]

1/ Annex E contains a full list of UNIDO's approved and/or operational technical co-operation projects.

2/ The structures and procedures used by SADCC and its international co-operating partners are described in a joint report by the SADCC Secretariat and the OECD Development Centre published by SADCC and the OECD, Gaborone and Paris, March 1988.

SADCC's Programme of Action, which calls for funding of more than US$ 7 billion, covers a number of sectors or sub-sectors for which a regional approach is to be undertaken in development and rehabilitation, and for which individual member states have been designated to assume co-ordinating responsibilites on behalf of SADCC. Their sectoral responsibilities, as of mid-1988, are:

Angola	energy;
Botswana	agricultural research (SACCAR), livestock production and animal disease control;
Lesotho	soil and water conservation, land utilisation and tourism;
Malawi	fisheries, wildlife and forestry;
Mozambique	transport and communications (SATCC);
Swaziland	manpower;
Tanzania	industry and trade;
Zambia	mining;
Zimbabwe	food security.

Annual consultative conferences between SADCC and its co-operating partners - international agencies and bilateral donors - have been held regularly since 1980, and focus on programmes and issues relating to development and rehabilitation. A large number of bilateral donors and international agencies attend these conferences, with representation, in the case both of SADCC, and its principal bilateral partners, often at the ministerial or head of agency level. At the 1987 Conference in Gaborone, there were representatives of thirty-one co-operating governments and eighteen international agencies; these included six CMEA countries, China and a number of other Third World countries, including Brazil, India and Nigeria. The next consultative conference will, for the first time, be held in Luanda, on the 23 February 1989, and will, inter alia, focus on industrial rehabilitation programmes within the SADCC group.

Among SADCC's co-operating partners, the Nordic countries as a group (Denmark, Finland, Iceland, Norway and Sweden) have established a special relationship with SADCC on a region to region basis, and at the 1986 Harare Conference, the Nordic countries signed a Joint Declaration with the SADCC states on region-to-region co-operation in both the economic and cultural fields, including Nordic support for intra-regional co-operation and for the maintenance and rehabilitation of productive capacity. In addition, within the overall framework of Nordic/SADCC co-operation, possibilities for encouraging joint ventures, rehabilitation programmes and other investments are being studied, as are institutional arrangements for strengthening the financial mechanisms needed for extended economic co-operation, notably through the proposed Nordic-SADCC Fund (NORSAD).

A Memorandum of Understanding was also signed at the 1986 Harare conference between SADCC and the Commission of the European Community on the programming of regional funds, under the Third Lomé Convention (1985-90), for ACP States in Southern Africa. A substantial part of these regional resources made available to SADCC countries under the Lomé programme are allocated to rehabilitation projects notably in the transport sector. Under the Lomé Convention, the European Investment Bank is also active in supporting agro-industrial investment and rehabilitation within the SADCC region, including Angola.

The aim of SADCC's industrialisation programme is to foster specialisation and complementarities in production by setting up national and multinational projects, with strong domestic and intra-regional linkages. The initial thrust of investment promotion by SADCC was towards the building of new capacities. However, these efforts in the early 1980s coincided with a major decline in industrial output in most SADCC counties, an acute shortage of foreign exchange, and on escalating burden of debt servicing. New plants, with their large capital costs and very high requirements for hard currency to pay for imported machinery or the servicing of loan capital, became progressively more difficult to finance. Meanwhile, capacity utilisation was falling in many plants to a very low level. SADCC studies on capacity utilisation identified substantial unused capacities, and recommended rehabilitating and upgrading existing plants.

SADCC's industrial rehabilitation programme, which is currently being integrated into a SADCC indicative industrial plan, now under preparation in the SADCC Industry and Trade Co-ordination Division in Dar es Salaam, requires action at three levels:

- economy-wide, in both a national and regional context to mobilise foreign exchange;
- industry-wide, by rationalising industries for national and regional resources and markets;
- at plant level, to increase production efficiency and capacity utilisation.

In the food industry area, the EEC is co-operating with the SADCC Industry and Trade Division in a study of the rehabilitation of plants producing edible oils and by-products in the SADCC region.

At its 1987 Gaborone Conference, the SADCC business sector, which brings together businessmen from private, public and mixed enterprises from within the region and from international corporations, recommended that available resources should first go to up-grading and rehabilitating existing capacity. In this context, joint venture partners with the necessary capital and access to management skills should be sought. Co-operating partners could also help through the provision of commodity assistance.

In the industrial rehabilitation field, contacts between small businessmen in SADCC countries and their foreign counterparts should be encouraged, as foreign investment need not always involve large enterprises. Cooperating partners (donors) should consider providing financial assistance to facilitate these contacts. Training and skills, especially business skills, should be given high priority as effective rehabilitation would be unlikely, if management and technical staff were not available to support this process.

In the investment and rehabilitation context, the SADCC business sector endorsed the role of export credit and export pre-financing funds. In this regard the efforts of the Nordic countries and the USAID to investigate the

feasibility of these proposals were welcomed. In both the investment and rehabilitation fields, it was recommended that mechanisms should be found for making equity capital available to local investors throughout the SADCC region. The SADCC business sector called for the establishment of a regional capital market or a regional bank for venture capital. Finally, it was stressed that existing banking and financial institutions in SADCC countries needed strengthening and reorientation to make them more responsive to the investment and rehabilitation needs of the region.

4.3 International perspectives and industrial regeneration

As a regional grouping created by the Front Line states, SADCC has consistently pursued its economic co-operation objectives within wider international policy perspectives. In addition to Angola, the Front Line states comprise Botswana, Mozambique, Tanzania and Zimbabwe, which came together in 1980 with Lesotho, Malawi and Swaziland in the broader SADCC framework. Since their original formation in the mid-1970s, the major political objectives of the Front Line group have been to secure the independence of Zimbabwe in 1980 and also now of Namibia, and to bring an end to the apartheid system in South Africa. In their work towards the realisation of these complementary purposes, it has become increasingly apparent to SADCC's co-operation partners, including both the USA and the USSR, that the Front Line states are making a significant contribution both towards the achievement of international peace and regional stability.

In this context, Angola has played an important role in the current quadripartite consultations on the independence of Namibia under the provisions of Security Council resolution 435 of 1978. As of September 1988, these quadripartite consultations have resulted in the withdrawal of South African forces from Angola and the formation of a joint Angola-South Africa supervisory commission. In addition, negotiations are continuing on details of the time-table and institutional modalities for Namibia's transition to independence, which would be accompanied by a further withdrawal of South African forces from Namibia itself, and of Cuban troops from Angola. At both an international level and in the African setting, and also within Angola, political discussions have begun to turn increasingly on the case for national harmony and domestic peace. While it is as yet too early to forecast the eventual outcome of these discussions, it is already apparent that the achievement of these policy objectives within Angola itself could have profound economic implications for the country's future development and for the fostering of closer economic co-operation within the SADCC region. Such developments would have a particularly important bearing on Angola's industrial rehabilitation priorities, and where appropriate qualitative account is taken of their potential significance, notably in the context of the report's longer term recommendations. Against this international and regional background, the report now turns to consider the Angolan manufacturing sector and its regeneration.

CHAPTER 5

THE MANUFACTURING SECTOR AND ITS REHABILITATION

5.1 Overall characteristics

In order to propose a viable programme for industrial rehabilitation in Angola, which is seen as a vital element of overall economic recovery, it is necessary to review past development and present conditions to understand the possibilities and constraints.

After World War II, there was a rapid growth in the Angolan economy, not least in the manufacturing sector. Thus, by 1975 there were some 4,000 registered manufacturing enterprises employing about 200,000 workers. The sector's share in GDP was then about 16 per cent and Angola had a relatively large and broadly based manufacturing industry. The backward linkages were strong as a large part of the manufacturing industry processed agricultural products. At the same time it was highly dependent on imported intermediate non-agricultural inputs as well as capital goods.

By 1977, industrial output had dropped to less than one third of that recorded in 1973. In 1977, the index of manufacturing production (1973 = 100) for the major industry groups was:

- food industry: 30
- light consumer goods: 32
- heavy industry: 20.

Since then, there has been a partial recovery of manufacturing sector, but the output level and employment is still far below that in 1973. At present official prices, demand is much higher than supply, and trade in the parallel markets plays a dominant role in the Angolan economy.

Basic data on the manufacturing sector are scarce and unreliable, but they still permit one to obtain a general view of the sector. Per capita manufacturing value added (MVA) has been estimated to be US$ 12 in 1984. The sub-sectors, in order of importance, are light, food and heavy manufacturing. Branch-level calculations on the basis of Ministry of Industry sources show that the food, beverage and tobacco branches represent 27.9 per cent of the manufacturing value added followed by the metal products, machinery and equipment branches with 22.3 per cent.

According to the 1983 "Registo Geral de Empresas", including only firms with more than ten employees, there were 247 enterprises employing 73,000 persons.[1/]

1/ Note: some enterprises in the manufacturing sector are under the Ministries of Agriculture and Fisheries and not included in this register.

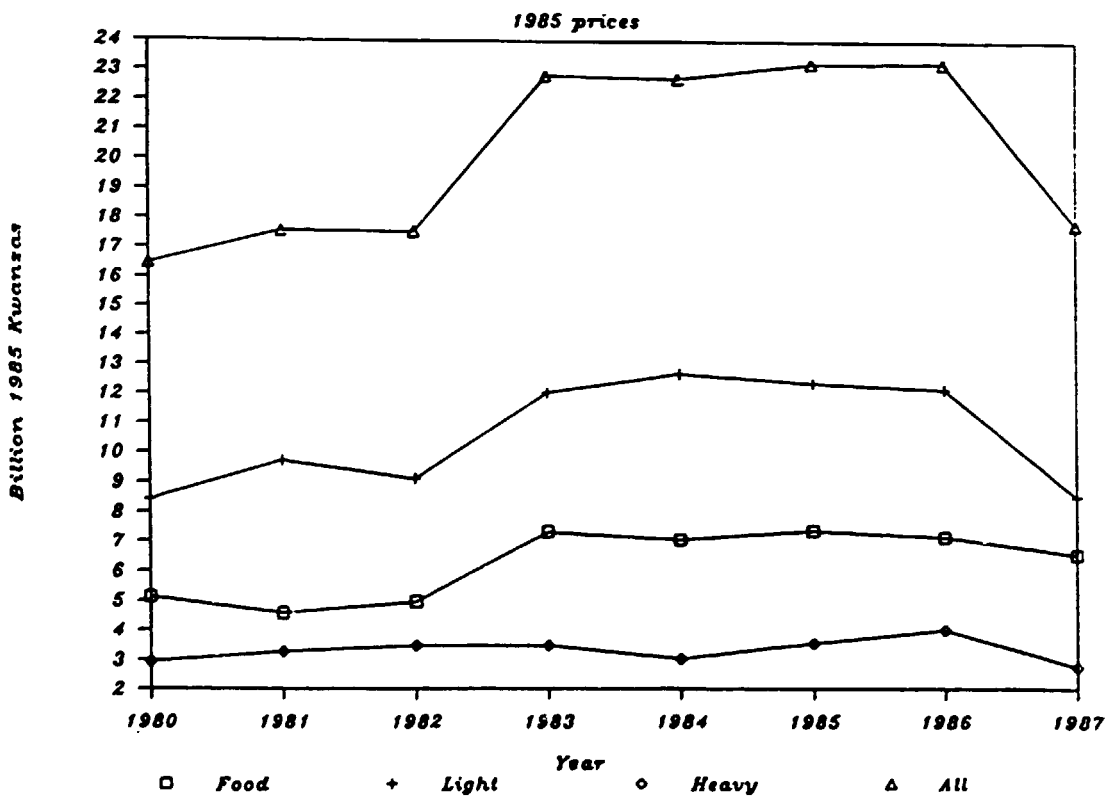
As can be seen from figure 5.1, industrial output rose from about Kw 16 billion in 1980 to Kw 23 billion in the 1983-86 period. In 1987, when the negative consequences of the drop in international crude oil prices hit the Angolan economy, there was a significant decline in industrial output.

5.2 Major problems and constraints

The problems of Angolan industrial rehabilitation and regeneration are in part similar to other African countries, but also present special characteristics and possibilities. Most of the external problems facing the Angolan economy as a whole are valid for the industry as well and are summarized below.

Figure 5.1

Gross value of production of Angolan food, light and heavy industries 1980-1985.
(Kz million)



Source: Ministry of Industry

(a) War situation

As was discussed under 2.4, infrastructure has been destroyed, and a substantial proportion of Angola's road and rail transportation system is no longer operational.

In many areas in the country, the war situation also prevents a regeneration of agricultural production. It should be noted that when agricultural production and supply increase as the security situation improves, there could still remain a transport constraint.

(b) Supply of raw material

With the decrease in the supply of agricultural production, Angolan agro-industry has met a shortage of inputs. This shortage could only in part be compensated by an increase in imports, e.g. maize to the mills and oilseeds to the oil industry. Supply of raw material to other sub-sectors such as cotton to the textile industry and tobacco for the cigarette industry also decreased as a result of the reduced import capacity of the country.

(c) Lack of spare parts, equipment and machinery

Before 1975, there existed some manufacturing capacity to supply the industry with needed spares, equipment and machinery, but a major part still had to be imported. Since then, the overall decline in the economy resulted in a reduction in the supply of such domestically produced goods. Other vital services, such as the supply of electricity and water are deficient. Even though there has been a marked decline in industrial output, and on this account also a reduction in demand for spares, equipment and machinery, there is an acute shortage in many enterprises. The lack of foreign exchange in Angola is the major bottleneck for importing needed spare parts, equipment and machinery.

Moreover, the overvalued exchange rate has caused enterprises to demand more imports than they would otherwise have demanded. Nevertheless, unless the supply is increased, further reductions in industrial output will take place.

(d) Incentives and allocation efficiency

The very special nature of the Angolan economy, with officially accepted parallel markets, and the attempts by the Government to control the economy, have made it generally more profitable to engage in parallel market operations than in producing efficiently. By the very nature of such operations statistics are practically non-existent. But, it seems reasonable to assume that a major part of private investments is made in the parallel markets.

When markets function normally, a profit for an enterprise is also a profit for society at large, although the distribution of this surplus is an area of conflict in most societies. The point however is that the real resources used in the production process are less than the value of the

output. In Angola, present price signals do not contribute much to an effective use of scarce resources and have caused many negative side effects. Some enterprises are making significant profits while many others are at the point of liquidation. These profits and losses reflect administrative directives more than economic realities or potential.

Scarce foreign exchange is allocated among economic sectors and enterprises according to administrative decisions with little bearing on real demands of the manufacturing sector.

(e) Lack of trained personnel

Before 1975 very few of the Angolans received training and they were not permitted to participate in economic and political life. The training of new cadres of Angolans will require a long time. Meanwhile, needed management skills and semi- and skilled workers will be in short supply.

5.3 Linkages

Most of the food and light industries were established to process domestic raw materials (cereals, cotton, oilseeds, tobacco, wood, etc). The same is true for the buildings materials industry. All these industries have strong backward linkages and have suffered severely because of the disruption of raw material production.

The small basic metals industry has forward linkages with the metal goods, tools and building material industry (e.g. simple agricultural equipment and corrugated iron).

The potential for backward and forward linkages is huge. Angola's ecological diversity would allow the regeneration of a highly diversified agriculture, which would form a solid basis for the agro-processing industry. Also, the fish processing industry, now the subject of rehabilitation efforts of the EEC is another important area of future growth, although overfishing may become a problem.

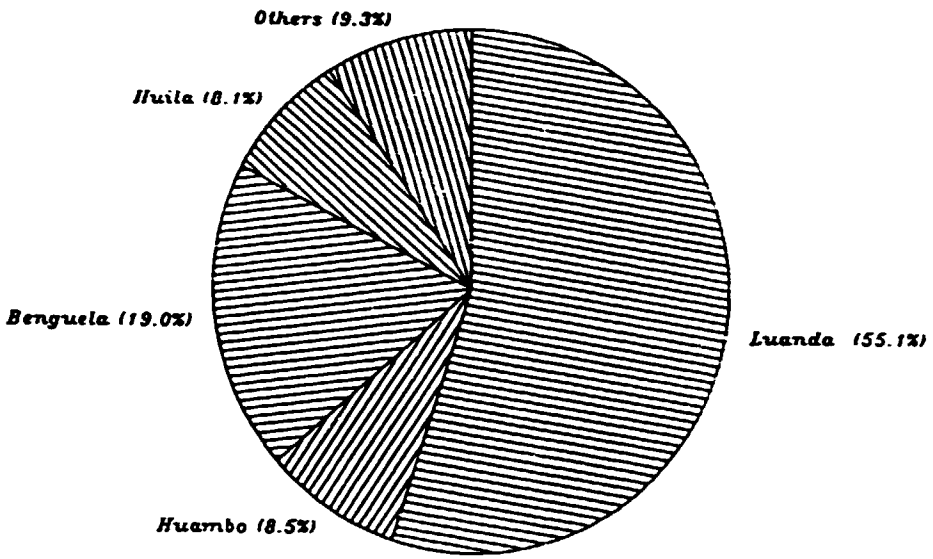
5.4 Spatial distribution

There is a very high concentration of industry in Luanda. As can be seen from Figure 8.2, more than half of the total number of enterprises, employing more than ten persons, can be found in or in the vicinity of the capital. Luanda's industrial structure is also quite diversified. This concentration of industrial production in Luanda provides a certain justification for concentrating initial efforts on rehabilitating industry there, although only as a first step in an overall rehabilitation programme.

Other significant manufacturing centres are the provinces of Benguela, Huambo and Huila where much of the industrial capacity is located in the provincial capitals. In this regard, rehabilitation initiatives would require to take particular account of developments now under way in Huila and more generally in the south west.

Figure 5.2

Location of industries, 1983



Source: Ministry of Industry

5.5 Ownership patterns

When the great majority of settlers left Angola in the middle of the 1970's, it became imperative for the Government to assume control of abandoned enterprises in order to attempt to maintain a minimum of production. In the case of some of these enterprises the ownership pattern has not been settled. In other cases there was an explicit policy objective to nationalize enterprises, for example the milling industry.

According to available information the Government has a major share in the ownership in the manufacturing industry, particularly in bigger enterprises.

Table 5.1: Ownership in manufacturing, 1985

	Government	Mixed	Private	Total
Food industry	31	2	8	41
Light industry	28	3	32	63
Heavy industry	34	3	15	52
Total	93	8	55	156
Gross output share (per cent)	56	15	29	100

Source: Hodges/EIU, from Ministry of Industry data.

As the table 5.1 shows, Government presence is strongest in the food industry, while the light industry is predominantly privately owned. The implications for industrial rehabilitation of the ownership pattern are roughly as follows. With few exceptions, the management is weaker in state enterprises than in privately owned enterprises. This is because there is a general shortage of trained personnel and this shortage became particularly acute in the enterprises taken over by the state.

In some cases there will be a need to define or modify the ownership pattern before industrial rehabilitation will be a viable venture.

As the Government proceeds to privatise state enterprises, as suggested by Government officials, the role of Angolan investors needs to be defined in the context of industrial rehabilitation and regeneration. It would seem as if the share of Angolan investors in total investments in the manufacturing industry is insignificant: most private companies are owned by foreigners.

5.6 Trade in manufactures

Angola's exports consist almost wholly of raw material. In 1985, crude oil accounted for 90.3 per cent of all export earnings.

Apart from refined petroleum, which represented 4.5 per cent of export earnings in 1985, recent statistics do not show any exports of manufactured products.

Imports of manufactured goods represent a large share of total imports. No recent detailed statistics are available, but the share could be as much as 50 per cent of total imports. Major manufactured imports include textiles, processed food, transport equipment, oil drilling equipment and arms.

Imports of inputs for the manufacturing sector (raw materials, intermediate products, spare parts and machinery) constituted 20 per cent of total imports in 1984, 18 per cent in 1985 and only 3 per cent in 1986.

The steep drop in manufacturing output in 1986 was not the result of a reduced need for imports, but rather the consequence of the decrease in the international price of crude oil. The Ministry of Industry's import budget was reduced from Kz 6,000 in 1985 to Kz 2,070 million in 1986. As a result, there was a sharp drop in the output of manufacturing in 1987. It is expected that the situation in 1988 has improved significantly.

Angola's single largest buyer of exports (i.e. crude oil) is the United States of America (USA). Excluding trade in arms, the major import partners are Portugal, France, USA and Brazil.

Although there has been a modest recuperation of manufacturing output in the 1980's, as compared with the levels attained in the 1975-80 period, the level of output still remains much below that obtained prior to 1975. The regeneration and general rehabilitation of Angolan manufacturing industry will require a long time. In the short run the focus should be on enterprises which can be rehabilitated quickly and are strategic for Angolan development. They should also have a strong potential for future growth.

CHAPTER 6

FOCUS ON AGRO-RELATED INDUSTRIES

Introduction

Shortages of food products and increased dependence on imports are among the main reasons for refocusing the future strategy for development on the food sector.

The agricultural sector, largely neglected in the post-Independence period, is now subject to new policies aiming at self-sufficiency as a first target, with scope for future exports.

The following sections provide essential background information on agricultural production and indications regarding the potential for raw material supply from the agricultural sector to the food processing sub-sector. The present position of the food processing industry is also discussed.

6.1 Supply of raw materials

The choice of plants is based, among other criteria, on the availability of inputs in the short and long term which is a major factor determining the overall strategy for rehabilitation of the agro-related manufacturing industry with focus on the food industry.

Agricultural output

Angola is favored by generally good conditions for agriculture in terms of soils, climate, and in many areas, availability of land and water for irrigation.

During the pre-Independence era agricultural production was derived from two sectors, the traditional peasant sector, comprising smaller farms, many of them of a semi-subsistence nature, and the commercial sector with Portuguese owned and managed large farming enterprises.

Crop production in the traditional farming sector is adapted to the different agro-ecological zones and includes staple crops such as cassava and maize, and coffee as a major export crop. A variety of vegetables and fruit was also grown, and in some areas cotton or tobacco.

The large scale commercial farming sector was oriented mainly towards the cultivation of cash crops such as sugar cane, sisal, cotton and coffee, which were supplied to agro-industries for processing. A major portion of staple foods for the urban areas came from the traditional sector.

The changes during the post colonial period have been dramatic: there are few exceptions to the drastic decline of agricultural production. Table 6.1.1 presents data for all important crops.

The marketed quantities of agricultural products are of interest when discussing raw material supply to food industries. Table 6.1.2 presents the data for years 1973, 1980 and 1987, respectively, to illustrate, in broad terms, the present situation and the potential (not considering the possible scope of increased hectarage for farming). The data should be treated with caution.

Table 6.1.1 Principal crops selected years
(tonnes)

	1971	1973	1986
Maize	709,750	853,847	287,853
Wheat	12,782	32,848	2,310
Rice	57,604	53,000	2,966
Sorghum, Millet	74,227	116,08	54,632
Beans	65,479	53,742	41,288
Groundnuts	26,936	26,679	13,862
Sunflower seed	17,930	24,614	120
Potatoes	138,757	59,941	31,453
Cassava	1,134,262	1,408,593	1,314,270
Tobacco	4,969	4,526	114
Coffee	215,923	210,000	15,451
Cotton	82,788	114,291	307
Sisal	65,154	60,200	239
Pineapple	N.A.	(1972) 35,273	286
Citrus fruit	N.A.	N.A.	3,708
Banana	N.A.	399,300	43,763
Cacao	516	445	51
Oilpalm seed	N.A.	N.A.	98

Source: Unofficial, Ministry of Agriculture and National Statistics Office

The reason for the drop in production, and the present very low quantities of products marketed through the state on the other are several. The main constraints at present include lack of a competent and efficient organization for collection of farm produce, incentives for the farmers to produce, and inputs in terms of improved seed, fertilizer and in certain cases probably also crop protection agencies. The war conditions which have prevailed in many parts of the country ever since Independence, have aggravated the difficulties.

The major agricultural areas in Angola are located in the provinces of Huambo and Huila in the central south-western part of the country. This is also a major livestock producing area, with extensions to the south and south-east.

Table 6.1.2: Selected products marketed through registered channels

	1973	1980	1987 State	1987 Other	1987 Total
Maize	333,780	30,840	56	36,963	37,019
Wheat	11,210	524	-	32	32
Rice	42,820	3,205	-	625	625
Sorghum, milled	N.A.	-	-	5,712	5,712
Beans	13,500	693	5	1,906	1,911
Groundnuts	12,970	282	62		
Sunflower seed	21,000	896			
Potatoes	68,500	8,793	62	9,022	9,084
Cassava	61,800	8,452		4,147	4,147
Tobacco	4,500	251	-	50	50
Coffee	210,000	36,576			
Cotton	79,280	1,453			
Sisal	N.A.	-			
Pineapple	4,800	2,212			
Citrus fruits	5,600	3,432			
Banana	95,480	10,695	2,209	3,913	6,122
Cacao	-				
Oilpalm seed	17,780		42	48	90

Source: Ministry of Agriculture

No livestock census has been carried and available statistics are based on estimates. Such estimates have been made by the Ministry of Agriculture and also by other agencies. Table 6.1.3 presents the different estimates, which show a considerable inconsistency. They may still serve the purpose of providing information on the order of magnitude.

In 1973 about 150,000 head of cattle or 24,500 tonnes were slaughtered as compared with about 15,000 head or 3,736 tonnes in 1985. A former net exporter of meat, Angola imported 18.0 thousand tonnes of meat and meat products in 1986.

Although slaughtering animals are reportedly available from the livestock areas in the south, these do not reach the Luanda region or other parts of the country. The reasons for this appear to be the absence of a functioning market system, the present economic framework for business and also the security situation.

Table 6.1.3: Estimated number of livestock
('000 heads)

	Year	Cattle	Goats	Sheep	Pigs
Ministry of Agr.	1984	5,409	2,101	n.a.	n.a.
EIU, Country Progr. 1987-88	1984	3,250	800	n.a.	400
World Bank	1987	3,420	1,300	n.a.	n.a.
Min. of Agr., National Livestock Dept.	1973	4,431	2,088	385	1,299
	1987	3,500	1,500	180	800
projections	1990	3,500	1,500	180	800
projections	2000	4,375	2,250	216	1,040

Contrary to cattle, which are concentrated to the south, pigs are to be found all over the country. They are mainly kept by households and most of them are reportedly of the small, domestic breed. About 12,000 head are believed to be in and around Luanda, according to the Ministry of Agriculture. There are reportedly no commercial pig farms at present, at least not with improved breeds of pigs.

In summary, there are virtually no sources of agricultural inputs for the food industry in Luanda. Given the balance of payment constraints, Angola will however in the future have to rely more on domestic resources, whenever these can be produced more cheaply than imported raw materials. Future rehabilitation and development of the food-manufacturing sub-sector is thus to a large extent dependent on increased supplies of raw material from the domestic agricultural sector, and therefore on the formulation and proper implementation of policies that stimulate the sector's productivity.

6.2 Food processing sub-sector

6.2.1 Overall characteristics

Up to the first part of the 1970s, a large number of food processing industries were established to process the increasing output from agriculture. This included flour mills, bakeries, vegetable oil extraction plants, fish processing, beverage manufactory in addition to slaughterhouses and dairy plants. Some of these industries were located in the major population centres of Luanda and Benguela, others in the main agricultural areas in the central western and south-western inland areas.

The dairy industry was concentrated in Luanda and the capital of Huila Province with five major dairy plants each processing roughly 30,000 litres per day or more in addition to some smaller units. The largest unit was the Luanda Dairy factory with a processing capacity of 60,000 litres per day.

The largest commercial slaughterhouse, with a capacity of several hundred heads of cattle per day, was located in the city of Huambo.

The number of enterprises in the food processing sub-sector is given in Table 6.2, which also includes tobacco processing. The importance of the food processing sub-sector is clearly shown in the table.

Table 6.2.1: Number of enterprises according to products

Province	Processing industries					
	Food	Fish	Beverage	Coffee	Tobacco	Total
Cabinda	1	1				2
Uige	1					1
Luanda	16	3	5	3	3	30
Cuanza Norte	1					1
Benguela	8	16	3	1	2	30
Huambo	5		2			7
Bii	2					2
Moxico	1		1			2
Namibe	2	2				4
Huila	9		3			12
Lunda Sul	1					1
Bengo	1					1
Total	48	22	14	4	5	93

Source: Registo General de Empresas April 1984

Table 6.2.2 is based on statistics which cover 80 per cent of all industries. Since there are no standard industrial statistics available on a branch level these figures can only be considered as indicative for the distribution of manufacture value added (MVA). In real terms the contribution of the food industry to MVA has remained fairly constant, slightly over 20 per cent, according to these figures.

Table 6.2.2: Distribution of MVA 1980-1987
(per cent)

Type of industry (est.)	1980	1981	1982	1983	1984	1985	1986	1987
Food industry	21.7	23.4	20.2	21.1	22.4	23.2	23.3	23.4
Light industry	59.4	60.3	57.9	55.9	54.5	52.4	49.8	49.8
Heavy industry	18.9	16.3	22.0	22.9	23.1	24.4	26.9	26.8
MVA (kz constant 1985 prices)	4,622	6,542	6,689	7,174	8,022	9,173	9,408	8,665

Source: Ministry of Industry.

The importance of the food processing sub-sector is also considerable from an employment point of view. Data on firms with more than 10 employees show that this sub-sector ranks first with 28,273 workers or 38.9 per cent of the total working force of 72,668 workers.

6.2.2 Major problems and constraints

The food processing sub-sector has registered a substantial reduction in output since the mid 1970s. A severe contributing factor is the unrest and civil war in large areas of the country, including major food producing areas. In addition, the failure to stimulate agricultural production and marketing of produce by proper policies has reduced the availability of raw material for the food manufacturing sub-sector.

Continuous degradation of processing equipment and installations is seriously hampering the industry as a whole. This is a result of a deficient supply of spare parts, caused by foreign exchange constraints, and inadequate maintenance.

Moreover, the technical standard of intermediate and shop-floor management is low by any comparison. This is of particular concern as it is a serious constraint for the success of future rehabilitation efforts of plant equipment. Equally serious are the shortcomings of top management in state enterprises. In fact, physical rehabilitation of these enterprises will have limited effects only if not preceded by organizational rehabilitation and substantial strengthening of the managerial capacities.

Available capacity (a figure taking into account installed capacity, the condition of the equipment, availability of technicians, etc.) and the capacity utilization of available capacity for a number of processed food products is shown in Table 6.2.3. Although the 1987 figures are estimates, they clearly indicate the seriously reduced output of the food-processing sub-sector.

The Ministry of Industry's priority projects for 1986/1987 include a number of food industry branches. The intention is to ensure a sufficient supply of processed staple foods, primarily for the urban areas. Table 6.2.4 gives an account of intended increase in production potential and estimated investments. The table is confusing as regards the programme for the bakery products and also for the cooking oil: the 1987 output of edible oil was 2,460 kl according to the data obtained by the mission. The yeast rehabilitation project is an ongoing one. The wheat milling and vegetable oil and fats branch is analyzed in Chapter 8 of the present study.

Table 6.2.3: Capacity utilization in the Angolan food-processing industry

Product	Available Capacity/year	Capacity utilization, per cent 1984	1987 (est.)
Maize flour	78,514 t	37.6	30.9
Wheat flour	76,000 t	36.4	41.8
Noodles	10,792 t	74.3	33.4
Biscuits	2,893 t	23.7	31.8
Margarine	2,545 t	22.1	9.3
Instant Coffee	134 t	26.0 (1982)	
Beer	1,435,800 hl	45.6	32.5
Fermented drinks	65,500 hl	45.8	45.8
Soft drinks	366,650 hl	49.6	19.6
Wine	280,000 hl	21.8	12.1
Liqueurs and Spirits	20,500 hl	101.3	68.3

Source: Min. of Industry, adapted from Industrial Development Review Angola.

Table 6.2.4: Priority list for investments in food industry

Product	Available capacity	Plan for annual prod. potential		Required Investment (Kz million) Local	Foreign	Total US$ Equiv.
Wheat flour	76,000 t	100,200t	Expansion	-	30.0	1.0
Maize flour	78,514 t	110,400t	"	-	45.0	1.5
Yeast	-	1,200t	Rehab.	0.9	39.3	1.3
Bakery prod.	13,685 t	12,000t	Expansion	20.0	45.3	2.2
Cooking oil	-	14,800kl	"	75.0	200.0	9.2
Margarine	2,545 t	5,800t	New proj.	26.3	215.1	8.0

Source: Ministry of Industry

6.2.3 Linkages

At present, the domestic backward linkages to the agricultural sector are disrupted on account of unavailability of raw material. The dairy processing branch, for example, has to rely on imported skim milk powder and fat. The situation is similar in the vegetable oils and fats and the flour milling branches, which to a large extent had to replace local oilbearing seeds, wheat and maize by imports. Meat for processing is not available in the Luanda area and, in at least one case, fish is used as a substitute in a meat processing plant, in an effort to keep production going.

The major linkages are illustrated in Figure 6.2.3. The stockfeeds and meat processing industries are examples of branches which frequently have complex and strong backward linkages, but this is not the case at present in Angola.

As pointed out elsewhere in this study, the bag manufacturing branch is intimately linked to the food processing sub-sector, without being part of it. Its importance for a large number of food processing branches is undisputable: without a sufficient supply of bags for raw material and food products the industry would not be able to operate, given the present system for material handling and transport.

6.2.4 Ownership pattern

In 1985, 31 out of 41 food industries were state-owned, two were mixed and eight privately owned.[1/] These data apparently represents less than half of the number of food industries listed in the official register of enterprises. The same source also quotes that the state-owned companies, contribute 56 per cent of the gross output of the entire manufacturing sector, as compared with 29 per cent for the private sector. This indicates that productivity in state-owned enterprises is, on an average, only half of that in private companies.

6.2.5 Policies as they relate to the food processing subsector

In addition to the policies affecting the manufacturing sector as a whole (see section 5.7.3), the food processing sub-sector is primarily guided by the key policy issue of self-sufficiency in food.

This implies inter alia that the success of the strategy for increased agricultural production is a prerequisite for the regeneration of the food processing sub-sector. Once self-sufficiency is achieved, surpluses are to be exported.

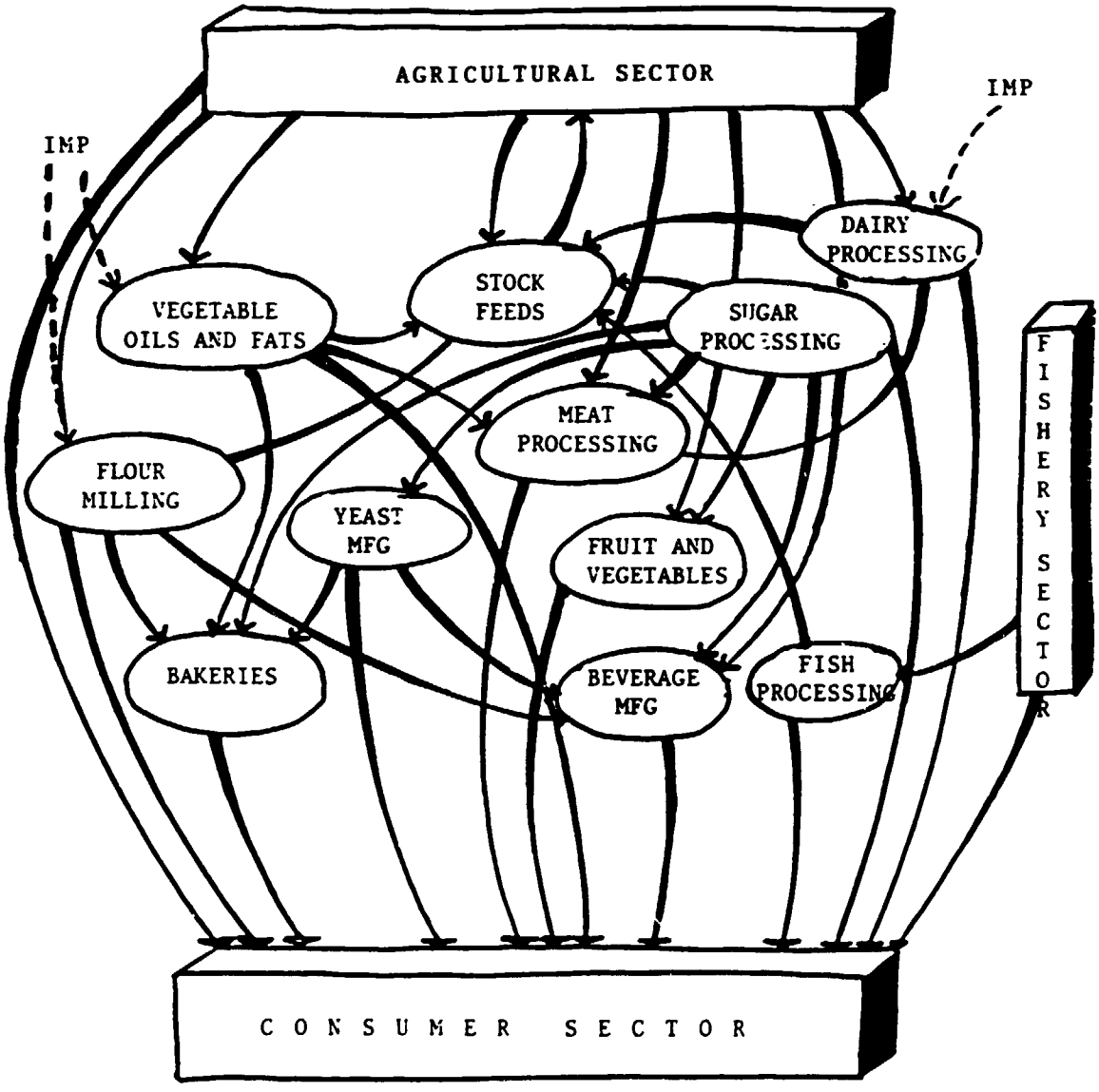
To rationalize both the agricultural sector and the food processing sub-sector, the viability of enterprises will be given more attention. Privatisation is seen as the main avenue to achieve the target of viability, but state companies, mixed and co-operative ownership will continue to play a role where this is considered essential by the Government.

1/ Sources: Hodges/EIU, Ministry of Industry.

There are as yet no firm detailed policies for the development of the food industry. Their formulation must be based on full understanding of the specific conditions of the different branches and their likely reaction to various policies.

Figure 6.2.3

Principal linkages in the food processing sub-sector



CHAPTER 7

THE CHOICE OF PLANTS

7.1 The selection process

The choice of plants for this study was made by the mission after consultations with the Ministry of Industry, other government departments including Agriculture, Finance, Trade and the BNA, and representatives of the Angolan business sector and of the country's main bilateral and multilateral co-operation partners.

During a preparatory mission in early July 1988, a list of ten candidate enterprises was put forward by the Ministry of Industry, to which three more firms were added on the arrival in Luanda of the substantive mission in early September. The enterprises submitted by the Angolan authorities represented both the public and the private sectors, and for the most part were based in the country's major industrial zone which is located in the Luanda area. The amount of information available on the individual companies varied considerably, and in making a final selection, the mission took this factor carefully into account. In this context, the mission examined company reports and accounts, where these were available, and met directly with representatives of management in all nominated companies situated in the Luanda area. The mission also interviewed officials from the various Angolan bodies mentioned above, and representatives of agencies, such as the Swedish International Development Authority (SIDA) and the European Community (EC), and of private financial institutions in Angola such as the Banque Paribas.

For the final selection, the following criteria were applied:

(a) The plants should be selected located within a strategic industrial sub-sector, preferably in the agro-industrial branch.

(b) The plants should have a good future economic potential and thus be viable rehabilitation projects.

(c) In view of shortages of foreign exchange resources, the projects should be able to attract funding from donor(s), especially European ones and/or commercial enterprises, and should be of a bankable nature.

(d) The projects should have the economic capacity to reduce imports and/or increase exports.

(e) In order to enhance the impact of eventual rehabilitation efforts, the selected plants should exhibit a maximum number of interlinkages.

(f) The projects should be able to mobilise domestic resources and inputs.

(g) The enterprises should be drawn from both the public and the private sectors.

(h) The plants should be located within Angola's main industrial zone in the Luanda area, given time and transport constraints.

7.2 Selected enterprises

After further consultations with the Angolan authorities, the mission felt that only four companies could be properly examined in the time available for the plant visits. These were:

(a) Fabrica de Alimentos Lda., FAL (private)

(b) Industrias Angolanas de Oleos Vegetais S.A.R.L., INDUVE (private, involving foreign public capital)

(c) Quicolo milling complex, Empresa Regional de Moagens (Norte) U.E.E. (public)

(d) Fabrica de Artigos de Fibras Sintiticas S.A.R.L., FIBREX (private)

The latter is not a food processing enterprise, but a packaging material producer. The industry was included because bags are essential for transporting and marketing food products. Apart from FIBREX, Sociedade Industrial de Grossarios de Angola S.A.R.L., SIGA, (private) was included in the analysis to obtain a complete picture of the bag manufacturing industry in Angola, with special reference to raffia type bags.

Complexo Acucareiro Amizade Angola/Cuba (public), also known as the Bom Jesus estate, was added to the group of enterprises examined for the reasons discussed below.

7.3. Justification and linkages

The current policy trend towards increased rationalisation of industry has justified the focusing of the present study on problems inherent to the private sector, not disregarding the specific constraints facing the public sector enterprises. Thus, out of the four enterprise chosen for analysis at a plant level, three belong to or are closely associated with the private sector.

FAL

FAL is one of the few meat/fish processing plants still operating. It has had, and continues to have substantial difficulties in obtaining necessary inputs. Substitute material is presently used. This situation has prevented the enterprise from producing the wider range of processed products it is capable of handling, and which would cater for the needs of customers in different income groups. FAL is located in Luanda and has a good potential for rehabilitation, partly due to the generally high standard of its facilities, and above all, a competent and devoted management.

The future production would be channeled mainly to the domestic market of northern Angola, but with scope for exporting specialised high standard products in a longer term perspective. Given the availability of sufficient

quantities of meat, the backward linkages would be rediversified, thus mobilising domestic resources and inputs to a greater degree (Figure 7.3, Major linkages selected enterprises).

Given the potential of FAL, once the supply situation is normalised, the local funds necessary for rehabilitation are believed to be available, provided the foreign exchange requirements can be arranged.

INDUVE

The product range of INDUVE includes edible oil and soap, two items of strategic importance for Angola. INDUVE's location in the major industrial centre of Luanda, which is also Angola's leading port, constitutes an insurance that supplies of imported raw material can be secured even at present, when domestic raw material is not available in sufficient quantities.

The plant is in need of rehabilitation in order to ensure the supply of edible oil, especially to the northern areas of Angola. The rehabilitation needs are primarily centred on the refinery section which, once rehabilitated, would constitute an essential component of the vegetable oils and fats branch at national level. Both edible oils and soaps have a stable market demand with comparatively low price elasticity.

Under normal business and economic conditions, investments in this branch involve marginal, if any financial risks. Hence, the financing of a rehabilitation programme is expected to be attractive to potential financing institutions, donor(s) and also possible joint venture partners, once economic conditions progress under the SEF programme.

Under such circumstances, when agricultural output begins to pick up with the resumed cultivation of oil bearing seeds at least for the domestic market, the backward linkage to agriculture and primary vegetable oil industries is expected to be strong. This is not the case at present, as is apparent from Figure 7.3. The forward linkages are not influenced by the present situation. However, the number of such linkages will increase in any future expansion of the food processing sub-sector.

Quicolo milling complex

The Quicolo milling complex is part of Empresa Regional de Moagens which is a state enterprise. Quicolo incorporates a wheat flour mill and a maize mill/stockfeed plant, including a storage silo for raw material which is not yet completed, both in regard to the civil works, which were abandoned in 1984, and the equipment, which has been on site since the mid-1970s. Interest is focused primarily on the wheat mill, which has encountered various problems in the past. The current situation, involving a heavy reliance on imported wheat to satisfy the urban market in and around Luanda with wheat flour, puts wheat milling in a particularly important strategic position in relation to the supply of bread as a staple food.

The rehabilitation requirements are wide ranging. Given that an integrated approach is applied to the rehabilitation of the mill, the impact on the future supply of wheat flour will be substantial, if wheat continues to be imported in sufficient quantities.

The backward linkage of the wheat milling industry, as a whole, is not expected to be particularly strong in the foreseeable future because of the comparatively limited domestic production of wheat, even if viewed in a historical perspective. Forward linkages are diversified, as illustrated in figure 7.3.

The very important role of the Quicolo wheat mill in the overall supply of food, coupled with the complexity of rehabilitation requirements, could make the project attractive to bilateral donors. A combination of private sources of financing and technical assistance might constitute a possible alternative.

The extent to which the Quicolo wheat mill will be able to use domestic inputs depends on future policies relating to the supply of staple foods and the long term strategy for agricultural production in Angola.

FIBREX

The supply of bags is vital for transporting and marketing agricultural commodities such as grain, beans, oilseeds, coffee, cotton etc, and also for products from the food processing sub-sector. Bags are both imported and produced domestically. In the case of Angola, raffia type bags are manufactured by two companies. Following a preliminary investigation of the two candidate firms in this field, it was concluded that the physical rehabilitation needs of FIBREX were greater than those of SIGA, other factors being relatively equal notably in regard to management capacity and institutional constraints. Although the bag manufacturing branch is included in this study partly because of the strategic importance of this industry from a food supply point of view, it also stands in its own right on account of its strong forward linkages to a range of branches in other sub-sectors.

All raw materials in this particular branch are currently imported; backward domestic linkages are weak.

The scope for exporting raffia bags at competitive prices, and yet with an acceptable margin, is not very promising. The character of the industry and the strategic importance of the product suggest that development banks or other financing institutions providing soft loans to industry might be interested in funding a future rehabilitation scheme.

SIGA

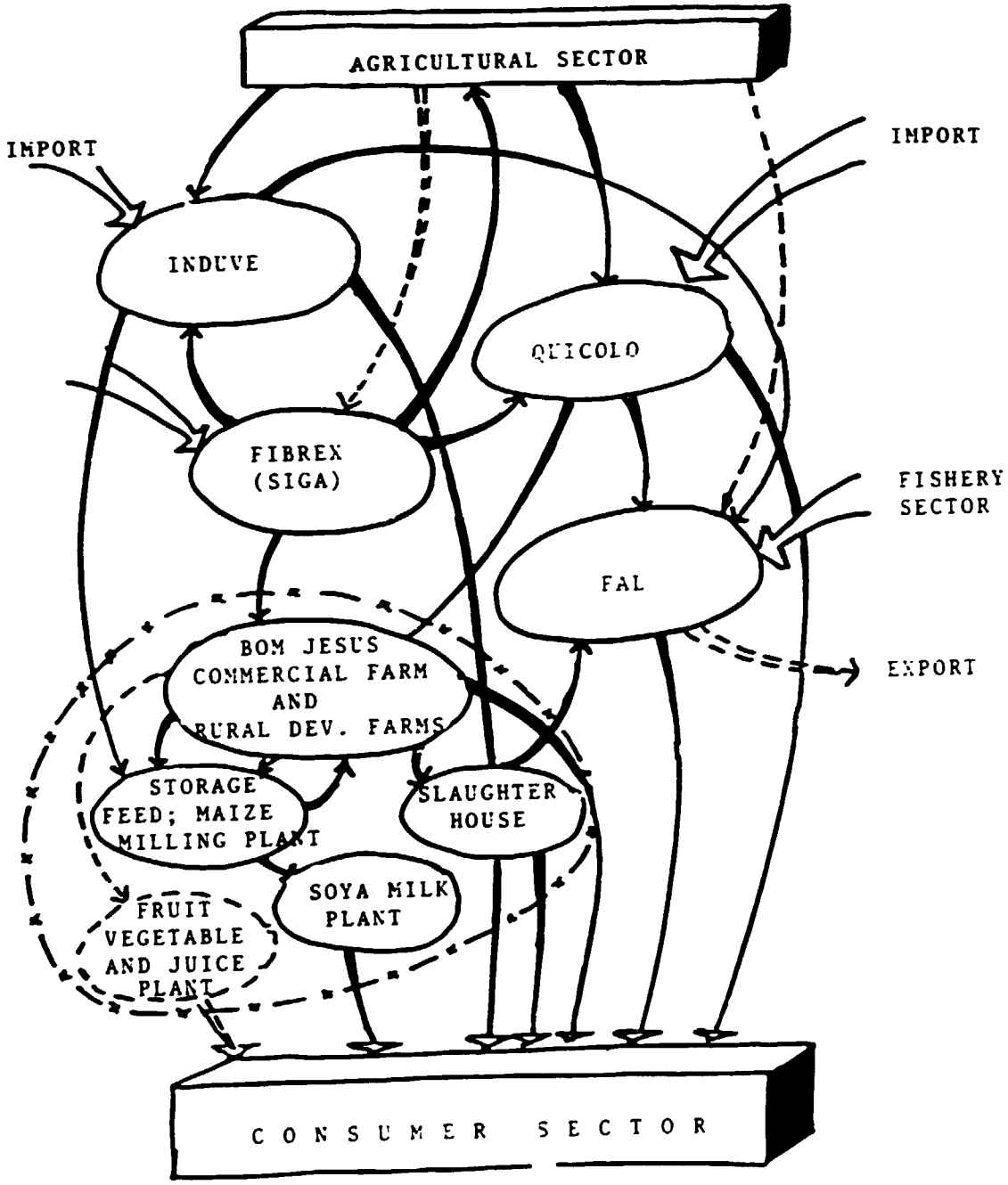
This company is included in the study mainly to obtain a complete overview of the Angolan raffia bag manufacturing industry for an assessment of future investment options. A second reason was to provide a better background for the analysis of suitable steps relating to the possible future resumption of bag manufacturing based on natural fibre, since SIGA retains a complete jute processing line which has not been in operation since 1975.

Complexo Acucareiro Amizade Angola/Cuba

This is a former sugar estate located at Bom Jesus, which is the conventional name used for the estate. After the termination of the estate's operations in 1980, the property and associated factory buildings have fallen into disuse, save for the modest cultivation of some 30 hectares. The desire on the part of the Ministry of Industry to convert the estate to an agro-industrial enterprise, the evident demand for specific raw materials for processing in the Luanda area, and an earlier UNIDO assessment calling for more comprehensive studies, justified the addition of Bom Jesus to the list of selected enterprises, notably in regard to the preparation of technical suggestions as to how the former sugar estate might best be rehabilitated and used in a productive manner. Annex A contains more details on this project. The role of a rehabilitated Bom Jesus estate and the linkages are illustrated in Figure 7.3. Alternative modes of financing may be considered where a combination of soft long term credits, commercial loans and bilateral donor contributions would be one alternative.

Figure 7.3

Major linkages selected enterprises



CHAPTER 8

BRANCH PROFILES

Introduction

The choice of plants was discussed in the preceding chapter. Having identified the plants, it is useful to provide information on the corresponding branches. This background is essential for chapter 9, which analyzes each plant in detail.

8.1 Meat processing

8.1.1 Overall characteristics

The meat processing branch incorporates slaughtering and processing of cattle, pigs and poultry. All these raw materials have become scarce if not unavailable in Angola since the late 1970s. Within the Instituto de Investigaçao de Pesca a method was developed where fish instead of pork and beef is used as the base for sausage production.

Because of the scarcity of beef and pork many factories have closed down or switched to fish. One company in Huila, Comerce & Industria de Huila, is known to produce only canned fruit at the moment.

The two most important companies still producing meat products are FAL in Luanda and BUCACO in Huambo. FAL has since ten years based its products on fish, while BUCACO is actually basing its production on stray pigs that can be found almost everywhere in Angola. This supply is obviously irregular, and has to be supplemented with imported pork. SIPAL in Huambo and PROTEICA and TRANCOSO VAZ in Huila have been closed down.

FAL is the only company that is all privately owned; the rest are owned and run by the Government.

8.1.2 Major problems and constraints

The major problem facing the branch is the severe shortage of pigs and cattle as raw material. This in turn can be blamed to great extent on the ongoing war, preventing the raising of animals in large areas of the country. The war has also disrupted communications between the hinterland and the more densely populated areas where manufacturers and consumers are located. There are areas in the center of the country where there is a huge surplus of animals but they are not available because of transport problems and the fact that a potential buyer cannot offer any acceptable means of payment (that is, goods in return for the animals).

Frequent outbursts of swine fever are also a constraint on pig supply. One cause of those epidemics is said to be the bad hygiene in the state slaughterhouses.

Another big problem is the frequent power cuts which damage not only products and raw material stored in refrigeration rooms, but also the installations themselves. The strong temperature fluctuations create cracks in the walls. Certain processes, moreover, cannot even take short power disruptions without requiring a long and complicated start-up procedure. This means that, in order to secure uninterrupted production, spare diesel generator plants are necessary.

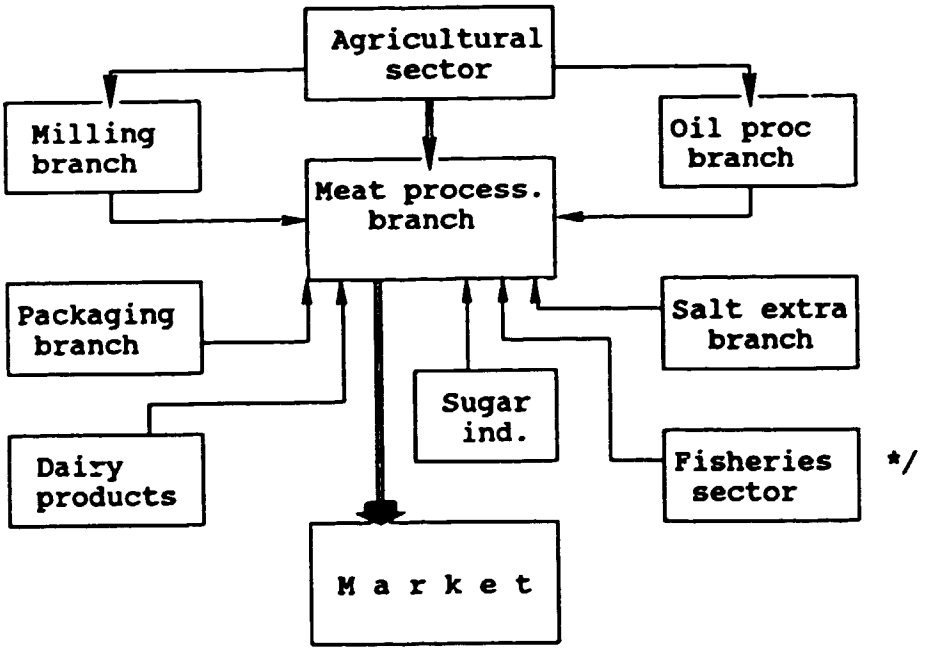
In a barter economy goods are more attractive than money; theft is therefore a big problem. Anything that can be exchanged for goods is stolen: raw material, packaging material, spare parts and finished goods. Up to 35 per cent of material in process has been recorded stolen in some factories. One factory where fish is used as raw material receives on average, 45 per cent less fish than it is billed for.

8.1.3 Linkages

Linkages to various branches and sectors are shown below in figure 8.1.1

Figure 8.1.1

Linkages related to the meat processing branch



* This is the temporary supplier of raw material to the branch until pork and beef are available again on the Angolan market.

8.1.4 Spatial distribution

The security situation in the country is such that the two regions where the fish and meat products branch is now located must be considered as autonomous regions. There is no competitive interaction between the two areas at present. When we consider the rehabilitation requirements of this branch, we must therefore bear this situation in mind, as new investment of any type must both be viable under the present circumstances and in a situation of peace, when considerable changes in the competitive environment are certain to occur.

We will therefore outline each area separately as follows:

(a) Luanda and the surrounding region

The fish and meat products branch is concentrated on the large urban area of Luanda and the major processing factory, which has no serious competitor in the whole area for its type of products (such as smoked fish and fish sausages) is FAL. This company is located in the Cazenga Industrial Zone of Luanda and has a rated capacity of 465 tonnes of processed fish or meat products per year.

Other producers, who are competing to some extent with FAL, are local fishermen who supply fresh fish directly to the market. Fresh fish appears to be in abundant supply and is found in all of the many markets surrounding Luanda city at the parallel market prices of Kz 5,000-6000/kg (see Annex C). Dried fish, which individual local fishermen land and dry in the open air by the roadside, is also sold in the Luanda markets at parallel market prices.

(b) South-western region

A meat processing company, PROTEICA, was located in Lubango. The company had very old machinery, which required a large labour force. It was originally rated at 7,000 tonnes/year but was forced to close down, as farmers were unwilling to sell their livestock to the factory at the official prices.

Another enterprise is the processing company BUCACO, which still produces a range of sausages and other processed meat. It cannot be judged to be a competitor of FAL in the Luanda region because of its slightly different product range, catering mainly for the Portuguese taste, in addition to its distant geographical position.

8.1.5 Ownership patterns

Many companies within this sector were in private hands before Independence, but have since been subject to nationalisation or been shut down for lack of raw material or other reasons.

According to FAL, most of the remaining companies that are operational are therefore state-owned. These represent about 93 per cent of the total; the privately owned account for 7 per cent.

8.1.6 Policies and institutions as they relate to the meat processing branch

Reference is made to chapter 6.2.5 Policies as they relate to the food processing sub-sector are the same for this branch.

8.2 Vegetable oil seeds processing branch

8.2.1 Overall charactaristics

Prior to Independence this branch was well-represented in Angola, with a number of major oil mills (see 8.2.4). Only two factories in this branch are currently operating in the Luanda area, INDUVE producing edible oil and soaps and OLMAG producing soap.

The branch formerly used locally produced raw materials - such as sunflower seed, palm oil seed and cotton seed - for all of its requirements. As the branch at that time could not process all of the raw materials produced, a significant quantity of palm oil seeds was exported (11,500 tonnes in 1970). However, due to the collapse of the agricultural sector, virtually no local raw materials are now available and therefore these have to be imported from Argentina and elsewhere. Due to the fixed price structure imposed by the Government, the company cannot operate profitably, It is therefore considering abandoning the grinding, pressing and chemical extraction of the seeds; instead it would merely import crude oil and refine it into edible oil and soap. The oilseeds processing branch would then cease to exist unless new facilities were installed elsewhere in the country, such as in the rural areas, when these eventually become secure.

8.2.2 Major problems and constraints

The major problem facing this branch of industry is the pricing of its main product, edible oil, which is termed a strategic commodity. At the current controlled price levels there is no incentive for any existing company or new company to invest in oilseeds processing facilities, as such an exercise would not be profitable. With low selling prices factories would have to operate with a high level of capacity utilisation, but as they now have to rely on imported seeds, they are totally dependent on obtaining sufficient foreign exchange. They would therefore need large and regular supplies of foreign exchange to be able to operate. The shortage of foreign exchange has been and will continue to be a major constraint for the oilseeds branch.

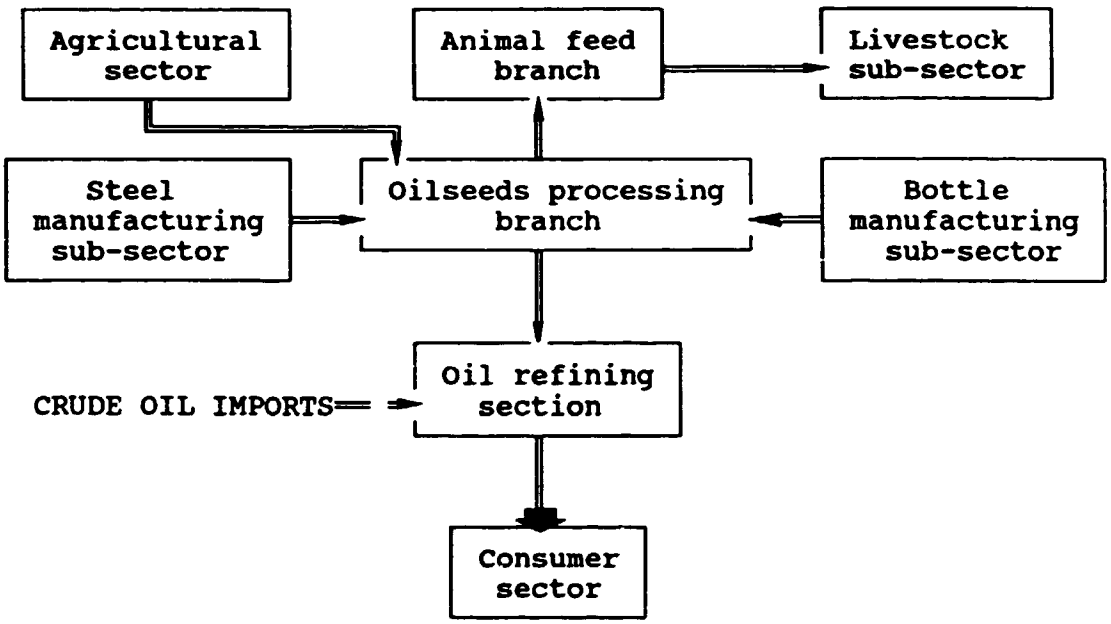
Without locally produced raw materials to supply the branch and limited foreign exchange for both spare parts and experienced expatriate engineers (to train local personnel in the maintenance of existing crushing, pressing and extraction facilities) the branch has allowed its plant to deteriorate, seeing no future in relying on imported seeds. The safer and far less demanding option of importing only crude oil is now the immediate aim of the branch.

8.2.3 Linkages

The oilseeds processing branch has a strong backward linkage with the agricultural sector for its raw materials and a direct forward linkage to the animal feed sub-sector, hence to the livestock sub-sector, as outlined below. There is also backward linkage to the bottle manufacturing sector for its container needs and the steel manufacturing sector for its spare parts.

Figure 8.2.1

Linkages related to the oilseeds processing branch



At present, the backward linkage is to the foreign agricultural sector, whereas previously it was to a domestic agricultural sector. The forward linkage to the animal feed sub-sector and livestock sub-sector has been weakened and is now dependent on a single major processor. This forward linkage could be destroyed, if this one company does concentrate on refining imported crude oil.

Linkage aspects of the development of the vegetable oil seeds processing branch

In order to maintain a manufacturing capability in this branch of agro-industry in Angola, it is essential that the forward linkage to the animal feed branch is strengthened. In the short-term this can be achieved by a rehabilitation of the oilseeds crushing, pressing and extraction facilities of the INDUVE factory with a technical assistance programme. This programme should include the provision of experienced maintenance personnel to carry out both the training of local staff and also hands-on practical

maintenance work. In conjunction with this work the provision of a more reliable water supply to that factory is essential. Provision of financing for the necessary spare parts would also be necessary.

The medium term plans of INDUVE include an investment in a new oil refinery with increased capacity to replace the existing plant. Under currently prevailing conditions the factory would use at least some imported crude oil; if the rehabilitation of the grinding, pressing and extraction systems was not carried out, the factory would eventually use only the imported crude oil for its basic raw material, despite the higher tariffs. While the latter is a much easier option for the factory, in terms of easier management and maintenance etc., it would be a significant step backward in terms of long-term branch interests. For there would be no facility in the country for the processing of oilseed once the security situation improves and local production of oilseed recommences. Rehabilitation of this facility therefore would have significant long-term benefits to the economy, quite apart from the immediate benefits to the company.

It is proposed that once agricultural activity can recommence in the north-western palm oil production areas, INDUVE and the soap producers would process the seed directly. In the sunflower seed and cotton producing areas in the north-west, central and southern regions it is suggested that a number of small local presses of different sizes be established, which would directly supply the local population with oil. The cakes would be used to feed livestock in those areas. Any surplus crude oil production would be transported to the new INDUVE refinery for further processing. The overall effect would therefore be to strengthen the agricultural and animal feed linkages with a corresponding improvement in the overall efficiency of the oilseeds processing branch.

8.2.4 Spatial distribution

The oilseed processing industry is now limited to a single operating factory, INDUVE, situated approximately 10km north of Luanda. It should be noted that even this company is operating at a loss and has been for many years. Nominal capacity was stated to be 100 tonnes per day.

Prior to Independence a number of other crushing plants were in existance in the country, including the following:

(a) A.A.A., a state-owned company in Catumbela, Benguela, with a nominal capacity of 1,346 tonnes/year.

(b) UPOHKA, a state-owned company located in Malanje, with a nominal capacity of 322 tonnes/year. The factory has a screw extraction plant for cotton seeds.

(c) INDUMIL located in Huambo is a mill for maize seeds only.

(d) EGC (Empresa de Gorduras Centro), located in Lobito, with a rated capacity of 50 tonnes per day, utilising sunflower seeds and groundnut.

(e) CONGERAL, public subsidiary of OLMAG, located in Luanda but closed in 1977.

None of these five plants is operational. The Benguela plant has very old equipment which could not be utilised if sunflower seed supplies become available again. The plant would need completely new equipment. As noted, INDUVE under the present price constraints would prefer to move away from the processing of oilseeds and concentrate solely on the refining of imported crude oils. This would mean that the oilseeds processing branch would disappear completely.

The branch also includes the soap industry, consisting of the following factories:

	Location	Type	Nominal capacity (tonnes/year)
1. INDUVE	Luanda	Private	5,500
2. OLMAG	Luanda	State	2,690
3. BARATA & BARATA	Benguela	State	3,480
4. SODETE	Huambo	State	4,693

Source: Ministry of Industry

All of these factories were stated to be operational.

8.2.5 Ownership patterns

The state-owned companies account for 36 per cent and the private sector for 64 per cent of total employment in the branch. The three main producers of edible oils and/or soaps were INDUVE, OLMAG and EGC. The latter has been reported to be non-operational. INDUVE is privately owned; the two others are owned by the state.

Shares in the INDUVE company are owned by three Portuguese companies:

- QUIMIGAL	60 per cent
- SNS (Sociedad Nacional de Saboes)	30 per cent
- MACEDO COELHO	10 per cent

Source: INDUVE

8.2.6 Policies and institutions as they relate to the vegetable oil seeds processing branch

The policies reviewed under 6.1.5 are applicable to oilseed processing. Currently there is no duty on imported oilseeds, but the price of the final edible oil product is controlled, which currently makes investment in this branch extremely unattractive to private companies.

8.3 Flour milling

8.3.1 Overall characteristics

The flour milling branch processes cereals, mainly wheat and maize. However, traditionally, the processing of other grains and root crops (such as millet and cassava) are also important.

Only rough estimates exist on the size of the branch. The estimated total capacity for processing both wheat and maize is about 156,414 tonnes, according to the Ministry of Industry. About 77,500 tonnes of this total are processed in seven wheat mills, the remainder being processed in 15 maize mills.

Maize and wheat are imported, although they could be obtained domestically if agricultural production increased. While in 1973, 32,848 tonnes of wheat and 853,847 tonnes of maize were produced, in 1986 the output of wheat and maize were 32,848 and 287,853 tonnes respectively. The causes for this decline in agricultural production have been referred to above. Moreover, the sector has suffered from drought and persistent irregular rainfall. The Government has put the increased production of maize as a top priority in its agricultural programmes.

8.3.2 Major problems and constraints

The major problem the branch is facing is low capacity utilization. Most plants are either operating below capacity or closed: out of the 15 maize mills, for example, 10 are said to be closed.

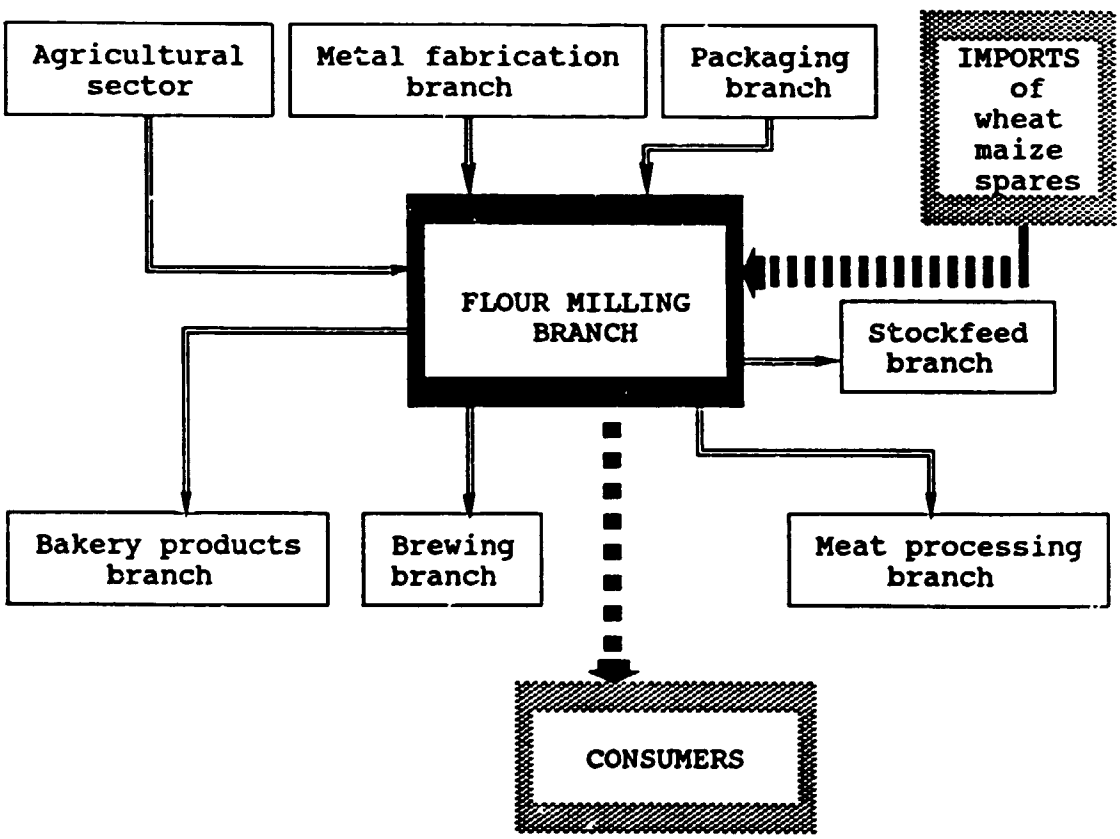
The low capacity utilization is caused by the lack of raw materials and the poor state of equipment in the plants. Imported grain was initially substituted for domestic raw materials. However, these imports have had to be restricted because of the lack of foreign exchange.

8.3.3 Linkages

The major linkages of the flour milling branch to other branches, sectors, imports and consumers are shown below:

Figure 8.3.1

Linkages relating to the flour milling branch



8.3.4 Spatial distribution

The flour milling branch is concentrated in the South West and North West of Angola. Table 8.3 shows the distribution of the major plants.

Table 8.3: Distribution of flour - milling plants

District	No. of plants
Benguela	7
Huila	3
Huambo	3
Luanda	5
Bie	1
Lunda Sul	2
Malange	1
Total	22

Source: Ministry of Industry.

The table shows that the flour milling plants are concentrated in Benguela and Luanda, areas of concentrated urban populations.

8.3.5 Ownership patterns

Most of the flour milling enterprises are Government-owned. They were taken over by the Government when the former Portuguese owners deserted the country after Independence in 1975. According to the records at the Ministry of Industry, only one maize flour plant is privately owned.

8.3.6 Policies and institutions as they relate to the flour milling processing branch

Currently, Government policies are focussed on increasing industrial output to achieve production levels of 1973. This implies increased capacity utilization in the flour milling branch.

The Government also encourages industrial plants that supply food to the armed forces and the population. In this context, the flour milling branch becomes a priority for increased capacity utilization and for rehabilitation.

Government has also made increased maize production a top priority in agriculture. This should increase the supplies of domestic raw materials to the branch.

8.4 Package manufacturing branch

8.4.1 Overall characteristics

As pointed out in previous chapters, the availability of bags is of strategic importance for handling, transport and storage of a variety of agricultural commodities and products processed in agro-industries.

Bag manufacturing in Angola is mainly based on synthetic material. In the past bags for cereals and coffee beans were made of jute, but in 1975 the only production line in the country was closed down. Manufacturing of raffia bags declined from 8 million in 1973 to 1.8 million in 1985, followed by an increase to an estimated 4 million in 1987.

The manufacturing industry for plastic bags includes five companies. Two of the companies are also making raffia bags.

Table 8.4: Location of plastic bags factories

Company	Location	Capacity tonnes nominal	Plastic tonnes 1987	Raffia tonnes 1987	Raffia max 1/
SIGA	Luanda	7,200	600	1,500	1,500
FIBREX	Luanda	1,800	79	-	780
INSUL	Lobito	1,590	0	N.A.	0
PECLENE	Huambo	720	0	N.A.	0
SOPLAS	Huila	400	0	N.A.	0

1/ After rehabilitation

Most of these companies also manufacture other plastic products such as vessels, tubing, sealings, etc., where waste material is re-used to some extent.

The present national output of raffia bags amounts to 679 tonnes, equivalent to about 4.2 million bags of medium size (50 kg). If the two plants presently manufacturing raffia bags were rehabilitated and could operate without any major constraints, the overall production would increase to 2,280 tonnes per year, corresponding to approximately 14 million bags of 50 kg capacity.

8.4.2 Major problems and constraints

Plastic raw material for bag manufacturing has become increasingly difficult to obtain. In fact, the industry expects that foreign exchange allocated for purchase of raw material, cannot be fully utilized in 1988. The reason for this is not quite clear. It does not necessarily reflect an increasing gap between availability and demand on the world market.

The directives for plastic raw material imports, state that sea transport must be carried out by ANGOLNAVE, a state-owned shipping company. The arrival of the cargo vessels in the port of shipment is frequently delayed and poorly co-ordinated with delivery of the product to the dockside by the supplier. Payment, which is due when the product is on board ship, is therefore delayed and it is likely that the supplier gives priority to other costumers to reduce the risks of delay of payment.

Like the manufacturing industry in general, the manufacturing of raffia bags is also faced with mechanical deficiencies in production equipment. Spare parts have been difficult or impossible to find locally, the foreign exchange scarcity has prevented the acquisition of sufficient imports and the lack of sufficiently trained technical personnel at different levels has aggravated the maintenance problems.

In spite of all this, the two raffia bags manufacturers have managed remarkably well, utilizing about 50 per cent of their capacity.

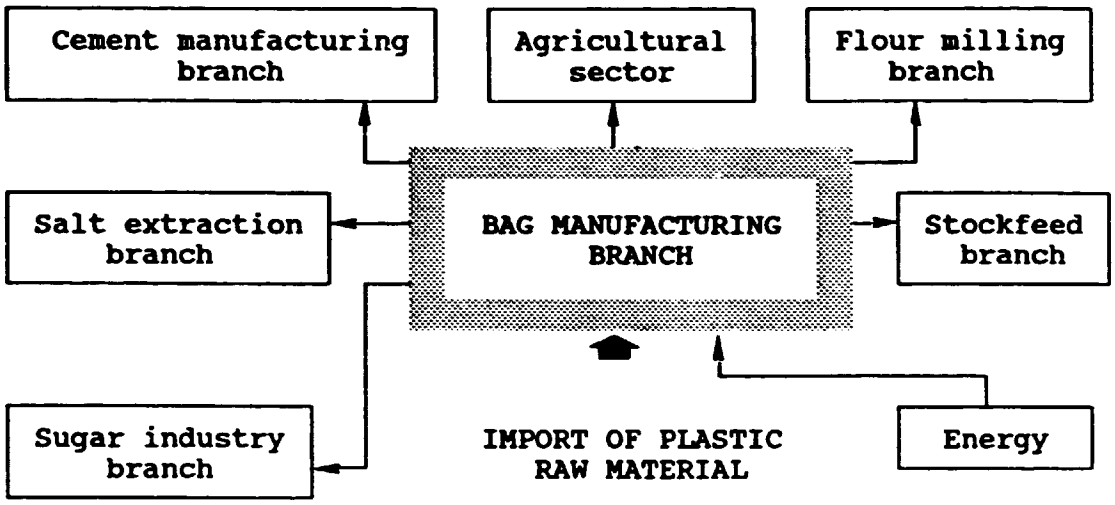
The new directives for increased agricultural production are likely to result in larger marketed quantities of cereals, beans, groundnuts, sunflower etc. and increased demand for bags. If agricultural raw material supplies are normalized again, production stops due to mechanical breakdowns are likely to become more severe and frequent, as the deficient equipment will be used more intensively. There is no official project available regarding the demand for bags over the next few years, but obviously rehabilitation of the bag manufacturing industry, especially raffia bags, is essential for satisfactory future domestic supply.

8.4.3 Linkages

The bag manufacturing branch in Angola has strong forward linkages to the agricultural sector, to the food industry sub-sector and also to other sub-sectors in the Angolan economy. These are illustrated in Figure 8.4.1. Backward linkages are poor since the branch is largely dependent on imports of plastic raw material.

Figure 8.4.1

The bag manufacturing branch - basic linkages



8.4.4 Ownership pattern and spatial distribution

The bag manufacturing industry is mainly privately owned. The ownership pattern of the two enterprises manufacturing raffia bags is as follows:

Company	Share capital '000 Kz	Per cent				
		Angolan	Portuguese (1)	Portuguese (2)	State	Others
SIGA	70,000	16.30	0.30	65.50	17.10	0.80
FIBREX	17,500	23.15	-	76.85	-	-

(1) resident in Angola
(2) resident in Portugal

The extent to which the Portuguese living in Portugal have an influence on the decision-making process is not quite clear. It appears, however, that the general managers are authorized to act quite freely. In the case of SIGA, the state owns a minority share, but it is not represented on the board of directors, nor does it assign a representative to attend the general assembly.

Both raffia bag manufacturing companies are located in Luanda, whereas the companies making only plastic bags and other plastic products are located in other provinces (see Table 8.4).

8.4.5 Policies and institutions as they relate to the package manufacturing branch

The Government subsidizes plastic bags. For imported plastic raw material, the enterprises only pay fifty per cent of the import duties. This policy dates back prior to 1975. It is expected that under the SEF programme import duties and tariffs will be revised.

At present pactically all of the bags produced are distributed through Ministries or state enterprises such as the Ministries of Trade (formerly Ministry of Domestic Trade), and Fisheries and EDIPESCA. Only a small part of the production is sold directly to private enterprises or directly to consumers. In the future, the enterprises will have more freedom to sell their products according to market conditions, as the state will disengage itself from retail trade and the state enterprises will no longer have a wholesale monopoly. Because of the importance of the branch for further development of food products industry, the mission has formulated a number of suggestions for the future development of the branch as a whole. These may be found in Annex B.

CHAPTER 9

PLANT PROFILES

9.1 Fabrica de Alimentos, Lda - FAL

9.1.1 Existing situation

(a) Plant history

Fabrica de Alimentos LDA (FAL) was formed on 25 October 1972. After the construction of the factory was completed, the company started business in October 1974, operating as a private enterprise, in the form of a joint venture between an Angolan business enterprise and an Austrian company.

FAL was originally established with the objective of producing a variety of meat products using locally reared cattle, pigs and chicken. Up to 1976 all of the beef, pork and chicken required were obtained from the Luanda area, and a full range of 52 different products, including sausages, cooked salami, ham, polony and ten chicken products, was produced at the factory.

During the events following Independence in November 1975, local supplies of cattle, pigs and poultry rapidly diminished due to a general collapse in livestock and agricultural production, and throughout 1976-77 the company was obliged to secure its carcass meat from the Lubango region in order to remain operational. This, however, proved to be only a temporary solution, since by late 1977 meat supplies from Lubango also became impossible to obtain. With no opportunity to buy any meat supplies from the domestic market, FAL then had no choice but to import its beef, pork and chicken requirements during the 1978-79 period, in order to survive in business. Foreign exchange for these imports was very difficult to obtain and as the situation in regard to input supplies continued to deteriorate, a decision was taken in 1979 to change from meat to fish products. Assistance was provided with the development of these new products by a Portuguese technician at the Fish Research Institute of the Ministry of Fisheries.

As from 1979 the FAL factory initially utilised only shark meat, which was plentiful at that time, but after foreign factory ships entered the fishing area off Angola, the supply of sharks to Luanda virtually disappeared, and FAL once again had to change its type of input for food processing. For a period in the early 1980s, FAL remained operational by utilising mantas, which were then very plentiful, but that supply has also since disappeared, as the mantas are no longer landed locally by factory ships.

Currently the company is operating at approximately 25 per cent of capacity, utilising a mix of different types of fish (mainly cutlass fish and carp). However, local supplies of all types of fish are becoming more irregular, and the average size of the fish smaller, as the factory ships continue to absorb all of the prime large fish for their own processing purposes. Consequently, although the FAL factory is still operating profitably, the profit level has been steadily declining to a current rate of 12 per cent.

The future of this company depends entirely on its ability to obtain adequate supplies and therefore its current plans include an application to import meat once more during 1989. The possibility of securing such imports, however, remains uncertain due to the limited amount of foreign exchange allocated to the company, which is therefore renewing its longstanding attempts to diversify its fish product range. To date this FAL initiative has been thwarted by the unavailability of foreign exchange to import the required equipment.

Despite the many difficulties experienced by this particular company since 1976, it is significant to note that the firm has endeavoured to reinvest its profits, whenever it has been allowed to do so by the provision of foreign exchange. However, in the past few years, such opportunities have become much more limited. The build-up of fixed assets within the company is as follows:

Year end	Fixed Assets (Kw '000)
1977	9,689
1978	13,763
1979	15,312
1980	15,813
1981	19,020
1982	17,909
1983	21,942
1984	19,329
1985	19,389
1986	20,416
1987	20,470

(b) Management and organisation

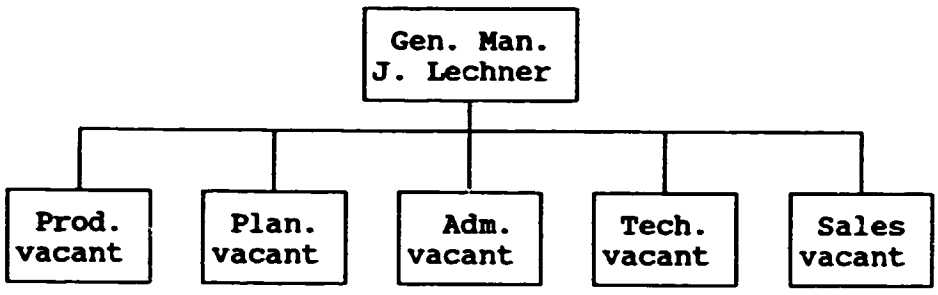
Fabrica de Alimentos, Lda (FAL) is a privately owned company with two owners, namely Socio Gerente, an Austrian company belonging to the FAL general manager, Mr Jakob Lechner (Austrian citizen) and Mabilio M. Albuquerque Comercial S.A.R.L., an Angolan enterprise, on a 50/50 basis.

FAL's legal form is that of a "sociedade comandite", (a private limited enterprise), which was established on 25 October 1972, and officially inaugurated in February 1975.

The present difficulties, resulting from an unreliable supply of inputs for food processing, have forced the general manager to make drastic reductions in personnel especially at the management level. Under normal conditions, when a full supply of the requisite inputs can be secured, appointments would then be made to the various managerial vacancies. It would be FAL's intention to fill all these posts with Angolan nationals to the extent that qualified managerial personnel are available.

Figure 9.1.1

Organisational structure of FAL



It is interesting to note that in spite of the various managerial vacancies, the general manager has succeeded in maintaining a certain level of production and has been able to ensure that the company receives a reasonable return on its investment.

In the organisation chart, there is no reference to a financial department. The reason for this is that all bookkeeping entries and other statistics are processed on a central computer provided in the Ministry of Industry. All the relevant data are sent to the Ministry for computer processing. In the future, when production has returned to a more normal level, the company will purchase its own computer terminal or PC for use in the factory.

Aspects of future management seem to be assured through the respective families of the two partners. The general manager's son is about to finish his agricultural training in Austria and the son of the owner of Mabilio M. Albuquerque Comercial S.A.R.L is expected to return to Angola shortly after a similar type of training in England.

In general it can be said that the company is very well managed with all documentation and statistics in extremely good order, as too are all FAL's installations and buildings notwithstanding their age.

The financial management is also excellent, as is indicated below (9.1.1.(c) Financial structure).

(c) Financial Structure

Table 9.1.1 shows the financial structure of the company, including initial paid-up share capital, accumulated retained earnings and reserves.

Fixed assets currently constitute 82 per cent of total assets. FAL has no short-term or long-term loans and no need for any bank overdraft facility, because of the continuingly positive nature of its cash flow situation. The latter results from FAL's policy of never offering credit to customers, and of itself enjoying up to 30 days credit from its sole supplier of fish.

With no external debt liability and a continuingly positive cash flow position, which the management is determined to maintain, irrespective of fluctuating levels of production, FAL is in an excellent position to cope with the current problems as to the availability of inputs for food processing.

The depreciation rates used: 4 per cent for buildings, 10 per cent - 16.6 per cent for plant and machinery, 33.3 per cent for mobile plant and 10 per cent for office equipment, are generally realistic in terms of the expected useful life of the various assets. 33.3 per cent depreciation for mobile plant might be considered a little too high, but bearing in mind the poor roads and the particular climatic conditions, the mission would not suggest lowering the depreciation rate for these items.

Table 9.1.1: FAL's total assets and capital employed at year end

(Kz '000)

Assets	1986	1987
Fixed assets	20,416	20,470
Raw material stocks	344	252
Cash	2	1
Bank deposits	3,544	4,304
Total assets	24,306	25,033
Capital employed		
Private capital	1,500	1,500
Accumulated retained profits	15,361	16,164
Reserves	150	150
Provisions	3,104	3,048
Current profits retained	4,191	4,171
Total capital employed	24,306	25,033

Source: FAL annual accounts as reported to the Ministry of Industry.

(d) Buildings and installations

The factory is situated within Luanda in the industrial zone of Cazenga on 6th Avenue, and consists of a single building complex, which includes a single-storey production area and an office unit, above which are located the canteen facilities for the employees.

The entire building is in excellent condition, the exterior walls being constructed of concrete and clay brick, which have then been rendered and painted at regular intervals. The front wall of the factory and the office have been clad with glazed red clay tiles, which do not require maintenance.

Internally all floors are terrazzo tiled, and are in very good condition throughout. The only area requiring any maintenance work of a structural nature are the refrigeration rooms, where all the walls have been damaged due to the variations in temperature resulting from frequent power cuts.

The plant consists of the following office, production, and storage areas:

	m2
Office	40
Weighing room	25
Packaging room	32
Refrigerated storage room	6
Cutting and packaging room	45
Smoking and boiling room	50
Storeroom incl. stairwell	34
Main processing area	165
Filleting room	55
Spare parts store	25

On one side of the main processing area and filleting room are situated:

(a) Raw material refrigeration room, which is fitted with a mono-rail carcass transport system to the filleting/meat preparation room. This refrigeration room is maintained at 0°C, and has a 10 tonne capacity hanging weight or a maximum 80 tonne floor weight storage capacity in an area of approximately 80 m2.

(b) Refrigeration room for finished products with an area of 22 m2. This room is maintained at a temperature of -25°C.

(c) Refrigeration room for buffer stocks of fish with an area of 22 m2.

(d) Refrigeration room for the storage of spices, fish roe and meat. This room is maintained at +4°C.

In addition to the production facilities, the premises also include:

(a) Sanitary facilities for employees including toilet, shower and locker facilities for both men and women. A cold water fountain is also provided within the factory.

(b) Laundry for washing clothes containing two hand washing units and ironing facilities.

(c) Small workshop area containing two old sheet steel cutting machines of Angolan origin (Celgo and Crutalia). Both machines are operational.

(d) A cleaning room (10 m2) for the sheep casings required for bratwurst, containing a specialised cleaning unit.

(e) Factory transformer and distribution board.

(f) Above the office is the canteen (64 m2) for employees containing 8 tables, with an adjacent kitchen (20 m2) provided with two hot water plates. Also provided is a washroom area (12 m2) with two washbasins, while a spare room (30 m2) is available for additional eating space, as and when the factory increases its labour force.

The factory building was originally designed to permit the future addition of a second floor above the existing production area, which could be used for packaging the products and also for storage of packaging materials. Should any future expansion take place in the factory's operations, the small water tank (3 m2) on the top of the production area roof could be removed and a 200 m3 water tower installed on the premises.

(g) Outside the main factory building are an additional toilet block (under construction), a 5,000 litre oil tank, two propane tanks, one autoclave for biogas, the main electrical substation and a 12.5 kva Petter generator. The generator is a little too small to cope with all the plant's requirements, as it causes all contactors in the distribution board to burn out, if it is used in a power cut situation.

(h) Additional storage space for raw materials such as plastic bags, packaging material, pallets and salt is provided by five 20 tonne containers.

The process and material flow of the factory is shown in Figure 9.1.1 and may be briefly outlined as follows:

Fresh fish deliveries are collected from the state wholesale fish trading company, EDIPESCA U.E.E. by FAL's own truck utilising 400kg capacity stainless steel wheeled containers with a tare weight of 85kg. On arrival at the factory, the containers are immediately weighed on a platform scale in order to cross-check with the invoiced weights, as shown by Edipesca. In practice, these amounts never correspond, as over-invoicing occurs on every delivery to the extent of 37-45 per cent, but FAL has to pay on the basis of invoiced amounts to ensure the continuity of its supplies.

From the weighing room the fish are then taken directly to the filleting room or to the raw material refrigeration room until required for processing. This refrigeration room is maintained at a temperature of 0°C. Under normal conditions, each delivery of fresh fish begins to be processed, immediately it arrives at the factory.

After filleting, the fish are taken to the main processing area in stainless steel trays, where they are first washed in a rotary drum type washer (1m diameter x 0.7m long). After approximately two minutes, the fish are ejected from the mixer by centrifugal action on to a perforated draining tray.

Fish are then transferred either to the buffer stock refrigeration room and stored at 8°C, or are immediately processed into either smoked fish or fish sausages. Carp fish are normally smoked, as they are usually too small for filleting. Cutlass fish are normally processed into the higher value sausages.

Smoking is carried out in a double chamber Savara smoking unit. Each chamber contains 400-500kg of fish, which are hung on wheeled trucks (2m high, 1m long) with six rows of fingers.

The process is carried out in two stages with an initial drying period of 45 minutes followed by a smoking period of 60 minutes at 62°C. Currently only one smoking operation is carried out per day, giving a daily output of approximately 1 tonne of dried fish.

Smoke is generated for the unit on an automatic interval basis from a smoking box attached to the two chambers. The smoking box utilises all types of normal wood shaving obtained from local woodworking plants. The temperature of the smoking operation is controlled by a small oil burner, although a timer unit with temperature and humidity controller mechanisms is installed to enable overnight working of the smoking unit. This is a risky process due to the power cuts, which occur frequently throughout the Luanda area. Although these cuts sometimes last for only a few seconds, the control unit does not reset itself after a power cut. For higher production levels, overnight working would be required, and the firm's intention would then be to run a generator continuously overnight to avoid any technical problems. This would result in higher overall energy costs, as electricity is not currently invoiced on a usage basis, but on a standard monthly charge, and the cost of diesel for the generator would then have to be paid in addition to the standard charge for electricity. However, under such energy supply conditions for expanded output, the overall energy cost per kg smoked fish produced would decrease.

After smoking, the fish are taken to the packaging room, where they are placed in plastic bags, which are then sealed on a manual sealing machine. They are then stored in the finished product refrigeration room, until dispatched to the customer.

For the production of fish sausages, the fish are descaled, cut into small pieces, and these are then mixed with an emulsifier, spices and vegetable oil in a 1m diameter dish mixer fitted with cutting knives. Additional mixing is also carried out in smaller dough-type mixers.

Once the required consistency has been achieved in the fish mixture, it is transferred to the two Vemag hand operated case-filling machines, which each require five personnel to operate. Each sausage case is then closed by means of clips, when it has been filled with fish mixture.

In addition to the fish processing equipment, which may also be used for meat processing, the processing rooms contain other equipment specifically for meat, such as:

(a) Guillotine cutter for frozen meat.

(b) Two Laska mixers for salting ham. These are rectangular paddle mixers with a capacity of 1 m3, having three paddles on the central shaft. They operate on a 12 hour intermittent reversing cycle, and can produce approximately 250kg of salted ham per day.

(c) One ice-making machine, capacity 300kg/24 hours, producing ice pellets.

(d) One two-stage mixer and extruder for frozen meat.

(e) One ham boiling unit with a capacity of 300kg of boiled ham per day.

Currently the total combined capacity of all the installed machinery and equipment could produce a maximum of 465 tonnes of finished items per year on the basis of a single shift operation.

General hygiene

This factory maintains exceptionally good standards of hygiene and the overall impression obtained is of a management determined to do its utmost in this context. The entire factory working area is cleaned at least once daily. All of the tiled floors were disinfected and perfectly clean, as were all of the machinery and working tables not in use. The company provides two complete sets of clothing and two pairs of rubber boots to each employee, and insists that clothing be changed twice per week and boots twice per day. Washing and ironing facilities for clothes are provided at the factory location, and a lady is employed full time for this work to ensure that good hygiene standards are observed. All toilets and showers were also perfectly clean and again a cleaning lady is employed full-time to ensure that requisite standards of hygiene are maintained.

All employees must have a health check on their lungs every six months to screen possible cases of TB, although no one is checked on a regular basis for salmonella or paratyphoid. Virtually the whole population of Luanda suffers from worms, and therefore all employees have to take an anti-parasitical emulsion drink once per year to kill these parasites.

Once a year the Ministry of Health checks the hygiene standards of the factory and also tests the products for quality. These tests have always found the plant to be satisfactory in all main respects.

The standards of hygiene at FAL would, therefore, appear in line with normal international standards. The management is very aware of its responsibility in this regard, and maintains a strict regime of discipline and control over all aspects of general factory cleanliness and hygiene. The only area, where there could be some possibility of bacterial growth, is in the filleting section, where wooden boards are used as a working surface. If these are not cleaned and disinfected thoroughly on a daily basis, this practice could be a source of bacterial infection. Although no problems have apparently occurred to date in this regard, it would seem prudent to use a non-absorbent working surface in the filleting section, which can more easily be kept clean and free from bacteria.

(e) Inputs

(i) Fish supplies

Although the plant was originally designed to process beef, pork and poultry, fish has been used as the one main ingredient since 1977.

The fish is supplied from EDIPESCA, a state-owned enterprise responsible for the wholesale distribution of fish landed in the Luanda fishing harbour, which is supplied mainly by foreign trawlers.

Officially FAL has been allocated a daily supply of 5 tonnes of fish. In practice, however, FAL has to go to the EDIPESCA office every day to find out if there is any fish available. This is not always the case, but normally the EDIPESCA office allocates quantities of the order of 3 to 4 tonnes.

The normal procedure is for two employees from FAL to go to the harbour with one of the company trucks. The EDIPESCA office provides the driver with a handwritten slip of paper authorising him to obtain a specified quantity of fish from categories 3 to 5, fish intended for processing. Category 3 is fish weighing over 3 kg, category 4 comprises weighs 0,2 to 3 kg and category 5 includes fish of all sizes, designated by species.

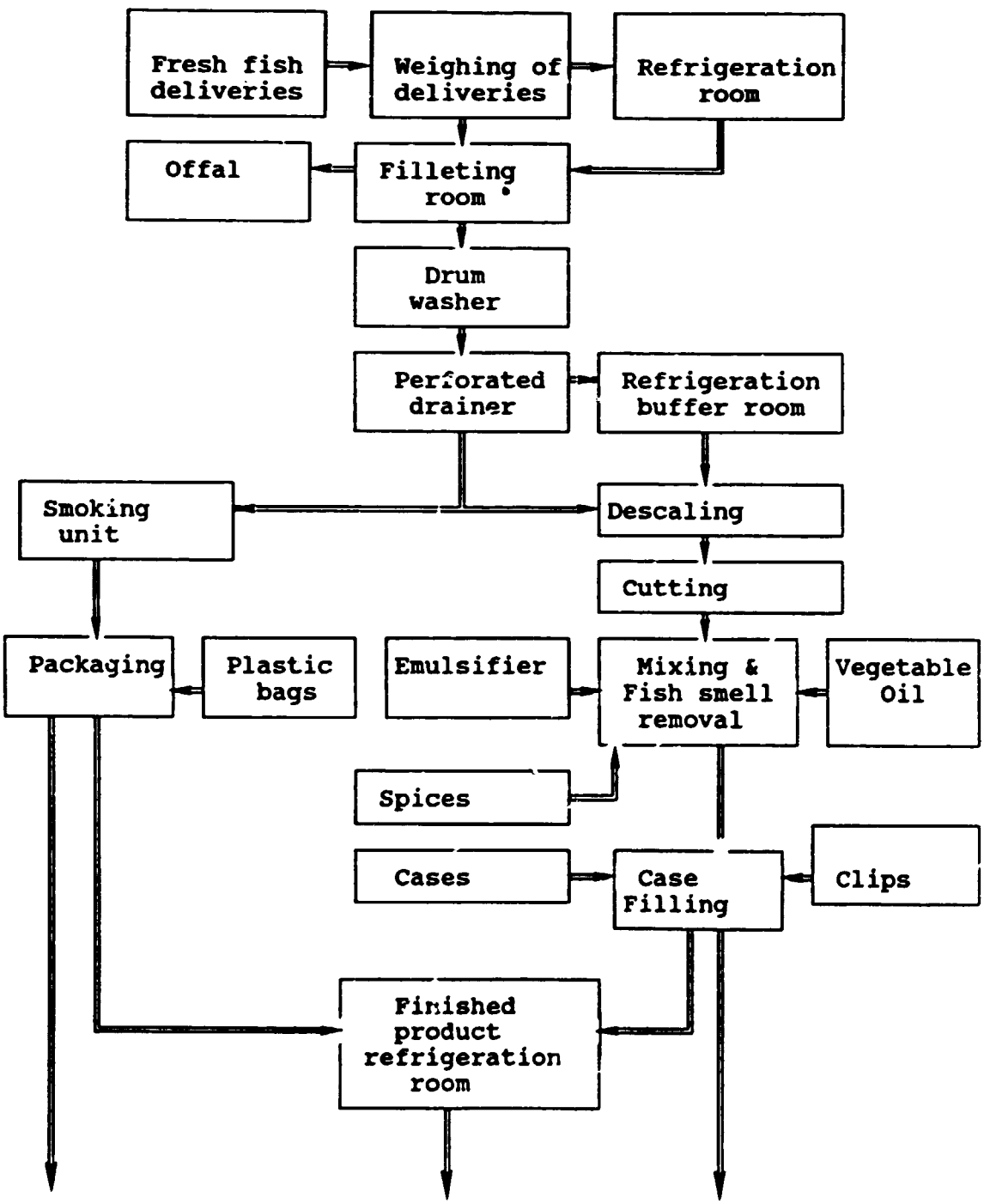
The authorisation note also directs the driver to one of the fishing boats. There the fish is loaded into plastic trays with a capacity of about 30 kg. The weight of each tray is 2 kg. The trays are weighed as they are loaded on to the truck, and the net weight of each category of fish is registered. The weighing procedure is visually checked on the dial of the scale by the two FAL employees. The total net weight is subsequently invoiced by EDIPESCA.

When the load of fish arrives at the FAL processing plant, the supply is always weighed as a matter of business routine. On 6 September 1983, 5,730 kgs were supplied according to the invoice from EDIPESCA, whereas the weight on arrival at FAL was 3,518 kgs, (2,122 kgs less) constituting a loss of some 37 per cent.

The corresponding figures on 13 September, the day before the mission's factory visit, were 3,518 and 2,285 kgs respectively with a 1,333 kgs difference, representing a loss of 37.8 per cent. This is reportedly a

Figure 9.1.2

Fish product flow diagram



regular feature of the supply of fish from EDIPESCA. The situation has been brought to the attention of the Ministry of Fisheries on several occasions in writing, but no comment has been made or action taken by either the Ministry or EDIPESCA.

The regular and continuing discrepancies between the weights given by EDIPESCA and the weight recorded at the FAL plant cannot be explained satisfactorily. Ice flakes, normally loaded with the fish, and which subsequently melted and ran off during transportation, could only account at a maximum to no more than 5 per cent of the original weight, representing a transit loss of a few hundred kgs.

Theft en route to the plant cannot be ruled out, but is not likely to account for the major losses involved. This question has an important bearing on suitable recommendations for a future rehabilitation programme at FAL. A detailed investigation by the relevant authorities may be required, without delay, to identify the reason for this situation and to take the appropriate actions to rectify this problem.

From a health and bacteria point of view, the quality of the fish obtained by FAL is not fully known. It should be noted in this connection that the time element from the point of catching the fish until it reaches the processing plant is of importance. In the situation under review, the time delay may be as much as five days when the fish is kept in refrigerated conditions but without prior cleaning.

The production performance of FAL depends also on the relative size of the fish inputs. Since the fish, which is used for manufacturing sausages, has to be cleaned and filleted by hand, before being fed into the processing equipment, the relative size of the fish is of importance. This factor is reflected to some extent in the current price list for fish of different categories shown in the table below.

Table 9.1.2: Official wholesale price of fish sold by EDIPESCA in Luanda: September 1988

Categories	1.	2.	3.	4.	5.
Size of fish,kg	> 3	> 3	> 3	0,2-3	all sizes
Usage	direct consumption		manufacturing		manufacturing
Kz/KG	85-95	59-66	44-47	26-28	21-24

The processing loss in the case of small fish in category 4 is about 10 percentage points higher than from the same species of fish in category 3. The use of small fish also raises the overall processing costs by approximately 50 per cent. When assessing the effects of technical rehabilitation on plant performance, improvements in other areas such as the availability of supplies should be taken carefully into consideration.

From this point of view, it is recommended that steps should be taken to ensure that the future supply of fish inputs for processing should normally accord with the daily quota provisions, and should be of a quality agreed upon between buyer and seller. Without a clear understanding on such arrangements, the future development and consolidation of this enterprise would be seriously hampered.

(ii) Other inputs

Other inputs from domestic sources include flour, salt, vegetable oil and sugar. These items are available at FAL's present level of production, and it is not envisaged that the acquisition of these components would create any problems in the event of increased annual production by the plant.

From time to time natural casings may be used. The required inputs, namely small intestines from sheep, are available from the local abattoir. However, synthetic casings are used exclusively at present, because of technical requirements resulting from the manufacture of sausages from fish. The associated casing clips to close the sausage casings are also imported.

Essential ingredients in sausage manufacturing are emulsifiers, gelatine, preservatives and, to some extent, spices. These are all imported from suppliers in Austria, the Netherlands and the Federal Republic of Germany, and FAL has not had any significant problem in obtaining these items.

(iii) Meat inputs

Meat inputs have not been available for manufacturing by FAL since 1978/79, when beef, pork and poultry were imported. Earlier in 1976-77, meat supplies were secured from the Lubango region in southern Angola. Given the availability of foreign exchange, FAL would endeavour to start again importing some pork and beef for the manufacture of specialized sausage products, until such time as there was a resumption in local production with supplies available to the company.

(f) Product range

Prior to 1975, the main items such as pork, beef and poultry, which were the normal input for FAL's production of sausages, were available within Angola. Spices and other additives could be imported without too many restrictions and administrative problems.

After 1975 the meat supplies mentioned above became more and more scarce, and finally FAL had to rely entirely on imported supplies until this possibility was also exhausted, because of difficulties in obtaining import licences and foreign currency. Since 1979, the company has not been able to continue production of meat products based on pork, beef and poultry.

Confronted with these difficulties, the general manager contacted Instituto de Investigaó/o de Pesca and a new process was developed, whereby fish could be used as base instead of meat for these food products. The difficulty was to get rid of the taste and smell of fish in the sausages. This particular problem has been solved with very satisfactory results.

In spite of the fact that Angola has certain of the richest fishing waters in the world, this source of raw material is now also in some danger. The FAL delivery truck now comes back to the factory every other day without supplies of fish, despite the fact that the Ministry of Fisheries has "guaranteed" the company 5 tonnes of fish per day.

Because of these difficulties, the FAL product range has been reduced to one type of sausage based on fresh, frozen and smoked fish, which is normally vacuum packed.

FAL production in 1987 was:

	Volume	Value	% of total
Fish sausages	45,545 kg	Kz 9,109.000	30
Smoked fish	208,182 kg	Kz 20,852,000	70

According to the general manager, there would be no technical problems in converting the existing production lines back to the type of meat products the factory was originally designed to manufacture.

It is understood from the general manager that FAL's future output, when circumstances permit, would be geared to meat products based on locally produced beef and pork, supplemented by a canning line for small sausages. FAL's products are oriented towards a community with cosmopolitan tastes, unlike the competing plants which are producing meat products catering more for a market used to Portuguese tastes [see chapter 9.1.1(h) Markets and competitors].

(g) Plant performance, cost and price structure

(i) General performance

Fabrica de Alimentos has an installed capacity of 456 tonnes of finished products per annum operating on a single shift of eight hours. The plant has over the past few years been producing an average of 180 tonnes of finished products per annum. This is about 39 per cent of installed capacity. However, during 1987, FAL did produce about 46 tonnes of fish sausages and 208 tonnes of smoked fish. The total sales from this production were valued at Kz 9 M for fish sausages and Kz 20 M for smoked fish. This represented about 30 per cent and 70 per cent of total sales of the finished products respectively. The 1987 output represented about 56 per cent of the installed capacity.

The low capacity utilisation is a reflection of the lack of raw materials, spare parts, and qualified workers, and of unreliable energy and water supplies. The major constraint is the lack of raw materials - beef, pork and fish. In fact, when the company was established in 1973, the plant was originally designed to produce different types of finished meat products. The shortages of beef and pork since 1975 forced the company to switch its operations to the production of finished fish products in 1979. Its current production is concentrated on the production of fish sausages and smoked fish. Table 1 shows the total value of production between the quarter beginning Jan - March 1987 and the quarter ending July - Sept 1988.

Since the official prices of the finished products have altered little over the past few years, the changes in total value are a fair reflection of the production performance of FAL. This is ultimately dependent on the supplies of fish to FAL which are limited and erratic. EDIPESCA, the monopoly state organisation responsible for the distribution of fish has a fixed quota of 12 tonnes of fish to supply to the local Luanda market. FAL has a present order of 5 tonnes a day with EDIPESCA. However, the actual allocation varies between 0 and 3 tonnes per day. The supplies of fish, which is a major input into FAL's operations, represents about 52 per cent of the total value of its inputs. Table 9.1.4 summarises the situation regarding the purchase of fish during 1987.

Table 9.1.3: Total value of production of FAL's finished items for the quarters Jan - March 1987 to July - Sept 1988

Quarter	Total value (Kz '000)
Jan. - March 1987	4,768
April - June 1987	7,568
July - Sept. 1987	11,716
Oct. - Dec. 1987	5,909
Jan. - March 1988	7,917
April - June 1988	4,135
July - August 1988	2,653

Source: FAL

FAL's underutilisation of plant facilities is also attributable in significant mesure to the lack of spare parts and qualified workers, and to unreliable energy and water supplies. The shortage of spare parts results from a lack of foreign exchange to import these items from abroad. FAL has the kwanza cover to meet such imports, but is unable to secure an adequate foreign allocation from the BNA.

Table 9.1.4: Total value of fish purchased by FAL for the quarters Jan. - March 1987 to Oct. - Dec. 1987

Quarter	Total value * Kz' 000
Jan. - March 1987	n.a.
April - June 1987	933
July - Sept. 1987	2,067
Oct. - Dec. 1987	627
Total	3,627

* Provisional figures based on uncertain estimates.

Source: FAL

FAL is also unable to obtain an adequate number of qualified workers. This problem has become increasingly pronounced since 1975. Many qualified workers have either left the country or been required for military service. Out of FAL's workforce of 95 workers in 1975, only 5 workers are still with the company.

Plant performance is further affected by frequent cuts in electricity power supplies to the factory. On an annual average, FAL is without electric energy for ten working days; sometimes there is no electric power for three consecutive days. The company has severe problems with water supplies, although these are not as serious as those experienced in the energy field.

Further light on FAL's production performance can be shed by examining data on value added. The table below provides data on value-added per employee between 1986 and 1989. The values for 1988 and 1989 are estimates based on company forecasts.

Table 9.1.5: Value-added by FAL operations, 1987-89

	1987 (actual)	1988 (estimate)	1989 (forecast)
Total value added (Kz'000)	7,765	14,171	11,895
Number of employees	34	33	33
Value added per employee (Kz'000)	228	429	360

Source: FAL

(ii) Inputs and import dependence

The main inputs which have been used by FAL are: fresh fish, pork, beef, sugar, wheat flour, vegetable oil, salt, casings, preservatives, milk products and casings clips. At the moment pork and beef are basically unavailable, and neither of these inputs were purchased during 1987. Of the remaining inputs, except for fresh fish and salt, all are imported. FAL's current concentration on the production of finished fish products has actually reduced import dependence. However, some of the inputs can be obtained locally, even if they were originally imported by other institutions, which source mainly from Austria, the Federal Republic of Germany and the Netherlands.

Import dependence in respect to spare parts is very high, although it is difficult to estimate the percentage of FAL's total expenditure, which is spent on spare parts, because of the uncertain nature of the limited financial outlays on spares compared to the amounts requested. For example, during 1986/87, FAL needed Kz 2.5 M for spare parts. The total foreign exchange asked for was Kz 21 M. In the event FAL received an allocation of Kz. 1.5 M. The company expects to spend Kz 355,000 of this amount on imported spares.

(iii) Protection

There are no embargoes or quotas on the importation of processed foods. The government therefore allows the importation of competing processed products. A tariff of about 35 per cent is levied on both processed finished products and raw materials. However, the total amount of any item imported into the country depends on the foreign exchange allocation for such imports.

(iv) Profit record

Despite the problems arising from shortages of raw materials, spare parts, erratic energy and water supplies and lack of qualified workers, FAL has enjoyed comfortable profits for many years. Table 9.1.6 summarises the current situation:

Table 9.1.6: Turnover, profits and taxes for 1987-89
(Kz million)

	1986 (actual)	1987 (actual)	1988 (estimate)	1989 (forecast)
Turnover	-	29.96	42.24	46.2
Tax payments	-	3.6	6.36	5.55
Net profits	4.191	4.171	7.814	6.346

Source: FAL

During 1987, net profits were equivalent to 14 per cent of turnover. This is expected to increase to 18.5 per cent of turnover during 1988. This good performance can best be explained by reference to the efficient management of the company.

FAL pays corporation taxes of over Kz 4 M each year. The rate of corporation tax varies depending on the profit levels, starting at 35 per cent for the first Kz 150,000 of profits. Under a regime of price controls, this type of tax penalizes efficient companies.

(v) Costs and pricing structure

In principle, the prices of FAL's products are controlled. For any alteration in prices, FAL would have to forward proposals for official price changes to the National Directorate of Prices through the Ministry of Industry. This submission would be accompanied with reasoned justification for the need to increase prices. It is understood that in making such request a firm such as FAL would base its proposals for price changes on production costs, plus a margin for profit. This process is obviously slow and cumbersome.

FAL currently charges the official price of Kz 200 per kilo for fish sausages and Kz 100 for smoked fish. These official prices have remained the same since 1979. The company estimates that its products are being sold on the parallel market at about Kz 5,000 per kilo.

The company operates an incentive scheme for its workers. The objective of the scheme is to increase production and profits. Bonuses and food rations are paid on the basis of good work performance and reporting to work on time. The company spends about Kz 60,000 per month on bonuses for its employees and each employee is entitled to 10 litres of cooking oil, 2 bars of soap and 20 kilos of fish per week.

(h) Markets and competitors

On account of the war situation, the Angolan market is in a very difficult position not only because of security problems, and a disrupted communications and transport system, but also due to growing defence expenditures, which today constitute about 45 per cent of total outlays in the national budget.

The collapse of the international petroleum market in 1986 has affected the Angolan economy very severely, and made even further restrictions necessary on imports and allocation of foreign currency.

The Angolan market has tended in the past to be split up geographically north and south. This market phenomenon is also apparent at the present juncture, when significant areas of the country remain insecure and many roads and railways have been put out of service. This situation has had a serious effect on the supply of goods from the southern provinces to markets in the north, including the Luanda area.

FAL's main markets are in the northern provinces, including areas in and around the capital. The market in the south is dominated by a company called Buóaco, which is FAL's main competitor in the country. Buóaco is slightly bigger than FAL with an estimated production capacity of about 500 tonnes/year, while FAL at the moment can reach a maximum throughput of 465 tonnes/year with the present factory system.

Before and shortly after 1975/76 period, there were several competing companies in the same branch, but most of these went into liquidation or closed down their operations for other reasons.

Market competition between FAL and Buóaco is of a somewhat pseudo nature, as the two companies seldom interfere in each others traditional market areas, and since also the two firms have slightly different product lines. FAL is more oriented towards clients with a cosmopolitan taste in meat and with a product range originally based on beef inputs, while Buóaco is manufacturing meat products based on pork, which correspond to Portuguese tastes, and which are now also attractive to certain sections of the Angolan population.

FAL has almost a monopoly position in Luanda and the northern provinces. Its main customers are supermarkets, hotels and factory canteens, which means that FAL has clients in all layers of society. This fact also means that its products are less sensitive to price changes, which might prove important once the government decides to change the official exchange rate between the Kwanza and the US dollar.

The size of the total market is about 2,400 tonnes/year for the products in question, which suggests that there are good possibilities for expansion both in the northern and the southern market areas.

The total Angolan market, divided into products and estimated market shares available to FAL, looks roughly as follows:

Product	Quantity (tonnes)	Official Price (Kz/kg)	Market share (per cent)
Sausage	700	200	30
Ham	300	250	23
Smoked prod.	400	100	48
Canned prod.	1000	200	100

Sales activities were previously undertaken by FAL salesmen who went out to visit potential customers in the morning in order to collect orders, and who in the afternoon delivered the products ordered. With the present level of production and sales, this marketing practice is not at the moment justified economically. Today sales are made at the factory gate, where the customers themselves purchase their own wares.

As the general economic situation changes under SEF, the company plans to go back to its earlier system of travelling salesmen. For the distribution of finished products, as well as for collecting its various supplies, FAL has one IFA truck, two VW pick-ups and a Renault pick-up, which are all in a very good condition.

FAL sales budget for 1989:

Product	Quantity (tonnes)	Value ('000 kz)
Fish sausage	60	12,000
Smoked fish	192	19,200
Mortadella	60	15,000
Total	312	46,200

Sales promotion presents a difficult problem, since very few advertising opportunities are available in the media. In its initial years, FAL sponsored a racing car team to get its name and products known to the public. At the moment no such activities are contemplated.

Moreover, the present market situation in Angola is geared towards the seller, since practically all products are in short supply, and there is, therefore, no need to spend money on sales propaganda.

FAL did originally have a small export trade in smoked turkey breasts to S/o Tomí e Principe before 1975. At the moment the FAL management considers that there is a potential export market for smoked fish products in the SADCC region, notably in landlocked countries like Zambia and Zimbabwe, while Zaire was also mentioned as an interesting export market. However, for the reasons given above, the priority accorded to export possibilities remains relatively low.

(i) Constraints

The principal constraints affecting FAL are the following:

- a lack of key inputs;
- a lack of foreign exchange;
- an irregular supply of electricity; and
- a lack of skilled workers.

In the mid 1970s, production and the marketed volume of most agricultural products fell rapidly and drastically. This in turn caused a lack of raw material and other supplies for the food industry including FAL. The major constraint in maintaining earlier production levels at FAL has been the lack of basic supplies such as beef and pig meat. Until 1977, the factory could acquire meat from Lubango in the Huila province in southern Angola. In the period 1978-79, the factory could import supplies of meat. Since then both sources of supply have been closed and the factory has switched to fish as its major processing input.

At present official prices, market demand for fish is significantly greater than supply, and in the official market the government is rationing available fish among different consumer groups. As the difference between the parallel and the official price of fish has increased, FAL has found it increasingly difficult to obtain even minimum quantities of quality fish. The actual deliveries of fish from EDIPESCA, the state-controlled distribution enterprise is far below the volume FAL has been demanding, and also below the volume attributed to FAL in the yearly plans of the government.

It is the stated intention of the government, not only to reduce its own role in wholesale trade, but also to disengage itself from retail sales. It is expected that most prices will be liberalised, and that prices will then be largely determined by market forces. Thus, in a longer term perspective, there may not be a physical input constraint for FAL. However, other constraints may then become more important and are discussed below.

The future market demand for FAL fish products may be less buoyant and profitable than for other products the enterprise can produce. In this sense, there may be a demand constraint for FAL fish products. It is probable, however, that other supplies, such as beef and pig meat, will again become available. The demand prospects for higher quality products, based on these types of meat, are considered to be promising.

There is currently an overall shortage of foreign exchange in the Angolan economy, and FAL needs have only been partially met in recent years. There is now a backlog of import requirements for spares, equipment and machinery as well as for certain imported inputs.

Since FAL does not have a functioning stand-by generator unit, power cuts have a negative impact not only on the production line, but also on storage capacity and the refrigeration and deep freezing rooms. Consequently, the irregular supply of electricity and frequent power cuts in the Luanda region have serious implications for FAL. At present production levels, the management has been able to handle this problem. To increase production without securing a regular supply of energy cannot be recommended.

FAL is operating far below capacity, and only a minor part of the previous labour force is employed. To increase production, FAL would need additional properly skilled workers, who would require appropriate training. Significant increases in production would also necessitate additional management capacity. Both of these represent constraints. The lack of skilled labour can in part be resolved by the introduction of automated machinery. Greater attention should also be given by enterprises such as FAL to the active development of relevant training programmes within the enterprise sector or in partnership with the government.

9.1.2 Rehabilitation requirements

(a) Management and organisation

Despite the fact that a middle management system has not yet been fully developed in the company, the general manager has succeeded in maintaining an impressive level of production, partly due to a good complement of workers, partly because the general manager himself is a remarkable entrepreneur in the classical sense of the word.

Staff loyalty and productivity are maintained through a system of rewards and bonuses for performance and punctuality etc. These bonuses include, for instance, a basket of food stuffs and an additional cash payment at the end of each month and at Christmas. This system has proven very effective, even if it has not completely eliminated the diversion of goods for personal use, which is a serious problem for many companies under the current economic conditions.

A leading priority, as the economic situation changes under the SEF, should be to fill certain of the outstanding managerial vacancies, if only to lessen the heavy workload on the general manager.

Priority should also be accorded to the purchase of a computer terminal to be connected to the central computer in the Ministry of Industry or even better the purchase of a micro computer system (PC-system) to be installed at the factory. These various developments could have important implications in the staff training field in relation to management, accountancy, computer and other technical skills, which would require to be further addressed.

(b) Physical plant

Although much of the equipment at FAL was supplied when the factory was first established in 1974, all of the existing equipment is in very good condition due to a strict maintenance schedule for all machinery, and the technical ability of the general manager to personally carry out all of the maintenance himself. However, as one of the major constraints on the factory's operations is an uncertain electricity supply, (10 working days having been lost for this reason in 1987), and as the existing 150kva generator is too small to serve the entire plant, a larger generator of 250kva capacity would form the main initial requirement of any rehabilitation programme.

The constraints in securing locally produced beef, pork and chicken in the near future due to the security situation, and the problems in obtaining foreign exchange for the import of such items mean that the company must still concentrate on fish based production for a certain period. Rehabilitation of the fish processing line with more automatic filling machines and new packaging machines will enable FAL:

- to become more efficient and thereby remain profitable at the existing selling prices or even at lower selling prices;

- to extend the product range and shelf life of the product;
- to widen the customer base into the rural areas and improve the nutrition of the rural people, who have no access to fresh fish;
- to improve the quality of hygiene during storage, transport and on supermarket shelves; and
- to effect some import substitution.

For the full rehabilitation programme it is necessary for FAL to obtain the equipment shown in Table 9.1.7 with the relevant costs, as estimated in long-standing quotations to the company, which have been upgraded to 1988 prices by adding the appropriate inflation factors. As none of the actual equipment can be purchased locally, these purchases all require a foreign exchange allocation. In terms of US dollars, the total amount necessary amounts to US$ 830,500, but this could easily be phased over a 2-3 year period, concentrating in the first year on the first four items shown in Table 9.1.7.

It should be noted that although the automatic filling, linking and looping machine will reduce the number of personnel for this single operation, the consequent increased overall cutput of the factory, subject of course to availability of adequate supplies, will mean that more personnel will be required by the plant, not less.

In order to guarantee adequate and consistent supplies to the factory, the management has considered the purchase of a fishing vessel for the company with a capacity of 10 tonnes of fish, as phase II of any rehabilitation programme. The cost of such a vessel is currently in the region of Kz 3-5 million, dependant on the exact type of boat and the facilities on board. However, before it is prepared to purchase such a vessel, the company wishes to seek a firm commitment on the part of the government to providing sufficient foreign exchange for its normal inputs and spare part requirements. For the machinery required for rehabilitation, the company wishes to seek finance in hard currency from an external development agency. Adequate reserves of local currency are available within the company.

In terms of technical expertise, the company considers itself to be self sufficient Both shareholders have sent their sons to Europe for technical training, one to the U.K. for training in all aspects of beef production and one to Austria for pig production. All are totally familiar already with the maintenance and production procedures of the factory, therefore technical assistance in these areas is not required.

With an improvement in the security situation, the intention of the company is eventually to provide a significant part of its own meat supplies from two farms owned by the two partners, one of 25,000 ha's, located 350km from Luanda at Cabela in the highlands, which has a good asphalt road and another at Quikulu, also 350km from Luanda. Both areas have guaranteed water supplies and good grazing land.

Most of the equipment to be purchased for the rehabilitation of the fish production line can also be utilised to manufacture meat products, in conjunction with the existing equipment. It is envisaged that irrespective of the type of future supplies, whether these be meat or fish, the new complex of equipment would enable the factory to maintain an increased output up to three times the current maximum, to improve employment prospects for local personnel, and to ensure the distribution of hygienically packaged food over a wider population base.

(c) Inputs

The future viability of FAL and the scope for consolidating the activities of the enterprise depend to a large extent on the behaviour of market forces. The type of supplies available for manufacturing FAL products should be evaluated in this context. This question is discussed under (e) Marketing.

Import of meat for manufacturing purposes is only acceptable in limited quantities and during a transitional period of time.

Table 9.1.7: FAL - Equipment & Machinery for rehabilitation

Item No.	Item (in order of priority)	No.	Forex	Kz(1000)
1.	250 kva Lister generator Type TAS6	1	UKP 21,566	1,100
2.	Automatic sausage filling, linking & looping machine	1	SF 125,000	2,370
3.	Clipping machine	1	SF 120,000	2,284
4.	Scrubbing & descaling m/c	1	SF 120,000	2,284
5.	Slitting machine	1	SF 100,000	1,904
6.	Fish skinning machine	1	SF 100,000	1,904
7.	Fish meat collector	1	SF 100,000	1,904
8.	Ice machine (2,700kg/24hr)	1	DM 46,800	751
9.	Cooking kettles (500 l)	2	OS 222,000	507
10.	Platform trucks	2		
	Containers	100		
	Miscellaneous items		DM 46,750	750

Table 9.1.7 (continued)

Item No.	Item (in order of priority)	No.	Forex	Kz(1000)
11.	Insect exterminator unit	1	DM 3,000	48
12	Automatic vacuum packaging machine (30 closings/min)	1	DM 222,000	3,529
13.	Smoking equipment for salami (12 truck)	1	OS 2.223M	5,079
14.	Repair of refrigeration rooms	4	local cost	102
15.	Building of water tower	1	local cost	400
Total requirements			US$ 830,500	24,916

Notes: (i) Old quotations upgraded in price to 1988 levels based on average inflation rates of 3 per cent for Switzerland, 4 per cent for Austria and West Germany.

(ii) Exchange rates used: UKP=US$ 1.70, 1.576 SF/US$, 1.87 DM/US$, 13.13 OS/US$, 30 Kz/US$.

With the termination of the war in Angola, accompanied by modifications and improvements in the general economic conditions, major emphasis will have to be placed on the stimulation of agricultural development. With the adoption of appropriate incentives, agricultural production is likely to adjust to the new conditions reasonably quickly.

Marketing or slaughtering animals in the traditional cattle districts can then be expected to be resumed. This is the natural source of beef for manufacturing, and could also be a significant source for FAL.

Pork is essential for successful sausage manufacturing, especially when the market calls for a reasonably wide range of products, from simple items required by low income groups to specialized sausages which can fetch a premium price.

Efficient commercial pig farming does not exist in Angola at the moment. The presence of African swine fever prevents a more general development of farm enterprises geared towards pig production. A realistic alternative is the establishment of pig farms reasonably close to a major consumption area.

A proposal along these lines is elaborated in Appendix A, "Outline proposal for Bom Jesus Agro-Industrial Rehabilitation and Rural Development Scheme".

(d) Cost and price structure

In the context of FAL's rehabilitation needs, reference is made here to the prices, protection and foreign exchange availability.

(i) Prices

Because of the prevailing system of price controls, the official prices for FAL's finished products have not changed since about 1975. It should be noted, however, that these prices were based on meat inputs. It seems reasonable to asume that input prices for fish were significantly lower than that of meat. FAL's products are selling at about twice the factory gate price in the parallel market. It would seem necessary to introduce greater flexibility in the pricing system affecting FAL and similar enterprises. One useful step would be to change the arrangements for approving price increases by locating the administrative system in a single unit. The time period for approving price increases could then be reduced to a shorter period, possibly one month. Over the medium to longer term, however, it might be anticipated that the price of FAL products would come to be determined by market forces.

(ii) Protection

FAL is very dependent on the imports of machinery and spare parts. The production of most of these items is basically non-existent in Angola. In this regard it would seem necessary to encourage the fabrication of spare parts in common use, and also the importation of labour-intensive machinery, depending on the available technology on the world market. It is suggested that certain tariff changes might be introduced where the importation of machinery was exempt from duty, especially if it is labour intensive. Higher duties could then be levied on spare parts that could be fabricated locally.

(iii) Foreign exchange availability

Like most companies, FAL is faced with shortages in the supply of foreign exchange. Part of this problem may be explained by the fact that in its business operations FAL requires to deal with a number of government departments including the Ministries of Agriculture, Finance, Fisheries, Industry, and Trade, as well as the BNA, and that when it comes to the allocation of foreign exchange resources there may be insufficient coordination among the government institutions concerned to ensure that FAL's production requirements are met. This particular situation points to the broader need for closer coordination between government departments and private companies to ensure that issues of this kind are more easily resolved and do not unduly restrict production.

(iv) Liquidity and foreign exchange

FAL has no domestic liquidity problems. Most of its sales are on a cash basis and carried out at the factory gate. The company has no long or short term financial commitments.

However, the company faces a major foreign exchange constraint, which has seriously affected its current operations and its ability to expand capacity.

FAL is allocated very limited foreign exchange to import raw materials, spare parts and machinery, despite the fact that the company has the Kwanza cover for such imports. It was, in fact, the lack of foreign exchange to import raw materials, specifically beef and pork, that made the company switch its production from finished meat items to finished fish products in 1979. During 1987, the company asked for a foreign exchange allocation of Kz 26,636,000, and was allocated Kz 1,500,000, or about 5.6 per cent of the total amount requested.

Apart from the general shortage of foreign exchange, the lack of administrative clarity as to which sector FAL belongs is likely to affect the amounts of foreign exchange allocated to FAL, since foreign allocations are processed through the relevant Ministries. As has been indicated above, there would appear to be a need for closer coordination among the government departments concerned in handling issues of this kind.

(e) Marketing

There is no immediate short term need for any marketing efforts since the products sell themselves without any marketing. However, this situation could alter very quickly as the government comes to introduce real and effective changes in the economic environment under the SEF programme.

9.2 Ermoagens do Norte U.E.E. - Quicolo wheat mill

9.2.1 Existing situation

(a) Plant history

Quicolo, which was originally established in 1952, is one of a number of public enterprises which now comprise the ERMOAGENS Group, and which were in the first instance set up by Portuguese private interests. Following abandonment by their original owners the enterprises in question became the property of the state. In 1978, and ERMOAGENS took over the responsibility at this time for running the Quicolo plant, which was the largest mill in the group and one of the leading milling operations in the country.

The main production milling facilities were designed for both soft and hard wheats, and consist of a 50 tonne/24hr production line and a 150 tonne/24hr line. The 50 tonne production line has been paralyzed for a number of years due to the lack of spare parts, and during this time it has been progressively cannibalised of many of its components, in order to maintain the 150 tonne line in operation. UNIDO already assists Quicolo in improving the functioning of the wheat flour line.

At the time of the plant's abandonment, construction of a combined maize and animal feed mill was partially complete, equipment having been delivered to the site in 1974. Construction of this plant came to a halt in 1975. The maize mill was designed to handle 100 tonnes/24hr day, while the animal feed mill was designed to produce 30 tonnes/24hr day. Work on the civil construction recommenced in 1980 using a local construction company, and this operation continued until 1984, when all further work was halted due to financial constraints. To date approximately 70 per cent of the civil works have been completed, and 70 per cent of the total equipment requirements have already been delivered to site, but of this equipment 30 per cent requires some renovation work or replacement, which will need to be financed in foreign exchange.

Quicolo is presently operating only the 150 tonne line, which cannot meet the demand for wheat flour in the Luanda region, even if operated on a continuous basis, because of constraints arising from a lack of raw materials caused by foreign exchange limitations, as well as from a lack of bags, frequent power cuts, and mechanical breakdowns.

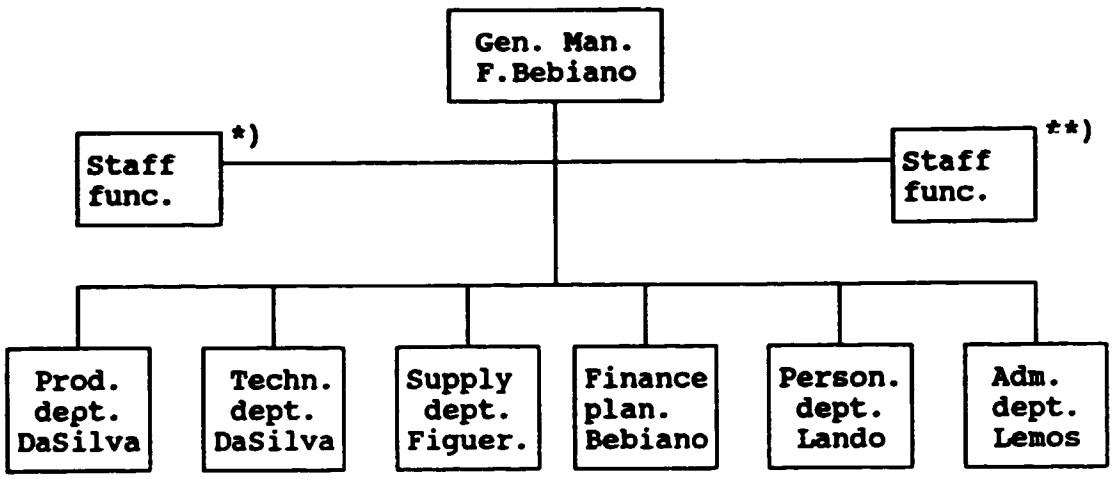
(b) Management and organisation

Within the ERMOAGENS group, EMPRESA REGIONAL DE MOAGENS (Norte) U.E.E. was founded in 1952 by Portuguese interests and nationalised in 1978. The company is fully owned by the Angolan state.

The company consists of seven different plants, of which four are shut down for various reasons. The remaining three, Quicolo, Herois Cangamba, and Promil are operational and function at varying levels of activity.

Figure 9.2.1

Existing management organisational structure of
Empresa Regional de Moagens (Norte) U.E.E.



Note* Auditing and Secretariat
Note** Conselho de Direcção

The present organisation shows a few vacancies in the department of finance and planning, as well as in the production and technical departments. The department for finance and planning is temporarily headed by the general manager, Mr. F. Bebiano and the production and technical departments are, also temporarily, headed by Mr. Da Silva.

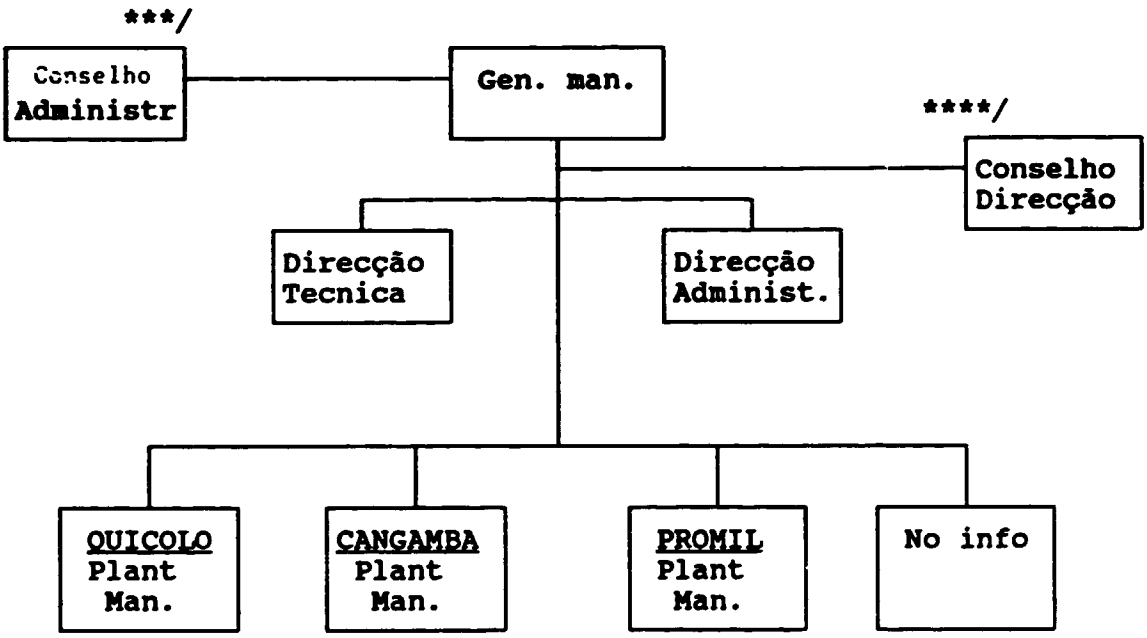
A weakness in the organisation is that the staff is partly under-qualified which makes it difficult for the general manager to delegate work. In the manager's view, there are also too many Government entities involved in decision making within the company. However, under the SEF programme, there is a new public commitment towards according greater autonomy to state enterprises.

The organisational structure, will shortly be altered in accordance with the following organisation chart, a development which it is believed will have a positive influence on the general manager's working conditions.

The general manager begins his working day with an analysis of reports from the production and accounting departments, which usually takes one hour between 0800 and 0900. Meetings between the general manager and clients and public institutions are held between 0900 and 1100 in the morning. From 1100 until lunch break is the period during which the general manager makes an inspection tour of the whole plant. Department managers report to the general manager between 1400 and 1500. The time between 1500 and 1600 is set aside for meetings with the workers. Routine work is done after 1600.

Figure 9.2.2

Envisaged reorganisation of the Empresa Regional de Moagens (Norte) U.E.E.



Note ***/ Conselho Administração consists of following persons:
- Representative from Ministry of Industry
- Representative from Ministry of Finance
- General manager
- Technical manager
- Administrative manager
- Plant managers (4)

Note ****/ Conselho Direcção consists of following persons:
- General manager
- Department managers
- MPLA, representative

The bad financial record of the company can probably partly be explained by poor financial management and inadequate control on the part of the owner, the Government.

(c) Financial structure

The Quicolo factory, which is part of ERMOAGENS group, is wholly owned by the Government through this enterprise. The current fixed assets of the group are valued at Kz 90 million, an increase of Kz 20 million over the 1986 value, although no building work apparently took place during that year.

	Kw (1000)		
	1985	1986	1987
Fixed assets	110,145	70,500	90,000
Current assets	30,134	20,804	23,360
Monetary assets	73,271	121,000	96,206
Investment in hand	65,000	35,000	96,000
Sub-total	269,550	247,332	305,566
Creditors etc.	98,550	74,883	47,834

The stated depreciation rates for QUICOLO are: 2 per cent for buildings, 28 per cent for plant and machinery, 33 per cent for mobile plant and 22.75 per cent for office equipment. The mission considers that some adjustment may be needed to avoid distortion in the book value of assets. A 2 per cent rate for buildings appears too low and those for plant, machinery and office equipment possibly too high given their expected useful life. It should be noted, however, that the balance sheets supplied showed no information on accumulated depreciation, so that the large variation in assets in 1985/86/87 for the group cannot be satisfactorily explained.

No information was supplied on the level of borrowings, short-term or long-term (if any) or on the mechanism to structure the finances in a way to cover the very large continuing losses generated by this company, despite its monopoly position in the market. We must assume the losses are absorbed by the Treasury; the consumer is thus, in effect, receiving a substantial indirect subsidy on his wheat flour purchases, which in 1987, for instance, amounted to 75.6 per cent of the normal factory gate selling price.

The financial management of QUICOLO appears to be extremely weak, none of the normal weekly, monthly, quarterly and annual returns expected in a well organised company are readily available and real financial control is non-existant due to Government policies on raw material purchase volume and price, sales prices and labour.

The financial structuring of the QUICOLO plant is affected directly by four major decisions:

1. The total amount of foreign exchange allocated for grain imports by the Government and this is probably affected to some extent by the level of food aid, either in the form of wheat or flour.

2. The decision concerning the proportions of the foreign exchange to be allocated to maize and wheat and this is a decision, where the ERMOAGENS management probably have some influence on the Government purchasing agency, IMPORTANG, as they generally much prefer wheat because of its lower price.

3. The decision on the proportion of the total quantity of wheat sent to QUICOLO. The larger the percentage sent to HEROIS DE CANGAMBA mill, the less sent to QUICOLO and this has a direct influence on the operational efficiencies of both mills. This decision is made by ERMOAGENS management. Were QUICOLO able to operate its installed capacity properly, there would seem little financial justification for continuing the milling operations at HEROIS DE CANGAMBA, given the current and anticipated levels of imported wheat. A rationalisation of ERMOAGENS group would have an immediate beneficial effect on the financial structure of the QUICOLO mill.

4. The price in Kwanzas charged to ERMOAGENS by the Government purchasing agency, IMPORTANG, of Kz 7.50/kg is far above the equivalent imported price in dollars of Kz 3.32/kg (US$110.28/tonne). A mark-up of 2.26 times over the CIF price from one state organisation to another state organisation seems very hard to justify. If ERMOAGENS were allowed to buy its supplies directly from overseas, its raw material input price would be far less with an immediate beneficial effect on the financial structure of QUICOLO.

(d) Buildings and installations

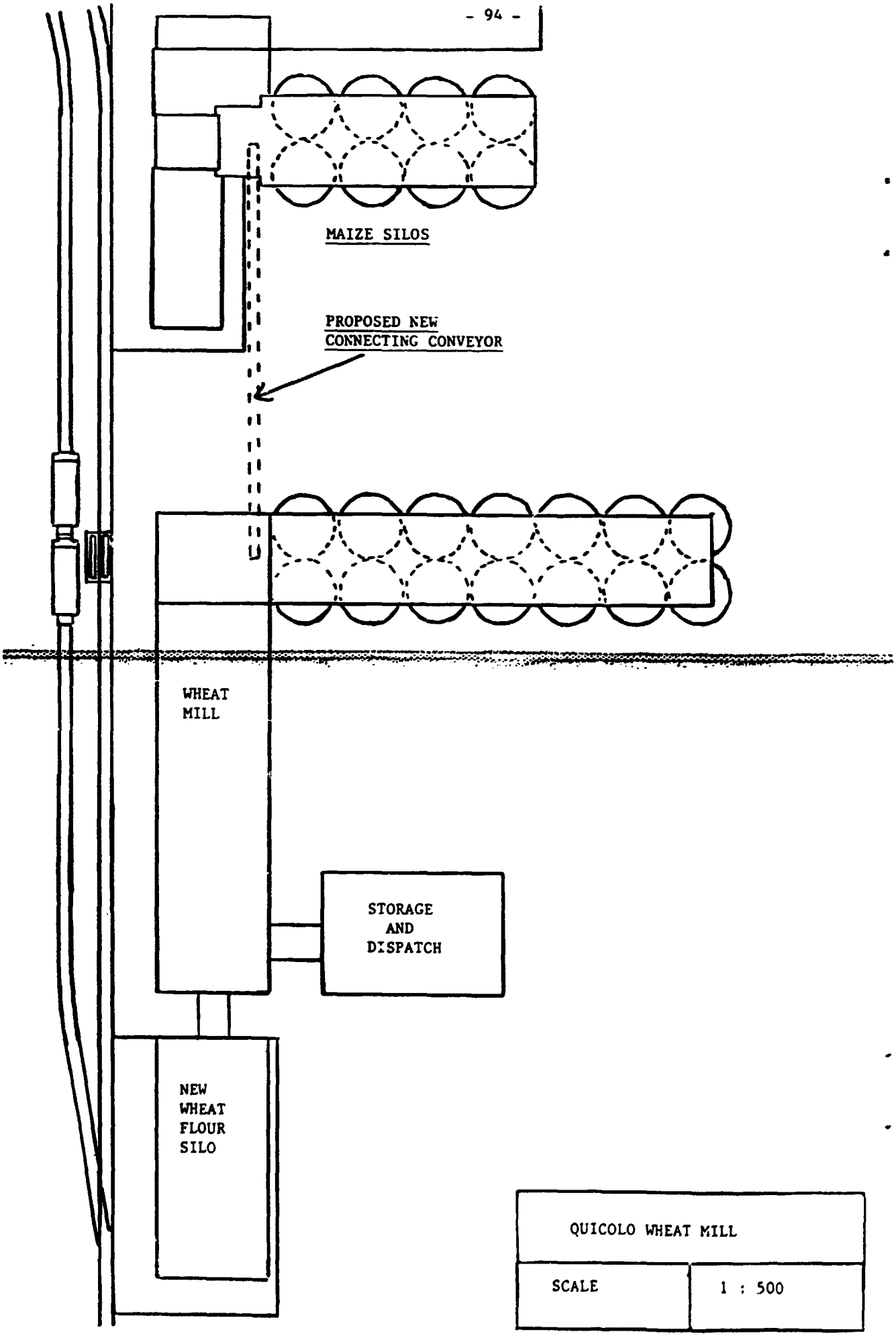
(i) Plant

The Quicolo factory of ERMOAGENS U.E.E. is situated in the northern industrial area of Luanda approximately 13 km from the centre of the city. The mill occupies a spacious site, which contains the following main buildings:

(1) Main mill

The main mill building, consisting of six floors has a total floor area of 715.5 m2 (53 x 13.5m) and the two storey storage and dispatch building, which is connected to the main mill building at first floor level has a total floor area of 260 m2 (20 x 13 m2). The ground floor is raised to facilitate loading. Outside this building is a covered raised loading area. The storage capacity of this building is 2,000 bags (x 100 kg) or 200 tonnes. The building is well constructed in a standard reinforced concrete frame structure with non-load-bearing walls being constructed of clay brick with a rendered finish. Internally all floors are terrazzo tiled, while in the storage and dispatch building the walls are also tiled in this manner.

The mill has a battery of 31 raw material silo bins, constructed out of reinforced slipformed concrete. The largest section of the battery consists of 7 pairs of main silo bins plus six intermediate bins, giving a total component of 20. The second section of the battery consists of 4 pairs of main silos with three intermediate silos, giving a total of 11. All 31 silos are utilised for the 150 tonne line, providing a total storage capacity of 12,000 tonnes or 80 working days supply.



QUICOLO WHEAT MILL	
SCALE	1 : 500

The disposition of the production machinery and equipment on the various floors of the mill is as follows:

Basement

This area contains the main grain reception hoppers, which are situated beneath the two railway lines and the main chain conveyor, which is located beneath all the silos and which feeds the elevator. The fumigation unit consisting of fan, gas bottle and connecting pipework to the silos and upper floor levels is located in this area, and part of the space has been converted into a small workshop and stores area.

Observations: The main elevator pit is very damp and musty, although the water pump was stated to be operational. It was evident, however, that the water level had recently risen to the base of the elevator, boot and this could therefore become a source of mould, if spillage is allowed to decay in this area. The fumigation unit had not operated in the past 8 years and therefore it was not possible to control the insect population either in the silos or within the mill building and its equipment.

Ground floor

Here are situated screw conveyors, a vertical screen and a weigh scale.

Observations: The weigh scale is inoperative so that it is impossible to weigh the incoming inputs of raw material or determine the amount of contaminants delivered with the grain.

First floor

On this floor are located a three-unit set of spiral classifiers for the 150 tonne line and a separate two-unit set of spiral classifiers for the 50 tonne line. Here are also located a screen classifier and a bag conveyor to the storage and dispatch building, which contains two spiral bag chutes to the ground floor. A manual bagging unit with a bag weigh scale (Berkel) and another manual weigh scale are provided for the bagging operation.

Observations: There are many broken windows on this floor, so that fumigation of this area would be not very effective, even if the fumigation equipment was operational. A second bagging unit was positioned for an additional weigh station, but no connection from the upper floor had been provided, and the motor and V-belts were all missing. Inspection of a few bags of flour in stock in this area indicated that many grubs and insects were contaminating at least the outer layer of the bags, and that the quality was not particularly good.

Second floor

Here are located the 16 double-sided roller mills for the 150 tonne line and the 7 roller mills for the 50 tonne line. The 150 tonne line mills are operated on a four-break system.

Observations: All the 50 tonne line mills were inoperative, and some of the 150 tonne line mills were undergoing maintenance.

Third floor

The pre-cleaner units for both lines are located on this floor, as are the clarifier units for both lines.

Observations: Many spares are required for the 150 tonne line clarifiers, and the management is thinking of bypassing them completely, especially as the 50 tonne line classifiers are smaller and of a different design, and therefore cannot be used on the 150 tonne line.

Fourth floor

This floor contains the cleaning equipment for both lines, the cleaner for the 150 tonne line being a three deck screen. Fumigation lines to this floor are provided, but as on all the other floors the windows are broken. The sifter units with 17 decks of screens were found to be contaminated with many insects, although the screens themselves were all in good condition, some having been replaced recently.

Observations: The 50 tonne line cleaning equipment is inoperative, as is the fumigation system. The 50 tonne line has been cannibalised of many parts for the maintenance of the 150 tonne line.

Fifth floor

This floor contains two screw conveyors and two air lock units.

Observations: At this position should be located the conditioning unit for the system, but when it malfunctioned it was totally removed from the system, although it is still kept in the stores and can therefore be replaced, should spares become available for this unit. No motors are on the air locks and all internal fittings have been removed so that the air locks could be bypassed. Again many windows are broken.

Sixth floor

On this upper floor is located the main bin feed conveyor, with distribution by manual ratchet valves to control the filling of each bin. Three air lock units are located on this floor and two temperature indicator units, each with three temperature indicator scales for the monitoring of the top, centre and bottom temperatures within each of the 31 silos.

Observations: Two of the three air locks were inoperative, and none of the silo temperature indicators are working, so that it is impossible to monitor the temperature build-up in the silos, as a consequence of mould and general spoilage. Consequently, the grain has to be recirculated more than necessary in some cases, but the level of spoilage by factory operatives was still stated to be in the region of 10 per cent, and this had to be sold as animal feed.

(The management states the spoilage at about 1 per cent, page 13).

Process flow in wheat mill

The milling process, briefly outlined is as follows:

Railway hopper cars empty their loads of wheat into the factory hoppers beneath the railway tracks, and a chain conveyor transports the grain to the elevator feeding an intermediate hopper (15 m3) capacity, from which the grain passes over an automatic weigh scale (inoperative) to a separator unit, which removes the main contaminants from the wheat grain, amounting to 2-3 per cent. As no weighing is carried out, this is just a "guesstimate".

A screw conveyor then feeds the grain to the silo elevator, which lifts the material to the single silo conveyor running across the top of the silo installation, covering both the main 20 bin section of the battery (area of 10 x 50m) and the smaller 11 bin section (area of 10 x13m).

Above each silo position is situated a manually operated ratchet gate valve. No electrical indication system of the valve positions is carried installed to show the flow of grain on central controle panel. Extraction from these silos is again by a manually operated valve system, and via spouts, cleaners and conveyors the wheat is fed to the roller mills on the second floor.

Grain is passed through a series of mills with a progressive reduction in the size of flute in the machined surface of the roller. The final mill has only smooth rollers, installed to produce the fine fraction of flour. At each milling stage, the flour is lifted pneumatically to be clarified and sifted.

Following the final sifting and clarifying operation, the flour is transported to an intermediate silo, which feeds the manual bagging station, where 100kg bags are filled with flour and closed.

The bags are then transported by conveyor to the storage and dispatch building. From the second floor, bags are placed on the spiral slides to the ground floor, which serves as a combined storage and dispatch area.

(2) Maize and stockfeed mill building

The partially constructed maize mill and animal feed mill consist of a main "L" shaped production unit with a total planned floor area of approximately 1,544 m2. Within this complex is a four storey unit with a floor area of 140 m2, the major part of which the main structure is complete. A basement section in the main production section covers an area of approximately 228 m2, which is presently flooded. A silo battery, consisting of four main pairs of reinforced slipformed concrete bins, has been built with three intermediate silo bins, giving a total storage capacity of 6,000 tonnes of grain or 46 working days supply at its designed capacity of 100 tonnes per 24 hours for maize and 30 tonnes per 24 hours for animal feed.

The conveyor pit area beneath these silos is flooded to a depth of 1m below ground level, and therefore adequate pumping arrangements must be made before bringing these silos into use. The civil works for the top of these silos must still be completed and none of the equipment for this unit is yet installed.

(3) Wheat flour storage building

The wheat flour storage silo building, which covers an area of 494 m2 (26 x 19m), is almost complete with a relatively small amount of civil work still to be done. The building is constructed of reinforced concrete with clay brick in-fill panels for all non-load bearing walls. Some civil work must still be completed on top of the silos, and the external rendering must still be completed. In addition, all of the 19 silos must have their internal surfaces plastered to a smooth finish, and be sealed with a special epoxy type resin coating. Each silo is approximately 3m in diameter and 18m high, giving a total storage capacity of 1,300 tonnes or 11 days output, based on a 75-78 per cent extraction rate on the 150 tonne/ 24 hour line assuming 100 per cent bulk handlinh and no bagging out. The flour storage silo building is designed for two delivery systems:

(a) Bulk discharge direct to the delivery vehicles, which should supply the large bakeries of EPAN. It should be noted that neither EPAN nor QUICOLO possess such vehicles at the present time.

(b) Bagging line to supply the needs of the smaller bakeries, especially in the rural areas outside the city.

All of the equipment necessary for the bulk delivery system has already been delivered to site, including all necessary electrical equipment, steel bottom cones, outlets, conveyors, cyclone and aspiration equipment with the associated tubing and filters. However none of the proposed bagging equipment was actually delivered to site.

(4) Workshop and office block (600 m2)

This is well constructed with clay brick and outer rendering. The workshop section contains the following equipment:

(a) Bühler lathe for refluting wheat mill rollers;

(b) Heron lathe type K24; and

(c) Large grinding wheel and small double grinding wheel unit.

The woodworking shop (49 m2) contains the basic equipment of a bench saw and an assortment of small carpentry tools, sufficient for small maintenance jobs only.

This area also contains the mechanics shop (84 m2) used for engine repairs and some electrical repairs, but only one small double grinder unit and an inoperative pedestal drill (scrap). However other equipment is located in an outside workshop and consists of:

(a) Romar hydraulic ram press (100 tonne);

(b) Motorised hacksaw;

(c) Belgius type sheet steel bending machine;

(d) Small welder, Hammel 3.3kw for ducting repairs;

(e) Anvil;

(f) Steel sheet cutter unit; and

(5) General manager's office (144 m2)

This building is in excellent condition, the walls being constructed of clay bricks, rendered and painted and the roof being constructed of clay roof tiles. A security fence surrounds this building.

(6) Canteen (231 m2)

Constructed of brick walls, rendered and painted with a corrugated steel sheet roof. The canteen is provided with 18 tables and internally is maintained in a clean condition. Adjacent to the canteen is a study area and bank building of identical construction occupying an area of 350 m2.

In addition to the above main factory buildings, there are a number of houses and storage buildings, while located outside the main substation of the wheat mill is one 200 kva Lister generator type AW280/22. This generator is well maintained, and is in excellent condition. Unfortunately this generator is used only for emergency lighting of the offices and wheat reception areas, and is not connected to any of the plant pneumatic conveying equipment. The total electrical requirement of the pneumatic conveying equipment and other conveyors amounts to approximately 200 kva, and as blockages of the pneumatic lines on every power cut cause considerable plant downtime, it would seem advisable to connect all of the prime drive units through one distribution board to the generator to avoid this downtime.

(ii) Maintenance

The maintenance facilities are presently scattered over a number of areas and to improve these facilities new workshop buildings have already been ordered to a value of Kz 10 million from a local company, Credon, who manufacture prefabricated buildings. Delivery is scheduled to be made in December 1988.

The maintenance departments in both the mechanical and electrical sections are extremely short of trained personnel, having just one trained man in each section. The mechanic has five helpers and the electrician has three. All personnel have been trained on-the-job and the lathe operators, in particular, seem proficient in their work. The overall state of the plant, with numerous inoperative items left unrepaired, missing items, original sections of the 150 tonne line being bypassed and the heavy cannibalisation of the 50 tonne line, indicates that the maintenance department is heavily overloaded and requires additional trained personnel. Although many of the problems do stem from the fact that spare parts could not be obtained, there are many items, which should have been repaired by the maintenance department

using local materials and local machine shops, especially when we consider that the plant has experienced lengthy shut-downs in the past two years due to lack of raw materials. This is a definite area of weakness, which should be addressed in any rehabilitation programme, as without a strong and continuous maintenance programme any rehabilitation scheme is doomed to failure. Some support services could be arranged for Quicolo with EMIN, an engineering company, which is already receiving assistance from UNIDO to upgrade the training of maintenance personnel.

(iii) Health and hygiene considerations

At the time of the mission's visit, the plant had been shut down for some four weeks for maintenance and the opportunity had been taken to clean the factory generally, which from reports received had been quite untidy. At the present time, however, it is very clean throughout the mill building and in the other buildings, such as the canteen. Hopefully these standards will be maintained once the plant resumes operations. There are a few areas, which are of concern, namely:

(a) The fumigation unit has not worked for the past eight years, apparently due to problems with the pipework, but the fan unit and outlets to the silos and sifters etc. could also be possible problem areas. The fact that there are a considerable number of broken windows on every floor of the mill also makes effective fumigation of the entire building impossible to achieve in any case, even if the fumigation unit was operative. The lack of fumigation for such a long period has meant that all areas of the mill, including silos, cleaners, sifters and final product are infested by a range of pests with the consequent reduction in product quality and increase in health hazard.

(b) The main elevator pit is very damp, although the pump was stated to be operational. Spillage of grain in such an environment could produce a source of mould, which could be transmitted into the storage silos.

(c) The fact that none of the silo temperature indicators are working means that the possibility of heat build-up and spoilage of wheat cannot be monitored. Up to 1 per cent of the grain stocks were reported to have been spoiled, despite recirculating them at intervals to aerate them. Some of the spoiled wheat was sold as animal feed, as it was not fit for human consumption, but some of this spoiled wheat could however have been milled and have entered the direct human food chain. As the factory itself does not carry out any quality checks on the inputs or the final product, the customer could, at times, conceivably receive a substandard and unhealthy product.

(d) The silo area of the partially completed maize and stockfeed mill is presently being used as an open toilet area, presumably by plant personnel. Animals such as cattle and goats are freely roaming this area and also wander close to the grain intake to the factory. Some

health hazard therefore exists, and the silo area should not be used in its present way. The ground area surrounding the maize mill building is covered with a mix of loose earth and grain, which would tend to attract vermin into the vicinity of the wheat mill. Every effort should therefore be made to clear all of these outer areas of grain spillage and maintain them in a clean condition. They should preferably be asphalted within a future rehabilitation programme

(e) Inputs

All the wheat for the Quicolo mill is imported. Its importation is the responsibility of the Ministry of Trade (formerly Ministry of External Trade), acting through IMPORTANG, a Government trading enterprise handling imports.

It is normal practice for Ermoagens to place orders with Importang for the importation of grain for all three mills, the Quicolo wheat mill, the Kangamba wheat mill and the Promil maize mill, giving the necessary specifications. The orders from Ermoagens are processed and international purchases made towards the end of the calendar year in November. The availability of foreign exchange at this time has implications for the subsequent supply of grain for the mills and for scheduling of imports.

Allocation of available quantities of wheat to the two wheat mills is the responsibility of the Ermoagens management.

Lack of foreign exchange, apparently coupled with inadequate planning, is one major reason for closing down the mill for varying periods of time.

Although the quality requirements are specified at the time of ordering the wheat, the actual compliance with these specifications is not checked by the mill when the wheat is delivered. This is easily understood, since the Quicolo mill has no laboratory of its own. A central laboratory is located elsewhere in Luanda, but is apparently not operational. It was stated by the management that the imported wheat has a moisture content of 14.5 per cent. This is not checked, at least not on a routine basis. No information was available regarding protein level, gluten content or the hygienic status of the grain, which apparently is never analyzed.

The grain is received in the port of Luanda, and then transported in uncovered railway cars to the mill. It sometimes happens that the very top layer of the wheat gets wet through exposure to rain with consequential deterioration during storage in the silo bins. The temperature indication system in the silo unit has been out of order for several years, and the proper monitoring of the movement of the wheat is impossible. Instead an attempt is made to recirculate the wheat, if it is considered likely that the temperature will increase.

It is estimated by the management, however, that about 1 per cent of the annual turnover is being spoiled, or quantities exceeding 200 tonnes per year at the present production level. This is blended with the healthy grain before milling. In addition to this, the plant as a whole suffers from infestation by insects which also has a negative effect on the quality of the final product.

(f) Product range

Empresa Regional de Moagens produces three main products, wheat flour, maize flour and certain by-products from the processing of wheat and maize.

The current break-down in annual production for the company as a whole is as follows:

Product	Volume (tonnes)	Value (Kz)
Wheat flour	24,300	170,100,000
Maize flour	2,880	34,560,000
By-products	9,035	34,590,000
Total	36,215 Total	239,250,000

No alterations are contemplated in regard to the product range, except for a possible change in the balance of production between wheat flour and maize flour. In this regard, the company wants to increase wheat production and correspondingly reduce the production of maize.

(g) Plant performance, cost and price structure.

(i) General

The company has two main production lines, namely wheat and maize flour. The nominal capacity for wheat flour is 60,000 tonnes per annum, while that of maize flour is 12,000 tonnes per annum, the extraction rate for wheat and maize flour being 78 per cent and 60 per cent respectively. There is also uncompleted building and unpacked machinery for a stockfeed plant, much of which is damaged.

During 1987, the company produced 24,300 tonnes of wheat flour and 2,880 tonnes of maize flour. This represented a capacity utilisation rate of 40.5. per cent and 23 per cent for wheat and maize flour respectively. These low rates of capacity utilisation may be explained by several factors, among which are the state of the machinery, lack of raw material inputs, irregular energy supplies, the quality of management and mechanical breakdowns.

Table 9.2.1. shows the total production of the company's products between 1985 and 1987. It may be noted that although there was an increase in the production of maize flour by 17 per cent in 1986, this fell again by 25 per cent during 1987.

The production of wheat flour declined over the 1985-87 period by 20 per cent. However, the wheat flour line is the most important production item and accounted for an average of 57.3 per cent of total output during this period.

The major raw materials use in the production of flour are wheat and maize. These are purchased from a state monopoly trading company named Importang. The raw materials are imported, and are therefore subject to erratic supplies depending on the amount of foreign exchange allocated to Importang to import cereals under the annual plan.

Table 9.2.1: Total production 1985-87
(tonnes)

Year	1985	1986	1987
Maize flour	3,300	3,860	2,880
Carits	875	790	615
Maize by-products	1,600	1,895	1,020
Wheat flour	30,400	12,278	24,300
Wheat bran	11,000	11,295	7,400
Total	47,175	30,118	36,215

Source: ERMOAGENS.

The other inputs include raffia bags, cotton yarn, and sisal thread. Table 9.2.2. shows the quantities of raw material inputs used by the company between 1985 and 1987

Table 9.2.2: ERMOAGENS. Quantities of raw material inputs: 1985-1987
(tonnes)

	1985	1986	1987
Wheat	41,800	24,000	32,000
Maize	6,200	7,000	5,000
Cotton twine	960	620	740
Sisal twine	480	310	370
Rafia bags (thousand units)	915	565	705

Source: ERMOAGENS.

Table 9.2.3. looks at the performance of the company in terms of value-added.

Table 9.2.3: Value-added per employee: 1985-87

	1985	1986	1987
Value-added (M Kz)	281.7	158.3	216.3
Number of employees	475	480	480
Value-added per employee (M Kz)	0.59	0.33	0.45

Source: ERMOAGENS.

(ii) Inputs and import dependence.

The major inputs into the production of wheat and maize flour are wheat, maize, raffia bags, cotton and sisal twine. Almost all the wheat and maize are imported. Table 9.2.4. shows the values of the various inputs. It may be seen that wheat and maize consisted on average about 86.7 per cent of the value of total raw material inputs. Since most of the wheat and maize are imported, this gives a very high dependence ratio on imports.

Ermoagens relies totally on imports for its machines and spare parts, which are imported from Italy and Switzerland.

Table 9.2.4: ERMOAGENS. Value of raw material inputs: 1985-87
(Kz '000)

	1985	1986	1987
Wheat	188,100	108,000	144,000
Maize	55,800	63,000	45,000
Rafia bags	38,887	24,012	29,962
Cotton twine	213	138	165
Sisal twine	38	25	30

Source: ERMOAGENS.

(iii) Profit record.

Ermoagens is sustaining heavy losses in its operations, which between 1985 and 1987, amounted to about Kz 381.4 million. Table 9.2.5. shows the company's financed record over the past three years.

Table 9.2.5: ERMOAGENS. Turnover and losses: 1985-87
(Kz million)

	1985	1986	1987
Turnover	304.1	184.5	239.3
Losses	(83.9)	(116.6)	(180.9)

Source: ERMOAGENS.

This financial record can probably be explained in large measure by poor management and erratic supplies of raw materials.

(iv) Costs and pricing structure.

The prices of the finished products are controlled and set by the Government. Ermoagens would appear to be involved in official discussions regarding the general level of flour prices. However, given the poor state of its company accounts, it is unlikely that this contribution would be of an effective nature. Current prices were set in January 1988 and are shown in Table 9.2.6. However, despite the poor state of accounts, Ermoagens has also to absorb the high operating costs of the monopoly trading companies because it has to purchase its major inputs through them. The company purchases wheat from Importang at Kz 7.50 per kg. The world market price of wheat is Kz 3.32 per kg. Similarly, for maize, the Ermoagens purchases its maize from the same company at Kz 12.80 per kg, when the world price is Kz 4.77 per kg. Clearly, Ermoagens is absorbing part of the trading company's operating costs. However, the parallel market prices for the same commodities are much higher.

Table 9.2.6: Ermoagens prices of finished goods
(Kz per kg)

Product	Factory gate price	Retail price
Maize flour	16.00	20.50
Wheat flour super	19.00	39.00
" " ordinary	10.00	26.00

Source: ERMOAGENS.

(v) Liquidity and foreign exchange.

The company sells its products at the factory gate to customers. Its wheat flour goes mainly to EPAN and its maize flour to ENSUL. The company obviously has liquidity problems because of its chronic loss situation. Apparently, this problem is solved by increasing its debt with BNA, and delaying payment to its suppliers.

The company is very dependent on imports for its major raw materials - wheat and maize. However, these are bought locally, since they are imported by Importang. However, it needs foreign exchange for machinery and spare parts, which it imports directly. During 1988, it has been allocated only 10 per cent of the amount it had asked for to import spare parts, which was obviously not enough to cover the company's requirements.

(vi) Protection

In the present situation, it is very difficult to argue for the protection of Ermoagens products. This is because the company produces a small portion of national market demand, and consequently the state allows in imports of its products. In the long run, once the company is rehabilitated, it may be necessary to consider protective tariffs. This would imply import duties on the type of finished products produced by the company and a low rate on its raw material and spare parts imports.

(h) Markets and competitors

Empresa Regional de Moagens is in a monopoly situation, since there is no competition for their products in the country. Like most other products, the demand for wheat flour and maize flour is by no means met in Angola and substantial quantities have to be imported.

The company produces about 27 per cent of country's total requirements of wheat flour, and about 8 per cent of total requirements of maize flour.

ERMOAGENS has no sales organisation as such, but sells its products at the factory gate. Wheat flour is distributed through EPAN (Empresa de Panificaó/o Nacional) to the bakeries, which acts as a sort of wholesaler. Large quantities are also consumed by the armed forces. Maize flour is mainly distributed through ENSUL (Empresa do Supermercados de Luanda), which sells the product to the armed forces, hospitals and factory canteens.

Certain by-products are sold as raw material to animal feed factories belonging to Ministry of Agriculture, mainly for pig feed in the Luanda area.

(i) Constraints

The Quicolo flour mill is expected to operate for 280 working days per year. However, in 1987 the mill was operational for only 154 days of 24 hours. The Stand-stills were caused by:

-	break-down of installation	10 days
-	power failure	70 days
-	lack of raw material	46 days

Power failures occur frequently. In 1987, they lasted on an average four hours per day. Clearing of the system and start-up required another two hours. Total stand-still periods at the flour mill due to power cuts are thus estimated at 70 days for that year, based on 24 hours operation. Available records show that power failures in 1986 were not a serious problem. This may have been due to a lower level of economic activity that resulted from declining oil revenues, which in turn reduced the import of raw materials for manufacturing industry as a whole. With increased industrial activity in 1987, the electrical distribution system appears not to have been able to cope with the increased demand for electrical energy.

The main reason for the technical breakdowns is related to the condition of the equipment which is discussed in Section 9.2.1.(d). This situation is further aggravated by the lack of spare parts.

A working group, consisting of one qualified mechanic with five semi-skilled helpers and two qualified electricians assisted by four helpers, is doing the day to day maintenance, the weekly services and a major overhaul once a year. The maintenance force is understaffed, and would constitute a constraint to the future operation of a rehabilitated mill.

According to the management, milling of wheat had to stop for two months in total during 1987, due to lack of either wheat, for about 90 per cent of this period, or bags, for 10 per cent of the time. Using a factor of 1.3 (relative time of total) the plant was idle during 46 days.

In summary, the following actions will have to be taken in order to overcome the identified constraints to the effective future operation of the mill:

- physical rehabilitation of the plant;
- strengthening of the technical capacity of the maintenance force;
- ensure regular power supplies;
- ensure adequate wheat supplies commensurate with the capacity of the plant; and
- ensure increased supply of bags or introduce bulk-handling of sufficient quantities of flour, thereby reducing the need for bags.

9.2.2 Rehabilitation requirements

(a) Overall considerations

The future plans for the national wheat milling industry may be considered entirely in the light of present market demand and projections in the medium and long term perspective. This exercise would be influenced, to a large extent, by the cost-price relationship with other essential staple foods such as maize and cassava. Another consideration would be the linkage of the future consumption pattern of staple foods to the traditional food habits and, more important, to the policies and strategy objectives for development of the agricultural sector.

Wheat is a crop well suited to mechanized medium and large scale farm operations. During the pre-Independence period wheat production in Angola reached a maximum of the order of 30,000 tonnes per annum. The present production is about 8 per cent of this amount or about 2,300 tonnes. It is not likely that the cost of wheat production in Angola can compete with the subsidised wheat available on the world market. Moreover, the basic equipment for cultivation, harvesting and storage of a large national wheat production does not exist.

It is reasonable to assume that the strategy for recuperation of the agricultural sector will include a package of incentives to farmers to boost production of both staple and cash crops. Priority would not be given to wheat production but focused on traditional staples, including maize.

One priority issue in the strategy could be actions aiming at encouraging increased consumption of locally produced food items by imposing suitable tariffs on e.g. wheat.

A proposal for physical rehabilitation of the Quicolo wheat mill is given under (c) below. The proposal builds on UNIDO's present assistance project. It is the opinion of the mission, that the study to look into the conditions, resources and options for the future production of food crops in Angola. This would be a guiding document for formulation of a long-term strategy for

agricultural production and development and also for a more detailed planning of the investment requirements for Ermoagens U.E.E. and the Angolan flour milling industry as a whole.

(b) Management and organisation

The organisation shows many weaknesses at management level, both regard to the numbers and qualifications of the supervisory staff. The position of Technical Manager is vacant, but is temporarily held by Mr. Da Silva, who is head of the Production Department. The post of Manager in the Finance and Planning Department is also vacant, and this position is for the moment held by the General Manager.

Those two vacancies should be filled as soon as possible, with qualified persons. This would relieve the General Manager from departmental routine work. He could then devote his time to more important work, such as longer term production planning and the improved utilisation of existing production facilities, as well as financial management.

It is also recommended that an analysis should be carried out of the quality of management in general, in order to make necessary adjustments.

(c) Physical plant

(i) General guidelines

The plant description under 9.2.1.(d) gives an account, in general terms, of the deficiencies in the buildings and installations pertaining to wheat mill, as well as the uncompleted flour silo, maize mill, and stockfeed plant.

In 1987, the total production of the mill was 16,860 tonnes of flour from an input of 22,600 tonnes of wheat. The average rate of extraction was then 74.4 per cent. When rehabilitated, the mill should be able to increase the extraction rate by 5 per cent. The flour would be improved from a nutritional point of view, although acquiring a slight off-white color.

Table 9.2.7: QUICOLO. Estimated mill performance after removal of constraints

Annual output of flour (tonnes)	Constraints removed 1)	Net Output per day (tonnes)	Annual consump. of wheat (tonnes)	Annual output of flour (tonnes)	Annual increase in output (tonnes)
5,070	A	164	24,600	19,530	2,670
7,230	A,B	234	35,100	27,870	11,010
7,390	A,B,C	274	41,100	32,630	8,470
8,658	A,B,C,D	280	42,000	33,350	16,490
7,790	A,B,C,D - 10%	252	37,800	30,010	13,150

1) A = break-downs; B = power failure; C = lack of wheat; D = shortage of bags.

Table 9.2.2.c gives an estimate annual production of wheat flour and bran, when the constraints related to equipment breakdowns, power failures and raw material supplies are removed. For the purpose of comparison with the 1987 production data, it should be noted that processing losses are not taken into account. In addition, an estimation is carried out for a realistic alternative, when all constraints are removed, but a 10 per cent operational time loss is assumed for various practical reasons.

The figures above show that removal of all constraints assuring 90 per cent capacity utilisation would improve the output of flour by 75 to 80 per cent or sufficiently to supply a population exceeding 160,000, assuming an average wheat flour consumption of 80 kg per capita and year.

Since the management has not been able to present information regarding input values, production costs and output value, it has not been possible to make an estimate of expected economic benefits from different levels of rehabilitation.

(ii) Scope for rehabilitation

Pending the result from the proposed study relating to future strategy of domestic supply of staple food (9.2.2.(a)) the rehabilitation efforts at the Quicolo plant should be focused on the existing wheat mill and, in particular, on the 150 ton/24 hour line. Ermoagens has obtained cost estimates as follows:

Wheat mill			
Rehabilitation	150 t.line	US$	1.416,395
"	50 t.line	US$	327,925
Labour		US$	214,562

Completion of wheat flour silo, the maize mill/stockfeed plant and electrical installations.

Cleaning	Fs	600,000
Milling	Fs	1,200,000
Flour silo and packing	Fs	500,000
Electrical works	Fs	600,000

FOB European ports.

Costs for transport, insurance and installation of the equipment have to be added, as well as the connection to the high tension power supply. No attempt has been made to estimate these costs. The management has not as yet prepared estimates for the costs for civil works pertaining to the flour silo on the one hand and the maize mill, stock feed plant including the silo unit on the other.

Comments

It is stressed by the mission that it is essential to vet the proposal from Bühler, who are, after all, machine manufacturers and in the business to sell as much equipment as possible. While it is probably true that all of the items listed in the Bühler proposal may be very useful to Quicolo, if money

were no object, it must be the objective of any rehabilitation scheme, which is supported by an international agency, to carry out the rehabilitation at the lowest possible cost, thereby enabling the factory itself to generate the funds for the less critical spare parts. For instance, in the case of a damaged conveyor belt, it may be possible to repair one section of the belt rather than scrapping the whole unit and buying a new one at a high cost. Similarly with many other machine items, needless wholesale replacement must be resisted.

In the opinion of the mission the US$ 1,416,395 quoted by Bühler only for the equipment necessary for the rehabilitation of the 150 tonne line, is excessive and contains items which are desirable but not critical to a successful rehabilitation.

The list should be vetted with the UNDP budget of US$ 700,000 firmly in mind and priority items should be chosen accordingly. Prices of all items should be cross-checked and in some cases the equipment does not have to be specifically Bühler. Other manufacturers do make similar equipment at possibly lower cost.

It is proposed that the rehabilitation measures for the 150 tonnes line should include:

- Physical rehabilitation of mechanical and electrical installations;
- Renovation of civil works especially windows;
- Completion of the wheat flour silo including both civil works and installation of equipment, all of which reportedly are available on site;
- Installation of auxiliary diesel-electric generator units, as required, to ensure continuous power supply, or as an alternative, through the relevant authorities obtain an assurance that the power supply is improved to an acceptable level, as soon as possible, but not later than on the date when the 150 tonne line is rehabilitated and subject to test runs;
- Completion of the grain silo in the maize mill/stockfeed complex, including the conveying system connecting it with the existing wheat mill; and
- The entire fumigation system to the silos and the sifter units must be rehabilitated to improve the quality of the final product.
- A laboratory should be established on the factory itself for the routine testing of the raw material inputs and all the products. The equipment now existing in Luanda but not utilised should be moved to the new facility at Quicolo.
- Technical assistance programme to train all of the maintenance personnel of the factory and to install proper preventative maintenance programmes.

It follows from this proposal, regarding rehabilitation inputs, that the 50 ton/24 hour wheat line will not be subject to any investments at this stage, nor will the completion of the civil works for the maize mill/stockfeed plant and erection of associated equipment.

(d) Costs and price structure.

It is difficult to analyze the performance of Ermoagens because of the state of its financial records. Rehabilitation should start here. There is a crucial need for technical assistance in the management of company accounts. It is only then that one can look into the question of price control. However, the state needs to introduce flexibility in the prices of the company's products. Currently, the company's flexibility and cost structure is heavily dependent on the operations of state companies - IMPORTANG on the supply side and EPAN and ENSUL on the demand side.

It is recommended that a computer terminal, to be connected to a central computer in the Ministry of Industry, should be installed at the QUICOLO factory, or as an even better alternative, a micro-computer system (PC-system) should be aquired for the plant.

(e) Marketing

The company is in a unique monopoly position in the country, but has only a very small percentage of the total market both with regard to production of wheat flour (27 per cent) and maize flour (8 per cent).

Taking this and the present pricing policy of the Government on inputs and outputs into consideration, there is no need for any marketing efforts in a short term perspective.

9.3 Industria Angolana de Oleos Vegetais, S.A.R.L. - INDUVE

9.3.1. Existing situation

(a) Plant history

INDUVE was founded in August 1957 as a private enterprise with capital from three private Portuguese companies with the objective of producing cooking oil and soap as the main products of the enterprise. These three companies consisted of Companhia Unico Fabril (CUF) owning 60% of the shares, Sociedade Nacional de Saboes Lda (SNS) owning 30% of the shares, and Macedo & Coelho Lda, owning the remaining 10% of the shares. Following the political changes in Portugal in 1974 CUF was nationalised and became a public company called Quimica de Portugal EP (Quimigal), but the respective shareholdings remained the same with no Angolan shareholders.

The factory was established on the basis of utilising only the locally produced raw materials, but since Independence the situation of the company has deteriorated progressively until it is now completely dependent on imported raw materials for its production. Domestic sources of palm oil seeds ("coconote" in local terminology) and sunflower seeds are now either inaccessible or in most cases are no longer in production. The company is therefore entirely dependent on obtaining sufficient foreign exchange to continue in operation, and whenever this is not available to purchase raw materials, the company simply comes to a standstill. This problem, together with other restraints when the company is actually operating, such as a severe shortage of water, an irregular electricity supply and an unrealistic official price structure for its products, which is determined by the Government, means that the company is operating constantly at a loss. Unless these restraints can be removed, this situation will continue into the foreseeable future with the possibility of the plant closing, if the Angolan authorities decline to offer further credit to cover the losses.

(b) Management and organisation

INDUVE (Industrias Angolanas de Oleos Vegetais) is a private company, which was established in 1957 with Portuguese capital.

The present shareholders are three Portuguese enterprises based in Portugal. The companies concerned are:

	Percentage holding
- QUIMIGAL	60 per cent
- SNS (Sociedad Nacional de Saboes),	30 per cent
- Macedo Coelho	10 percent

The board of directors consists of the following persons:

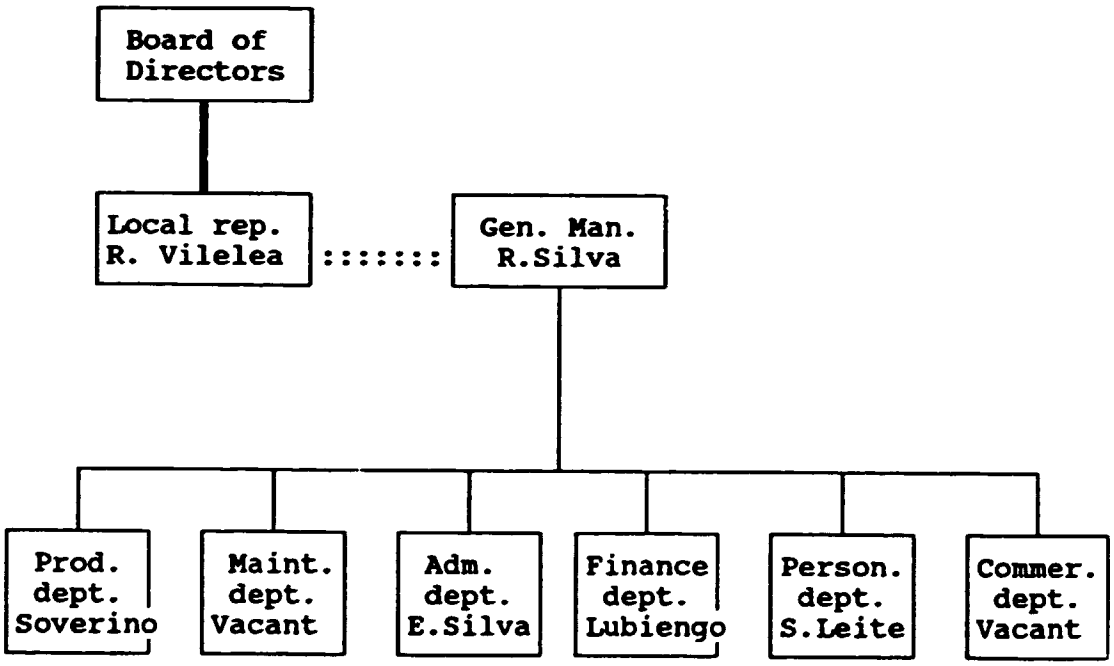
Chairman:	Mr. José Arturo Negro,	Quimigal
	Mr. Francisco Fereira Neto,	SNS
	Mr. Jaime Lanóa de Morais,	Macedo Coelha
	Mr. Antonio Peres da Silva,	Companhia Fabril e Comercial
	Mr. Rui Vilela,	INDUVE

Mr. Rogeiro Silva, the general manager, usually attends board meetings although he is not formally a member of the board of directors, which normally meets in Lisbon.

The board of directors has delegated certain prescribed responsibilities to Mr. Vilela, its resident director in Luanda who acts as liaison between the board of directors and the factory management. He also has some limited powers in the decision making field.

Figure 9.3.1

Management and Organisational structure of
I N D U V E.



Board meetings in the proper sense of the word are held only once a year in Angola, but Mr. Vilela travels frequently to Portugal when decisions of some importance have to be taken.

The budget and company plan is drafted by the general manager and the various departmental managers in July/August, before being presented to and approved by the directors at their annual board meeting, dealing with financial matters.

The general manager, Mr. Rogerio Silva is an Angolan citizen of Portuguese origin. He has a degree in chemical engineering from Instituto Tecnologico de Luanda. He joined the company in 1976, and became general manager in 1985.

A serious weakness of the organisation is the very loose connection between the board of directors and the general manager. Except for one annual meeting, all contacts between the owners and the management are channeled through the resident representative (administrator) of the shareholders, Mr. Vilela. Other weaknesses in the organisation include the two middle management vacanies. It is intended to fill these as soon as possible.

The problem in identifying and appointing appropriate candidates to these positions is that if a mistake is made when selecting a new departmental manager, it is subsequently very difficult to correct. The reason for this is that the existing employment legislation does not permit a company to dismiss an employee without the most cogent reasons.

The company is very dependent on outside technical support, which is partly provided through six Portuguese expatriates working permanently in the company. Areas of particular importance in this context are finance, maintenance and production, where four additional professionals/technicians are currently required.

According to the general manager, another serious problem area is at the foreman grade. It is particularly difficult to find competent supervisors at this level. Soap production is more sensitive than other processing lines, since the actual fabrication requires a skilled knowledge of the trade.

No reorganisation or major changes are presently contemplated in the operational structure except for filling the vacancies mentioned above.

Considering the fact that the management's hands are completely tied through the Government's present price control, financial management is good. See immediately below.

(c) Financial Structure

INDUVE is a private limited company with an issued share capital of Kz 65 Million, wholly owned by three Portuguese companies, namely:

	Share value(KwM)	%
Quimica de Portugal EP (Quimigal)	39.0	60
Sociedade Nacional Saboes Lda (SNS)	19.5	30
Macedo & Coelho Lda	6.5	10
Total issued share value	65.0	100

Quimigal is fully owned by the Portuguese Government, while the two other minor shareholers are both private companies.

Table 9.3.1 INDUVE shows the financial structure of the company including the initial paid-up share capital and accumulated losses of the company.

Table 9.3.1: INDUVE: Total assets and capital employed
(Kz 3000)

Assets / Year end	1984	1985	1986	1987
Fixed assets	287,609	320,318	341,578	50,387
Losses-current	53,258	23,069	56,888	113,965
Losses-previous	552,619	605,877	628,946	685,835
Current assets				
Raw material/spares	106,472	143,223	89,562	120,569
Cash/bank deposits	28,987	42,648	31,727	27,676
WIP/debtors	244,859	155,185	166,360	142,866
Investments in use	737	1,176	458	1,271
Total assets	1,274,541	1,291,496	1,315,519	1,442,569
Capital employed				
Private capital	65,000	65,000	65,000	65,000
Depreciation fund	204,650	238,514	271,785	294,679
Government fund	-	-	4,075	-
Reserves	51,067	51,067	51,067	51,067
Provisions	13,453	12,212	12,244	11,612
Loans	178,330	113,830	147,987	152,310
Creditors	761,537	809,697	762,903	867,443
Investment finance	504	1,176	458	458
Total capital	1,274,541	1,291,496	1,315,519	1,442,569

Examining the current situation we can see that this company has been making continuous losses and as the shareholders have not covered the losses themselves by increasing their share capital, the company is only surviving by the generosity of its creditors.

The 1987 loss of Kz 114 Million has been virtually covered by increasing the amount owed to creditors by Kz 105 Million. In a normal situation, such a company would quickly be placed into receivership. In April 1988 the Government finally allowed a price increase to take place, and this will reduce the losses for the current year (1988). However, until the pricing problem is rectified on a long-term basis, there is no incentive for any private company or individual to invest in INDUVE.

Internally the company operates a good financial information system with a regular monthly analysis of the factory's performance. Unfortunately, although the finance department and management are quite aware of the serious financial situation, the company is virtually helpless to carry out normal corrective action on prices and labour due to current Government policies.

(d) Buildings and installations

The factory site of INDUVE contains a series of buildings required for the different operations in cooking oil and soap manufacture. All are constructed with a reinforced concrete structure with clay brick walls, which have been rendered and painted. All buildings are structurally sound and the majority require little attention apart from cleaning, painting and replacement of a few windows. The following buildings and installations are described in the order of the natural process flow.

(i) Edible cooking oils

Storage shed I

Immediately outside this building (14.5 x 60m)is the ground feed hopper, into which are fed the raw material supplies, such as the imported palm oil seeds from Argentina and elsewhere. The hopper is fitted with a protective grid (50mm x 75mm) openings, through which all deliveries are screened. Deliveries are then deposited into the storage shed by means of an elevator and an overhead conveyor, which runs centrally down the full length of the building. At intervals are scraper positions, which are manually adjusted to deliver seeds into the correct storage pile. This storage shed is interlinked with an adjacent similarly sized building by an elevated screw conveyor, which is also fed by the elevator.

The hopper, which is linked to an internal ground hopper (2 x 5 x 4m), is also fed from a screw conveyor system feeding stored material in this storage shed into the production system. Seeds are fed into the underground screw conveyor at four positions by small electrical scoops. The electrical control panel in this building was stated to be operational, but it would be advisable for an electrician to give the entire panel a thorough cleaning and overhaul.

Storage shed II

This building is also sized 14.5m x 60m, but is fitted with an open channel screw conveyor along the centre line of the building, which feeds an 8m x3m x4m ground hopper, which in turn feeds an elevator by means of another screw conveyor.

Cotton seed production building I

This building, sized 16m x 11m, contains two rows of cotton seed machines, each row consisting of four machines. They were designed to handle a total of 100 tonnes of seed per 24 hour day, but have not been used since independence. The machines still appear in reasonable condition and could still be used in the future, should cotton seeds become available again in Angola.

Cotton seed production building II

This building contains the following equipment:

(i) Two double-deck Carver 54inch vibrating screens (Model No E65 62) containing a top perforated steel screen with 15mm diameter holes and a bottom screen sized with 3mm holes. All bottom screens were completely clogged, which means that when the machinery was in operation most of the fine particles would have passed to the final product line.

(ii) One Bauer screen, again left in a dirty condition.

(iii) Underground screw conveyor to deliver material to the adjacent building. This had not been cleaned out, when the plant had ceased production.

The building is currently used to store locally produced palm kernal, which is delivered in 100kg bags.

Palm kernel production building I

This building, sized 14m x 11m, contains three sets of preparation equipment. A vertical elevator and overhead screw conveyor deliver seeds to each of the following three units:

(i) Cracking and screening unit manufactured by M. Neumunz & Son, Oilmill engineers, USA. This contains a double-deck screen with a top plate slotted screen (15mm x 4mm) and 2mm diameter holes in the bottom screen. The bottom screens were all found to be totally blocked and the top screen was bent and damaged. Associated with this unit was an air cyclone and a Bauer screen (2m x 0.8m x 2m).

(ii) Cracking and screening unit manufactured by MIAG, Braunschweig, type 716/M3400 1971. This unit 1m x 3m in size is fitted with a double screen.

(iii) Cracking and screening unit manufactured by Carver, size 1m x 3m with a double screen and an aspiration unit.

The output from all these three machine installations is fed by a screw conveyor located in the floor, which then feeds a vertical screw elevator to the next building. Waste is transported via another screw conveyor and elevator and is deposited outside.

Seed crushing building

This building is sized 11m x 28m and contains the following equipment:

(i) Vertical screw elevator.

(ii) Buffer bin with a bottom screw feed.

(iii) Vertical screw elevator feeding an horizontal screw conveyor.

(iv) Two hammer mills, neither of which have screens installed and which are no longer used, having been bypassed.

(v) One roller mill, which is now carrying out the entire crushing operation.

(vi) Floor level screw conveyor, which transports the cleaned crushed seeds to the end of the building, where a vertical screw conveyor lifts the seed to the cooker.

All of these machines were in operation two weeks prior to the mission's visit, but all of the feed conveyors had been left full of material, and none of the screens had been cleaned. This is not good production practice, as maintenance staff cannot check the items properly, and there is always the possibility of overloading motors or restarting the plant, when machinery is already full of material.

(vii) Seed cooker unit, 2m diameter x 3m high. This item is steam heated and was supposed to have the following temperatures, in order from top to bottom, 165, 195, 220, 220 225 °C. However all of the temperature indicators in the cooker were defective and none could be relied on to give the correct temperature. Proper control of the cooking process was therefore not possible. In the event of a power cut, there is no problem with the cooker unit for about 30 minutes, but after a power cut of more than 30 minutes the cooker must be emptied by hand and then refilled. This takes approximately thirty minutes.

(viii) Two screw presses, type FOMCO Model 77, which press the hot cooked seed through a progressively narrowing barrel, by means of a steel auger. The oil pressed from the seeds drips down on to a screen, where the coarse contaminants are removed.

Temperature gauges on the presses were found to be inoperative and one press had no pressure gauge, therefore control and monitoring of the operation cannot be done with any accuracy. Control is only made by the amperage reading of the two presses, a maximum of 140 amps being allowed. The augers are built up by the plant maintenance staff only when there is a problem in production, normally once per year. A regular schedule of maintenance is not carried out on these machines.

(ix) Pump unit located in a floor pit, into which the oil from the presses flows in an open drain.

(x) Oil screening unit, the second stage of the oil cleaning process.It has not been used for three years due to the lack of filter mesh for the screen deck. It was initially bypassed by cutting a hole in the screen mesh, but subsequently the oil was piped directly to the filter press, avoiding the oil filter unit completely.

(xi) Filter press, type SHRIVER with 72 plates and 36 outlet taps feeding a double sided run-off tray. No pressure gauge is fitted to the machine. The filter cloths are purchased locally and are cleaned twice per day, since the oil screen unit was bypassed. Previously they were cleaned only once per day. The filter press cakes ares removed at floor level by a screw conveyor and are fed into the next building.

(xii) Two buffer oil storage tanks for the filter pressed oil.

Cake crushing room

This room, size 10m x 12m, contains the following equipment:

(i) Screw elevator to vertical screw elevator.

(ii) Storage bin

(iii) Hammer mill

(iv) Feed conveyor to screw conveyor

(v) A roller mill machine, type BAUMEISTER ZWG 600, No 39806. This was delivered to the factory and installed on a concrete plinth some years ago, but was never incorporated into the production line. It was purchased for the further reduction of the cakes from the hammer mill, so that the efficiency of the chemical extraction unit could be improved. The machine is in good condition and with proper organisation could be incorporated into the line over a normal weekend. The mission recommends that this be done at the earliest opportunity.

Cotton decorticating room

This room, size 12.5m x 20m, contains the following equipment:

(i) Cotton decorticating machine, type M.K. NEUMUNZ & Co., including four cyclones to remove waste.

(ii) Baler unit for waste cotton and lint.

(iii) Weighing machine for bales of waste cotton.

All equipment is in working order, although it has not been used for many years.

Chemical extraction unit

The chemical extraction unit, type DE SMET from Belgium, is located outside the main building, and is fed with crushed cakes from the hammer mill (Section g-iii). This was not in operation at the time of the mission's visit due to a lack of steam on the factory caused by maintenance work on two of the three boiler units and the fact that the soap production line had

priority for steam. Some of the temperature and pressure gauges are not working on the extraction unit, therefore accurate control must become more difficult. Extraction is carried out in 60 tonne batches, which normally take about one hour to complete, although experimentation is still being carried out to determine the best operational time. A total of 60 tonnes of cake are normally processed per day.

The percentage of oil in the residue after extraction was stated to be a maximum of 1 per cent. This was tested once per day, but as the laboratory frequently ran out of water, the results were often delayed by about two days, thereby nullifying much of the control procedure. From the extractor, oil is sent to the refinery and the residue is sent to the feed bagging building.

Feed bagging building

This open roofed area, size 22m x 30m, contains the collection silo for the residue (1m x 3m x 7m), which feeds a floor screw conveyor, which in turn feeds the screw elevator to the auto-weigh unit, type CHRONOS. This machine weighs 100 kg of cake residue into bags, and this is then sold as animal feed. Also in this building is a cyclone recovery system and heated storage tank for the recovery of the extraction solvent from the silo area.

Refinery building

This building, sized 30m x 12m, contains the process equipment for bleaching, deodorising and splitting of the edible oil from the soapstock. This consists of the following equipment:

(i) Two storage tanks

(ii) Pump to heated pipes

(iii) Storage tank and pump

(iv) Tank mixer for bleaching

(v) Set of two centrifuges used to split soapstock from edible oil

(vi) Soapstock tank

(vii) Three sets of two centrifuges to clean the edible oil. One of these sets is not operational. Water is added to the oil at this point.

(viii) Intermediate tank

(ix) Bleaching tank for bleaching process. The initial temperature is approximately 60°C, which is raised to 100°C during the 2.5 hour bleaching period and to 120°C for a 15 minute period. Cooling down to 80°C takes one hour, after which there is a 4.25 hour filtration period.

(x) Two filter presses, one of which is not operational.

(xi) Deodorising tank for 6,000 kg batches on a 1.5 hour cycle.

(xii) Cooling tank (outside building) to cool oil to 50°C

PVC bottlemaking plant

This building, size 8m x 40m, contains the following equipment:

(i) Two air blown bottle making machines, type BEKUM, for 1 litre containers. The capacity of each of these machines is 13,000 bottles per 24 hours. One of the machines is not operational.

(ii) One air blown container machine for 4 litre containers with handles, the rated output beig 2,000 per 24 hours.

(iii) Two shredding machines to recycle defective bottles and waste material.

(iv) Adjacent to this area is the air compressor, type Atlas Copco GA 410 (operating at 7 bar, max. 10 bar) and the associated air receiver and refrigeration unit (5°C).

Container filling area

This area, size 18m x 18m, is utilised for the manual filling of the 4 litre containers (4,000/8 hours), 20 litre containers (1,000/8 hours total from both filling units) and 200 litre steel drums (250/8 hours).

An adjacent 6m x 12m building contains the automatic bottle filling machine, type INDUSTRIAS AUSERE of Spain, which is rated at 12,000 one litre bottles per 8 hours. All of these areas require cleaning.

Boiler house

This building contains the following boilers:

(i) POWERMASTER oil-fired boiler 16,000 lb/hour.

(ii) S-ELECTRIC 1966 oil-fired 13,390,000 Btu/hour.

iii) POWERMASTER oil-fired 6,695,000 Btu/hour.

Two of these boilers were undergoing maintenance at the time of the mission's visit, which meant that the chemical extraction plant could not operate.

(ii) Soap production

This is carried out in a single unit, the main production area being sized 54m x 30m with a rear saphonication area, containing a heated soapstock tank, two tanks for silicates and perfume and three 25 m3 saphonication tanks, which are heated for 24 hours for each batch of soap. Inside the production area are two soap production lines. The first line contains two main storage tanks, which feed an intermediate tank by means of a pump. A second pump

feeds the liquid soap through a heated pipe section to the soap bar extruder, type MECHANICHE MODERNE from Italy, which is fitted with a die, behind which are a perforated filter plate and a fine filter mesh to remove contaminants. The machine and the associated soap cutter are rated at 45-50 pieces x 0.4 kg bars/minute. From the cutter the bars of soap are transferred to a double chamber cooling unit (5 high), after which the bars are stamped and packaged into cardboard boxes containing 20kg.

The second production line consists of a similar arrangement of tanks but has an extruder fitted with a die for 1kg bars. The cooling unit is of different design, being 2m wide x 6m long and 3m high with 16 vertical holders. The capacity was stated to be 31 pieces x 1kg bars/minute. After cooling the bars are packed into the same type of box that is used for the smaller bars.

In addition to these main buildings are the restaurant and medical facilities, and also the holding area for the live animals, which are used to supply the kitchen.

(e) Inputs

The description of the processes clearly shows that the plant operates in different sections which are interdependent, but which can also operate separately. For instance, the refinery could very well operate independently, given that crude vegetable oil is supplied as required, or according to the production target.

At present the production is based mainly on purchased sunflower seeds and palm oil kernels. In addition tallow is used at present for the manufacturing of soap since the supply of palm oil kernels is limited.

Domestic production of sunflower seed and palm oil kernels were of the order of 20.000 tonnes per year in the early 1970s. Available statistics show an estimate for the present annual crop yield of about 100 tonnes and 600 tonnes respectively for sunflower seeds and palm oil kernels.

Only palm oil kernels are purchased domestically at present, but available quantities do not satisfy the factory demand. Tallow is imported as a substitute and the entire supply of sunflower seed is also imported.

In addition to the oil bearing seeds and fats, substantial quantities of other inputs are imported for the processes, a large portion of which are used in the manufacturing of soaps. Packaging material, PVC for bottles are imported, while the drums are purchased locally.

Other items, specific to INDUVE, are purchased directly from the manufacturer or exporter abroad.

(f) Product range

INDUVE's main products are edible oils and soap in two qualities, Super and Offenbach. The principal by-products of vegetable oil production are sunflower and palm kernel cake.

Figure 9.3.2

INDUVE. Process flow diagram - crude oil production

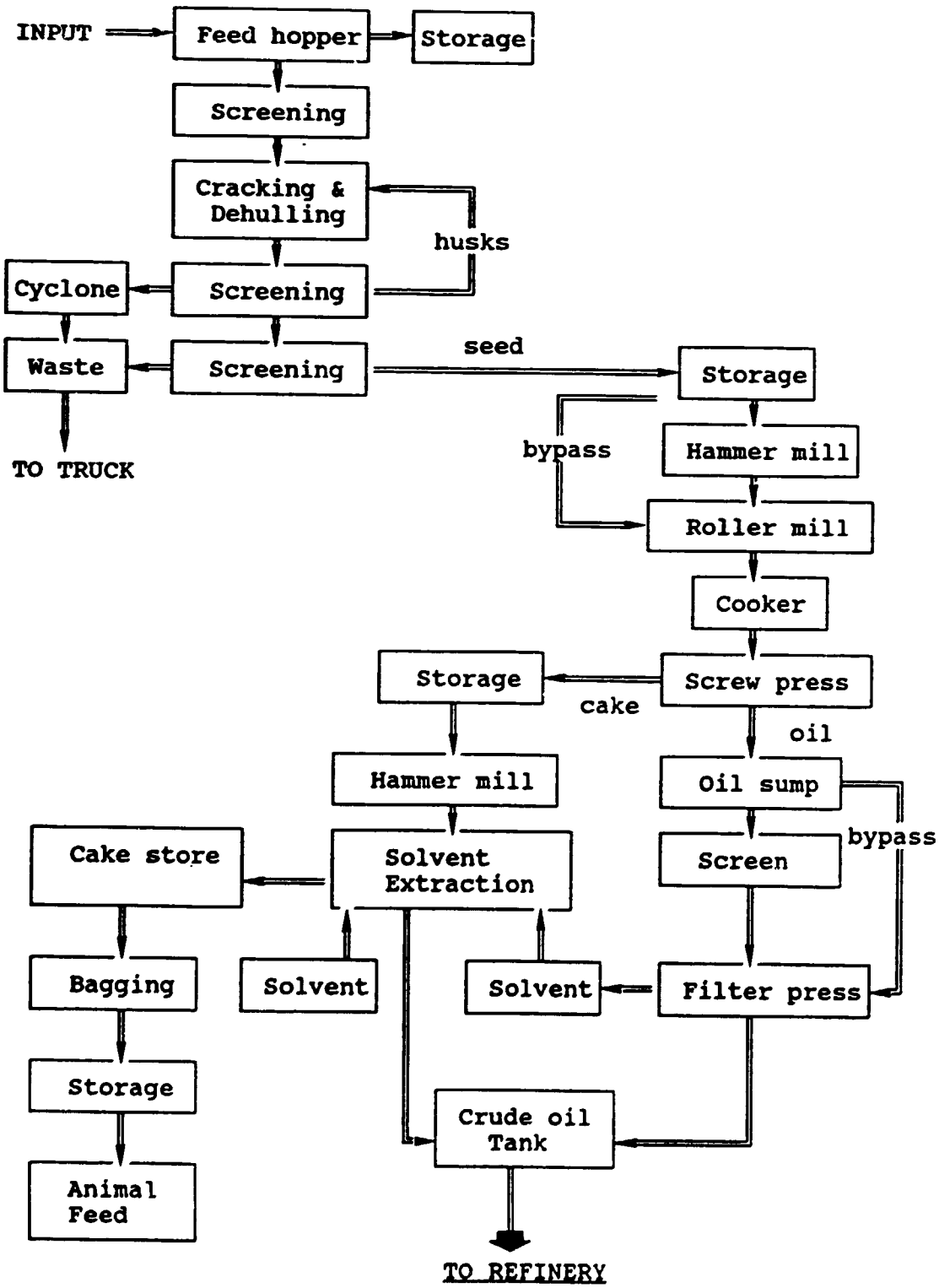


Figure 9.3.3

INDUVE. Process flow diagram - Edible oil & soap

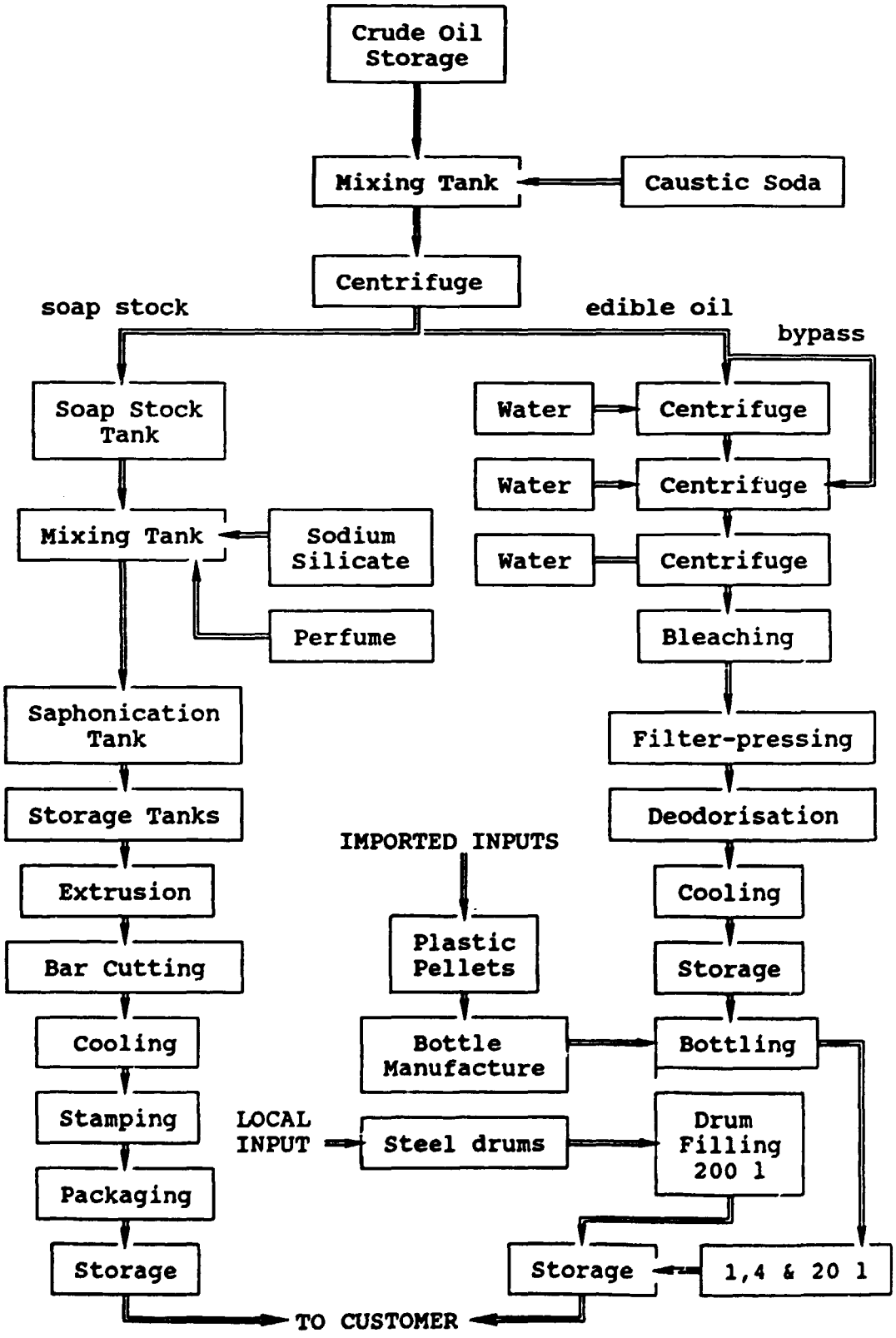


Table 9.3.2: INDUVE. Volume and value of inputs, 1987

Item		Tonnes	Million KZ	Usage	Origin
Sunflower seed		13,870	228.89	Crude	ARG
Palm oil kernels		600	6.00	-"-	Domestic
Tallow		3,820	N.A	Soap	USA,NZ
Caustic soda		900	N.A	-"-	BRAZ
Silicates		265	2.80	-"-	PORT
Bleaching earth		30	0.19	-"-	FGR
Polyvenly comp		100	4.00	-"-	PORT
Polyethene		90	5.00	-"-	FGR
Hexane	m3	280	6.72	solv extr	Domstic
PVC		100	4.00	packing	PORT
Barrels	(pcs)	19,500	10.89	-"-	N.A.
Cartons	(pcs)	550,080	22.86	-"-	-"-

Table 9.3.2 shows the total inputs in 1987, value, usage and origin.

The imports of items used by a number of Angolan companies, as in the case of sunflower seed, tallow and caustic soda,are handled by TRANSAPRO which comes under the Ministry of Industry,and ordered through IMPORTANG which comes under the Ministry of Trade.

1987 was an exceptionally difficult year for the factory with a shut down in production over several months. Consequently the following figures relating to the output of the various products are therefore not representative of the company's performance in a normal year.

Product	Quantity	Value(Kz)
Edible oil	2,582,000 litres	125,793,000
Soap	2,194 tonnes	63,441,000
Sunflower cake	2,136 tonnes	3,500,000
Palm Kernel cake	99 tonnes	81,000
Total value of sales during 1987 were:		192,815,000

Future plans are to increase the refining capacity to 60 tonnes/day or 2,200,000 litres/year. Edible oil is the most profitable of INDUVE's products. In addition, the Government has approved the company's plans to extend its existing product range at INDUVE involving the establishment of a new factory for the production of margarine. The production target is 7,000 tonnes/year. This investment is estimated at US$ 7 M at 1985 prices. Land for this planned investment is available on INDUVE's existing premises.

(g) Plant performance and price structure

(i) General

INDUVE's main products are refined edible oils and toilet soaps. The soap production line produces two kinds of soap - a super quality soap, with a 72 per cent fat content, and an ordinary quality soap with a 41 per cent fat content.

The plant is about 20 years old. In its refined oil production line, the plant can process most oilseeds except for soya beans.

The installed capacity in edible oil production is 5,000 tonnes of refined edible oil per annum. The crushing capacity is 30 tonnes per day and the refinery capacity is 25 tonnes per day. However, the plant can work on no more than 80 per cent of the refinery capacity because of problems relating to the supply of water and energy.

The installed capacity in soap production is 6,000 tonnes per annum. The plant also produces two intermediate products, plastic bottles and palm kernel oil. Plastic bottles are used to package the plant's refined oil products. Palm kernel oil is used as an input into soap production.

The firm has been producing below capacity. Table 9.3.3 shows the plant's production during 1987, when the plant produced 6,896 tonnes of finished products. The 65 tonnes of palm kernel oil being an intermediate input into the production of soaps. The major production lines being there for refined oils and soaps. These represented respectively 35 per cent and 31.6 per cent of total output produced during 1987.

Table 9.3.3: INDUVE: Distribution of total production during 1987

Product	Total Production (tonnes)	Percentage of total Production
Refined Edible Oils	2,461	35.7
Soaps	2,200	31.9
Palm Kernel Oil	65	
Sunflower Cake	2,136	30.97
Palm Kernel Cake	99	1.44
Total	6,961	100

Source: INDUVE

However, in the case of refined oil production the plant was operating at about 49.2 per cent capacity utilisation during 1987, and of about 36.7 per cent for soap.

Table 9.3.4: INDUVE. Total sales: 1985 - 1987
(Million Kwanza)

Year	1985	1986	1987
Refined edible oils	219.7	230.72	125.8
Soaps	176.0	144.14	63.44
Sunflower cake		5.6	3.5
Palm Kernel cake	23.4	0.3	0.08
Total	419.1	380.76	192.82

Source: INDUVE

Table 9.3.4 sheds further light on the performance of the plant over time, indicating the total sales of the company between 1985 and 1987. Since the offocial prices for INDUVE's products have not been altered since 1982, the nominal values correspond closely to the actual trends in production. INDUVE sells all its products at the factory gates, and does not keep any stocks.

It should be noted that INDUVE's production has been declining in recent years. It decreased by 9 per cent between 1985 and 1986, and fell a further 49 per cent between 1986 and 1987. As INDUVE is the only fully operational edible oil plant in the country, the shortfall in the demand for edible oil and soaps has been increasingly met by imports.

Low capacity utilisation and the continuous decline in production at INDUVE are attributable to various factors. These include the instability in the provision of raw materials, the lack of adequate water supplies, the considerable variations in the supply of electric energy, transport constraints, shortages of spare parts and difficulties in obtaining qualified workers.

The main raw material used in refined oil production are sunflower seeds, the supply conditions for which are generally unstable. At the moment, sunflower seed is almost entirely imported. This is due to the fact that there is currently very limited production of sunflower in Angola on account of the security situation and lack of incentives for farmers to increase agricultural production. Sunflower seeds are imported mainly from Argentina.

INDUVE's production is also affected by the inadequate supplies of water to the plant. The municipal water system is only able to supply 10 per cent of INDUVE's water requirements. Consequently, it is not possible to operate the plant fully, or to run the factory for more than three consecutive days in any given week because of water supply problems.

The supplies of energy are erratic and plagued by continuous cut-offs. However, this problem is not as severe as the difficulties created by inadequate water supplies.

The plant is also faced with the lack of qualified workers. Efforts have been made to resolve this problem through a technical assistence agreement with QUIMIGAL.

The factory is also faced with a lack of spare parts and transport problems affecting its workers. All these factors have combined with other constraints to reduce the company's capacity to operate efficiently.

The performance of the company can also be assessed by reviewing the value of total sales per employee. This is shown in table 9.3.5. As has been pointed out above, since INDUVE's prices for its finished goods have been fixed over the time period, the value of total sales per employee provide some reflection of trends in the average contribution to output per worker.

Table 9.3.5: INDUVE. Value of total sales per employee
(Million Kwanzas)

Year	1985	1986	1987
Total sales	444.5	434.2	234.8
Number of employees	682	692	689
Total sales per employee	0.652	0.627	0.341

Source: INDUVE

It can be observed that despite declining production, INDUVE has maintained its workforce at more or less the same level. However, the firm's employees have on average been contributing less and less to total output.

(ii) Import dependence

The flow of production at INDUVE is largely dependent on imports. The major input used by INDUVE is sunflower seeds, which are bought locally from TRANSAPRO, after being imported from Argentina by IMPORTANG. This is a substantial dependence since the total value of sunflower seeds, of Kz 228 million, represents about 69 per cent of the value of total inputs.

Supplies of sunflower seed are sold to INDUVE by TRANSAPRO at Kz 16.50 per kg. The current world price of sunflower seed is Kz 8.50 per kg, or half the domestic price of the product. Thus, despite INDUVE being in a chronic loss situation, it would appear to be subsidising the importation of sunflower seeds. However, since INDUVE sustains its financial position by increasing its debt to the BNA and the monopolistic raw material suppliers, it is the state which ultimately subsidises the operations of the monopoly trading companies, TRANSAPRO and IMPORTANG.

The other major inputs used by INDUVE are PVC, polythelene granules, silicates, bleaching earths, tallow, palm kernels, carton boxes, hexane, caustic soda and drums.

Tallow and caustic soda are bought locally from TRANSPRO, although they are imported into the country. Table 9.3.6 shows the major products that are imported directly by INDUVE. These were valued at Kz 11.8 million during 1987 and represented about 3 per cent of the total value of inputs.

Table 9.3.6: INDUVE. Total values and quantities of imports, 1987

Product	Quantity (tonnes)	Value (Million Kwanza)
Polythelene	90	5.0
PVC	100	4.0
Silicates	265	2.8
Bleaching earths	30	0.002
Total	485	11.802

Source: INDUVE

Other inputs including palm kernels, carton boxes, hexane and drums are either grown or manufactured locally. INDUVE's total purchases in 1987 amounted to K 46.5 million.

Similarly, in case of spare parts, INDUVE's import dependence is very high. Most of the spare parts are imported from Belgium, Federal Germany, Japan, the UK and the USA.

The company's most acute problem is in the acquisition of the great bulk of its spare parts. Many of these are unvailable in the country, although Angolan manufacturing industry has apparently the capacity to fabricate many of the components. INDUVE can make some simple spare parts in its workshop, but this is a ralatively expensive operation. Consequently, almost all the spare parts are imported from abroad. In 1988, the budgeted cost of imported spare parts is estimated to be of the order of Kz 23.6. million.

(iii) Protection

Refined edible oils and soaps are imported into Angola by IMPORTANG and EMATEC. Currently, there is heavy importation of these products because of low domestic production. Tariffs on the finished products are very low, and have not changed since before independence.

As regards inputs into edible oils and soap manufacture, the duties here are also generally low. The rates on some inputs are: 5 per cent for PVC; zero for sunflower seeds; 25 per cent for tallow; 30 per cent for crude oil and 5 per cent for silicates.

(iv) Profit and loss accounts

The company has been operating at a loss since 1974. The accumulated loss in 1977 was Kz 685.8 million. Table 9.3.7 shows the financial loss record of the company between 1985 and 1987. This loss has been largely financed by increasing the company's debt to the BNA and its raw materials suppliers.

The company's losses may be attributed in the main to constrictal production and low prices. Constricted output is caused by the lack of raw materials and infrastructural problems in the supplies of water and energy. Low prices are a result of official price controls. The company's profits are squeezed between controlled prices for its finished products and the rising prices of its main inputs.

Table 9.3.7: INDUVE. Turnover and losses, 1985-87
(Million Kwanza)

Year	1985	1986	1987
Turnover	444.5	434.2	234.8
Losses	23.1	56.9	113.9

Source: INDUVE

(v) Costs and pricing structure

INDUVE uses a cost-plus system to set its prices. However, this is not very useful because INDUVE's products are classified as essential goods in respect to which Government sets the price. However, the company still uses the cost-plus system to arrive at a price when it presents its case to the state. During 1987, the company suggested a price of K 79.50 per litre cooking oil. This was a cost-plus price. However, the Government rejected the suggested price and instead fixed the price at Kz 76.50 per litre. Table 9.3.8 shows INDUVE's prices for 1982 and 1988.

The Government argues that it sets prices on the basis of a study of the cost of production for the item in question by the Ministry of Planning. Sometimes the company concerned participates or provides relevant information. The last time prices of INDUVE's products were changed was in 1982, but they were updated in April 1988. However, there is still a very marked difference between INDUVE's official and parallel market prices.

Table 9.3.8: INDUVE. Prices of main products 1982-1988

Product	1988	1982
Edible oils		
bottles (litre)	K 76.50	K 49.50
drums (litre)	K 68.50	K 47.50
Soaps		
super type (kg)	K 39.0	K 36.25
ordinary type (kg)	K 32.0	K 21.50

Source: INDUVE

INDUVE incurs heavy social costs in terms of the provision of transport to workers and restaurant facilities at the work place. The company spends about Kz 12 million per annum on subsidised meals, and has to provide transport for its workers. For example, INDUVE currently needs 4 buses, which are in service for only four hours a day, to ferry its workers to and from the factory.

(vi) Liquidity and foreign exchange position

INDUVE sells its finished products at the factory gate. Two state companies buy most of the production: EDIMBA and LOGISTICA. The rest of the production is used by the company for barter transactions for sales to restaurants, and for payments in kind to employees .The company has liquidity problems since it is squeezed between controlled prices for finished goods and rising input prices. However, because it is considered to be engaged in the production of essential items, it is easy for the firm to secure financial help from the state to solve its liquidity problems.

Allthough it can for the moment resolve its liquidity difficulties, the company is still faced with foreign exchange problems although its priority status makes its problems in regard to the availability of foreign exchange less severe. The company's major problem is to get adequate foreign exchange for spare parts and to cover its technical assistance agreement. During 1988, the company needed Kz 30 million in foreign exchange,and was allocated Kz 15 Million - 50 per cent of the amount asked for.

At one time the company engaged in barter trade with QUIMIGAL in Portugal, using sunflower cake to pay for its foreign exchange technical assistance payments. However, this arrangement was stopped in 1986.

(h) Market and competitors

The Angolan market for edible oils is estimated at 30,000 tonnes/year of which INDUVE accounts for about 16 per cent. Since INDUVE is the only producer of edible oil in Angola, the volume of imports represent 84 per cent of the market share or 25,200 tonnes/year.

In the case of soap production, there is a certain element of competition, since two other companies are producing more or less the same soap products as INDUVE. Those companies are: OLMAG in Luanda and EGC (Empresa de Gorduras do Centro) in Lobito. INDUVE is estimated to have 27 per cent of the total market for soap of 22,000 tonnes. OLMAG has the same market share 27 per cent, EGC is a smaller company with 7 per cent market share. 39 per cent of soap supplies are imported.

INDUVE does not have a department focusing exclusively on its sales, but has organised a unit called the commercial department with six staff members, who deal with all trading activities i.e. sales of finished products and the acquisition of raw materials, spare parts and other items necessary for production. Most of the firm's raw materials are now purchased through a state owned enterprise called TRANSAPRO, but INDUVE also has a small direct import of additives and spare parts, which is handled by its commercial department.

Most of the sales of INDUVE's products are "at the gate", thus avoiding the need to engage in the distribution and transportation of its products. Similar conditions are valid in regard to the purchase of, raw materials, for instance from TRANSAPRO. This is a common practice in Angola, since most firms are reluctant to engage in transportation and distribution activities. INDUVE has no plans to arrange its own transportation services in the foreseeable future.

The company has no permanent agents or representatives outside of Luanda to handle the sales of its products and to purchase its raw materials. However, INDUVE has been asked by the Government to engage business agents in the rural areas to purchase raw materials. This is considered by INDUVE to be slightly premature, at least until there is a certain increase in the production of sun-flower seed or other vegetable oil products in the rural areas.

As in the case of most other products in Angola, the demand for INDUVE's products is greatly in excess of local supplies. Consequently, there might appear to be no immediate need for sales promotion. However, with the introduction of the SEF programme, firms like INDUVE will require to devote increasing attention to distribution activities in the rural areas in order, inter alia, to provide consumer incentives for enhanced agricultural productivity, as in the case of the EEC-supported programme in the Lubango region.

In order to keep its name before the public, INDUVE takes part in FILDA (Feira Internacional de Luanda), which is a yearly event.

Most of INDUVE's products are on the list of essential products, which means that in order to export it requires to obtain an export licence. In 1986 2,000 tonnes of sun flower cake was exported to Portugal as payment for technical assistance.

No significant export of INDUVE's other products are contemplated in a short to medium term perspective.

(i) Constraints

The principal constraints affecting INDUVE are as follows:

- a limited and irregular supply of raw material;
- a price policy not conducive to the development of the enterprise;
- a lack of water supplies;
- an irregular supply of electricity;
- a lack of foreign exchange to purchase spares, and machinery, and to contract technical assistance from abroad; and
- a continuous deterioration in the condition of its equipment and machinery which will jeopardise future production, unless new investments are made.

Prior to 1975, the enterprise relied on domestically produced palm kernels, sunflower and cotton seeds to produce edible oils and soap. Both products are consumed by the population at large, and are considered strategic by Angolan policy makers. As agricultural production fell in Angola, it became necessary to replace domestically produced raw materials with imports, which were purchased by IMPORTANG. Because of overall foreign exchange constraints affecting the Angolan economy, the volume of deliveries of raw material to INDUVE has not been sufficient for the factory to maintain production levels.

The enterprise has operated at a loss for several years. Had it operated under normal commercial conditions, it might well have gone into liquidation. One important factor explaining the poor economic performance was that the Government has fixed both input and output prices at levels which do not permi the company to become a viable commercial enterprise. As a result the company has operated at a loss since 1975. The Government has financed this deficit by extending credits to the enterprise. If this company is to make an effective contribution to Angola's development, certain incentives may have to be provided by the Government to ensure that the owners will produce efficiently and make necessary new investments.

The factory management stated that the lack of a sufficient supply of water is the most important constraint facing the factory to maintain production at an efficient level. Reportedly, total demand of water per 24 hours is estimated at 350m3, but the factory is receiving only 290m3.

As is the case for most other enterprises in the Luanda region, frequent power cuts pose a serious problem for the factory and increase production costs.

The lack of foreign exchange affects INDUVE's activities in two ways. Firstly in an indirect manner, because the supply of raw materials from the state importing enterprise, IMPORTANG has been insufficient. Secondly a direct because the enterprise has not received sufficient foreign exchange to

contract necessary expatriate staff to fill key positions, to purchase spares and to replace worn out machinery. Little, if any, systematic training of Angolans has been carried out by the enterprise. Middle level management is lacking, and will become a bottleneck for any future expansion of the enterprise.

Since 1975 very little investment has been carried out by the enterprise. Unless new investments are made, the possibilities for maintaining present production levels will steadily diminish and the factory will eventually come to a stand still.

Given the Government's intention to liberalise markets and let these market forces determine prices, another issue may shortly have to be addressed. From a practical point of view, as the sole domestic producer, INDUVE has a monopolistic position in edible oils. If the enterprise is interested in maximising profits or minimising its losses, which is a reasonable assumption, it might be inclined to curtail production so as to obtain a higher rate of return at the economic margin.

9.3.2 Rehabilitation requirements

(a) Management and organization

The organisation at INDUVE shows weaknesses in several areas, the most important being the working relationship between its board of directors, the local representative and the general manager.

At present very few board meetings are held on the company premises in Luanda. Instructions from the owners are normally channelled through the local representative, Mr Vilela, who has very limited powers of decision making. For all significant decisions in relation, for example, to company investments, reference has to be made to the owners in Portugal, which is usually done by Mr Vilela, who makes frequent trips to Portugal. It was not possible to determine exactly how responsibilities are divided between the general manager and the local representative. However it is quite clear that the present situation is not satisfactory.

To improve this situation and make communication lines shorter and more efficient, a local board of directors should be formed with participants from the local business community, representative(s) of the shareholders and perhaps also a representative of the Government. Voting rights should correspond to the level of investment among the shareholders.

The daily operation of the company should be left to the general manager who would have the local board to consult when necessary. The local representative of the owners should if necessary be given power of attorney to act in certain prescribed areas, but only within the responsibility and competence of the main board of directors.

Such an arrangement would give the management greater flexibility of action in the business field without the owners loosing control over their interests. The general manager would then be more open to commercial impulses within Angola, which should help to stimulate relevant business initiatives on the part of the company.

The next step to be taken is to fill the existing vacancies for commercial manager and maintenance manager. This should be given high priority, since it would release part of the general managers time and energy for other more important duties. He now has to devote much of his working day to questions related to problems within those two departments.

Another supervisory weakness confirmed by the management is at the foreman level. A thorough analysis of the problem is called for, and depending on the results, replacements and/or recruitment of new personnel should be actively considered. This problem has not been studied in detail by the mission.

(b) Physical plant

For any rehabilitation scheme, or indeed any further new investment, to be successful at INDUVE, the constraints regarding the infrastructure must be first addressed, ie:

(a) The lack of water has been a serious long-term problem because the daily requirements of 350 m3 cannot be met by the municipal water supply system and the supply from the cement factory stops at frequent intervals, whenever that factory is not working. Trucking the water by tankers was stated to be expensive. Plans are well advanced to bring water from a new water pipe system, which is being installed for the refinery extension and this should be complete within the next year. At the present time the project is held up due to financial constraints and the mission feel that, if no progress is made in the near future on this project, the construction of an additional ground storage tank, with a capacity of a minimum 1,000 m3 would be a valuable investment, as this would then give the plant a total storage apcity of 1,800 m3, which is sufficient for one week's production. A tank would require approximately 150 m3 of concrete, assuming reinforced walls of 250mm.

Estimated costs for materials are: US$ 20,000
Estimated costs of pump and pipework: US$ 5,000

UNICEF have not carried out any drilling in the area of INDUVE, as they are concentrating their efforts in the rural southern areas but according to old portuguese reports the only areas, where water can be found are close to the river systems.

(b) The small boiler was stated to be nearing the end of its useful life and the company wishes to replace it.

Estimated cost is US$ 85,000

(c) Emergency generators with a capacity of 1,460 kva are already installed but are insufficient for the needs of the factory. Already on site is a new power plant, consisting of generators and transformers with a capacity of 2,500 kva. This equipment must be installed in any rehabilitation plan and also for the planned new refinery.

Estimated cost is US$ 15,000

(d) Once financing has been arranged for these important items with an outside agency or development bank, a detailed rehabilitation programme can commence with a technical assistance programme concentrating on the maintenance of the grinding, pressing and extraction machinery and the training of local personnel. The experienced engineer would also install a preventative maintenance scheme for the factory. In conjunction with this, financing must also be arranged for the supply of all the necessary spare parts.

Estimated cost for technical assistance is US$ 50,000
Estimated cost for essential spares is US$ 40,000

(e) New vehicles have to be purchased for the transportation of factory personnel. Requirements are for two 60 seat buses and one 20 seat minibus.

Estimated cost is US$ 140,000

(f) In the medium term the company wishes to invest in a new 22,000 kl oil refinery and additional storage capacity for crude oil, therefore it would not be worthwhile to spend a large amount on the existing refinery but routine maintenance must obviously be carried out continuously until such time that any new facility is commissioned.

Estimated cost for essential spares is US$ 10,000
Estimated cost for new refinery is US$ 4.5 million
Estimated cost for additional storage (3,160 tonnes) is US$ 367,000

(g) The laboratory requires some essential reagents and consumables such as glassware for normal operational testing and quality control. The laboratory also requires updated protein analysis equipment, potentiometer and balances.

Estimated cost for these items is US$ 41,000

(h) In conjunction with the new refinery, financing would also be required for additional packaging equipment and a new plastic bottle extruder to cope with the additional output from the factory. This assumes, of course, that sufficient foreign exchange is made available for the required raw materials, either seeds or imported crude oil. There would be little sense in investing in new packaging facilities, if raw materials are not available. As foreign exchange for raw materials is likely to be limited this investment would probably only make sense, if locally produced materials were available. This project must therefore be realistically long-term.

(i) A long-term project already selected by the Government is to install a 7,000 tonnes per year margarine factory at the INDUVE factory. A 1985 cost for a turn-key project was US$ 7 million of which about 10 per cent of the equipment was already in Angola. The remaining 90 per cent at current prices has to be financed.

Estimated cost is US$ 7.3 million.

(c) Inputs

The present reliance on imported raw material, the oil bearing seeds, can be changed only when peace and security is restored and domestic agricultural commodities are available to the food processing industry. In 1987 very small quantities of oil bearing seed appeared on the market (table 6.1.2). These data should, however, be treated with some caution. In 1987 a total of 90 tonnes of palm oil seed was marketed through the state while information from INDUVE shows a domestic purchase of 600 tonnes in the same year. Available statistics are generally confusing regarding the production volume of palm oil seed.

The estimates of marketed quantities of "oleo de palma" was 3,618.5 tonnes in 1981, a figure which was slightly higher than the previous year, 3.406 tonnes. This may be compared with the quantities of palm oil seed marketed by the state in 1984, 146.3 tonnes and the above quoted quantity for 1987. Again, the official statistical data show a fairly even production of the order of 90 tonnes per year from 1980 through 1987 except, for 1983, when 303 tonnes were produced.

In the short term perspective it appears essential to identify the domestic resources of palm oil seed producing estates and/or farms and explore the scope of increasing the supplies to INDUVE and reduce the dependency on imported tallow for soap manufacturing.

INDUVE as an enterprise can do very little to influence the domestic supply of oil bearing seeds of any kind. This is decidedly a question for the Government and in particular the Ministries of Planning and Agriculture.

The rethinking of the Government on agricultural policy issues include initially to define areas where the state should be active. One area which has been mentioned is research, experiments and promotion of certain cash crops such as cotton and tobacco. With limited resources it would appear that substantial research and development efforts should be focused on oil seed crops rather than on tobacco. This would have equal or more impact on agro-industrial development, substantially contribute to feeding the nation and provide feed to a growing livestock subsector, providing job opportunities, agro-industrial expansion and improve food supply. Focusing on oil seed crops, however, would not directly create foreign exchange, but the positive development effects would carry more weight.

In medium to long terms additional supply of domestically grown oilbearing seeds should consist of palm oil kernels in particular, whereas crude vegetable oil could be supplied from a growing primary vegetable oil industry in the major agricultural areas. (see Section 8.2.3)

Stratification of the future Angolan vegetable oil industry should be made at an early date where INDUVE has a leading role as the only refinery in the country.

Rehabilitation requirements for inputs also include improvement of the water supply discussed under Section 9.3.2 (b) and electrical energy.

(d) Cost and price structure

(i) The cost-plus approach to pricing by INDUVE is acceptable. However, there is need for the state to allow flexibility in INDUVE's prices of finished goods. INDUVE's profitability is squeezed between the fixed controlled prices of its finished products and the increasing input prices. The flexibility can be in terms of allowing the controlled price to reflect the cost of production as much as possible with perhaps an annual review of its level.

(ii) There is need to review tariff policy so as to encourage the local fabrication of spare parts which can be made locally. This could be done by setting high tariff rates on such spares and very low or zero on those spare parts that cannot be fabricated within Angola.

(iii) A review of the cost structure of the monopoly trading corporations, such as TRANSPRO, may need to be instituted. The domestic price of sunflower seed, a major input into INDUVE's production of refined oil, is about twice the world price of sunflower seed. This might be caused by the high operational costs of the public trading corporations.

(e) Marketing

Previous economic policies involving the control of prices both of inputs and outputs, have contributed to a situation of extreme scarcity for practically all products, to a collapse in the production of local foodstuffs and, to a flourishing parallel market, where a significant part of the country's commercial transactions take place.

The market for INDUVE's products is a sellers market and for the moment there are no problems whatsoever in selling the firms products. There is, therefore, little immediate need for investment in sales promotion in a conventional sense, although with the introduction of the SEF, greater attention would require to be given to the distribution of products in the rural areas, including particularly the Lubango region.

It might thus be advisable for the firm to investigate the possibilities of establishing agents at key points throughout the country for the purchase of raw materials and the sales of its products.

The successful implementation of such business initiatives would depend in large measure on progress made in implementing the SEF, including particularly the phased liberalisation of the price control system and greater flexibility in exchange rates.

9.4 Fabrica de Artigos de Fibras Sint ticas, S.A.R.L. - FIBREX

9.4.1 Existing situation

(a) Plant history

Fabrica de Artigos de Fibras Sintiticas, S.A.R.L. (FIBREX), located in the industrial area of Viana, 23 km east of Luanda, was established in 1966 as a private limited company by a group of Portuguese individuals and companies and Angolan citizens with a total share capital of Kz 17.5 million. The initial factory lines installed were two pipe extrusion units, which commenced production in 1967/68. The raffia bag unit began its operations in 1972. In addition to extruded plastic pipes, prduction of other items, such as window frames and shutters, was also initiated during this early period.

Despite the economic problems which Angola has encountered in recent years, there has always been a good demand for the products of the factory, and it can easily sell its entire output, when operating at capacity. Currently the plantcannot operate to its full capacity due to a lack of foreign exchange to finance imported raw material and spare parts requirements. The government controlled price structure for raffia bags has meant that the profitability of these items has declined,and consequently the management is at the moment more inclined to invest in the pipe manufacturing sector, which continues to be more profitable for the company.

(b) Management and organisation

FIBREX (Fabrica de Artigos de Fibras Sintetica S.A.R.L.) is a privately owned company located in Viana, 23 km east of Luanda with offices both in Vianda and Luanda, which was originally founded in 1964 by Portuguese businessmen living in Angola and Portugal.

The board of directors consists of the following persons:

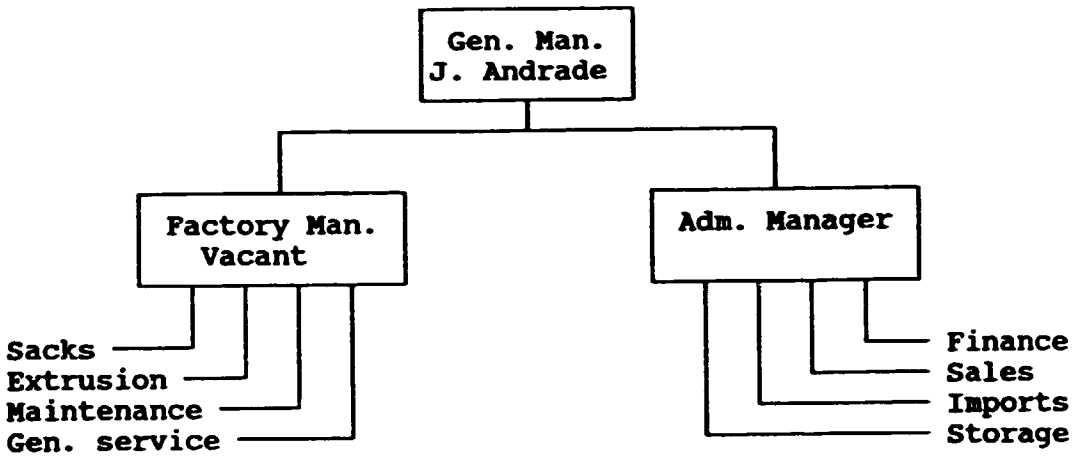
Chairman	Joao Gonzalves Fernandez Costa
General manager	Julio da Costa Andrade
	Josí Armenio Pereira Sequeira
	Josí Manuel Silva Carvalho Fava
	Antonio Godinho Monica

The general manager is a Portuguese citizen who has worked almost 40 years in Angola, joining the company in 1966.

The general manager begins his working day by attending to general business matters in the Luanda office between 0800 hrs and 0900 hrs. Between 0900 hrs and 1400 hrs he receives customers, discusses factory operations with department managers and deals with routine matters in the Vianda office. From 1400 hrs to 1900 hrs, the general manager deals with administrative work in the Vianda office.

Figure 9.4.1

Management Organisational Structure of FIBREX



There are no significant changes planned in the organisation at least not in the near future. The position of factory manager is vacant at the moment, and there is a general weakness at middle managment level due to a severe shortage of well educated people. The factory wishes to hire qualified technicians from abroad, but the government has declined to release the requisite foreign currency for paying these expatriates. Government is prepared to meet expenditures of this kind when technical assistance is needed in the industrial sector, but its ability to act in this area depends on the availability of foreign exchange, and the pressure of competing priorities.

FIBREX is confronted with an accute shortage of technicians and machine-operators and a rapid turnover among its employees. Among the reasons for this situation is the distance between the factory in Vianda and the main residential areas in Luanda with the transport problems involved. Many young people are moving around among companies in order to remain in civilian life; they sometimes stay in a particular job less than a month, long enough to obtain food-coupons.

Financial management is of a relatively high quality in the context of the economic environment (for details see chapter 9.4.1 (c) Financial structure).

(c) Financial Structure

FIBREX is a private limited company with a share capital of Kz 17.5 million held by 33 Portuguese and Angolan shareholders, excluding equily belonging to FIBREX, which still holds 231 shares of Kz 1,000. The 26 Portuguese shareholders hold 13,449 shares (76.85 per cent) and the 7 Angolan shareholders plus FIBREX hold 4,051 shares (23.15 per cent).

Table 9.4.1: FIBREX. Fixed assets and capital employed, 1985-1987
(Kz '000)

	1985	1986	1987
Fixed assets	69,574	75,999	82,424
Fixed investment	-	-	62,937
Current assets:			
Raw materials	12,590	2,996	3,826
Work in progress	10,045	2,542	17,228
Finished goods	10,645	8,032	8,444
Merchandise	-		4,619
Cash & deposits	102,030	119,630	38,338
Creditors	4,639	17,719	13,353
Investment in hand	-	3,682	3,682
TOTAL ASSETS	209,524	230,600	234,851
Capital employed			
Share capital	17,500	17,500	17,500
Depreciation fund	54,687	58,034	62,721
Reserves	16,171	16,171	16,171
Profit retained	30,842	27,941	-
previous profits	59,009	89,851	117,792
Debts	31,315	21,103	20,666
TOTAL CAPITAL EMPLOYED	209,524	230,600	234,851

This company suffered a loss for the first time in 1987 due to a shortage of raw materials extending over a period of eight months, but because of large cash deposits and reserves from previous years, the company did not have to resort to loans to cover this loss. Considerable investment over the period 1975-87 has been made by the company despite foreign exchange constraints, and after allowing for depreciation the value of fixed assets has risen to a current level of Kz 82.4 million against a share capital of Kz 17.5 million. The depreciation rates charged, 5 per cent for buildings, 10 per cent for machinery, 12.5 per cent for other equipment, 33.33 per cent for mobile plant and 10 per cent for office equipment are very realistic in terms of the expected life of the plant. With a depreciation fund now amounting to 76 per cent of the value of fixed assets, the company is in a very good position to invest further in the factory, particularly if foreign exchange can be obtained on a loan basis from an international agency. Local financial resources for servicing such a loan could be made available from existing reserves and future income.

The financial management of the company appears to be well conducted with all normal company control data compiled on a regular weekly and monthly basis.

(d) Buildings and installations

This factory consists of two production units, one manufacturing raffia bags and the second manufacturing a range of extruded pipes, window frames and shutters. The raffia bag installation, which is the subject of this study, is housed in a reinforced concrete frame single storey building, with an overall size of approximately 80m x 60m. Walls are constructed of clay brick, rendered and painted. The entire factory building is in excellent condition, as is the attached two storey office block and it is clearly apparent that regular maintenance and cleaning is carried out. The building contains the following production equipment:

(i) Extrusion section

Three extrusion lines are installed, two lines having a capacity of 60kg per hour and the third, 30kg per hour, ie: a total factory capacity of 150 kg per hour. Extruders are run on the basis of 24 hours per day x 5 days to obtain the best efficiency and reduce production problems. Total potential daily capacity is therefore 3,600 kg per working day. However only one 60kg line is currently operational, representing 40 per cent of total capacity, as both of the other lines require spare parts. Some parts have been removed from the second 60kg line, in order to keep the first line operational.

The first 60kg line, type SAMAFOR of France, which is 15 years old, consists of the following:

1. Plastic sheet extruder, which forms a double sheet of plastic by an air blown operation. Feed of polyethylene or polypropylene beads to the extruder is by air suction.

2. Following formation, the double sheet is passed through a roller for flattening and a series of five tensioning rollers.

3. Tape cutting is by a simple multi-knife frame, where the tensioned plastic sheet is sliced into the required tape width. The waste edges are returned for reprocessing.

4. The tapes then pass through the 3m long heating and stabilising unit, and after which through another series of five tensioning rollers.

5. A second stabilising unit is installed in this line, as some types of bead require additional stabilisation time. It was not in use at the time of the mission's visit, as the raw material in use did not require more stabilising but is, however, in working order.

6. Two shuttle winding units, each with 40 rollers on each side, i.e. a total of 160 shuttles. Approximately 150 shuttles are produced per hour.

The second 60 kg line and the 30kg line both have an identical layout, with the exception that the two 60 kg lines have only one stabilisation unit installed. The second 60kg line requires heat resistant electrical cables for

the extruder and also a speed regulator, plus speed boxes for the rollers on the stabilising machine. The 30kg line requires only a new cylinder unit to make it operational again.

A LEIGER compressor supplies the air requirements for all extruders, and is in good condition.

(ii) Loom section

From the shuttle winding section some of the shuttles are placed in trays to be utilised in the cross-weaving operation, the rest are loaded on to two 5m long 8 shuttle high feeding frames, each containing 820 shuttles. Via a muti-hole tape separation frame, each of the frames feeds, a combing machine, type OMINA 1972 from Italy. The combed threads are all fed onto the bottom roller (1.5m and 1.2m wide), which when full are then stored for use by the looms. The looms are all type IWER from Spain, and the factory has a total of 100, 92 of which are of 1.5m warp width, and 8 of 1.2m warp width. However, only 71 of these looms are operational. Eight are currently being repaired but the remainder require spare parts from Spain. The total requirements for weaving guides come to approximately 100 per year at the present production rates. The looms can weave at the rate of 30cm per minute, but with a modified weaving mechanism a rate of 45cm per minute could be achieved, representing a 50 per cent improvement. One loom has been converted to the modified system and the intention was to install the new weaving unit on 10 looms per year but due to foreign exchange constraints this programme has been suspended. The cost of each modification is US$ 9,000.

(iii) Sewing section

The loom rollers, when full of woven raffia, are taken to the sewing room, where they are cut to the required length, depending on the customers needs, folded and sewn. The facilities consist of five cutting benches, each having a heated wire cutter and a total of eight sewing machines, of which six are in use.

Each of the sack cutting benches must produce a target number of 1,500 sack units in a four hour working period, i.e. a total of 7,500 units, if all five benches are working. The output target of each sewing machine is 800 sacks in a four hour period. Under present conditions, this unit does not work every day, as it is dependent on the output from the looms. Once the bags are sewn, they are baled in to units of 500 bags by a type POLVE machine from Spain, for collection by the customer.

The current production is limited to approximately 1.5 million bags per year, whereas with all three lines operational a minimum of 3.0 million bags could be produced.

(iv) Health and hygiene

The kitchen and canteen facilities were kept in a very clean condition and are no cause for concern. However, in the loom section and the cutting and sewing room, fumes from the cut fabric were not extracted and operators

were breathing these unhealthy and possibly carcinogenic fumes. The installation of adequate extraction, which is not expensive, should be carried out in these work areas.

(e) Inputs

The production of raffia bags is geared entirely to imported materials. The basic raw materials used are for the most part high density polyethylene granules but polypropylene granules constitute an alternative. The factory obtains its supplies from the Federal Republic of Germany, purchasing directly from companies such as Hoechst, Bayer, Basf and Huls.

Deliveries are normally made in 100 tonne shipments, although 20 tonne is the minimum load, i.e. one complete container. The 25kg bags of raw material are all palletised. Despite being delivered in containers and palletised, shipments are often interfered with in Luanda port, prior to the factory obtaining the goods from the port authorities. Bags are opened and their contents emptied, so that the bags themselves can be sold on the parallel market.

At the present time, the factory has sufficient granules in stock to supply the factory's needs for the next 8-9 months at the current rate of output, i.e. 60 kg per hour, which produces up to 1,500,000 bags per year. During 1987 however the raffia bag production line was halted for eight months due to a lack of raw materials, caused by foreign exchange constraints. In some years the Ministry of Fisheries has guaranteed some foreign exchange, sufficient to cover its requirements for fish meal bags. Similarly the Ministry of Internal Commerce has also guaranteed foreign exchange for its requirements.

Each year a global foreign exchange ceiling is assigned to the factory. The general procedure for establishing the ceiling is as follows: in August each year the factory forwards its production plans to the Ministry of Industry, together with the corresponding foreign exchange component corresponding to the proposed production level. After discussions with the planning department of the Ministry, the foreign exchange limit is established. The management is, in principle, free to use the amount authorised among different product lines according to its wishes. In order to carry out an import transaction, the factory obtains a pro-forma invoice from the supplier, which is submitted to the Ministry of Trade for approval and an import licence is then issued. Subsequently, the firm approaches the Banco Nacional de Angola and deposits Kzs to an amount equivalent to the pro-forma invoice. The Bank then opens a letter of credit in favour of the supplier. Import prices have to be quoted FOB as the Angolan state insurance company insures the freight, while the Angolan shipping line assumes the responsibility for transport.

Currently the foreign exchange platform of Kz 50 Million for the input and maintenance requirements of the entire factory (including the pipe manufacturing plant) is sufficient to cover 60 per cent of total requirements. As the production of Rafia bags is far less profitable than that of pipes, there would appear to be a certain economic case for favouring

the pipe production unit in the internal distribution of this foreign exchange. However, there is a tacit agreement with the government to the effect that the factory may carry on profitable production of its other lines, on condition that it maintains a satisfactory level of bag production. For this reason the factory has continued to import raw material to produce bags.

Reportedly, the factory has a relatively low standing among foreign suppliers, as quantities of 100 tonnes per shipment are small in terms of the international trade for this particular input. However, the planning of shipments seems to be poor as supplies of the raw material sometimes lie in the port of export for prolonged periods, and as the supplier is not paid until the cargo has been loaded, such payment delays may be another reason for the reportedly low rating of the company.

For the single line now operating, the annual raw material requirements are estimated to be:

60kg/hr x 24 hours x 240 days x 90% utilisation = 311 tonnes

Allowing for wastage and the maintenance of adequate reserve supplies, the factory requires to import 350 tonnes of raw material per year for one 60kg/hour production line.

(f) Product range

FIBREX produces various plastic articles and raffia sacks made of polythelene. Production during a twelwe month period with a normal supply of raw materials, customary delays, and stops for other reasons, appears roughly as follows:

Table 9.4.2: FIBREX. Volume and value of sales

Product	Volume	Sales price (Kzm)
Raffia sacks	1,500,000 pcs	50,000,000
Tubes(hard)	194 tonnes	20,000,000
Tubes(soft)	291 tonnes	27,000,000
Tubes PVC(hard)	291 tonnes	36,800,000
Profiles	145 tonnes	30,000,000
Hoses, flexible	97 tonnes	13,000,000
	Total:	176,800,000

Of the total raffia production 90 per cent is sold to government agencies and of the remaining products, exc profiles, about 50 per cent are sold to public undertaking. Up to 80 per cent are sold to private companies and the rest to public agencies.

No major changes are contemplated in regard to the product range, except that the raffia line is going to be renewed when the requisite foreign currency can be secured.

(g) Plant performance, cost and price structure

(i) General

The FIBREX plant produces several synthetic products. Among them are sacaria de raffia, irrigation pipes, tubes for drinking and drainage systems, construction profiles, such as building blinds and panels, and various other plastic products. The nominal installed capacity of the plant is about 2,000 tonnes per annum of finished products. However, the plant normally produces about 1,400 tonnes per annum. This gives a capacity utilization of about 70 per cent. Table 9.4.3 gives the various outputs of the plant and their total values during 1986.

Table 9.4.3: Total output and sales of the FIBREX plant during 1986

Product	Quantity (tonnes)	Sales value (million Kz)	Sales value as % of total value
Sacaria de raffia	350	50.0	28.3
Hard plastic tubes	200	20.0	11.3
Irrigation pipes	300	27.0	15.3
Tubes for water and drainage systems	300	36.8	20.8
Construction profiles	150	30.0	17.0
Hoses and various plastic tubes	100	13.0	7.4
Total	1,400	176.8	100

Source: FIBREX.

About 1,438,000 raffia bags were produced during 1986. As can be noted from table 9.4.3, this represented 25 per cent of the company's total output and 28 per cent of its total sales. The distribution of the various types of raffia bags produced by the company between 1985 and 1987 is shown in table 9.4.4.

The raffia bags which the company produces mainly for cereals, salt and flour. These bags are bought by the state, companies and agricultural producers. FIBREX and SIGA are the only producers of raffia bags and together they satisfy only about 50 per cent of the national demand. The demand for raffia bags is estimated at about 6,000,000 bags, of which FIBREX supplies 1,500,000 and SIGA 1,700,000.

Table 9.4.4: Percentage distribution of types of rafia bags produced by FIBREX, 1985-1987

Type of bag	1985	1986	1987
80 kg - cereals	40	40	80
50 kg - flour	40	40	20
50 kg - salt	20	20	-
2 kg - salt	10	10	-
Total bags (units)	1,408,000	1,438,000	453,000

Source: FIBREX.

The low capacity utilization in the production of raffia bags at FIBREX is partly due to the age of the machinery and equipment, the lack of spare parts, problems in the supply of raw materials, lack of skilled labour, erratic energy supplies and self-acquisition by the workers, especially of raffia bags.

The machinery and equipment in the manufacture of raffia bags is about 24 years old. It therefore needs frequent maintenance, but this is restricted by the quality of skilled personnel. The company lacks qualified workers especially during the last two years.

Adequate spare parts are hard to acquire because of the foreign exchange shortages that the country is facing. The lack of spares is especially important in the raffia bag line. The lack of raw materials is another problem. But this is a problem relating to both the inadequate availability of the raw material on the world market and the lack of sufficient foreign exchange. During 1987, the plant was shut for seven months because of the lack of the major raw materials - high density polyethylene, which is imported from Federal Germany. This lead to the production of about 31.5 per cent of normal output of the raffia bags by the plant.

There is also a appropriation high level of raffia bags by the workers. This affects more the sales and therefore the profitability of the company rather than the capacity utilisation. There is an interest in acquiring raffia bags because they are in high demand in the parallel market, and returns these compare favourably with fixed nominal wages.

Another indication of plant performance is total sales of raffia bags per employee. Given that there little or no stock, this will give us an indication of output, since the prices of raffia bags have been fixed for sometime. Table 9.4.5 shows the trend in sales of raffia bags per employee for the years 1985 to 1987. The heavy fall in total sales per employee in 1987, was because of the lack of production during that year due to shortage of the major raw materials.

Table 9.4.5: FIBREX. Total sales of rafia bags and sales per employee 1985-87

Year	1985	1986	1987
Total sales (million kwanza)	14.34	45.52	18.12
Total number of employees	256	265	221
Total sales per employee	0.173	0.172	0.082

(ii) Inputs and import dependence

The company is totally dependent on imports for its production line. The main raw material input is high density Polyethylene. This is mainly imported from Federal Germany, largely from four main suppliers: Bayer, Hoechst, Hüls and Basf. The company also imports some pigments. The other imports are machinery and spare parts. The company imports both raw materials and machinery and spare parts directly. Table 9.4.6 shows the cost of raw materials used in the production of raffia bags. Since the company is entirely import-dependent for its main inputs, this can be taken as a fair reflection of the total value of imported raw materials.

Table 9.4.6: FIBREX. Total value of raw materials 1985-1987
(Million Kwanzas)

Year	1985	1986	1987
Raw material cost	15.65	15.98	5.68

Source: FIBREX.

The total import dependence of the company on raw materials can be illustrated by the low output of 453,000 raffia bags and the consequent loss of K 27.3 Million during 1987 when the company had problems with supplies of the major raw material polyethylene.

(iii) Protection

The state levies a duty of about 12 per cent on imports of high density polyethylene and pigments. However, there is a law under which the company can ask for exemption of duty on its raw material inputs. In any case, even without the exemption from duty, duties are lower on the raw materials imported for raffia bag manufacturing. The company is of course mainly subsidized by the overvalued exchange rate.

(iv) Profits and loss record

FIBREX is a profitable company as a whole. However, the production of raffia bags is unprofitable. Table 9.4.7 shows us the profit record of the company as a whole. It has made profits except for 1987, when it made a loss of K 27 Million. This was because the plant was closed down for 8 months, because of the lack of raw materials during that year. The company financed the loss in 1987 by drawing on its bank balances.

The company pays a corporate tax of about 35 per cent on net profits and a surtax which depends on the level of profits and varies between a minimum of 2 per cent and a maximum of 30 per cent. Total taxes paid amounted to K 11 Million in 1985 and K 10.6 Million in 1986.

Table 9.4.7: Profits and taxes in respect to FIBREX
(Million Kwanzas)

	1985	1986	1987
Net profits	38.0	31.7	(27.1)
Taxes	11.1	10.6	-

Source: FIBREX.

(v) Costs and pricing structure

The price of raffia bags is not fixed by the state. However, there seems to be an understanding between the companies in raffia bag manufacturing and the state that the companies will not change their price without consulting the government. Consequently, the prices have remained fixed for sometime. This in spite the fact that the raffia bags production line is running at a loss and is being subsidized by profits on other products being produced by FIBREX. The company sells raffia bags at an average price of K 40 per bag, when the parallel market price is about K 1,500 per bag. However, the prices of other products reflect the cost of production for the whole plant, plus a certain margin to account for profits.

(vi) Liquidity and foreign exchange

The company does not experience liquidity problems. It sells its products at the factory gate and has huge cash balances in the bank. Thus, the K 27 Million loss in 1987 was financed from these balances.

However, because of its heavy import dependence on raw materials and spare parts, the company has heavy foreign exchange requirements. Comparatively, the company has experienced less problems in the allocation of

foreign exchange, because it produces an essential commodity-raffia bags. It has always been allocated on average 60 per cent of the foreign exchange requested. Table 9.4.8 shows the amounts of foreign exchange allocated to the company for the imports of raw materials and spare parts. However, recently, the company has experienced problems in the availability of raw materials on the international market, even if it has the foreign exchange.

Table 9.4.8: FIBREX. Foreign exchange allocation, 1985-1987
(Million Kwanzas)

Year	1985	1986	1987
Foreign exchange allocation	49.4	31.0	16.0

Source: FIBREX.

(h) Markets and competitors

The size of the market for raffia sacks is estimated at about 6,500,000 sacks per year. During a year of normal supply of raw materials, FIBREX produces about 1,500,000 sacks. The only competition comes from SIGA, and is of a limited nature. That company has a production level of about 1,700,000 sacks per year under comparable conditions. To meet the national requirements for raffia sacks a further 3,300,000 would normally have to be imported.

The rehabilitation of the raffia line at FIBREX would nearly double the firms production in this area providing that the problems of obtaining raw material were overcome. This rehabilitation would also help to solve part of the present labour problem at the factory.

The raffia sack line is the least profitable of FIBREX operations. The plastic lines are more profitable, and price policy in relation to these products seems too be more liberal.

The use of natural fibre as raw material was discussed, but this alternative does not find approval of the management mainly on account of the present price level for the raw material which is imported from Bangladesh. Jute sacks imported from that area are said to have a landed cost equivalent to that of producing the raw material in Angola. FIBREX does not have a production line for natural fibre unlike SIGA which does, although its line has not been operational for some years.

The internal trade organisation at FIBREX consists of some 10 persons. The company has no external sales organisation or commercial representatives outside the Luanda area, but uses a number of distributors as a distribution outlet for their products. Those distributors are mainly located in and around the capital.

As can be seen in table 9.4.2 in the section on product range, 90 per cent of the sack production is destined for government bodies such as the Ministry of Agriculture and the Ministry of Fisheries and related agencies.

Most of the sales are at the factory gate which means that transportation is left to the customer to arrange and FIBREX does not have to engage significant resources in the distribution of their products.

All sales transactions are made against cash payment.

When first established FIBREX engaged in exports of both raffia sacks and PVC products to Mozambique, Zaire and S/o Tomí e Principe. In 1973 the value of this export trade reached US$ 1.3 million.

No exports are contemplated for the moment partly because the national demand is far from satisfied, partly because it is difficult to compete quality-wise (PVC-products) in the international market.

(i) Constraints

FIBREX has a constraint, like most companies, in securing foreign exchange to finance its raw material and spare parts requirements. In 1987, for instance, the foreign exchange received was only sufficient to allow the factory to work for four months of the year. In the current year the factory has been allocated approximately 60 per cent of its actual foreign exchange requirements. Lack of spare parts has resulted in two of the three extrusion lines becoming inoperative and also of 29 of the 100 looms also being withdrawn from use.

Other constraints include:

a) A lack of trained personnel in the factory work force, affecting both operations and maintenance, significantly reducing the firm's efficiency.

b) A high labour turnover, which may be attributable in some measure to a lack of partial payment-in-kind, e.g. bags and plastic items. The factory does, however, provide requisite food for all its employees. To train a loom operator to a reasonable standard takes at least two months but many (eight out of ten) trainees certainly leave within one month. To reduce its dependency on trained labour, therefore, the company is considering the purchase of more automated looms in the medium term with a wiew to mitigating the effects of the current constraint.

c) The location of the factory, in Viana, makes it more difficult for the factory to retain trained personnel, than, for instance, SIGA in Luanda. At least twenty per cent of the employees live in Luanda, which means that the factory has to provide transport service for these and other worker living at a distance from the factory. Because of the security situation, nightshift employment for such workers is more difficult.

d) The electricity supply to Viana is by means of a single transmission line and if a technichal problem occurs at any point on the line, all the factories in Viana are immediately without power supplies. The factory has no generator of its own to provide electricity to the plant on a stand by basis. It is understood that a second distribution line is planned for Viana, which should then hopefully remove this particular constraint.

e) Government restrictions on the employment of expatriates have meant that maintenance of the factory and training of local personnel have been adversely affected.

f) A tendency among personnel employed in the cutting and sewing area to appropriate finished goods, despite attempts to secure this section, has led the management to consider the purchase of an automatic cutting and bagging machine at a cost of US$ 200,000. Such an acquisition would eliminate the necessity of having so many employees in this area and so hopefully prevent much of this loss. This problem results from the huge difference between the official price for sacks of approximately Kz 40 and the Kz 1,500 that a worker can obtain for the same sack on the parallel market. Thus the price, which can be obtained, for two sacks, on the open is equivalent to nearly one weeks normal wage (Kz 3,740).

g) At times there is a shortage of polypropylene supplies in Europe, especially for relatively small customers, such as FIBREX.

h) FIBREX has to retain the monopoly government shipping agency and may only use the Angolan shipping line. This policy has led to many delays in shipments because of problems surrounding the quality and reliability of the state services.

In the wiew of the management, the most serious constraint relates to the factory machinery. Solving the immediate maintenance problems on the existing machinery and upgrading the standard of their facilities are matters of prime importance.

9.4.2 Rehabilitation requirements

(a) Management and organisation

There is an acute lack of trained personnel at all levels in the company, from middle management down to machine operators. The turnover of personnel at these levels appears to be abnormally high. This problem is partly attributable to the location of the factory in Viana which is about 23 km from Luanda and its immediate vicinity where many of the employees live. This distance between home and work gives rise in turn to serious transportation problems. Another cause is probably the level of wages and salaries and lack of other incentives such as auto-consumption arrangements, under which the employee receives part of his wage or salary in the form of factory products.

Unlike FIBREX, SIGA has experienced few problems in the labour field and many of its workers have been with that company for 20 years or more.

The most urgent organisational decision to be taken by FIBREX is to fill the vacancy of factory manager as soon as possible since this is a key position, where the manager has supervising responsibility for all matters relating to production, maintenance and general services in the factory.

It is also recommended that the company acquires a computer system (PC-computer) to improve management information flows system with regard particulary to accounting, sales, purchasing and administration.

According to the general manager, the company has been in contact with the government with a view to contracting technicians from abroad, but the government has so far declined to allocate foreign exchange for this purpose. There appears to be a certain preference on the company's part to hire expatriates rather than to train local citizens for these posts. Its also appears that when foreign currency payments are involved the government assumes a certain responsability for such expatriates by providing housing as part of the foreign currency element in their salaries.

(b) Physical plant

Financing and technical requirements in the rehabilitation field to enable the factory to increase its manufacturing capability to a minimum of 3 million bags per year are as follows:

(i) Provision of financing for the purchase of spare parts for the 60kg per hour extrusion line and the 30kg per hour production line. The estimated cost of these spares is US$ 15,000.

(ii) Provision of financing for the purchase of normal spares for the 100 looms installed in the factory. Only 71 of these looms are presently in use and when the extrusion lines are rehabilitated, it will be necessary for all 100 looms to be fully operational for the envisaged output. At the present juncture, none of the more significant spare parts can be made locally, and certain general maintenance items, such as nuts, bolts etc are also unobtainable locally at the moment. The estimated cost of these spares is US$ 20,000.

(iii) Provision of financing for the modification of 98 looms, to increase the weaving capacity of each loom by 50 per cent (from 30cm/min to 45cm/min). The cost of modification is approximately US$ 9,000 per loom. If 10 looms are modified each year this will require financing of US$ 90,000 per year.

(iv) Technical assistance to provide a trained and experienced expert in the operation and maintenance of the Spanish-style and other equipment, who will both train local personnel and offer direct hands-on maintenance support. The cost of this assistance is estimated at US$ 50,000 per annum.

(v) The possible provision of financing for an automatic cutting and sewing machine to reduce the dependence of the factory on operators in this area, who regularly tend to appropriate finished goods from the factory to sell on the parallel market at inflated prices. The estimated cost of his equipment is US$ 200,000. However the probability is that this type of problem could be overcome through the implementation of SEF programmes by the Angolan authorities which inter alia ensure factory workers a realistic monetary wage. For the moment FIBREX may also require to consider making certain payments in kind to its employees.

(vi) For the long-term the factory intends to invest in a more modern type of automated loom to increase the efficiency of the factory. No pricing of this equipment has yet been done.

(c) Inputs

As all inputs required by FIBREX are imported, the situation for polypropylene and polyethylene products is determined by external factors. With a more flexible approach to determining the value of the Kwanza, the price of the imported materials will rise, making it even more important to carry out early rehabilitation of the machinery, in order to make the factory as efficient as possible using the existing machinery. The products have traditionally been sourced from the Federal Republic of Germany but with the current strength of the DM, these products could possibly be obtained more cheaply from other European or international sources.

(d) Costs and price structure

Given FIBREX's total dependence on a raw material which cannot be produced locally, it might be necessary to allow the importation of polyethylene granules duty-free.

In case of spare parts, efforts must be made to identify those spare parts where there is a domestic capability of manufacture. After that is done, there is need for a discriminatory tariff: a higher rate on those spares that can be manufactured locally and a lower or zero rate on those spare parts that cannot be fabricated locally.

There should be more flexibility in changing the prices of the company's products. This will allow it to cover the costs of production and will also reduce the difference between the parallel price and official price for its products. Probably, this will have an effect on reducing plant thefts.

(e) Marketing

FIBREX and SIGA are the only producers of raffia sacks in Angola and they have about 50 per cent of the market divided evenly between them.

There would appear to be no immediate need for major marketing efforts in the region since there is ample room for expansion by both companies on this sellers market. However greater attention may require to be given to marketing and distribution in other parts of the company, and notably in the

south-western provinces, where significant economic developements are taking place and substantial aid rescurces are being provided for agricultural inputs such as sacking.

In a medium term perspective with the implementation of SEF measures, the PVC production at FIBREX could very well prove to be an interesting export product in the SADOC region and in other neighbouring countries. And in the light of the consideration currently being given by the authorities to the eventual introduction of export retention schemes, there would appear to be a case for the company giving early attention to the identification of potential export markets. These might be developed in future years, and under future export retention arrangements provide the firm with some direct access to foreign exchange. In this context, the Angolan authorities and business sector may wish to study the Zimbabwe experience, notably in regard to the operation of the Zimbawe export revolving found (financed by the World Bank and a commercial bank consortium) and the associated export retention scheme.

CHAPTER 10

GENERAL OBSERVATIONS AND RECOMMENDATIONS

10.1 General policy observations

Although this study focuses on issues connected with the rehabilitation of individual plants, the regeneration of Angola's manufacturing industry depends on the overall long-term recovery of the economy. The possibility for such a recovery depends largely on the successful implementation of the economic rehabilitation programme (SEF), and, not least, on reestablishing peace in the region and in the country. In this context, agricultural growth is a pre-requisite for economic development in Angola. The full applicability of many of the longer term recommendations below must, therefore, be seen in the light of this overall recovery.

As the implementation of the SEF programme gains momentum, it is the mission's view that the main attention of the Angolan authorities may become increasingly directed towards reestablishing macro-economic equilibria within a relatively short term economic policy perspective. Since the existing disequilibria are of considerable magnitude, the short term adjustment processes could present serious problems for the authorities, and, if not carefully monitored, could even run into conflict with long-run growth and development objectives. For example, a general liberalisation of markets could then have certain negative effects on the distribution of income and wealth in Angola. Long run viable enterprises might have to shut down their operations because of short run economic problems. Particular attention must therefore be given to harmonising short term stabilisation measures with overall development objectives.

Many of the economic measures introduced under SEF have been strongly recommended by the international community to the Angolan authorities. It would therefore seen logical that the international community should assume a share in the responsibility for implementing SEF, so that short term stabilisation measures do not jeopardise Angola's legitimate aspirations for growth and development.

In the short and medium term, the country does not have sufficient resources to engage in large-scale industrial rehabilitation. Moreover, the output of manufacturing industry will depend almost exclusively on the availability of foreign exchange, i.e. the value of petroleum exports, because the major proportion of industrial inputs has to be imported. In addition, there is a backlog not only of machinery replacements, but also in relation to new investment in the manufacturing sector. This investment demand cannot be met without a massive inflow of foreign exchange, either in the form of international loans and grants and/or investments by foreign enterprises in Angola.

In this regard, it is the mission's view that Angola's regeneration and rehabilitation efforts deserve continued and increasing support from the international community.

Within this broader context of industrial rehabilitation, there are some issues which deserve special attention. First, more analysis at the plant, branch, sub-sector and sector levels will be needed to enable the formulation of viable regeneration and rehabilitation proposals on a sector-wide basis. The present industrial data base, however, is very poor, which inter alia is reflected in the sometimes sketchy information presented in Chapters 5, 6 and 8. Reinforcing the industrial data base (for example, by improving the Registro Geral de Empresas) would be essential in this context.

Second, most of the enterprises visited wished to invest in new machinery and/or to replace old equipment. This dominant concern is a reflection of the worn out state of existing investments. However, most of the enterprises also wished to introduce labour saving forms of capital equipment. In some instances this may be needed for technological and hygienic reasons, but the mission is of the view that present relative prices levels tend to discriminate against labour intensive technology. Special attention has to be given to this problem so that new investments will not contribute to unemployment. It should also be emphasized that new investments will only make a full contribution to industrial recovery if the right environment is created for that recovery.

Third, there is a marked shortage of skilled personnel and this constraint has to some degree been solved by employing expatriate personnel. These expatriates secure part of their salaries in foreign exchange and also receive other fringe benefits such as housing which is in short supply. The present laws relating to salaries of qualified Angolans restrict the possibilities for paying them in foreign exchange. Since the national currency is greatly overvalued, the cost to the enterprise of employing expatriates is much lower than the cost to Angola. This has created an unduly high demand for expatriates and has not stimulated the training and employment of Angolans. This situation will change when the official price of foreign exchange reflects its opportunity cost. Until then, the possibility of training and employing Angolans must receive a special degree of encouragement.

If the SEF programme, involving a major commitment of economic resources by Angola and her cooperating partners, were to be implemented without making effective provision for the maximum development of Angolan skills at all levels, then on the completion of the programme, the country could end up being more, rather than less, dependent on outside support. For this reason the mission strongly recommends assigning priority to human resource development at all levels, including the management field.

Fourth, there is the question of foreign versus domestic investment. The government wishes to stimulate foreign investments, as outlined in the new law passed in July 1988. Different forms of foreign investments are foreseen such as joint ventures and mixed enterprises. Most of the existing private investments in Angola are of foreign origin. However, the future role of Angolan investors in the country's development is an important issue, and there is no clear policy yet established in this respect. In general, it can be assumed that the Angolan investor will be in a weaker position than the foreign investor mainly because of limited access to foreign credit and technology. If Angolan private capital is to play a significant role in the future development of the country, special measures are needed to encourage its more active involvement.

Fifth, the mission observed that the supply of electricity and water was inadequate for the plants visited. In this context, it should also be noted that the level of manufacturing output is still below that of the installed capacities. As industrial rehabilitation proceeds and output increases, these input supply constraints will become increasingly significant. The present practice of each plant solving its own supply problems in regard to electricity and water is costly for the country as whole, and solutions to the technical problems involved merit continuing attention.

10.2 Regional dimensions

Consultations with the companies visited, and more broadly with the Angolan business sector, underlined the importance which both private and public enterprises attach to Angola's participation in SADCC actions geared to industrial rehabilitation objectives. Of immediate relevance in this context were seem to be the following elements in the SADCC Programme of Action:

* Preparation of technical and diagnostic studies on SADCC member States' agro-industrial rehabilitation requirements at the branch and plant level e.g. in relation to vegetable oil seeds processing;

* Development of management training programmes sponsored by the Eastern and Southern African Management Institute (ESAMI) based in Harare and Arusha, and in agricultural management techniques at Mananga in Swaziland;

* Recent technical initiatives relating to the eventual rehabilitation of the Benguela railway, in 1987-88 in particular the ten year development plan prepared by the Southern African Transport and Comunications Commission (SATCC), which was seem to have important implications for the rehabilitation of Angolan agro-industry, notably in the Benguela-Lobito and Huambo areas;

* SADCC and cooperation partners' proposals for the strengthening of industrial financing institutions in the region, particularly as these related to the financing of industrial inputs, export credits, equity holdings and cross-border investments;

* The formation of a region-wide SADCC business sector group to help strengthen working relations and informed understanding between local enterprises, foreign investors and government services. It was considered that the SADCC business sector initiative was well designed to address issues of immediate concern such as the mobilisation of financial support for local businessmen, and the application of a regional approach in the industrial rehabilitation field in the context, for example, of the production, distribution and financing of spare parts and equipment.

10.3 Management, organisation and marketing

General observations

(a) All the companies visited suffer from certain significant deficiencies at middle-management, foreman and supervisory levels. Top-management tends to be substandard, especially in public enterprises. Some of the companies also mentioned problems at machine operator level. Management, training and information systems are generally inadequate for routine tasks such as accounting, administration, purchase and sales.

(b) None of the companies visited had any effective sales organisation in place, largely because they are now operating in sellers market. Practically all sales are concentrated in the Luanda area and other secure parts of the country. All sales are made "at the factory gate", which is a very common practice in Angola. This means that the customers provide their own transport and the companies do not have to engage in any transport or distribution arrangements. Similar conditions apply in relation to the purchase of raw materials.

In the context of rehabilitation and expansion, it will be necessary to improve both on sales organisation and distribution systems, notably in regard to the distribution of incentive products in the rural areas.

(c) Institutions involved in the promotion of exports include the Ministry of Trade (which is currently being restructured), EXPORTANG (the leading state export company), SONANGOL (the Government oil company), and FICOM (Feria Industrial e Commercial de Luanda). Except for SONANGOL, which has an office in London, Angola has no commercial representation or trade offices abroad. Under the SEF programme, it is understood that a general review is being made of the institutional structure relating to foreign trade, and that an increased role is envisaged for the private sector. The introduction of new procedures, such as an export retention scheme, under which a company engaged in exports can retain some of its foreign exchange earnings for essential imports, is also being considered.

(d) The price control system governing both company inputs and outputs, linked with foreign exchange shortages, has generally had a negative impact on production. It has also led to the emergence of a flourishing parallel market, and contributed to the general collapse in the production of food stuffs for sale in the urban areas. Practically all companies are operating under a system of official prices originally established in the mid-1970s. The present exchange rate of 29.918 Kz/US$ was set at the same time, and has remained unchanged since then. Much of the economy has changed into a barter system, where the local currency has ceased to play a

significant role as a means of payment. These are the problems which SEF is concerned to address in the monetary field, and whose effective resolution is a necessary prerequisite for the successful implementation of industrial rehabilitation programmes.

Recommendations:

(a) Existing managerial vacancies should be filled by qualified personnel recruited where necessary from outside the firms concerned. In the public enterprise case, careful consideration should be given to improved management and related training facilities available under technical assistance, joint venture, and management contract or leasing arrangements. Where required, computer systems (personal computers) should be introduced at a company level, again with relevant training provision.

Urgent consideration should be given to recommendations for improved management training at university and higher technical levels in reports recently submitted by the World Bank/UNDP and the Gulbenkian Foundation. At a technical level, the recent ILO/UNDP report makes a series of valuable and practical recommendations regarding the training of technical instructors and back-up services in support of training programmes sponsored by individual Angolan enterprises. To secure future generations of managers, a management training institute should be created.

(b) All the companies reviewed should improve on their sales and trading systems, and on practical training in these areas. The actual commitment of resources by individual firms in this context should be carefully synchronised with economic measures to be taken by government under the SEF programme, as well as with the progress of physical rehabilitation in the plants concerned. The increasing number of donor aid programmes geared to the provision of agricultural inputs and services and incentive consumer goods, for example in the south west of Angola, should provide new market outlets for industrial companies.

(c) As the implementation of the SEF programme proceeds, economic opportunities should open up again for the resumption of a wider range of agro-industrial exports outside the oil sector. In this situation, companies with export possibilities should benefit from the provisions of export retention or revolving fund schemes. Part of the foreign exchange could be used to increase the quality of Angolan agro-industrial exports, in order to improve their competitiveness. Possible misuse of the funds could be prevented by requisite legislation and administrative procedures. However, central to the success of such an initiative would be the development, as for example in Zimbabwe, of close working relations and business confidence between government departments and industrial and commercial associations involving private, mixed and public enterprises. In this context, SADCC recommendations relating

to the formation of an Angolan export promotion board merit support by the Angolan authorities and business sector. In this regard, the development of an Angolan export revolving fund, possibily along the lines the SIDA/NORAD-financed seed capital revolving fund in Tanzania or the World Bank-supported export revolving fund in Zimbabwe, could attract possible donor assistance within the framework of current SADCC proposals.

In the medium and long term perspective, it will be necessary to introduce trade representation abroad geared to specific export market interests. These could lie in regional groupings, such as SADCC and the PTA, or further afield, for example in the EEC, where Angolan exports have significant market access opportunities under the trade provisions of the Lomí convention.

(d) The present system of price controls should be modified as soon as possible and markets increasingly liberalised to create incentives under SEF for expanded production and enhancement of value added in the local manufacturing sector, thus increasing employment opportunities and saving scarce foreign exchange resources.

(e) A fundamental problem, which should receive continuing attention under the SEF programme, relates to the phased adjustment in the unrealistic exchange rate of the kwanza. The effects of this adjustment will be wide ranging, but in the industrial field it should, inter alia, provide a stimulus to local production and employment, generally encourage greater use of domestic resources, and lead eventually to the elimination of the type of foreign exchange shortages, which have seriously affected industrial productivity in recent years.

10.4 Physical plant

All of the companies visited had substantially built premises, which for the most part were well maintained and require little additional attention. All companies were operating well below installed capacity, as a result of a combination of constraints.

(a) Routine maintenance of machinery in virtually all the factories is a definite weakness, both because of the inability to obtain sufficient spare parts due to foreign exchange restraints and because of the severe shortage of trained mechanics and electricians to properly maintain the machinery. The private companies were more successful in achieving a reasonable level of maintenance with limited resources, i.e. by utilising, in some cases, foreign exchange, originally provided for raw materials, for spare parts. In other instances because of a lack of trained maintenance personnel, the Managing Director himself would maintain all of the machines personally, in order to keep the factory operational. The same degree of personal involvement in the success of the company was not found in the state companies.

(b) While much of the equipment examined was old, most only required a relatively small number of spare parts to make the machines serviceable again for a number of years. In addition to this requirement, however, all of the private companies for their medium term plans were seeking to invest in more automated modern machinery to become more efficient and to survive with the fixed price structures in these agro-industries. All took rather a cautious view of the speed with which the SEF programme would be implemented, and assumed that actual positive results would take a long time to affect their own companies. Most were concerned that the government should effect the necessary reforms as quickly as possible. In the mean time, they saw investment in new machinery as a means of reducing current problems associated with a general lack of properly trained labour. All of the private companies appeared fully committed to remaining in Angola.

(c) Quality control programmes in the private companies varied from outstanding to mediocre, in the latter case this was due not to a lack of equipment, which was excellent, but to a frequent lack of water, which delayed test results to an unacceptable degree, making them useless for prompt control purposes. In the state company quality control was totally absent. Normal test facilities were not installed on the factory premises and even some facilities, which were stated to be available in Luanda, were not utilised.

(d) Plant hygiene and general cleanliness was excellent at two of the private companies, but at the third private company and the state company certain further improvements should be made. However, at the latter, efforts had been made in recent weeks to clean the factory thoroughly during a maintenance shutdown period.

Recommendations

(a) The short-term rehabilitation programme for all factories must include technical assistance for the training of maintenance personnel, both mechanical and electrical. In addition, companies with relevant experience such as EMIN (already supported by UNIDO) should be strengthened. Their activities could be expanded to provide a maintenance back-up service to the agro-industrial sector companies, and to assist the medium term development of maintenance capabilities.

(b) The provision of financing facilities for the purchase of spare parts for all of these companies is essential for the necessary rehabilitation programmes.

(c) Domestic capacity for spare parts production should be increased. The know-how and machinery of the oil industry repair services could form the basis for projects strengthening this capacity.

(d) For the further development of these companies, certain new equipment will be necessary and the provision of financing facilities from international agencies or development banks would

enable these projects to materialise, as BNA is not in a position to provide the necessary authorisation for the required foreign exchange.

(e) Where weaknesses have been observed in quality control procedures, these should be corrected by provision of the required equipment and the necessary training of personnel in the correct methods of quality control.

(f) In the interests of personnel safety and health, all factories should maintain the highest standards of cleanliness. This is particularly important in food related industries, where the consumer can also be put at risk.

10.5 Inputs

All food processing industries suffer from deficient supplies of raw material whether grain, oil bearing seeds, meat or any other commodity from the agricultural sector. Branches classified as strategic, such as the flour milling and vegetable oil processing branches, receive substantial quantities through imports.

These imports are often delayed for long periods, which adds to the problems of maintaining a reasonably even flow of production and to arrive at an acceptable level of utilisation, resulting in a frequent failure to produce the final output originally programmed.

Deficient domestic raw material supply is expected to be remedied through the new strategy for increased agricultural production, the result of which could take some considerable time to materialise.

The bag manufacturing industry is entirely dependent on imports of plastic raw material which makes the branch vulnerable to disruptions or delays of shipment.

The import procedures for the raw materials required by several of the enterprises studied involve, in principle, at least three government agencies. Thus, TRANSPRO collects orders and later arranges for the distribution of the products. IMPORTANG is the executing agency and ANGOLNAV transports the products from port of loading to Angola. These government agencies belong to three different departments, the Ministries of Industry, Trade and Transport. Although each agency has specific responsibilities within its own field, no coordinating body appears to have an overall responsibility to ensure that the entire system works in a timely and coherent fashion. Serious delays affecting production reportedly occur far too frequently.

Weaknesses in the electricity distribution system cause frequent power failures, a constraint from which virtually every enterprise is suffering in the Luanda area, and which the public utility service is now addressing.

Recommendations:

(a) The present unsatisfactory nature of domestic raw material supplies can be remedied only by regeneration of the agricultural sector and market system. Although efforts in this direction are now being accorded priority notably in the south and south west, the results of these endeavours are going to take time to materialise. Meanwhile, in the Luanda area action should be taken at the earliest opportunity to implement local agricultural projects in the green belt around the capital. Some of the production from this area, and from the south and south west, could be channelled to the food processing industries.

(b) Upgrading of the electricity distribution system giving apropriate priority to the industrial zone of Luanda.

(c) Rationalise arrangements for the importation of raw materials required by agro-industrial enterprises.

10.6 Costs and pricing system

General observations

(a) The manufacturing sector has experienced a very serious decline in output and capacity utilisation since 1975. Both output and capacity utilisation were much lower in 1987 compared to 1973. Government policy is not only to promote manufacturing growth, but also to achieve output and capacity utilisation levels of 1973.

(b) Most companies in manufacturing sector are dependent on imported raw materials, machinery and spare parts. The heavy imports of raw materials, especially since 1975, are a result of declining agricultural production. There are variable tariff duties on the imported raw materials, and machinery and spare parts. In cases, where inputs cannot be made available locally, duties merely increase the cost of production of the plant, although they yield higher revenues for the government. Immediate fiscal losses can, however, be offset in the longer term by other revenues resulting from increased production and profitability from these firms, if non-competing imports have low tariff rates. Where there are possibilities of local production, it might be necessary to have higher tariffs on competing imports to nurture the growth of local production.

(c) It was observed that many firms, especially in the private sector have large stocks of kwanza holdings in the BNA. There are highly liquid funds which are generally not earning any interest.

(d) Manufacturing industry operates in an environment of price distortions, with price controls on most products. Permission to increase prices has to be channelled through the technical department concerned and thence to the Ministry of Planning. Resulting decisions are channelled down through the same administrative structures.

In most cases, there is a noticeable lag between the increase in input prices and the subsequent adjustment in output prices. In a situation where input prices are increasing and output prices remain relatively fixed, company profits are reduced or losses incurred. Output prices should cover costs of production and provide for a level of profits to enable firms to maintain plant and machinery in good repair and ensure its replacement over time.

(e) The parallel market in products of the Angolan manufacturing sector and competing imported goods is very extensive. Most items produced in the manufacturing sector are sold on this parallel market at many times the official market price of the commodities concerned. Because of the extremely low level of monetary wages in the manufacturing sector, there is a continuing incentive for factory workers to appropriate items from the production lines for their own use or for subsequent barter transactions on the parallel market.

(f) The overriding constraint faced by most companies is the shortage of foreign exchange. This has affected the ability of firms to import raw materials and spare parts, has further constrained capacity utilisation in the industry concerned.

Allocation of foreign exchange is effected on the basis of a company's annual foreign exchange needs. No clear distinction is drawn between requirements for raw material inputs and machinery and spare parts. Companies are free to use their foreign exchange provision for either purpose once it has been allocated to them.

Recommendations

(a) A review should be made of the current price control arrangements with a view to introducing greater flexibility in the system. An institutional mechanism could be introduced under which the overriding policy objective is to reduce the gap between official and parallel market prices. In this regard, understands that the SEF programme does in fact envisage greater flexibility in price determination, leading to the eventual introduction of a relatively free market system.

(b) The administrative system for approving price changes should be reviewed with a view to locating this operation in a single administrative unit, which could then consult as required with the relevant technical ministries. Under such a system, companies would not have to go through several administrative layers with price proposals.

(c) In this same general context, the determination of prices for finished goods should be synchronised with changes in the prices of related inputs. It is suggested that the Ministry of Planning could integrate such a mechanism into the institutional arrangements for reviewing prices.

(d) Wherever necessary, the production of spare parts should be encouraged and promoted. In this context, a selective tariff structure should be worked out with high rates on competing imports and low to zero on non-competing imports.

(e) An agricultural policy geared greatly towards increased domestic production should be pursued, with a view to enhancing the availability of local raw materials and reducing imports.

(f) There is a need to modify arrangements for the allocation of foreign exchange under a system which should distinguish between foreign exchange allocated to companies for raw materials, finished goods, and machinery and spare parts. Adjustments require to be made in the determination of the official exchange rate along the lines indicated above, which could involve a crawling peg system.

The effects of exchange rate adjustments should be closely watched, as such changes would obviously create problems for manufacturing companies in terms of the price at which they may acquire foreign exchange. There could also be a reduced demand for their products because of consequent increases in the price of finished goods, and an impact on their liquidity position.

CHAPTER 11

SUMMARY OF PLANT-LEVEL FINDINGS AND RECOMMENDATIONS

11.1 Fabrica de Alimentos, Lda - FAL

11.1.1 Management and organisation

Findings

FAL is a one man show, which with present difficulties taken into account is performing extremely well.

Recommendations for the short term

Providing that domestic economic climate continues to improve, FAL should employ a deputy to the general manager, and acquire a computer terminal or a PC-computer system to relieve the latter of routine work.

11.1.2 Marketing

Findings

Little marketing is done at the moment, and little is needed since most problems are concentrated on the input side, where lack of raw material is the major constraint.

Recommendations for the short term

This market will continue to be a sellers market within the foreseeable future and consequently no extensive sales promotion is necessary.

Short-term recommendations in terms of project concepts

Installation of a computer terminal, connected to the central computer in the Ministry of Industry, or purchase of own PC-computer system. Training for the users.

Medium- to long-term recommendations in terms of project concepts

1. Fill the existing vacancies at middle management level according to the actual needs.

2. Undertake a market survey in neighbouring markets where a potential outlet exists. Under the retention scheme mentioned in the SEF programme, where a certain proportion of export earnings could be retained in the company, foreign exchange could be secured for requisite imports of raw materials needed by the enterprise and possibly for the purpose of servicing foreign loans.

11.1.3 Physical plant

The requirements of FAL for the rehabilitation of the fish and meat processing machinery section and the packaging operation are suitable for a financing arrangement with either an international agency or a development bank. At the moment, the company has sufficient local currency reserves to cover the servicing and repayment schedules, which are likely to be demanded in any loan agreement.

The above requirements are related to urgent short-term, medium-term, and long-term needs.

(a) Short-term needs

These consist of the following items:

1. 250 kva Lister generator
2. Automatic sausage filling, linking & looping machine
3. Clipping machine
4. Scrubbing & descaling machine
5. Repair of refrigeration rooms

The total cost involved for short-term needs is Kz 8,140,000 or approximately US$ 271,300.

(b) Medium-term needs

These consist of the following items:

1. Slitting machine
2. Fish skinning machine
3. Fish meat collector
4. Ice machine
5. Cooking kettles
6. Platform trucks, containers, miscellaneous items.
7. Insect exterminator unit
8. Automatic vacuum packaging machine
9. Smoking equipment for salami
10. Building of water tower

The total cost involved for medium term needs is Kz 16,776,000 or approximately US$ 559,200

(c) Long-term needs

There is the possibility that a fishing vessel would have to be purchased for a cost of Kz 3 - 5 million, dependent on type.

It is recommended that development banks, in particular, should be approached for the financing of both the short-term and medium-term requirements. The long-term need for a fishing vessel could be finalised only when the actual effects of the SEF reforms are known. Should the security situation improve, the need for a vessel would no longer arise, as supplies of local beef and pork would become more generally available from domestic sources.

11.1.4 Inputs

Beef and pork for manufacturing of sausages have not been available since 1977. Fish was then introduced as a substitute.

EDIPESCA, the state enterprise for distribution of fish landed in the harbour, has awarded FAL a daily quota of 5 tonnes of fish. Apart from being irregular, the level of supplies does not accord in practice with the quota provision. Moreover, review of available documentation shows that quantities received by FAL fall short of the amounts registered and invoiced in the order of two tonnes per delivery.

Recommendations

(a) Short term

Investigation by the Ministry of Fisheries of

(i) the reasons for EDIPESCA not supplying fish according to relevant quota, and

(ii) of the procedures and routines for weighing the fish before loading on to the buyer's vehicles.

Depending on the result of the investigations, make the appropriate arrangements for the correction of this situation.

(b) Medium- to long-term

Establishment of commercial pig producing farms in the green belt in the vicinity of Luanda and arrange, as soon as conditions permit, for the transport of beef to Luanda from established cattle areas in other parts of the country.

11.1.5 Costs and price structure

Findings

1. The company has large cash balances with the BNA.

2. High import dependence with respect to spare parts. Duties on all imported spare parts.

3. Large difference between official price and parallel market price of company's products.

Recommendations

Short-term

1. Introduce a financial market for securities or treasury bills to absorb excessive company liquidity.

2. Change tariff structure relating to spare parts.

3. Reduce the difference between official price and parallel market price through increased price flexibility.

Short-term project concepts

1. State to introduce a financial market for securities or treasury bills. Companies can invest their excess liquidity in the market.

2. State to introduce a differentiated tariff structure with high tariff rates on competing imports and low to zero rates on non-competing imports.

11.2 Ermoagens do Norte, U.E.E. - Quicolo wheat mill

11.2.1 Management and organisation

Findings

The present organisation is clearly understaffed at management level due to vacancies for the posts of technical and production managers as well as a manager for the department for finance and planning. The staff is more or less under qualified at all management levels. Management information system, as well as financial management, is less than professionally adequate.

Recommendations for the short-term

As soon as possible, fill the above vacancies. Carry out an assessment of the qualifications of the staff at management and foreman level, and make apropriate adjustments.

Short-term recommendations in terms of project concepts

1. Management training to upgrade staff at management level.

2. Install computer system to improve management information system and to simplify financial management.

11.2.2 Marketing

Findings

No marketing is done at present, and there is no immediate need for marketing in a conventional sense, until the SEF programme begins to take practical effect.

Recommendations for the short-term

None, since it will take a long period before increasing local market demand can be satisfied from domestically milled flour.

Recommendations for the medium- and long-term

Organise a sales department and a number of sales representatives at selected points in the rural areas for flour sales, as well as purchase of locally produced wheat, where available.

Short-term recommendations in terms of project concepts

None, see comments above.

Medium- to long-term recommendations in terms of projects

1. Organise a sales department and chain of representatives.

2. Training of sales personnel.

11.2.3 Physical plant

The most important immediate needs for Quicolo are to rehabilitate the 150 tonne line, as quickly as possible, building on UNIDO's present assistance to the factory. A technical assistance programme, concentrating on training the maintenance personnel in correct maintenance procedures and on establishing preventative maintenance schedules throughout the mill is also needed. These actions will enable the mill to become more efficient in the utilisation of its installed capacity on the 150 tonne line in the most cost-effective manner.

Short-term requirements

1. To implement the rehabilitation of the 150 tonne line, utilising the UNDP budget, which was originally specified for a possible rehabilitation of the 50 tonne line.

   Estimated cost US$ 700,000

2. Replacement of all broken window panes in the mill building, so that effective fumigation is possible.

   Estimated cost Kz 30,000

   This should be the responsibility of the mill itself, not a funding agency.

3. Repair of the fumigation system for the silos and sifter units.

Estimated cost US$ 5,000

4. Connection of existing generator to the important pneumatic equipment, through a common distribution board.

Estimated cost US$ 5,000

5. Technical assistance programme for the training of all maintenance personnel.

Estimated cost US$ 40,000

6. Establishment of a laboratory on the factory site for the quality control and routine testing of all of the raw material inputs and products.

Estimated cost US$ 30,000

Medium-term requirements

1. Completion of the grain silo in the maize mill/ stockfeed complex, including the conveying system connecting it with the existing wheat mill.

Estimated cost US$ 250,000

2. Completion of the wheat flour silo, including the bagging unit.

Estimated cost US$ 300,000

Long-term requirements

1. Additional auxiliary diesel-electric generator units, equivalent to 800kva. Expenditure on these items will not be required, if the electrical distribution system is improved in the meantime.

11.2.4 Inputs

All wheat for the Quicolo wheat mill is imported, based on specifications submitted by the mill. The availability of foreign exchange, at the time of placing the orders for the following year, has an influence on the subsequent availability of the wheat for the mill.

Lack of foreign exchange, apparently coupled with inadequate planning, is one major reason for closing down the mill during periods of varying length. No quality testing of the wheat is done upon arrival to check that the quality complies with the specifications. No laboratory facilities are available at the mill preventing any form of quality control of raw material, in the process or of the final product.

Recommendations

(a) Review the procurement routines and procedures to remedy the present shortcomings which result in the periodic closing down of the mill.

11.2.5 Costs and price structure

1. High import dependence on raw materials and spare parts. Duties on all imported spare parts.

2. Weak organisational structure, also affecting accounting operations.

Recommendations

Short-term

1. Change tariff structure with respect to spare parts. As agricultural production picks up, apropriate encouragement should be given to the domestic production of wheat supplies, where economically feasible.

2. Restructure the organisation of the company, including accounting functions.

Short-term project concepts

1. Introduction by government of difierentiated tariff structure for spare parts with high rates on competing imports and low to zero on non-competing imports.

2. Overall review by government of the organisational structure of the company under SEF guidelines.

11.3 Industria Angolana de Oi os Vegetais, S.A.R.L. - INDUVE

11.3.1 Management and organisation

Findings

A serious weakness is the very loose connection between the board of directors and the general manager. All contacts between the owners and the management are channeled through the resident representative. Other weaknesses are two vacancies at middle management level. The company is also too dependent on outside support in the field off maintenance, production and financial management.

Recommendations for the short-term

Form a local board of directors with participants from the local business community, representative(s) of the shareholders and perhaps also a representative of the government.

Fill the two vacancies for commercial manager and maintenance manager as soon as possible.

Purchase computer system (PC-computer) for routine tasks such as administration, accounting and stock keeping.

11.3.2 Marketing

Findings

Little or no marketing is done at present mainly because of the existence of a sellers market.

Recommendations for the short-term

None

Recommendations for medium- and long-term

Establish agents at key points throughout the country for purchase of raw material and sales of products.

Short-term recommendations in terms of project concepts

Installation of computer system together with training programme for users.

Medium- to long-term recommendations in terms of project concepts

Expand and organise sales organisation internally, and possibly externally, with net of agents throughout the country.

11.3.3 Physical plant

INDUVE, a loss-making company has the problem of a plant requiring immediate maintenance, but no foreign exchange for the necessary spare parts, as well as insufficient trained maintenance personnel to carry out the necessary work, even if spare parts were available. In addition, the fixed price policies of the government have led to a situation, where the management is not really interested anyway in maintaining large sections of the plant, such as the grinding, pressing and extraction machinery, since its aim is to concentrate on refining imported crude oil, rather than imported seed.

The requirements of INDUVE are for both technical assistance and for a financing package to cover the cost of necessary spares and additional investment. Under current pricing policies, INDUVE would not be in a position to service loan finance, and a restructuring of the balance sheet and shareholding capital would probably be required, even if pricing policies on edible oils are relaxed under the SEF programme.

The needs of the company can be divided into short-term, medium-term and long-term requirements:

Short-term requirements

1. Finalisation of the plans with the oil refinery for a water supply from the SONANGOL oil refinery's new extension. The cost of this to INDUVE was stated to be 20 per cent of the total project cost of US$ 2 million, ie: US$ 400,000.

In addition the factory would require a water treatment system based on sedimentation and the estimated cost was stated to be approximately Kz 2 million, 50 percent of this amount being in foreign exchange. This particular oil refinery project is currently at a standstill due to financial constraints, but INDUVE is quite hopeful that it will be completed within a year's time.

2. Construction of an additional water storage tank (1,000 m3). This should, in the mission's view, be built as soon as possible, because it is clearly cost effective, even if the oil refinery water pipeline is completed on schedule.

Estimated cost of materials is: US$ 20,000
Estimated cost of pump & pipework is: US$ 5,000

Excavation work could probably be carried out by the factory's own personnel.

3. Installation of new generator and transformers.

Estimated cost is US$ 15,000

4. New boiler of larger capacity to replace existing small boiler.

Estimated cost is US$ 85,000

5. Technical assistance programme for maintenance of machinery and training of personnel, including provision of essential spares.

Estimated cost for technical assistance is: US$ 50,000
Estimated cost for essential spares is: US$ 40,000

6. Laboratory equipment and consumables.

Estimated cost is US$ 41,000

7. Spares for existing refinery

Estimated cost is US$ 10,000

Medium-term requirements

1. New buses for factory personnel.

Estimated cost is US$ 140,000

2. New refinery and crude oil storage facilities.

Estimated cost for 22,000 kl refinery is: US$ 4.5 M
Estimated cost for additional storage is:
(3,160 tonnes) is Kz 11 million: US$ 367,000

Long-term requirements

1. Packaging equipment and new plastic bottle extruder. No pricing has been attempted on these items.

2. Margarine production unit, 7,000 tonnes per year.

   Estimated cost is approximately US$ 7.3 M

3. Reference is also made to Chapter 9.2.2 (a), Overall considerations.

11.3.4 Inputs

Of the total input of oil-bearing seed,only some 4 per cent are grown domestically. It is concluded from relevant data that it is unlikely that the availability of oil-bearing seed will increase rapidly, once peace is restored, although there is a longer term potential in many parts of the country, including the south and the south west. At present about 14,000 tonnes of sunflower seed are purchased from abroad, and 3,800 tonnes of tallow for soap manufacturing. If proper incentives are introduced, the scope for increasing the supply of palm-oil seed is promising, even in the short run.

Irregular availability of foreign exchange in combination with a bureaucratic system for imports result in periodic shortages of raw material inputs.

Ingredients necessary for the refinery process are all imported without any major problems. These ingredients, except for caustic soda, are items specific to this industry and the purchases are made directly from the exporter.

Supply of water is invariably insufficient, sometimes preventing the various components of the plant from operating simultaneously. Alternative solutions are being considered in cooperation with SONANGOL.

Recommendations

(a) Short-term

Identify the domestic resources of palm oil producing estates and/or farms, and explore the scope for increasing the supplies of palm oil seed, hence reduce the requirements of tallow imports.

(b) Long-term

   (i) Under the new planning arrangements, include within the agricultural strategy a programme for research, development and promotion of oil seed production.

(ii) Elaborate a long term master plan with guide lines for development of an integrated vegetable oil industry in a national perspective. This could include rehabilitation of existing oil crushing plants and establishment of new installations in oil seed producing areas, thus promoting rural development in its wider sense. Surplus crude vegetable oil, not required for local consumption (double filtered), would be supplied to INDUVE for further processing.

11.3.5 Costs and price structure

Findings

1. High import dependence on raw materials and spare parts. Duties on all imported spares.

2. Company has been running at a loss since 1974. This is largely because of fixed prices for its finished goods.

Recommendations

Short-term

1. Change the tariff structure with respect to spare parts.

2. Allow flexibility in the prices of the company's products. Perhaps an annual review. Synchronise the prices of finished products and raw material prices in the review.

Short-term project concepts

1. Introduction by government of differentiated tariff structure for spares with high rates on competing imports and low to zero on non-competing imports.

2. Introduction by government of a new pricing approval system.

11.4 Fabrica de Artigos de Fibras Sint ticas, S.A.R.L. - FIBREX

11.4.1 Management and organisation

Findings

The present organisation shows a vacancy for factory manager, and there are certain weaknesses at middle management level due to a shortage of well educated personnel with relevant experience. Their appears to be an excessive dependence on expatriate technicians. Also the foreman and machine operator levels show weaknesses due to an abnormally high turnover of staff.

Recommendations for the short-term

The most urgent action to be taken as regards organisation is to fill the vacancy for factory manager which is a key function within the company.

Greater attention should be given to staff training priorities.

Installation of computer system for handling routine work.

Short-term recommendations in terms of project concepts

1. Installation of management information system (PC-computer) with adequate training programme for the personnel.

2. Technical assistance and training of technical personnel.

11.4.2 Marketing

Findings

Little or no marketing is done at FIBREX at the moment, since the firm is operating in a sellers market, and in a domestic demand situation which local production cannot fully satisfy at the present juncture.

FIBREX and its competitor SIGA share 50 per cent of the market which is divided between them. There is room for expansion for both companies under the present market situation.

In the early 1970s, FIBREX had a small export trade in both raffia sacks and PVC products.

Recommendations for the short-term

None

Recommendations for medium-term

Make a market survey in neighbouring markets including SADCC countries regarding possibilities for exporting PVC products within the region.

Medium- to long-term recommendations in terms of project concepts

1. Organise sales net with agents and distributors.

2. Export market survey in neighbouring countries, including SADCC region.

11.4.3 Physical plant

The requirements of FIBREX are mainly for technical assistance to train maintenance personnel and operators in the correct maintenance procedures. Finance is also sought for both spare parts and certain new equipment.

Short-term requirements

1. A technical assistance programme to provide an experienced engineer to train factory personnel.

   Estimated cost is: US$ 50,000

2. Financing arrangements for purchase of extrusion line spare parts and loom spare parts.

   Estimated cost is: US$ 35,000

3. Financing arrangements for the modification of 98 looms

   Estimated cost is: US$ 90,000 per year

Medium-term requirements

1. Financing arrangements for the purchase of an automatic cutting and sewing machine.

   Estimated cost is: US$ 200,000

Long-term requirements

Financing for more modern looms. These have not yet been costed.

11.4.4 Inputs

As all FIBREX's raw material inputs are imported, the effects of any devaluation made under SEF will have an immediate impact on the cost of production, but not as much, as might first be expected, since the cost of raw materials still amounts to only 30 per cent of production costs.

Sourcing from other European countries, such as the U.K. and the Netherlands in addition to the traditional supplier, Federal Germany, could prove to be one way of reducing raw material costs.

11.4.5 Costs and price structure

Findings

1. High import dependence on raw materials and spare parts. Duties on materials and spare parts.

2. The company is making a loss on the raffia bag manufacturing line because of fixed price.

3. The company has excess domestic liquidity, with high cash balances in the BNA.

4. There is a large difference between the official price and parallel market price for the company's product.

Recommendations

1. Change tariff structure with respect to raw materials and spare parts.

2. Introduce financial market for securities or treasury bills.

3. Allow price flexibility in the pricing of raffia bags.

Short-term project concepts

1. Introduction by government of differentiated tariff-structure for raw materials and spare parts with high rates on competing imports and low to zero on non-competing imports.

2. Introduction by government of a financial market for securities or treasury bills. Companies can invest their excess liquidity in this market.

11.5 Bag manufacturing

11.5.1 Inputs

Bag manufacturing in Angola is using imported synthetics. hence the industry is vulnerable to major practical difficulties ranging from unavailability of plastic pellets to inefficiency of procurement and transport services.

Recommendations

Reference is made to Chapter 8.4.4 where suggestions for future development of the bag manufacturing branch are given.

11.6 Bom Jesus estate

11.6.1 Present situation

Bom Jesus, a former sugar estate, is located some 60 km south-east of Luanda in the Bengo province. The operations were terminated in 1980 and less than one per cent of the arable land is presently used, mainly for growing vegetables and bananas.

11.6.2 Recommendations

Suggestions for rehabilitation of the estate based on an agro-industrial and rural development concept are presented in Appendix A.

The scheme would incorporate one nucleus commercial farm, 20 to 50 rural development farms and a number of small to medium sized agro-based industries. These would include initially a grain/soya bean storage unit with feed processing installations and a small maize mill for local needs, a soya milk processing plant and a slaughterhouse for pigs.

A substantial training component and plans for social services and trade are integral parts of recommended scheme.

CHAPTER 12

SUMMARY OF PROJECT CONCEPTS

(a) General

- Rationalise institutional responsibility for import of inputs used by several enterprises to avoid delays and irregular deliveries

- Continue to advance the implementation of new agricultural policies to allow for resumption of supply of agricultural commodities to the food processing industry

- Provision of increased technical assistance, notably to the Ministry of Industry, for the strengthening of the industrial data base and the elaboration of project plans and pre-investment studies, including relevant aspects of the Bom Jesus agro-industrial and related rural development scheme. Such assistance could build on earlier UNIDO projects.

- Technical assistance re. studies for strategic planning for development of the integrated vegetable oils and fats industry.

- Assistance for further investigations, in cooperation with other SADCC countries, regarding the use of natural fibres grown in the region, in the context of a long term strategy for the development/expansion of the bag manufacturing industry.

- In connection with above activities re. natural fibre assistance by UNIDO for establishment of rehabilitated jute line using existing installations at SIGA

- Support for industrial management training now under review at university and higher technical levels.

- Continue to upgrade electricity distribution network in the industrial area of Luanda.

(b) For all enterprises visited

- Improve the technical training of all maintenance staff, both mechanical and electrical, by means of technical assistance programmes (UNIDO). These should be coordinated with programmes currently under preparation by the ILO/UNDP.

(c) Plant level projects

FAL

- Renovate part of the existing installations.
- Secure supply of energy.
- Improve management information and related training system.

QUICOLO

- Assistance for physical rehabilitation of the 150 tonne/24hr milling line, continuing and expanding the present UNIDO project.
- Technical assistance for training of middle and lower level management personnel, and of those engaged in ; operation and maintenance.
- Technical assistance at top management level , or as an alternative, conclude a management agreement contract with an experienced foreign milling company.

INDUVE

- Form local board of directors.
- Fill vacancies for commercial manager and maintenance manager.
- Purchase computer system.
- Establish sales agents throughout the country.
- Finalise plans for water pipeline from oil-refinery.
- Construction of water storage tank.
- Installation of new generator and transformers.
- New boiler to be purchased.
- Technical assistance programme for maintenance personnel, training and for spare parts.
- Purchase of laboratory equipment and consumables.
- Spares for existing refinery.
- New buses for factory personnel.
- New refinery and crude oil storage facilities.

- New packaging equipment and new plastic bottle extruder.

- New margarine production unit.

FIBREX

- Employment of a factory manager.

- Technical assistance programme for maintenance personnel and for spare parts.

- Market survey regarding the possibilities of exporting PVC products, notably in neighbouring markets, including SADCC region.

- Installation of management information system on PC computer.

- Organise external sales agencies and distributors.

- Organise financing arrangements for purchase of spare parts and modification of the looms to increase their output.

- Organise financing for the purchase of an automatic cutting and sewing machine.

- Organise financing for more modern looms.

(d) Bar chart for implementation of rehabilitation work

Item	Year 1	Year 2	Year 3
FAL			
1. Discussions with agencies	XXX		
2. Granting of loan I	XX		
3. Install computer system	XX		
4. Delivery short-term items	XXXX		
5. Create securities & treasury bills market	XXXXXXXXXX		
6. Granting of loan II	XX		
7. Introduce differential tariffs	XX		
8. Delivery medium-term items		XXXXXX	
9. Granting of loan III		XX	
10. Fill middle-management vacancies			XXX
11. Delivery long-term items			XXX
12. External market survey			Year 4 ===
QUICOLO			
1. Discussions with agencies	XXX		
2. Granting tech. assistance	XX		
3. Fill middle-mangmt places	XX		
4. Technical assistance	XXXX		
5. Install computer system	XX		
6. Implement rehab. 150t line	XXXXXX		
7. Management training progrm	XX		
8. Granting of loan I	XX		

Item	Year 1	Year 2	Year 3
9. Organise sales training pgm			XXXXX
10. Delivery short-term items	XXX		
11. Granting of loan II	XX		
12. Completion of flour silo		XXXXXX	
13. Completion of grain silo		XXXXXX	
14. Granting of loan III			XX
15. Purchase generators			XXX
INDUVE			
1. Water supply pipeline	XXXXXXXXX		
2. Organise local board of directors	XXX		
3. Discussions with agencies	XXX		
4. Install computer system	XX		
5. Granting loan I	XX		
6. Fill existing vacancies	XX		
7. Water treatment system	XXXXXX		
8. Installation of generators	XX		
9. New boiler installation	XX		
10. Technical assistance	XXXXX		
11. Laboratory equipment	XX		
12. Discussions with agencies	XX		
13. Granting of loan II			
14. New buses		XXX	
15. New refinery - study cost & implement		xx XXXXXXXXXXXXXXXX	

Item	Year 1	Year 2	Year 3
16. New crude oil storage		XXXXX	
17. Discussions with agencies		XXX	
18. Granting of loan III		XX	
19. Establish agency network			XXXX
20. New packaging equipment			XXX
21. New bottle extruder			XXX
22. New margarine unit			X===
FIBREX			
1. Discussions with agencies	XXX		
2. Install computer system	XX		
3. Granting tech. assistance	XX		
4. Fill middle mangmt places	XX		
5. Spares finance available	XX		
6. Technical assistance	XXXXX		
7. Loom finance available	XX		
8. Spares installed	XX		
9. Loom parts installed		XXXXXXXXXXXXXXXXXXXXX	
10. Discussions with agencies		XXX	
11. Granting of loan II		XX	
12. External market survey			XXXX
13. New auto cutting/sewing			XXXX
14. Discussions with agencies			XX
15. New modern looms			Year 4 ===

SELECTED REFERENCES

Assembleia do Povo. Lei Sobre Os Investimentos Estrangeiros. Aprovado na Sessao de 26 de Fevereiro de 1988.

Aguiar, Joaquim editor. Portugal, os Estados Africanos de Lingua Oficial Portuguesa e os Estados Unidos da América. Fundacao Calouste Gulbenkian/World Peace Foundation, Lisboa, 1987.

Bhagavan, M. R. Angola's Political Economy, 1975-1984, in Africa: Problem in the Transition to Socialism, edited by B. Munslow. Zed Press, London 1985.

Birmingham, David. Angola Revisited. Forthcoming in Journal of Southern African Studies. Oxford University Press 1988.

Centre du Commerce International CNUCED/GATT. Programmation et Procedures d'Importation en Angola. Rapport de mission. Genève, 1988.

Centro de Cooperacao Técnica Internacional. Reabilitacao, Modernizacao e Expansao da Industria de Processamentos de Alimentos. Sao Paulo, 1984.

Diario da Republica de Angola.
- Lei No. 4. 23 janeiro 1988.
- Lei No. 5. 30 janeiro 1988.
- Lei No. 7. 13 fevereiro 1988.
- Lei No. 9/88. Lei Cambial. 2 juhlo 1988.
- Lei No. 10/88. Das Actividades Economicas. 2 juhlo 1988.
- Lei No. 11/88. Das Empresas Estatais. 9 juhlo 1988.
- Lei No. 12/88. Da Planificacao. 9 juhlo 1988.
- Lei No. 13/88. Dos Investimentos Estrangeiros. 16 juhlo 1988.

Dilolwa, Carlos Rocha. Contribucao à Historia Economica de Angola. 1978.

EEC. On Improvment in the Agricultural Sector with particular emphasis on Port and Transport Rehabilitation in Angola. Luanda and Bruxelles, 1986.

EEC. Assistance Tecnique relative à la Préparation d'un Programme Sectoriel d'Importation - Lomé III. Luanda et Bruxelles, 1987.

EEC. Coopération entre la République Populaire d'Angola et les Communautés Européennes. Rapport annuel sur la mise en oeuvre des conventions CEE-ACP et autres actions de coopération. Luanda, 1987.

EIU. (The Economist Intelligence Unit). Country Profile Angola, Sao Tomé & Príncipe 1987-88. London, 1987.

- Country Report. Angola, Sao Tomé & Príncipe. No 2 1988.

- Angola to the 1990s. The Potential for Recovery. Special Report No. 1079 by Tony Hodges. London, January 1987.

FAO. Rétablissement de l'Industrie Laitière d'Angola. Luanda et Rome, 1988.

Fundacao Calouste Gulbenkian. Universidade Agostinho Neto: Estudo Global. Luanda e Lisboa, 1987.

Haarloev, Jens. Regional Co-operation in Southern Africa: Central Elements of the SADCC Venture. Centre for Development Research, Copenhagen, 1987.

Imani Development. Report to Review Trade Promotion and Investment Programme Alternatives for the SADCC Region. USAID, Harare, 1987.

IBRD. (International Bank for Reconstruction and Development - World Bank) Missao do PNUD/Banco Mundial (Dez. 1987) Nota de conclusoes provisorias. Luanda, 11 December 1987.

ILO/UNDP. Report on Technical Training in Angola. Prepared by Paulo Barcia, Luanda, June 1988.

IFAD. (International Fund for Agricultural Development). Report of the Special Programming Mission to Angola. Report No. 0022-AN. Rome, June 1986.

International Trade Centre. UNCTAD/GATT. Republique Populaire d'Angola. Programmation et Procedures d'Importation. Report prepared by Mr. M. Hardo. ITC/DTC/88/776. 22 March 1988.

Legum, Colin and Hodges, Tony. After Angola. The War Over Southern Africa. The Role of the Big Powers. (Colin Legum) How the MPLA Won in Angola. (Tony Hodges). Rex Collings, London 1976.

Ministério da Industria. Estatuto Organico do Ministério da Industria. Versao corrigida. Luanda 1988.

- Registo Geral de Empresas. Luanda, April 1984

- Moagem do Kikolo. Construcoes Técnicas, S.A.R.L. Luanda, 28 January 1981.

Ministry of Planning and UNDP. Reconstruction Programme for the Provinces of Huila, Nambibe & Cunene. Dar Al-Handasah Consultants. November 1987.
Programa de Saneamento Economico e Financeiro. Discurso do Camarada Presidente José Eduardo Dos Santos Proferido Na Abertura Do 1/ Seminario Nacional Sobre O Saneamento Economico E Financeiro (SEF). Luanda 1987.

- Linhas Gerais de Orientacao Para A Estruturacao De Um Novo Sistema De Comercio. Luanda, September 1987.

- Bases Para A Formulacao Do Sistema De Gestao E Planificacao Regional E Local. Luanda, November 1987.

SIDA. (Swedish International Development Agency) Landrapport Angola, Planeringssekretariatet SIDA, Stockholm May, 1988.

Sommerville, Keith. Angola. Politics, Economics and Society. Frances Pinter (Publishers), London and Lynne Rienner Publishers, Inc., Boulder, 1986.

Southern African Development Co-ordination Conference (SADCC). Annual Consultative Conference Report. Harare, 1986.

SADCC. Intra-Regional Trade Study. Report prepared for the SADCC Secretariat by the Chr. Michelsen Institute, Bergen and Gaborone, 1986.

SADCC. Reports on Industrial Development within the SADCC Region. SADCC Industry and Trade Co-ordination Division, Dar es Salaam and Gaborone, 1986/88.

SADCC. Annual Consultative Conference Report. Gaborone, 1987.

SADCC. Annual Report on the Implementation of the SADCC Programme of Action. Gaborone, 1987/88.

SADCC. Investment in Production. Report of the Seminar for Businessmen held in Gaborone, Botswana, February 1987.

SADCC. Study on the Rehabilitation of the Edible Oils Industry in SADCC Countries. (Draft Report) SADCC Industry and Trade Co-ordination Division, Dar es Salaam, 1987.

SADCC. Report on Export Prefinancing Revolving Fund (EPRF) Systems in SADCC Countries. EPRF working party, SADCC Secretariat, Gaborone, 1987.

SADCC/OECD Development Centre. Development Co-operation in Southern Africa: Structures and Procedures. Gaborone and Paris, 1984.

SADCC/OECD Development Centre. Implementing the SADCC Programme of Action. Joint Study by the SADCC Secretariat and the OECD Development Centre of Structures and Procedures in Development Co-operation, Gaborone and Paris, 1987.

Southern African Transport and Communications Commission (SATCC). Lobito Port Transport System, 10 Year Development Plan. Luanda, Maputo and Stockholm, January 1988.

UNDP. Rétablissement de l'Industrie Laitière. ANGOLA. Conclusions et Recommendations du Projet. UNDP and FAO, Rome 1988.

- Rehabilitation of Milk Industries. People's Republic of Angola. A joint UNDP/FAO Evaluation Mission. N. S. Inter enr. Léry (Québec), April 1987.

UNIDO. The regeneration of Zambian industry with emphasis in agro-based industries, Special reports on industrial rehabilitation, no. 1, prepared by Regional and Country Studies Branch, Industrial Policies and Perspective Division, Department for Programme and Project Development. UNIDO, Vienna, 14 October 1988.

- Description of REG's Programme for the rehabilitation of African manufacturing industry 1988/89: Country level diagnostic surveys. UNIDO, Vienna, 10 May 1988.

- Report of Mission to Angola 26 July - 1 August 1988. Prepared by Mr. U. Antinori. UNIDO, Vienna, August 1988.

- Metallurgical industries in Angola. Prepared by Mr. F.J.M. Tanaka. UNIDO, Vienna, 19 August 1988.

- ANGOLA. Stimulating industrial recovery. UNIDO, Vienna, 17 August 1988.

- Regenerating African Industry. Briefing book - Angola country mission. Prepared by Regional and Country Studies Branch with UNIDO consultants Hjalmar Brundin and Paul Hesp. UNIDO, Vienna, 4 August 1988.

- Relatorio Final da Missao. ANG/86/004. Reabilitacao de unidades agroalimentares. Reabilitacao da empresa de panificao. Prepared by Marcio R. Rodrigues, Georges Michielson and Jean Ruffat. UNIDO, Angola, November 1986.

- Renforcer la "FILIERE PAIN" en Angola. UNIDO, November 1986.

- Technical report: Activities in the Rehabilitation and Expansion Programme. Food Processing Rehabilitation and Expansion Programme, UNIDO, Vienna, 8 October 1988.

- Technical Report: Technical assessment of the sugar industry. Food Processing Rehabilitation and Expansion Programme, UNIDO, Vienna, 5 December 1983.

United Nations Office for Emergencies in Africa. The Emergency Situation in Angola. Priority non-food requirements for the year 1988. Prepared by the African Emergency Task Force in Collaboration with the Government of the People's Republic of Angola.

Wheeler, Douglas L. and Pélissier, René. Angola. Pall Mall Press, London, 1971.

Wolfers, Michael and Bergerol, Jane. Angola in the Frontline. Zed Press, London 1983.

ANNEX A

BOM JESUS AGRO-INDUSTRIAL REHABILITATION AND RURAL DEVELOPMENT SCHEME

Table of contents

BOM JESUS AGRO-INDUSTRIAL REHABILITATION AND RURAL DEVELOPMENT SCHEME

1. Introduction

In the context of this UNIDO study on the rehabilitation of the food industry in Angola, issues relating to the supply of raw materials stand at the very forefront of the developement policy debate. At present the food processing industry is suffering heavily from a lack of agricultural commodities to provide the necessary raw materials for manufacturing. As a last resort, imports are being made to a limited extent, when the foreign exchange situation permits. Fresh and processed foods are also brought into the country to buttress the domestic supply of foodstuffs.

It is the intention of the Angolan Government to replace a significant proportion of imported foods with domestic supplies at the earliest possible opportunity. New initiatives have recently been signaled indicating actions which will be taken to encourage increased agricultural production, including the establishment of private farms, improvement of the marketing system, provision of various institutional services to the rural areas, such as extension, health and education, and practical support to develop rural trade.

As the Government was anxious to secure further advice on the rehabilitation of the Bom Jesus Estate near Luanda, it was included among the candidate enterprises to be reviewed by the UNIDO mission, especially with regard to the industrial rehabilitation requirements of the factory buildings to be used for various types of food industries.

After a visit to the area, it was concluded that the former sugar estate could be used inter alia for a agro-industrial rehabilitation and rural development scheme, where a number of elements could be included which would be consistent with the government's new policies for increased agricultural production and rural development within the framework of the Saneamento Economico e Financeiro (SEF).

This appendix presents a conceptual approach to the agricultural and agro-industrial development of the Bom Jesus Estate. Suggestions are given for guidelines for the implementation of the scheme, including a tentative time schedule. This is intended to facilitate timely decisions by the Angolan authorities, potential Angolan investors, bilateral aid organisations, international agencies and other interested financing institutions.

Two draft copies of this appendix were handed over to the Ministry of Industry prior to the departure of the UNIDO mission from Angola on 30th September 1988.

2. The project rehabilitation area

Bom Jesus Estate is located about 60 kms south-east of Luanda in the Bengo province. The total area reportedly covers 4,600 hectares, 1,300 of which were used for growing sugar cane on a commercial scale until 1980, when the sugar factory closed down.

The Kwanza River separates the estate from the Quicsama National Park south of the river. To the north is a tract of undulating shrubland, which reportedly is very sparsely populated. To the west the terrain is characterised by low hills, some of which have sparse stands of Baobab trees, and lower areas in between, which tend to broaden out towards the river. The village of Bom Jesus, with villas for estate personnel and housing for workers, is built on the hill bordering and overlooking the property from the east, where the road leads to Luanda.

About 30 hectares are presently cultivated, but the rest of the land has deteriorated in varying degrees. Some sugar cane is still standing, but large areas are now overgrown by shrub. Main drainage canals, ditches, pumping stations for drainage water and irrigation systems have deteriorated beyond normal rehabilitation requirements.

The sugar factory is located in the south-east corner of the estate. Most of the original equipment is still in place in five of the seven buildings, the other two being warehouses which remain in reasonably good condition. The latter could be used for a future commercial farm project. Once the installations are dismantled, the five factory buildings should be demolished, since it would be a doubtful economic proposition to rehabilitate them for other uses. In this area there are also a number of other buildings, some of which are probably of cultural interest, which should be saved and utilised in a future project.

A number of studies have been made earlier to assess the possibilities of using the property for the cultivation of different crops. Consultec, for instance, recommends intensive production of soya beans and the establishment of mini soya milk processing units, strategically located in consumer areas, while Lonrho suggests that the estate be used for growing vegetables, fruit and food grains. To the west of Bom Jesus in the area surrounding Calumbo (Fig 1, area 5), the prospects of establishing a rural development project are presently being studied within the corperation agreement between Angola and Italy for the green belt of Luanda (Cintura Verde de Luanda). Close coordination of the two project should be considered.

3. Project approach, project components

The main considerations pertinent to the general rehabilitation and development of the Bom Jesus Estate are as follows:

3.1 Pig production

A vital consideration in securing maximum benefits from rehabilitation efforts is to identify viable economic linkages in order to reduce bottlenecks in the integrated chain of agro-industrial activities. These are sometimes complex and difficult to handle effectively. In the studies undertaken by the UNIDO mission, requirements for meat particularly for processing into sausages, have been identified, together with a market demand for pork cuts.

The production of pig meat, reasonably close to a major consumer areas, has advantages from a handling point of view, especially if fresh meat is preferred by the consumers. The additional cost of freezing must also be considered.

3.2 Soya beans, soya milk

Domestically produced liquid milk is not available at present, except for certain quantities of reconstituted milk supplied from the Luanda dairy plant (CELL).

The dairy industry in Angola has almost completely collapsed, and indeed a large portion of the national dairy herd no longer exists. The milk collection system appears to have disintegrated and very few dairy plants reportedly remain in an operational condition. The dairy industry will no doubt recover once security in the dairy producing areas is restored, and the appropriate conditions provided for the resumption of commercial dairy production and processing. However, it will be a long time before the Luanda market is supplied with locally produced cows milk.

The production of soya milk constitutes a possible means of providing the market with an acceptable locally produced substitute for cows milk. The principal input, soya beans, is grown on a limited scale in Angola, and the cost per litre of soya milk is relatively low. During a transitional period of time when soya bean production is promoted as a potentially, interesting cash crop, some imports of soya beans may be considered, carefully monitored through suitable tariffs, to avoid unwanted competition with an emerging domestic production of soya beans.

In a longer term perspective, milk from the dairy industry and soya milk will be competitive in some instances, complementary in others. The by-products from soya milk processing may be used for human consumption or as an ingredient in the formula feeds for weaner pigs.

3.3 Farm structure

(a) Commercial farming

The scope for achieving rapid results from land reclamation, and from the subsequent farming of the land, would be much greater, if handled by a commercial enterprise. The time lapse between an official decision on this project, and the start of operations would be of the order of two years or less, depending on the seasonal factor.

A commercial and suitably mechanised farm does not normally provide a large number of job opportunities, although the employment factor is, to some extent, related to the choice of crops. In addition, a seasonal demand for extra manpower requirements may be generated.

(b) Small- to medium-sized rural development farms

Rural development based on existing peasant farms, or new farms of only a few hectares, results in high man or women power use per hectare of land yielding many job opportunities, which frequently constitute the main employment opportunities available.

Small farm development schemes have the disadvantage of limiting the development potential for the individual farmer, leaving marginal possibilities of improving the income and standard of living for his or her family in years to come.

Rural development based on small to medium sized farms is an interesting alternative. The farms would then have an ultimate cultivated area of 5 to 20 hectares. They would be sufficiently large to produce sizable quantities of farm commodities for sale, they would require a higher level of management capabilities and entrepreneurship, and they would have to be semi-mechanised, or even fully mechanised, depending on the cropping pattern and cropping intensity. Finally, the farmers to be recruited would require to have the capacity and incentive to be properly trained and later assisted and guided in the pursuit of their vocation.

Farmers in this particular group are potential employers. In the initial investment phase it is reasonable to assume that significant numbers of people could be employed on a development scheme of this kind. In a longer term perspective, however, the number of workers is likely to drop as farmers come to rely more on mechanised facilities of their own.

3.4 Training, supervision, services to rural development farmers

A rural development programme along these lines should be linked to a commercial farming operation. Part of the farmers' training programme should be conducted there, before they start farming on their own. The commercial farm would provide machine services for a number of years, tapering off, as the farmers gain experience of their own and consolidate their farm enterprises. The commercial farm workshop would handle repair and major services for farm machinery and tractors over a foreseeable period of time.

Continuous training and supervision in seasonal planning, crop and animal production, irrigation, maintenance and record keeping are absolutely vital over an extensive period. This would be the responsibility of an appropriately composed team under the Ministry of Agriculture, stationed in the area, probably using the commercial farm as a base.

3.5 Establishment of agro-based industries

The commercial farming enterprise would form the nucleus of a number of producers of farm commodities for marketing, processing etc. Its establishment would provide a guarantee that minimum quantities of supplies would be available to the agro-industries concerned from the very outset. These supplies would increase as the rural development programme expanded and the small- and medium-sized farm operations become more efficient. Depending

on the success and interest of the farmers and evolving market requirements, additional types of food processing industries might be established.

3.6 Trade and social services, agro-industry ownership

The total number of people associated with the operation of the commercial farm, the small- to medium-sized farmers and their families, service personnel, employees at the agro-based industries and the farm workers would constitute a sufficient basis for the development of trade in the area, and for the provision of health, educational and social services.

The agro-industrial scheme might be owned either privately or by a farmers' association, or by some form of joint venture.

3.7 Summary of objectives

In summary, major objectives under this type of project approach would be:

(a) Further agricultural development in the green belt surrounding Luanda;

(b) Rural development geared to increased food production;

(c) Provision of job opportunities with potential for steadily raising standards of living over a significant period of time;

(d) Development of agro-related industries in the rural area; and

(e) Fostering of a group of small- to medium-sized farm entrepreneurs who could also be a model for other areas comparable developments in other areas.

Figure 2 indicates the principle linkages and product flows, but not necessarily the physical location of the different units. To illustrate the development potential for agro-industrial expansion, additional processing ventures are also included. For instance, the fruit and vegetable sorting, grading and packing plant would be situated directly adjacent to the juice processing unit. Choice products would be supplied to the Luanda market, while second grade fruit would be processed in the juice plant. This in turn would probably benefit from having utilities such as electricity, water supply, sewerage etc. in common with the soya milk unit. The possibility of pasteurisation and packing of the juice in the soya-milk processing plant should be assessed in the feasibility study proposed below.

Some commodities might also be sold directly from the commercial farm and/or the rural development farms to consumers or dealers.

4. Project concept

Rehabilitation, development and utilisation of available arable land of the Bom Jesus Estate would include the following elements.

(a) A commercial farm of approximately 1,300 hectares. The production should be geared to:

- growing of soya beans on approximately 200 hectares annually, determined by the particular crop rotation to be adopted;
- growing of cereal crops for human and animal use;
- cash crops to be determined by the commercial farm management based on market forces and business opportunities; and
- integrated pig production from about 400 sows when fully developed.

(b) Rural development scheme with 20 to 50 farms. The exact number would have to be determined in the context of the proposed technical studies and related to the total area of land available and suitable for intensive farming. Each farm should have 5 to 20 hectares of arable land depending on land configuration, natural boundaries between farms etc. It would be an advantage for the farms not to be of a standardised size, but for this factor to be determined by practical considerations connected with the proposed operation of the farms.

The production pattern should include:

- growing of soya beans;
- growing of cereal crops; and
- pig production, which could be either integrated or specialised.

In addition, the following options might be considered:

- vegetables;
- fruit; and
- poultry.

The ultimate choice of optimal lines of production should be determined by the economic interest and ambitions of the individual farmer.

(c) Training of rural development scheme farmers

(d) Extension services to rural development farmers

(e) Specialised pig slaughterhouse with appropriate facilities, including blood collection and treatment, chilling of carcasses, cutting and hygienic packing of prime cuts, cleaning of casings and salting, and efficient and hygienic handling and dispatch of all products.

Arrangements for veterinary inspection and sanitary slaughter would also need to be made. Required capacity is tentatively estimated at 35 to 50 pigs per day. Different ownership structures should be considered for the pig slaughterhouse. The overall project concept suggests that a private limited company would be preferable where shares, at a later date, might also be acquired by the rural development farmers.

Regardless of ownership structure, the pricing policy should be studied and determined with particular regard to farm gate prices relative to market prices.

(f) Soya milk processing plant with the necessary facilities for storage of soya beans.

It would be an advantage if the storage of soya beans and cereals for the entire Bom Jesus agro-industrial rehabilitation and rural development scheme were coordinated through a single installation to ensure simple and effective storage conditions, to avoid losses, and to benefit from economies of scale.

(g) Feed mill processing capacity adapted to the specific requirements of both the commercial farm and the rural development farms. The mixing capacity would be in the range of 5 tonnes per hour.

It is premature, at this stage, to specify the range of requirements for storage of raw materials and final products. This aspect of the scheme should be covered in a future technical study. The nature of the problem suggests there should be effective coordination with the storage facilities for soya beans.

In this general context, detailed consideration would require to be given to the ownership structure of the soya milk plant, the feed plant and the various storage facilities. Other components in a soya/cereal sub-project might be considered, such as a simple maize mill with a capacity of probably 200 to 500 kgs per hour to mill for local consumption only.

(h) Social services including education and public health facilities.

The detailed requirements would have to be investigated well in advance and included in the overall project plans.

5. Ownership and responsibility aspects of a BOM JESUS AGRO-INDUSTRIAL FARM CO. (BJAFCO)

The responsibility of a future BJAFCO would be to develop and manage the property according to sound agricultural and economic practices. In addition, BJAFCO would assume certain responsibilities associated with the implementation of the Bom Jesus agro-industrial rehabilitation and development scheme.

A combination of local private interests and foreign participation could be one attractive alternative. The foreign partner would be expected to take a leading managerial role and provide technical expertise. An element of transfer of technology should be incorporated in the overall structure of the company, but not at the expense of over-staffing with unnecessary high personel costs.

The BJAFCO's responsibilities towards the agro-industrial and rural development scheme would appear to fall into two main fields:

(1) As a contractor to assist the Government to:

(a) develop the necessary infrastructure including establishment of basic farm buildings; and

(b) to take part in the training of rural development farmers according to a programme to be mutually agreed upon.

(2) As a project development agency to take a leading role in the establishment and operation of the different agro-related industries including marketing; this role would imply coordination with the Ministries of Industry, Agriculture and Trade, arranging for planning and design procurement, execution and the appropriate commissioning of the various installations.

The farm gate price would be crucial as an incentive to the rural development farmers. The principles for determining the farm gate price of different commodities should be decided upon at an early date, preferably in the context up the pre-project studies for the rural development scheme. It is essential that the rural development farmer should always receive a fair price, and that he or she should not be exploited by the food processing industry.

The responsibilities under (1) above are directly associated with rehabilitation and rural development. Efforts should be made to interest bilateral aid organisations in providing part of the necessary funding. Direct contact between the Angolan Government, a future BJAFCO and an interested aid organisation would provide a firm basis for discussions regarding formalities and practical arrangements.

6. Plan of operation for the development of the project

The tentative plan of operation would include the following actions:

(a) Discussions within Government regarding the suggested project concept, leading to eventual decisions;

(b) Identification by Government of interested parties, including private Angolan, foreign commercial and foreign bilateral aid organisations; assistance to be extended by UNIDO, where required;

(c) Formation of a "Bom Jesus Agro-Industrial Farm Company";

(d) Elaboration of detailed terms of reference for a comprehensive study relating to the entire Bom Jesus agro-industrial rehabilitation and rural development scheme.

The draft terms of reference might be prepared by UNIDO (or another interested multilateral or bilateral agency) and reviewed by the Angolan Government and BJAFCO prior to procurement of the necessary expertise to assume responsibility for the study. The study should be broken down into three main parts.

(i) A pre-investment study at a feasibility level for the various agro-related industries, and the commercial farm and a detailed programme for the rural development scheme including technical planning and cost estimates. The former should include:

- the soya milk processing plant;
- storage facilities for soya beans, grain for feed plant, and maize for local meal milling requirements ;and
- pig slaughter house.

(ii) Two further studies which would appear necessary for the agro-industrial scheme, the commercial farm project and the rural development programme, are

- sociological investigations with reference to future employment requirements, and the establishment of a new rural community.
- Investigations regarding the presence of African swinefever in the project area and its close vicinity. Plans for phasing out the present pig population and long term plan, with detailed recommendations, to prevent future spreading of the disease to the project area; the last question should be dealt with in close cooperation with planning of the commercial and rural development farm pig production units.

(e) Rehabilitation and development of project infrastructure on commercial farm and rural development farms; dismantling of sugar factory installations and demolition of factory buildings.

(f) Begin work on the commercial farm.

(g) Start training programme for rural development farmers.

(h) Gradually, take up operations over a period of about 5-6 years, on the rural development programme farms.

A partial breakdown of activities is presented in fig. 3 to illustrate, in general terms, the possible sequence of events. Proposed tentative time schedule implies that certain rehabilitation works commence and are carried out parallel with the main project studies.

Requirements for sub-soil clay drainage pipes

To improve the general drainage charactaristics of the Bom Jesus estate, it would be advisable to install a subsoil drainage system in the areas under cultivation, in order to increase the yield per hectare.

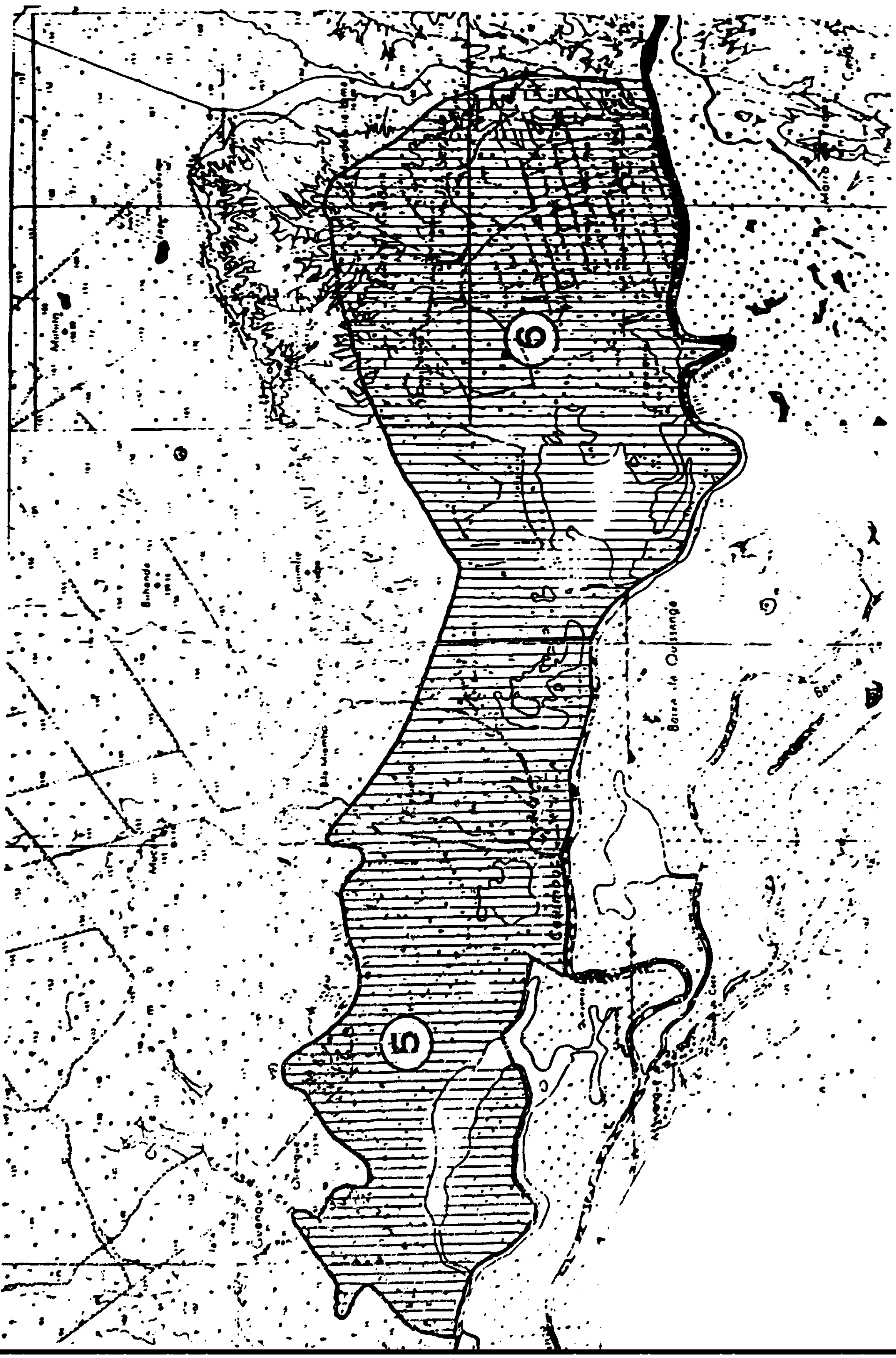
The two normal systems are to use either clay pipes (termed "tiles" in some areas) or plastic piping. Clay pipes have the significant technical advantages of being superior in their drainage capabilities, when compared with an equivalent sized plastic pipe and in addition, they are far more resistant to both physical and chemical damage. They also have the advantage of utilising the abundant local clay deposits, rather than imported plastic goods.

In the Luanda region are a number of clay brick factories, which are underutilised and one, in particular, the Ist May brick factory, is particularly suited to the manufacture of such pipes. All of the clay preparation machinery, extruder, cutter, dryers (presently not operational) and kiln are ideal for this type of product, the only addition being required being a relatively inexpensive pipe die with perforation bridge and core system. The Ist May brick factory itself requires some rehabilitation work and some technical assistance and this additional product for its existing facilities, would be of considerable help in its recovery programme.

The product would also be of significant interest to other farming areas subject to water logging and inadequate drainage.

In the course of project implementation, a routine appraisal should be carried out every 6 months to facilitate the appropriate monitoring of project activities. Timely remedies could then be applied to ensure that the project develops according to the agreed plans.

Map of the project area



BOMJESUS AGRO-INDUSTRIAL REHABILITATION
AND DEVELOPMENT SCHEME

PRINCIPAL LINKAGES AND PRODUCT FLOW

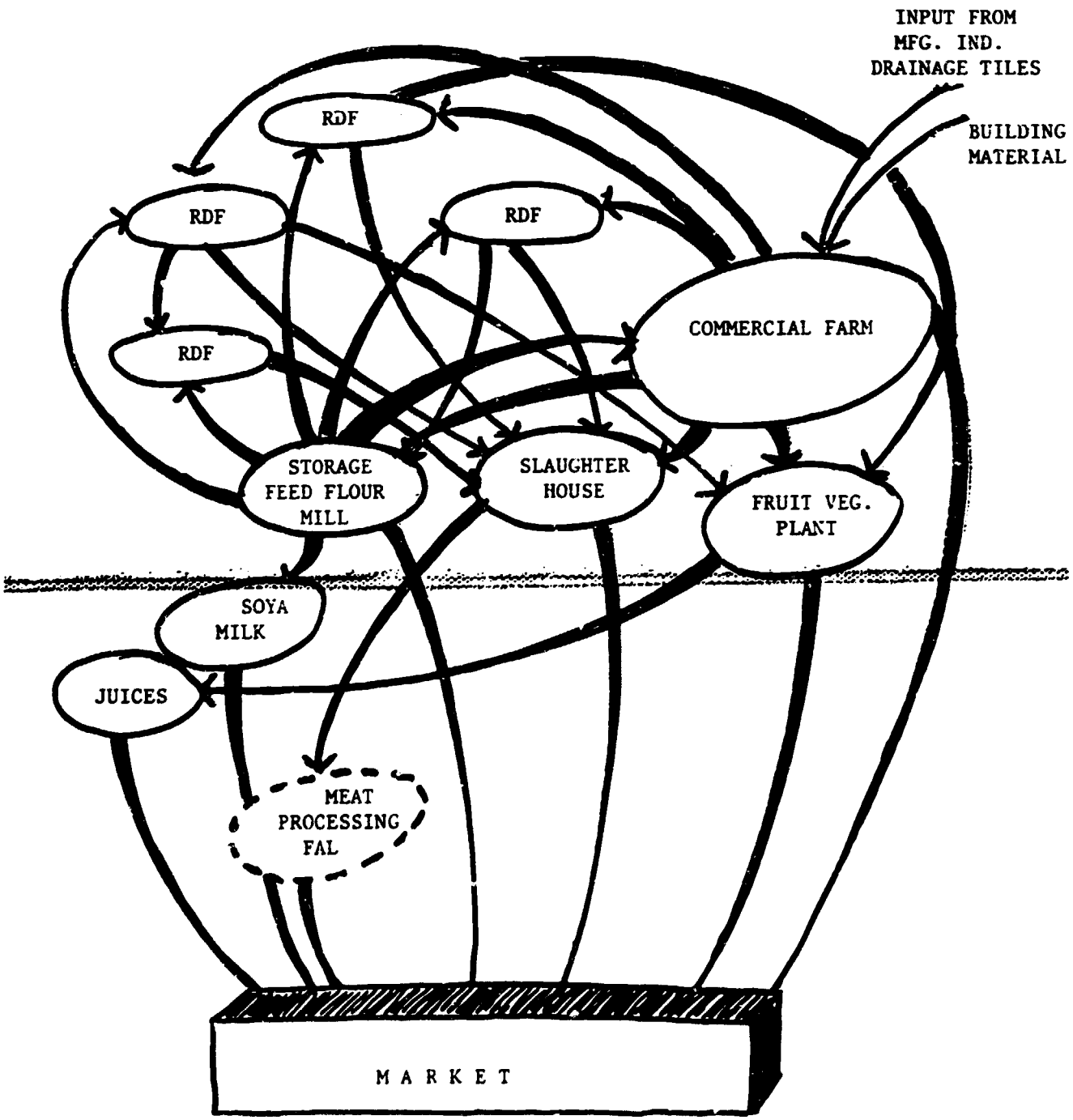


Figure 3

BOM JESUS AGRO-INDUSTRIAL REHABILITATION AND RURAL DEVELOPMENT SCHEME

Outline plan of operation - tentative time schedule

Activity	Year 88/ 89/ 90/ 91/ 92/ 93/ 94/ 95/ 96/ 97/ 98
Project prep. phase	
1. Govt. discussion	XX
2. Decision	x
3. Identify parties	XX
4. BJ company formed	x
5. Elaborate TOR	XXX
6. Preinvestment study	x X
- commercial farm	
- soya milk plant	
- storage etc.	
- slaughterhouse	
- rural dev. scheme	
7. Sociological study	x XXXX xxxxxxxx
8. Animal health study	X X
Project execution	
9. Rehabilitation & developmt. project infrastructure	
- roads	XXXX xxxxx
Commercial farm	
- clearing shrub	XX
- drainage	xxx XX xxxxx
- irrigation	x XXXXXXXX xxx
- dismantle sugar factory	XXX
- buildings	x XXX

Activity	Year 88/ 89/ 90/ 91/ 92/ 93/ 94/ 95/ 96/ 97/ 98
Rural dev. scheme	
- land reclamation	XXX xxxxxxxxx
- drainage	XXXXXXXXXXXXXXXXX xxxxxxx
- irrigation	XXXXXXXXXXXXXXXXXXX xxxxx
- buildings	XXX xxxxxxxxx
10. Cropping	
commercial farm	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Pig production commercial farm	xxxx XXXXXXXXXXXXXXXXXXXXXXXXX
11. Training progrm.	XXXXXXXXXXXXXXXXXXXXXXXxxxxxxx
12. Operation RD farms	XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
Agro-ind implementation and operation	
13. Soya milk	x XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
14. Storage facilities feed & maize mill	x XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
15. Slaughter house	x XXXXXXXXXXXXXXXXXXXXXXXXXXX
16. Social services	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
17. Local trade	xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Brick & clay drainage pipe factory rehabilitation	
18. Tech. assistance programme & spare parts for 1st May brick factory	XXXX xxxxxxx
- production	
- maintenance	

KEY:

XXX major inputs

xx minor inputs

ANNEX B

Suggestions for future development of the package manufacturing branch

(a) General background

Before 1975 Angola had the capacity to manufacture approximately 5 million bags from natural fibre. The unprocessed jute was imported as domestic production of soft natural fibre was negligible. Since Independence only rafia bags have been produced and the demand of jute bags, for coffee in particular, has been imported since plastic bags are hitherto not acceptable for coffee. This is not likely to be changed in a foreseeable future.

In the early 1970s the coffee production was around, or slightly over, 200,000 tonnes per year with an estimated demanded for 4 million bags. The total crop yield at present is estimated at the about of 15,000 tonnes per year, requiring only about 0.3 million bags. Once peace is restored, and agriculture is permitted to develop again, the output of the coffee production will gradually increase. The rate of increase depends on to what extend the coffee cultivations have deteriorated. On the assumption that the local coffee harvest is increased to 50,000 tons by the end 1990s about 1 million bags of natural fibre would be needed. Cotton production will also increase and so will the need for hessian cloth for the cotton lint bales.

The very high degree of dependence on imported raw material for bags is a problems which Angola shares with other member countries within SADCC.

Experiments with growing of fibre crops, jute and kenaf, was carried out in Angola by the Portuguese. In comparison with other cash crops the revenues from growing fibre crops could not compete and the fibre project was shelved. In Zambia a programme geared towards improvement of cultivation practices and ensure efficient process techniques is being considered .

Although cultivation of soft natural fibre is of marginal interest at present in Angola, the Ministry of Agriculture may consider to include the resumption of experimental production of fibre crops in the 1990-1995 five-year development plan. A decision along these lines, preferably in cooperation with other SADCC countries, would be welcome and pave the road for assessing the value of natural fibre for bags within the national context.

The questions to be answered include:

(i) The place of fibre crops as a cash crop in an expanding agricultural sector; on traditional farms, on commercial farms or both.

(ii) Region or regions suitable for growing of fibre crops.

(iii) Recommended production and processing systems.

(iv) Cost of production, handling, transport and processing.

(v) The future roll of natural fibre in Angola; to avoid being entirely dependent on imports, produce domestic raw material for certain commodities such as coffee, and to introduce natural fibre crops as alternative cash crops in selected areas, once the production of food crops is sufficient for domestic needs.

Projection of the future bag demand can be based on the 1990-1995 Five Year Plan as a basis for a programme for development of the bag manufacturing industry in a 10-year perspective. The guide-lines should consider an emerging interest to introduce bulk handling of different products, the result from experiment and studies of using domestically produced natural fibre for bags with an attempt to quantify the target for 1995 and year 2,000 respectively. The balance would have to be supplied from existing bag manufacturing industries, or through import of rafia bags. A separate discussion on this subject is given under (c) below.

(b) Suggestions to increase production

The review of the bag manufacturing branch has included visits to, and collection of information from, the two rafia bag manufacturers, SIGA and FIBREX. FIBREX is analyzed on a plant level, and discussed in section 9.4.

(i) Natural fibre

SIGA, which is the larger of the two, has been dealt with in the overall context, in order to formulate suggestions as guide-lines for rehabilitation and development of the bag manufacturing branch.

In addition to the capacities given in table 8.4. SIGA has the before-mentioned jute line, taken out of production in 1975. This line has a nominal capacity of 6,000 tonnes of natural fibre per year. The line of equipment is complete from the bale opener, through machines for spreading, softening, fermentation boxes, carding machines, drawing and spinning frames, twisting machines and finally looms, 50 of which could be available for a rehabilitated processing line for natural fibre. The equipment manufactured or supplied by James Mackie & Sons, Belfast, Ireland, is in varying states of repair. A thorough inspection and a proposal for suitable rehabilitation measures would be necessary. This should preferably be carried out by the supplier in co-operation with UNIDO.

SIGA has, however, clearly stated that they are not interested in rehabilitation, and the subsequent operation, of the jute line. Instead they want to dismantle it and use the floor space for expansion of the synthetic manufacturing section. This is understandable from an enterprise point of view and should be supported.

It is thus suggested that the equipment, subject to rehabilitation, is taken over by another company, existing or a new entity, and transferred to industrial premises elsewhere in the Luanda area. This company must have the complete support from the government to facilitate the transaction and to ensure that natural fiber can be imported in sufficient quantities. Suitable arrangements should also be made to prevent unhealthy competition from import of bags at subsidised prices.

A rehabilitated processing line for natural fibre would form part of a national programme discussed above under 8.4.4. (a). It may not be necessary to retain a total capacity of 6,000 tones per year. Half that capacity, or even less, may be sufficient for processing of natural fibre to be produced in the future fibre crop experiment programme up end of the 1990s. The rehabilitation of a processing capacity of about 3,000 tonnes per year, subject to separate studies and considerations, should be followed by an annual import of sufficient quantities of natural fibre to make up the balance between the ultimate capacity decided upon, and the domestically grown experimental crops.

A general plan of action along these lines would also serve the purpose of maintaining, and develop, the human skill of operating a processing industry for natural fibre, provide the coffee and cotton industry with packaging material and postpone the decisions regarding the role of natural fibre in the Angolan bag manufacturing industry until the end 1990s when the background for a qualified evaluation is available.

(ii) Synthetic fibre

Depending on the rate at which the agricultural sector will recover and develop, the demand for rafia bags is expected to increase. The principles to assess the future demand is discussed in Section 8.4.4 (a).

Rehabilitation needs of FIBREX are analysed in Section 9.4. If implemented, the bag manufacturing capacity will increase to about 2,280 tons per annum, equivalent to approximately 14 million bags of 50 Kg.

SIGA is not interested in rehabilitation of existing equipment but would welcome assistance to expand the operation by introducing new equipment to increase the output of rafia bags. This should be considered to the extent necessary to provide Angola with adequate and sustained supply of bags. Aspects on the utilization of foreign exchange for rehabilitation and development of the industry, are given below.

(c) Domestic production versus imports

The plastic factories, also producing bags, are allocated foreign exchange to purchase raw material inputs. In a competitive market equilibrium, allocation efficiency would be obtained. Thus, the enterprises would have to meet competition from imported goods and among themselves. However, since prices are fixed, and the government decides on physical production plans and targets, the pattern of production may not be optimal from the point of view of Angola as a whole. The following example illustrates this point.

Assuming that saving foreign exchange is a major objective under present economic conditions, then the following would have to be addressed. The question is how much foreign exchange is saved by importing raw material and producing the final goods in the different product lines of the factories? To answer this question it would be necessary to have information on the following:

(i) For a given amount of foreign exchange, how much foreign exchange is saved by importing raw material and making rafia bags within the country instead of importing them?

(ii) The same amount of foreign exchange can be used to import raw material to increase production in other production lines in these factories. This increase in production would then correspond to a decrease in imports and/or exports of the products.

It would be in the interest of the country to allocate foreign exchange to production lines which save the most in foreign exchange for each dollar allocated. It is not certain that such an analysis would suggest that Angola should increase production of rafia bags. It could well be that other lines of production would have a stronger impact in saving scarce foreign exchange.

As markets become more competitive, most such problems would be solved by the market forces and government intervention can then be greatly reduced.

ANNEX C

SELECTED OFFICIAL AND PARALLEL MARKET PRICES IN LUANDA IN SEPTEMBER 1988

Selected offical and parallel market prices in Luanda in September 1988

1. Official City Market (Kenashishi)

Product	Price Kw/kg		US$ equiv.		World mark. prices USD	
Implicit	Official	Actual	Official	Actual	Guestimate	Ex. Rate
Tomato		530		17.89	1.80	294
Onion		526		17.77	1.50	350
Potato		833		28.13	2.00	416
Cassava		250		8.44	0.50	500
Cabbage	35	909	1.18	30.69	1.20	757
Broccoli	35	1,670	1.18	56.27	2.00	835
Banana	30	100	1.01	3.38	0.30	333
Rice	800	800	27.01	27.01	1.50	533
Cassava Meal		1,670		56.27	1.50	1,113
Cassava Flour		625		21.10	2.50	250
Bread, 300g		1,670		56.27	2.50	668
Spaghetti		1,500		50.64	3.00	500
Soya Oil		2,000 to 3,000		67 to 101	3.80	526 789
Ham (Canned)		3,000		101	4.00	750
Orange Drink		4,225		143	2.00	1,056
Wine (Local)		4,000		135	3.00	1,333
Toilet Soap 100g bar		1,000		34	1.00	1,000

Large Market on the outskirts of Luanda

Tomatoes	1,250	42	1.80	694
Cabbage (pc)	900 to 1,500	30 to 50		
Green Beans	3,300	113		
Carrots	2,000	68		
Bananas	1,400 to 1,430	48		
Rice	2,000	62		
Beans (White dry)	3,300	111		
Cassava Flour	2,200	74		
Coffee (local)	3,200	108		
Corn Flakes (375g)	3,000	101		
Cheese	4,000	135		
Eggs	6,000	202		
Fish	5,000	169		
Shirt synthetic short sleeve	15,000	506		

ANNEX D

LIST OF PRINCIPAL ORGANISATIONS, COMPANIES AND PERSONS CONTACTED BY THE MISSION IN ANGOLA

1 - 30 September 1988

Organisation/Company	Person(s) met
I. Government Departments and Major Parastatals	
Ministry of Industry	Mr. Henrique Carvalho Santos, "Onambwe", Minister of Industry
	Ms. Bernarda Anapas, Director of Technical Cabinet
	Mr. Manuel Duque, Head of Department for Financing and Organisation of the Planning Cabinet
	Mr. Josi Gonóalves Ribeiro, Head of Statistics Department of the Planning Cabinet
	Ms. Nazari Silveira, Section Head of the Department of International Economic Affairs
	Ms. Teresa Muro, Advisor for relations with ACP/EEC Centre for the Development of Industry
Ministry of Trade	Mr. Silvio Franco Burity, Director of Technical Office
	Mr. Lusevikueno Jo/o, Chief of International Economic Relations
	Mr. Mbumba Tschico, Senior Trade Officer responsible for SADCC affairs
	Mr. Josi Antonio da Silva Neto, Senior Technician of National Directorate of Trade Policy
	Ms. Arlete, Technician of National Directorate of Foreign Trade Operations
Ministry of Agriculture	Mr. Carlos Emanuel de Rosario, Director of Technical Department Mr. Marco da Silva, Acting Head of Planning Department

	Ms. Sisaltina A. Van Dunen, Member of Technical Group for Projects
	Mr. Leopoldo Mangueira, Head of Material Planning
	Mr. Pedro Carvalho, Agro-industrial sector of Technical Cabinet
	Mr. Lopez da Silva, Head of Statistics
	Mr. Jo/o Paulo, Statistical Department
	Mr. Jorge Vanderghem, CTA FAO, Statistical Department
	Mr. Giovanni Trezzi, Agricultural Advisor
Ministry of Finance	Ms. Antonia Cayate, Head of Financing Department
	Mr. Antonio José de Freitas, Senior Technician
	Ms. Anabe'a Tata Claudio, Technician
Ministry of Planning	Mr. Kinanvuidi Kiako, Acting Head of the National Price Directorate
	Mr. Ngeko Vuidiko, Senior Technician
	Mr. Bernard Picot, Planning Advisor
Permanent Secretariat of SEF	Mr. Victor Nunes, Head of the SEF Secretariat and National Director in the Ministry of Finance
	Prof. Luvumbu Sebasti/o, National Director of Ministry of Trade and Professor of Economics at the Agostinho Neto University, Luanda
National Bank of Angola	Mr. Antonio Ferreira, Head of Engergy and Industrial Department
	Mr. Tombuele Pedro, Economist of the Technical Cabinet
	Mr. Eleuterio Brand/o, Supervisor of Industrial and Energy Enterprises Credit Plans
CAFANGOL - U.E.E.	Mr. Jaime Dos S Oliveira, Director
SONANGOL - U.E.E.	Mr. Vicente Pinto de Andrade, Director of Planning

SADCC Energy Sector	Mr. J.T. Carvalho Simões, Regional Coordinator and Head of Technical and Administrative Unit
	Mr. Arne Moe, Technical Advisor
	Ms. Cecilie Butenschon, Archivist

II. Companies reviewed

ACUNOR U.E.E.	Mr. Cândido Carneiro, Managing Director
	Mr. Antonio Carlos Bebiano, Director
Empresa Regional de Moagens (Norte) U.E.E. (QUICOLO)	Mr. Fernando Alves Bebiano Managing Director
ENFORMAC U.E.E.	Mr. Freire Antonio Castigo, Head of Financial Department
	Ms. Filomena Abilio, Executive Secretary
)PYGEL U.E.E.	Mr. Jo/o da Silva, Head of Personnel
	Mr. Pedro Jo/o Manuel, Head of Production and Sales
	Mr. Sebasti/o Antonio Cardoso, Head of Planning and Finances
	Mr. Serafim Sim/o Mateus, Party Coordinator
	Mr. Calele Almeida Gombe, First Secretary of the Labour Union
	Mr. Daniel Quintas Gomes, Head of Legal Section
FAL	Mr. Jakob Lechner, Managing Director
FIBREX	Mr. Julio Andrade, General Manager and Chairman of the Board of Directors
INDUVE	Mr. Rui N. T. Vilela, Member of the Board of Directors
	Mr. Rogerio Silva, General Manager
SIGA	Mr. Manuel Paiva de Sousa, Chairman of the Board of Directors
	Mr. Antonio Dias Fernandes, Managing Director

III. Business and Banking Sector

Banque Paribas	Mr. Alain Pfeiffer, Representative
Fishing Enterprises	Mr. J.R. Couto, General Manager
Hull, Blyth (Angola) Ltd.	Mr. Scott Nicholson, Managing Director
	Mr. Paul Wesson, Marketing Manager
Kaeler Central Africa Ltd.	Mr. Fredy S.Reif, Director
	Mr. Cosmos Makoni, Regional Sales Manager
Lonrho International Ltd.	Mr. Patrick J.M. Ross, Director
Lusolanda S.A.R.L.	Mr. Peter Cowman, Director
	Mr. Simon Ellis, Commercial Director
Zuid (Casa Holandesa)	Mr. Theo Grob, General Manager

IV. Embassy and Development Cooperation Representatives

Embassy of Belgium	Mr. Daniel Dargent, Attachí
Embassy of Brazil	Mr. João Solano Carneiro da Cunha, First Secretary
Embassy of the Federal Republic of Germany	Michael R. Gimmerthal, Chargí d'affaires
Embassy of France	Mr. Robert Villemin, Commercial Advisor
	Mr. Patrick Mizen, Commercial Attachí
	Mr. Jaques Etienne Roland, Technical Cooperation Attachí,
Caisse Central	Mr. Loic Carsin, Representative
Embassy of the Germany Democratic Republic	Mr. Peter Streletz,Commercial Secretary
	Mr. Hans Stuendel, Commercial Attachí
Embassy of Italy	Mr. Andrea Perugini, Chargí d'affaires
Mission of Japan	H.E. Mr. Ikebe, Ambassador

Embassy of the Netherlands	H.E. Mr. C.W.A de Groot, Ambassador
Royal Norwegian Consulate	Mr. Carl Th. Johnsen, Hon. Consul
Embassy of Portugal	Mr. Antonio Manuel Ricoca Freire, First Secretary
Embassy of Spain	H.E. Mr. Antonio Sanchez, Ambassador
Embassy of Sweden	H.E. Mr. Per Lindström, Ambassador
	Mr. Svend Thomsen, First Secretary
Swedish International Development Agency (SIDA)	Mr. Sven-Ake Svensson, Head of Development Cooperation Office
Embassy of the United Kingdom	H.E. Mr. James Glaze, Ambassador
Embassy of the USSR	Mr. Valentin F. Zinin, Advisor for Economic Affairs
Delegation of the EEC Commission	Mr. Kieran O'Cuneen, Delegate
	Mr. Bertrand Davaux, Administrative Advisor
	Mr. Rui Branco, Financial Advisor

V. International Agencies

UNDP Office Luanda	Mr. Jean-Pierre Germay, Resident Representative a.i.
	Mde O Moulinier, Resident Representative a.i.
	Mr. N. João Daves, UNDP Programme Officer
	Mr. Antonio Molpeceres, UNDP Programme Officer
	Mr. Zangelme, UNIDO CTA
	Mr. Armindo Miranda, CTA, Population and Development Planning
	Mr. Marco C. van Wallenburg, UNIDO Junior Professional Officer
	Mr. Urban Moberg, UNDP Junior Professional Officer

ILO Office Luanda	Mr. Jorge Paulo Bàrcia, ILO Advisor
FAO Office Luanda	Dr. Miguel L. Carmen, FAO Senior Technical Advisor
UNICEF Office Luanda	Mr. Ibrahima D. Fall, Representative
UN Centre on Transnational Corporations (CTC), New York	Ms. Eleanor Sebastian, Advisor

ANNEX E

UNIDO's Approved and/or Operational Technical Co-operation Projects

(approved = PAD issued)

People's Republic of Angola

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/AGRO Mr. Antinori	J13103	DP/ANG/86/004**	Assistance in the rehabilitation of the bread production chain
IO/T/ENG Mr. Sharapov	J13314	SI/ANG/87/802	Technical assistance in the reconstruction of fabrica 'F.I.D.R.O. de Angola' for production of vehicles for food transportation and mobile refrigerators
IO/T/ENG Mr. Sharapov	J13316	DP/ANG/82/020*	Maintenance and repair centre (phase III) (Associated Agency: UNV)
IO/SD/FEAS Mr. Kylkov	J14101	US/ANG/87/075	Opportunity study for the establishment of a production capacity of wind-driven water pumps in Angola
IO/SD/FEAS Mr. Klykov	J14102	DP/ANG/85/003*	Establishment of a unit for preparation and analysis of industrial projects (phase I)

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* Large-scale project (= total allotment $150,000 or above)

** Total allotment $1 million or above