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Solidarity Ministerial Meeting for  
Co-operation in the Industrial  
Development of the Republic of Mali

Bamako, Mali, 30 September - 3 October 1986

GENERAL INFORMATION ON THE REPUBLIC OF MALI

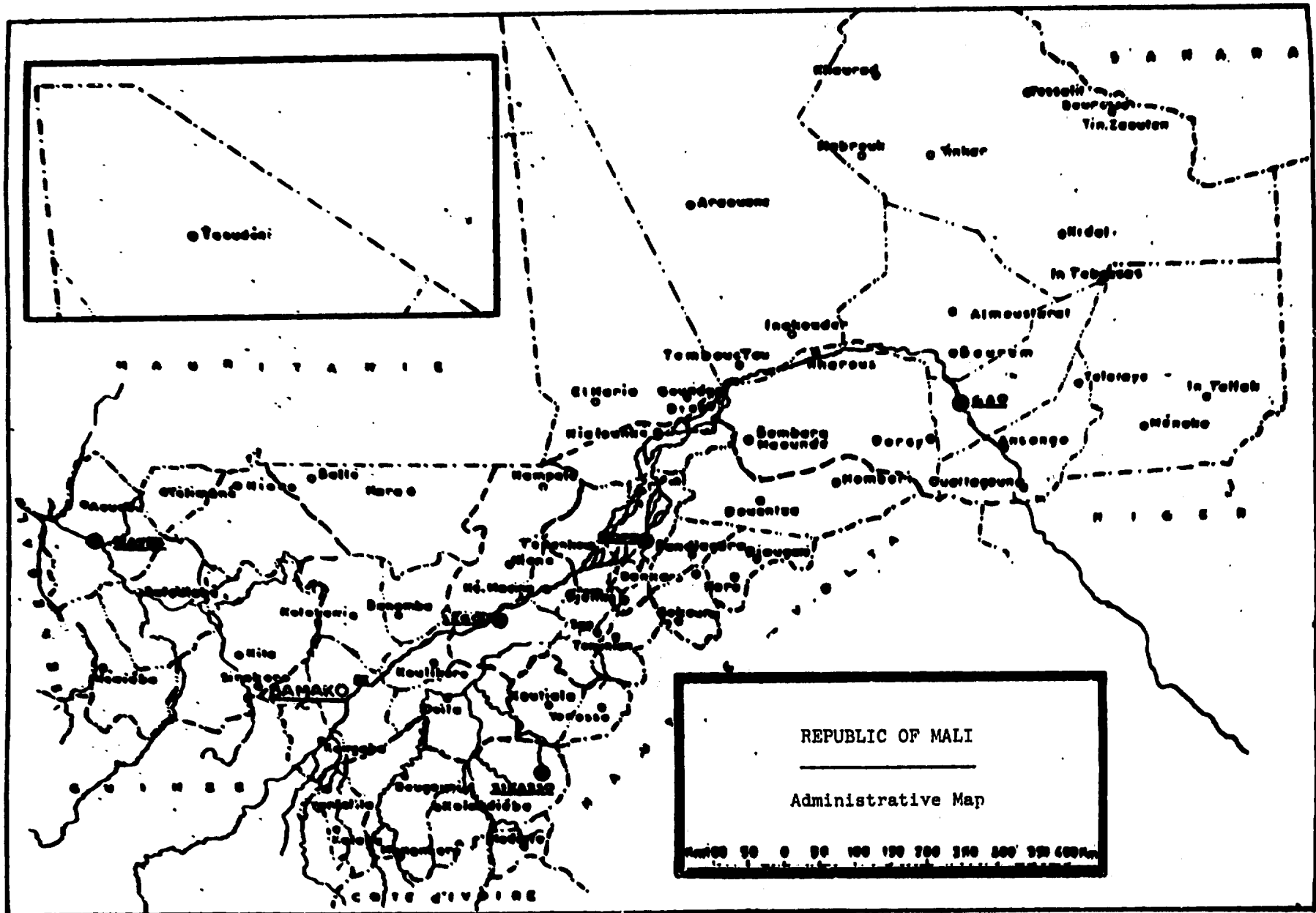
AND

PROJECT PROPOSALS\*

Prepared by the  
Section for Economic Co-operation among Developing Countries  
Division of Policy Co-ordination  
UNIDO

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\* This document has been translated from an unedited original.



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**Source:** Taken from the document prepared by the Government of Mali for the Country Consultation Meeting of the Least Advanced Countries, 1981.

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**PART I. THE REPUBLIC OF MALI: GENERAL INFORMATION**

Basic Indicators

The Republic of Mali has been independent since June 1960.

<p><b>A. <u>Total population:</u></b> 7.53 million (1983)</p> <p>Active population: <u>1/</u> 3.63 million (1983)</p> <p>GDP (1982): \$US 1,030 million</p> <p>GNP/per capita (1982): \$US 180</p> <p><u>GNP/sector</u> (1982):</p> <table border="0"> <tr> <td>Agriculture</td> <td>43%</td> </tr> <tr> <td>Industry</td> <td>10%</td> </tr> <tr> <td>Manufacturing</td> <td>5%</td> </tr> <tr> <td>Services</td> <td>47%</td> </tr> </table>	Agriculture	43%	Industry	10%	Manufacturing	5%	Services	47%	<p><b>B. <u>Area:</u></b> 1,240,190 km<sup>2</sup></p> <p><u>Principal towns</u> (1983):</p> <table border="0"> <tr> <td>Bamako (capital)</td> <td>500,000 inhabitants</td> <td></td> </tr> <tr> <td>Ségou</td> <td>65,000</td> <td>"</td> </tr> <tr> <td>Mopti</td> <td>54,000</td> <td>"</td> </tr> <tr> <td>Sikasso</td> <td>47,000</td> <td>"</td> </tr> <tr> <td>Kayes</td> <td>45,000</td> <td>"</td> </tr> </table>	Bamako (capital)	500,000 inhabitants		Ségou	65,000	"	Mopti	54,000	"	Sikasso	47,000	"	Kayes	45,000	"
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<p><b>C. <u>Agriculture</u> (thousands of tons, 1982):</b></p> <p><u>Cereal crops:</u></p> <table border="0"> <tr> <td>Millet, maize, sorghum:</td> <td>802</td> </tr> <tr> <td>Rice:</td> <td>141</td> </tr> </table> <p><u>Other crops:</u></p> <table border="0"> <tr> <td>Cotton seed</td> <td>127</td> </tr> <tr> <td>Peanuts</td> <td>3</td> </tr> </table> <p><u>Stock-raising</u> (1984):</p> <table border="0"> <tr> <td>Cattle:</td> <td>6 million</td> </tr> <tr> <td>Sheep/goats</td> <td>12 million</td> </tr> </table> <p><u>Fisheries</u> (1984): 85,000 tons</p>	Millet, maize, sorghum:	802	Rice:	141	Cotton seed	127	Peanuts	3	Cattle:	6 million	Sheep/goats	12 million	<p><b>D. <u>Mines:</u></b> phosphate, gold, manganese, bauxite</p> <p><u>Energy:</u> Thermal and hydro-electric</p> <p><u>Transport:</u></p> <table border="0"> <tr> <td>Roads:</td> <td>18,000 km (estimate)</td> </tr> <tr> <td>Railways:</td> <td>707 km</td> </tr> <tr> <td>River links:</td> <td>1,500 km</td> </tr> <tr> <td>Airports:</td> <td>Bamako and 9 airfields throughout the country</td> </tr> </table>	Roads:	18,000 km (estimate)	Railways:	707 km	River links:	1,500 km	Airports:	Bamako and 9 airfields throughout the country			
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Sources: A. : World Bank, except 1/ Bamako Chamber of Commerce.  
 B. and D.: The Economic Intelligence Unit, 2nd Quarter 1984.  
 C. : The Economic Intelligence Unit, 2nd Quarter 1984; approximate figures including a large margin of error (parallel market and subsistence farming).

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E. Exports (1982):

Total value: \$US 146 million

Principal products: cotton, live animals

Principal destinations:

Industrial market-economy countries 62%

Eastern planned-economy countries 1%

Developing countries 37%

E. Imports (1982):

Total value: \$US 332 million

Principal products: vehicles, machinery and equipment, petroleum products, food products, building materials, chemical and pharmaceutical products

Principal sources:

Industrial market-economy countries 59%

Eastern planned-economy countries 13%

Developing countries 28%

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F. Balance of payments (1983): -\$US 103 million

Foreign debt (1982) : \$US 822 million

Debt servicing (1982) : 3.5% of total exports

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Sources: E. and F.: World Bank.



## A. GENERAL SURVEY

### 1. Territory and climate

The Republic of Mali covers an area of 1,240,190 km<sup>2</sup>. This is an immense land-locked territory located between the countries of the Maghreb of the North and the heavily forested countries of the South. Mali is bordered by seven countries, namely, Algeria, Burkina Faso, Côte d'Ivoire, Guinea, Mauritania, Niger and Senegal.

The Malian climate is essentially sudano-sahelian in character, with desert characteristics predominating as one moves northward. There is only one rainy season, with precipitation ranging from 1,400 mm/year in the South to less than 100 mm/year in the North. The principal obstacle to stock-raising and agriculture is connected with the problems of rainfall.

Within this territory, 15 per cent of the land is arable; 25 per cent is unfit for agriculture but quite suitable for animal husbandry.

### 2. Population

The Republic of Mali has a population of 7.5 million inhabitants (1983) unevenly distributed throughout the national territory. The average population density is 6.5 inhabitants/km<sup>2</sup>, the figures ranging from 30 inhabitants/km<sup>2</sup> in the South to less than 1 inhabitant/km<sup>2</sup> in the North.

The urban population is estimated at 20 per cent of the total figure and is concentrated for the most part in the principal towns of Bamako (the capital), Kayes, Mopti, Ségou and Sikasso.

The average rate of population growth in Mali is 2.5 per cent, life expectancy is 45 years, and infant mortality is very high.

More than 70 per cent of the economically active population are engaged in agriculture.

B. PRINCIPAL MACRO-ECONOMIC PARAMETERS

1. Gross domestic product

Considered from a global standpoint, the growth of the gross domestic product (GDP) has been very weak and was even negative in 1983.

The structural evolution of the GDP in terms of relative value reveals a shift in the formation of this indicator away from the production sectors to the service branch of the tertiary sector.

Table I.  
Evolution of the gross national product, 1981-1984  
(in thousands of millions of CFA francs)

	1981	1982	1983	1984
<u>Primary sector</u>	<u>178.4</u>	<u>194.3</u>	<u>173.8</u>	<u>171.3</u>
Agriculture, forestry, animal husbandry and fisheries	178.4	194.3	173.8	171.3
<u>Secondary sector</u>	<u>50.5</u>	<u>50.2</u>	<u>53.7</u>	<u>56.5</u>
Industry and energy	26.5	29.2	31.2	34.0
Construction and public works	24.0	21.0	22.5	22.5
<u>Tertiary sector</u>	<u>101.5</u>	<u>108.4</u>	<u>113.9</u>	<u>118.1</u>
Transport and telecommunications	11.5	12.6	13.6	14.0
Services	11.6	12.7	12.9	13.1
Commerce	57.3	60.5	63.6	66.1
Administration	27.3	29.0	30.4	31.6
Fictitious branches	-6.1	-6.4	-6.6	-6.7
GDP at factor cost	330.4	352.9	341.4	345.9
Taxes	13.4	13.5	15.1	15.2
GDP at market price	343.8	366.4	356.5	361.1

Source: Estimates of the State Planning Ministry.

Table II.  
Evolution of the structure of the GDP, 1981-1984  
(in percentage)

	1981	1982	1983	1984
Primary sector	51.8	53.0	48.8	47.4
Secondary sector	14.7	13.7	15.1	15.6
Tertiary sector	33.5	33.3	36.1	37.0
	100.0	100.0	100.0	100.0

Source: Estimates of the State Planning Ministry.

The result of this situation is that both the GDP and per capita income are very low. Money plays a negligible role in the economy (more than 70 per cent of what is produced is consumed by the producer himself), while no accounting is kept of internal savings, which are not diverted into any of the classic channels of productive investment.

## 2. Characteristics of the monetary and financial situation

The network of financial institutions:

There are a relatively large number of banks in Mali, frequently affiliated with foreign banking institutions: the Central Bank of Mali, which has become the Central Bank of West African States (BCEAO) following Mali's entry into the West African Monetary Union (WAMU); the Development Bank of Mali; the International Bank of West Africa (BIAO); the Malian Credit and Deposit Bank; the National Bank for Agricultural Development (1982); the Arab-Libyan-Malian Bank (1983); and the Bank of Africa (1983).

The banking system hardly extends, however, beyond the capital and a few of the larger urban centres. As a consequence, this sector operates at a very low level of activity (producing, in 1982, 7,420 million CFA francs or \$US 2,000 million). "Where to find internal savings and how to channel them towards the financing of the production sector" remains the key question to which the banking sector is endeavouring to find an answer.

The monetary situation:

The total amount of money in circulation was kept under control during the period between 1980 and 1984.

Table III.  
Composition of the total amount of money in circulation  
(in thousands of millions of CFA francs as of 31 December of each year)

	1980	1981	1982	1983	1984
Fiduciary currency	40.6	40.9	45.0	50.2	
Bank money	31.6	33.4	37.7	43.6	
- Banks	25.8	29.2	33.6	41.3	
- Postal giro accounts	5.8	4.2	4.1	2.3	
Total amount of money in circulation	72.2	74.3	82.7	93.8	104.7
Rate of annual growth		2.8%	11.4%	13.4%	11.5%

Source: BCEAO, Economic and Financial Statistics for 1984, IMF.

As far as internal indebtedness is concerned, in 1983 it accounted for 49 per cent of the GDP, a sizeable figure essentially explained by the State debt.

Mali's entry into the West African Monetary Union was accompanied by a de facto devaluation of the Malian franc (FM), high interest rates and a slow-down in the expansion of credit.

### 3. The trading structure

In terms of real trade flows, imports represent an average of 30 per cent of the GDP, with imported goods accounting for 65 to 70 per cent of final consumption in respect of marketed products. In 1983 imported cereals accounted for 15.3 per cent of total imports.

Exports, limited by and large to raw products (live cattle) or largely unprocessed products (ginned cotton), offset only about 50 per cent of the imports.

Mali's debt situation has deteriorated since 1981 (109.1 per cent of the GDP in 1984 as opposed to 78 per cent in 1981). In 1981 the servicing of this debt accounted for 6.4 per cent of the exports of goods and services, the figure rising to 12.2 per cent in 1984 after rescheduling.

This unfavourable commercial balance, coupled with inadequate savings for investment financing, is reflected in a very heavy financial dependence on foreign countries.

### 4. Principal sectoral characteristics

Within the primary sector, agriculture accounts for 17 per cent of the GDP, stock-raising for 16.8 per cent, fisheries for 0.9 per cent and forestry for 12.7 per cent.

Among the industrially significant crops, cotton remains the leader, with an annual production volume in the order of 120,000 tons. The once important peanut-growing sector is in rapid decline (159,000 tons in 1979, 91,000 tons in 1982 and 20,000 tons in 1984).

The Malian livestock herds represent a considerable resource (6 million head of cattle and 12 million sheep/goats). Very little, however, has been done to develop this resource: the export of cattle on the hoof to Côte d'Ivoire is by far the most widely practised form of marketing, meat exports being negligible. The leathers and hides undergo very little processing.

Although of impressive volume (110,000 tons in 1981 and 85,000 tons in 1984), the exploitation of the fish resources of the Interior Delta is suffering from the failure to extend the "PECHE MOPTI" fisheries project and is backed by at best a listless export promotion policy.

There has been a reduction in the principal areas of agricultural production in recent years because of the drought and also as a result of such unfavourable economic conditions as the depressed price level and the inadequacy of marketing channels.

In addition, on two occasions (1972/73 and 1979/80) there was an estimated 30 to 40 per cent decline in the size of the herds.

Despite these facts, nearly all exports come from the rural economy sector. In 1984, in relation to overall exports totalling 80,700 million CFA francs (\$US 230.6 million), the principal headings were the following:

Cotton products	50.9%
Livestock	27.9%
Karite	4.0%
Peanut products	0.6%
Fish	0.9%

Conversely, imports of food products are growing very rapidly and have, since 1982, exceeded in volume the value of cotton exports. Specifically, rice production satisfies barely 50 per cent of the domestic demand.

The very serious droughts of recent years have dramatically worsened the cereal shortfall, and in 1983 gross domestic production per annum and per capita in the primary sector stood at 36,000 CFA francs (equivalent to 94 United States dollars of that same year).

#### The mining industry

There has been little development of the mining industry although there is encouraging evidence of petroleum and uranium. Large deposits of bauxite (reserves of 850 million tons), iron (more than 1,000 million tons) and manganese (3.5 million tons), are currently being evaluated. Some 20,000 tons of phosphates have been extracted from the Bourem mines. The Kalana site should be able to produce annual amounts of 1,800 kg of gold and 500 kg of silver.

#### The crafts sector

The crafts sector (80,000 persons) makes a major contribution to employment and income in both rural and urban areas. Of the economically active population engaged in craft activities, 64 per cent live and work in the countryside, thus representing an appreciable factor of additional agricultural activity and income. The urban crafts sector provides employment for 30,000 persons distributed among Bamako and the other town centres.

At Bamako the production crafts sector predominates over the service crafts sector (75 per cent versus 25 per cent), competing with the modern sector in such activities as light mechanical work, carpentry, hardware, etc.

Through programmes sponsored by the International Labour Office, the Centre for Industrial Studies and Promotion and, in particular, the Malian Textile Company, and thanks also to the pilot experiments conducted by a number of corporations, the non-structured crafts sector has succeeded in gaining full recognition both as a focal point of activity, a provider of employment and a generator of income.

This vast reservoir of creativity should certainly not be overlooked when the time comes to identify the training grounds for the industrial promoters of the future.

#### The manufacturing industries

Co-existing within this sector one finds State enterprises (51.5 per cent of the jobs and 27 per cent of the turnover), mixed enterprises (29 per cent and 47 per cent, respectively) and private enterprises (20 per cent and 26 per cent, respectively).

Nearly 80 per cent of the private enterprises are located at Bamako as opposed to 35 per cent of the public enterprises. This is an illustration of the authorities' desire to limit the concentration of manufacturing activity in Bamako, despite the very severe constraints encountered in establishing facilities in zones where the infrastructure is often minimal if not altogether non-existent.

The industry is engaged for the most part in the processing of agricultural raw materials and as a consequence, is largely dependent on fluctuations in local harvests (cotton, peanuts, rice, etc.).

Table IV.  
Structure of industrial production in 1982  
(in millions of CFA francs)

	Production	Value added
Agro-food industry	19 252	8 411
Electricity and energy	5 646	2 327
Building materials	492	155
Engineering industries	5 695	1 560
Chemistry	971	841
Textiles and leathers	24 521	11 402
Miscellaneous	1 091	253
	57 902	24 949

Source: National Accounts of Mali, State Planning Ministry.

#### Building and public works

Between them, the private enterprises and the sub-contractors account for 99 per cent of this area. Self-construction is also very highly developed.

#### Commerce

The wholesale and retail trade is in the hands not only of a number of large-scale companies (SOMIEX, OPAM, FRUITEMA, etc.), but also of numerous private merchants.

In the area of foreign trade the State monopolies have seen the scope of their activities sharply reduced as a result of the economic liberalization policy.

#### Transport and communications

The Niger River, which is navigable one-third of the time over a distance of 1,400 km (out of a total 1,800 km in Malian territory), represents one of the principal communication arteries towards the north.

The road network comprises 18,000 km of roads and trails, half of which cannot be negotiated during the rainy season. This system is concentrated in the southern part of the country.

The country's only rail line constitutes the principal link between Dakar and Bamako (a distance of 1,040 km) and also permits access to the ocean.

There is an international airport at Bamako, in addition to nine airfields located near the most important towns.

#### Principal institutional characteristics

Since the outset of the 1981-1985 Five-Year Plan the Malian Government has clearly indicated the new thrust of its economic policy: an opening to more liberal forms of economic management on the basis of individual initiative and peasant associations. In order to move in this direction, a major effort in terms of economic decentralization and organization has had to be undertaken. It is in

line with this effort that the Government has set about restructuring and putting in order the State enterprise sector, leaving within it only those activities that have been found to be of a strategic nature.

Similarly, the Investment, Tax, Customs and Commerce Codes are in the process of revision. In parallel, the procedures for the setting, the certification and, above all, the dynamic revision of prices are being eased, together with the procedures pertaining to the approval of industrial and commercial projects. The planning machinery is being modified as required by the shift towards a more decentralized economy and the expected involvement of private economic agents.

### C. THE MANUFACTURING SECTOR

#### 1. Evolution of the modern manufacturing sector since independence

##### Historical aspects of the industrial policy

Mali's industrial structure is closely linked to planning, even if the fulfilment rates for the programmes undertaken have not always lived up to expectations. Since independence in 1960, four plans, each extending over a period of several years, have been formulated. The first of these was markedly different from the other three, which were designed after 1968, the year that saw the introduction of major political change.

##### The period 1960-1968

Mali's industrial establishment at independence consisted of only a few production units, and industrial development really began only at that time. The 1961-1965 Five-Year Plan stressed the importance of industrialization "as a means of adding to the value of raw products so as to both satisfy internal consumption and increase exports", and laid down the following priorities:

- To develop agricultural and livestock production for the purpose of strengthening independence with respect to food;
- To lay the foundations for a planned economy;
- To carry out infrastructural investments.

Despite serious financial difficulties and management problems, it was at this time that the majority of the State and mixed-ownership companies were established. A proper assessment of this period requires a certain subtlety of judgement and a viewpoint that looks beyond the mere criteria of financial profitability. The establishment of production units outside Bamako meant taking a daring chance on the decentralization of industrial activities that could have been more "economically" concentrated within the capital (the only area with even a modicum of infrastructural facilities); the roles of enterprise and public service are so closely related that the financial costs of the latter have more than once impeded the proper functioning of the former.

##### The period 1969-1973

The change in policy that occurred in 1986 and Mali's reintegration within the Free Zone gave rise to the 1970-1972 Three-Year Plan, known as the "Plan de Redressement" (Economic Recovery Plan). Although retained, the semi-public sector was reorganized so as to make the enterprises more operationally effective, while a stimulus was imparted to the national and foreign private sector through Mali's reintegration within the Free Zone.

The accent was placed on:

- Industrial projects for the development of raw materials;
- Industries upstream of agriculture;
- Import-substitution projects.

Private national and foreign investors found more flexible conditions for the establishment and development of enterprises. The secondary sector (with the exception of public works) achieved the best results.



### The period 1974-1980

The 1974-1978 Five-Year Plan was formulated during the drought of the 1970s. This entire period was marked by the steady deterioration of the State sector, ascribable to the aging of the production apparatus, unchecked growth in the number of personnel, and a mushrooming indebtedness leading to financial asphyxia in a context of declining turnover.

The consequences were to be an underutilization of production capacities and a drop in productivity. Despite these negative factors, a number of new agro-food units were established and additional private enterprises were created in the Bamako industrial zone.

### The 1981-1985 Five-Year Plan

At its Constituent Congress held in March 1979, the UDPM (Democratic Union of the Malian People) Party called for the "building of an independent and planned national economy based on the coexistence of a State sector, a mixed sector and a private sector".

The objectives set were the following:

- Food self-sufficiency;
- Water resource management;
- The rebuilding of the herds and the re-establishment of the vegetation cover;
- Access to the sea;
- The involvement of the private sector in industrial development;
- The establishment of more effective distribution channels.

The State sector was the subject of a three-year recovery plan (1980-1982) that was not genuinely convincing for the reason that there were delays in implementing the measures that were to have accompanied it:

- Realignment of the financial structures;
- Separation of entrepreneurial and public service activities;
- Improvement of the economic environment (revision of price schedules, protection of local production, improvements in the area of supply, easing of the tax burden, etc.).

### The principal areas

Mali's industrial establishment is dominated by two branches: the agricultural and food industries, on the one hand, and the textile and leather industries, on the other. The evolution of the metalworking and engineering branch deserves particular attention because of the number and diversity of the enterprises operating in this branch and their situation at the fringe of the crafts sector.

### The agro-food industries

The relative weight of this branch may be seen both in terms of employment (6,000 jobs in 1984) and in the number of enterprises (about 50 if the industrial bakeries are included). The State and mixed-ownership companies account for the majority of these enterprises in most of the sub-branches, except for beverages, cereal products and confectionery items.

#### - Oilseeds:

The main sources of oilseeds are peanuts, cotton seeds and karite nuts. The oilseed sector is experiencing serious difficulties having to do in particular with the problems affecting peanuts, where there has been a major decline in production (drought, the slump in world prices and, in its wake, producer prices that if anything discourage production) and a diversion to non-official commercial channels.

#### - Animal husbandry products:

The importance of animal husbandry in Mali has led to the formulation of a number of projects for the development of these products. The policy of building large combined slaughterhouses and meat-packing plants has not yet paid for itself, and the country's one milk processing plant is competitive thanks only to the reconstitution of imported powdered milk (92 per cent of the total). New life has been breathed into the processing of skins and hides through the current rehabilitation of the TAMALI State tannery enterprise, which has been undertaken with Chinese assistance and after a long period of long decline due to supply difficulties and the competition of rawhide exporters.

TAPROMA, a private production unit established at Kayes in 1978, very soon suffered a series of reverses, as a result of which a resumption of commercial activity is still not possible.

### The textile industries

Of the total volume of cotton fibre produced, 96 per cent is exported unprocessed.

Two local plants are engaged in spinning and weaving:

The COMATEX plant has a capacity of 9 million metres of fabric a year. Production and productivity, which were good until 1972, have since then continuously declined because of the obsolescence of the equipment and the difficulties of adapting to the requirements of a market wide open to foreign competition.

The ITEMA plant is engaged, in addition to spinning and weaving, in fabric printing and in the production of blankets and ticking. This is a more efficient facility in terms of general productivity, although it too faces a critical competitive situation.

The SOMASAC plant was formally engaged in the processing of dah for the production of grain sacks from this material. In April 1984 it had to discontinue all activities after the Malian Textile Company (COMATEX) ended its involvement in the production of dah.

### The engineering and electrical industries

Some 15 enterprises providing 800 to 900 jobs are an indication of the diversity of this branch. The majority of these enterprises are of recent creation (1975-1980), and the private sector greatly outweighs the public sector in these activities. The most important enterprises of the branch are the following:

- EMAMA (INDIA hand pumps);
- IMACY (bicycles and motor cycles - 120 employees);
- SMECMA (agricultural equipment - 150 employees);
- METAL-SOUDAN (metal frames - 150 employees).

### The other industries

These include the chemical industries (tobacco and matches, Javel water, vinegar, plastic bags and tubing, batteries, foam plastic items, etc.) and the electrical industries.

## 2. The difficulties of the manufacturing sector

These occur on three levels - the first common to the majority of developing countries and above all to the least advanced among them, the second linked to the structures of Malian industry in general, and the third referring to the specific problems of the State enterprises on the one hand and the private enterprises on the other.

### The bottlenecks specific to Mali as a least advanced country

These are:

- Its land-locked geographic position (the principal outlets to the sea pass through Dakar and Abidjan) and the rudimentary nature of its internal communication networks;
- The relative weight of the agricultural sector within the economy (its unhealthy state directly handicaps the downstream industries and promotes the importation of products essential for the satisfaction of industrial requirements);
- Inadequate human resource qualifications (the gap between the training capacity and the skill requirements);
- A limited internal market in a context of fairly stagnant subregional co-operation;
- Monetary disarray and unsteady raw material prices;
- Dependence on external financing sources.

### The general problems of Malian industry

The difficult situation in which a number of Malian industrial enterprises find themselves can be traced back to the constraints connected with the country's nearly total dependence on external financing and with its organizational arrangements, which in many cases have remained unchanged since independence.

- The multi-annual plans, project schedules, periodic equipment revision programmes and commercial undertakings are all too often compromised by the delayed or incomplete mobilization of external financing.
- The external financing very often pertains to a clearly delimited programme: recurrent expenditure expressed in local currency and additional costs is rarely given the consideration it deserves.
- Legally or fraudulently imported products place local products under severe competition in terms both of price and quality, if not because of greater availability or, more simply, the force of habit: the agents are different, the trading margins are notoriously discriminatory, the local cost prices are inevitably higher, the distribution channels lack the same flexibility, fiscal control is not uniformly effective, the traditional sources are aggressive, and external financing can only benefit external supply.
- Poor performance of the equipment maintenance function is the general rule. While the diversity of the equipment (a result of the historical development or the source of the financing) and the lack of technical skills are contributing factors, it is no less true that the shortage of working capital (quite often stretching back to the start-up of the activity) must be identified as the principal cause.
- Co-ordination between the agencies involved in industrial development also represents a problem. The emergence on the scene of private operators has not yet been accompanied by the adaptation, strengthening and simplification of the operational management machinery of the industrial sector.

#### The problems specific to the State enterprises

As a favoured channel for the implementation of the State's social policies, public enterprise has been forced to absorb, often alone, the additional costs generated by:

- The policy of regional balance, which has resulted in the establishment of production units in areas distant from their markets and lacking the necessary infrastructure;
- The employment policy, which has led to inflated manning tables, a levelling of the general standard of qualifications, and frequently a dampening of the spirit of competition;
- The policy of administered prices in the absence or shortage of genuine equalization funds. The sale prices of so-called essential products are fixed by the State without the necessary indexing to production costs, an indexing that is itself not without its problems: by maintaining the pressure on the prices offered the peasant producer, the effect is to trigger off a spiral that ultimately dries up the sources of supply (the peanut situation); by raising the final price, another spiral is set in motion reducing even further the solvent demand (the electricity situation);
- The practice of the uncompensated requisitioning of the tools of production (trucks, railcars, civil engineering equipment, etc.) in the event of natural disasters or major crises.

The problems specific to the private enterprises

The following problems, individually or more often in combination, are confronting the private enterprises:

- Difficult relationships with the administration (lengthy approval procedures, a high element of risk in the search for sites, overly bureaucratic processing of applications);
- Time-consuming and uncertain access to loans, all the more when the project is modest in scope;
- Competition from the crafts sector when the enterprise has been unable to secure a protected market slot;
- A very hazy knowledge of the markets and a neglect of the marketing function;
- The absence of effective and affordably priced assistance for the management of the project (feasibility study, industrial architecture, technical management and administrative organization);
- The preference accorded to short-term considerations over medium-term benefits (planning, preventive maintenance, quality control, basic and advanced personnel training, interest in process research, etc.).

The private industrial sector consists of three generations of enterprises:

- The enterprises established before 1975 were built with modest but tangible capital stock, have resorted to loans, have faced an occasionally difficult market situation, have set their own pace and have prospered reasonably well, and may be seen as examples of success against the background of the various constraints marking the path towards industrialization in a developing country.
- The second generation of about 20 enterprises owes its existence mainly to lines of credit made available by the Federal Republic of Germany (KFM). This generation consists of new and largely inexperienced State institutions, many of which have subsequently had to shut their doors; for example, a glance at the current status within this generation reveals three enterprises still in operation and four or five that are capable of reactivation.
- The third generation of promoters seems less motivated. For example, of the 94 projects approved between 1981 and 1983, only 23 have been implemented, being evenly distributed between industrial bakeries and soap works operated according to craft principles.

The principal explanation for this low transition rate from the project stage to the operational stage lies in the difficulties currently confronting the enterprises that are already in operation, the relatively short time the institutional framework for promoters and enterprises has been in existence, and finally the attraction exerted by business activities where profit margins are larger and risks smaller.

However, by way of example, two projects/enterprises approved in 1985 deserve mention. Their common characteristics are:

- The experience of the promoters was a favourable factor in both cases: the capacity expansion of an existing unit (producing polypropylene bags) and a vertical integration (an instant yeast unit) planned by a group of industrial bakeries.
- The project proposals prepared were "bankable" under the most common conventional conditions, which made it possible to identify the projects as profitable.
- The advantages sought were realistic and within the realm of the ordinary, and an appropriate contribution was made by the promoters.

### 3. The environment of the manufacturing sector

#### The institutions

These essentially cover six areas:

#### (a) The information and data required for industrial planning and development

The collection and processing of the information required for industrial planning are the responsibility of the National Directorate of Statistics and Information (DNSI). This Directorate's principal activities in the field in question are: the annual industrial survey, which is limited to the modern sector; the quarterly survey; and the economic situation studies, which form the basis for the calculation of an industrial production index.

A national project inventory is currently being prepared.

The industrial enterprise survey conducted in 1983 by the National Directorate of Industries provides a complete picture both of the country's enterprises and of their principal management parameters.

There are a very large number of documentation centres and specialized libraries providing information regarding those areas that have a direct bearing on industrial development and product lines.

The expert reports prepared by such institutions as UNIDO frequently contain summaries of papers originating from a variety of sources and provide highly valuable bibliographical references.

The regional diagnostic studies conducted in 1984 and revised and supplemented in 1985 contain much instructive information on the potential and problems of all the regions.

#### (b) The formulation, implementation and follow-up of the plan

The major guidelines are defined by the Party (Democratic Party of the Malian People - UDPM) in accordance with constitutional requirements. These guidelines are adopted by the Party's National Council meeting in special session.

The general planning structure is essentially the following:

- The Regional Development Committees, decentralized planning bodies responsible for formulating objectives and projects geared to the specific requirements of the rural communities;

- The National Planning Commissions, sectoral planning organs (rural economy, secondary sector, infrastructure, human resources, finance);
- The Superior Planning Council, the highest-level planning agency with the power to carry out whatever arbitration may be necessary and invested with decision-making authority.

With respect to industry, the competent bodies are essentially the Sub-Commission for the Crafts Sector and Industry, which is subordinate to the National Commission for the Secondary Sector, and the National Directorate of Industries (DNI), which is a department of the State Ministry for Industrial Development and Tourism. The scope of DNI's activities is extremely broad (industrial policy-making, industrial planning, standardization, pre-approval project evaluation, the gathering of industrial information, post-implementation follow-up, and the preparation of economic studies and their submission to specific agencies and the Government).

(c) The management of public industrial enterprises

With respect to their day-to-day management, the majority of public enterprises are under the supervision of the State Ministry for the Supervision of State Companies and Enterprises.

(d) Investment financing

For all practical purposes, the Development Bank of Mali (BDM) is alone in financing public and private industrial projects. The International Bank for West Africa (BIAO) is beginning to show an interest in this area.

Projects are financed basically through foreign loans or grants.

With respect to the projects of private promoters, BDM can call on only very limited foreign funds, which are in addition difficult to mobilize. For example, during the period 1975-1985 BDM managed six lines of credit made available by the Federal Republic of Germany (DM 12 million), the International Development Association (\$US 2,765 million) and the European Development Federation (180,000 European Currency Units). Other possibilities have not been taken advantage of (1,000 million CFA francs for the purchase of Brazilian equipment and a similar amount for equity participation by the Islamic Development Bank - IDB).

Financial conditions for promoters are as follows:

- Personal contribution of 10 to 20 per cent of the total investment cost;
- Interest rate of 9 to 12 per cent;
- Duration of 19 months to 15 years;
- Grace period of 3 years maximum.

(e) Investment promotion and enterprise support

- The Centre for Industrial Studies and Promotion (CEPI). This is a public office under the supervision of the State Ministry for Industrial Development and Tourism. It is responsible for the various areas concerned with facilitating industrial promotion in general and the promotion of small and medium-scale enterprises in particular. In addition to preparing feasibility studies, the Centre informs, assists and advises promoters. It

is supposed to be able to draw on an equity fund for the purpose of imparting an initial impulse to any project that appears to be of interest; however, the non-availability of loan money for studies has to some degree been inhibiting its activities, as promoters are reluctant to finance a study for which there is no guarantee either of approval or of subsidized loans.

- The Institute of Productivity and Management Forecasting (IPGP) is a public agency involved essentially in the basic and advanced training of State enterprise personnel.
- The National Society for Development Studies (SNED) is a public agency that, in addition to preparing economic planning studies, is secondarily concerned with industrial project analyses.
- The Malian Foreign Trade Centre (CMCE) is responsible for export studies. In the area of industrial promotion, CMCE co-operates with DNI and CEPI on projects involving the processing and packaging of meat and fruits for export.
- The Chamber of Commerce and Industry of Mali (CCIM) is working on a project to set up an industrial promotion service for the purpose of interesting promoters in key industrial projects. The Chamber has its own vocational training centre.

(f) Technology research and development

The establishment of the National Council for Scientific and Technical Research (CNRST) dates back to 1967. Research and technological adaptations in the fields of energy, agricultural equipment, product preservation, water management, building materials, etc., have been carried out by the various rural development agencies as well as by such specialized institutions as the Institute of the Sahel, the non-governmental organizations and private bodies. In addition to causing some degree of fragmentation, this multiplicity of public, semi-public and private structures occasionally leads to an excessive proliferation of agencies and in all cases to a general lack of co-ordination: Mali has not yet developed a technology policy to permit the channelling of its various efforts towards clearly defined long-range objectives.

With respect to industrial research, mention should be made, in particular, of the Division of Agricultural Mechanization (DMA), the Solar Energy Laboratory (LESO) and the Regional Centre for Solar Energy (CRES).

The incentive system

The Investment Code

The Investment Code (which has recently been revised) distinguishes between three systems:

Minimum size of the investments

A	150 millions CFA francs
B	1,000 millions CFA francs
C	25 millions CFA francs



The advantages for approved enterprises may involve temporary import tax exemptions and/or exemptions from industrial profit tax and the tax on income from land. The new code is more favourable than the former one in its treatment of projects designed to increase exports and generate additional employment (either through the selection of appropriate technologies or by establishing facilities in economically disadvantaged zones).

The foreign promoter is guaranteed that he will be able to transfer his capital and profits. Although desirable, the participation of local partners is not a requirement.

Commerce, Tax and Customs Codes

The Commerce, Tax and Customs Codes have been revised and are currently under consideration at the parliamentary level.

#### D. INDUSTRIALIZATION PROSPECTS

##### 1. The major approaches to industrial development

The approaches to industrial development flow directly from the objectives and principles defined as part of the food strategy.

Since 1979 the World Food Council has recommended the application of food strategies as a planning tool to permit countries to solve their specific food problems. The food strategy pursued in Mali is regarded as a pilot operation and is receiving special support from the European Economic Community.

The overriding objective, on which the others are based, is to provide the population with a balanced and acceptable diet at the lowest possible cost through measures taken at both the production and the marketing levels. In this way, the contribution of the industrial sector to the success of the food strategy is to be reflected in the priority development of the agro-industrial sector in order, on the one hand, to ensure the necessary diversification of food products from the nutritional standpoint and, on the other, to contribute to maintaining a seasonal market balance and encourage the growing of agricultural crops that would not otherwise be profitable.

##### 2. A new economic policy

Since the beginning of the current decade, Mali has been engaged in a structural reform aimed at:

- The priority pursuit of food self-sufficiency;
- The medium-term reduction of public finance deficits and the improvement of the balance of payments;
- The reinvigoration of industrial activity.

These reforms require a policy focusing on the decentralization of initiative, an easing of State regulatory structures and greater liberalization. It was in pursuit of these objectives that in 1982 Mali and the IMF signed an agreement (renewed in 1984) coupled with a programme of economic and financial recovery based on three principles:

- The establishment of a sound fiscal basis through the absorption of internal and external payment arrears and the loosening of the relatively severe budgetary restrictions;
- The reorganization of the State sector, many of whose enterprises are chronically in the red. The means in use or under consideration to this end involve the liquidation or reprivatization of non-strategic enterprises, manpower cuts through the payment of voluntary departure bonuses, and the enhancement of managerial methods;
- The restructuring of marketing channels, the curtailment or elimination of monopolies, and the recognition of the de facto role performed by private economic operators.

The effect of this policy on the industrial sector is that the future of this sector must come to be based essentially on the initiatives of private promoters, with the machinery of the State to be responsible for providing them with support in terms of information, assistance and advisory services, administrative help, infrastructure development (reception area, transport, utilities) and suretyship whenever there is a need to mobilize supplementary financing. In any case, it is only the profitability of the project from the point of view of the entrepreneur that can determine its viability from the national perspective.

### 3. The ways and means of implementation

In the light of the strategic guidelines and the new economic policy that have been adopted, there is a need for a reordering of priorities and initiatives in the industrial area, involving both a review of the country's comparative advantages and a gradual change in the whole range of structures and policies comprising the environment of the industrial sector.

#### The comparative advantages

From both a national and a private perspective, one can identify a number of comparative advantages that might be used to guide future actions:

- There is a declared determination on the part of the Government to ensure that Mali takes advantage of the machinery that has been set up and the facilities that have been granted to promoters in the subregion, particularly within the framework of the West African Monetary Union (WAMU) and the Central Bank of West African States (BCEAO). This could have the effect of rechanneling to Mali a part of the country's private capital that is currently being invested elsewhere and also of attracting foreign investors.
- For the immediate future the country offers a largely underutilized industrial base. An approach based on marginal cost should provide more effective incentives for the implementation of the rehabilitation programmes.
- The potential but non-solvent demand is very high for everyday products for which it should be easy to reduce the cost price (for example, the retail price for a single egg is 75 CFA francs, while a litre of unreconstituted milk is officially sold at 250 CFA francs).
- Mali's land-locked geographic position may, in certain cases, prove to be an effective factor for the protection of the domestic market. It is also not without interest to "consider" Mali as a country bordered by seven adjacent countries and with potential access to a market of 60 million people at the most favourable average transport costs.
- The country has an enviable potential in the area of river transport. The cost per ton transported in this way (distinctly less than the corresponding rail cost) should make it possible to turn a project for the development and control of the Niger (which flows over a distance of 1,800 km in Malian territory) into an extremely profitable long-term undertaking.
- The majority of existing product and market niches have so far remained unexplored. An import product substitution programme can sustain competition if it is supported by soft technologies and production capacities that, while initially modest, permit modular and gradual expansion. Similarly, many projects unable to pay for themselves as isolated activities can be brought to profitability through the further processing and commercial development of their by-products.
- Inexpensive (at least if priced at the marginal cost) hydro-electric energy is available: the Sélingué power plant is operating at 50 per cent of its capacity, while, from 1992, the Manantali plant is scheduled to deliver an additional 200 MW.

- The country's animal husbandry, fishery and fruit resources justify its hopes of being able to export these products to neighbouring countries, North Africa and the Middle East. By placing its packaging, preservation and transport processes on an industrial basis and pursuing the economies of scale, Mali should be in a position to meet the international competition.
- The ingenuity and skills of the national craft sector can and should be harnessed as part of the effort towards self-centred development, similar to what, in a number of South East Asian countries, appears to be the basis of those nations' industrial take-off.
- Wages are low, as is productivity. However, within the subregion, this ratio continues to be favourable in Mali.
- The competence and dynamism of the Malian businessman are recognized throughout the region and have been for centuries. The involvement of the business community in industrial projects will make it possible, on the one hand, to de-emphasize a number of import product categories and, on the other, to gain access to highly developed and well-proven internal commercial networks that are well-adapted to heterogeneous and diversified population sectors.

#### 4. The restructuring of the industrial environment

The new economic policy together with the technical characteristics of the industrial sector call for an all-encompassing plan of action.

It is in this context that the National Directorate of Industries (DNI) is completing a draft Master Plan for Industry with the assistance of UNIDO (as mentioned above). This Master Plan is to be fully incorporated into the upcoming 1987-1992 Five-Year Plan. Because of the great importance to be accorded to it, this Plan will ensure that the new arrangements and action programmes are consistent with the country's major priorities and most urgent requirements.

## E. MALI AND SOUTH-SOUTH CO-OPERATION

### 1. The harmonization of requirements and possibilities

On the basis of past experience coupled with a critical analysis, it is possible to envisage a strengthening of this kind of co-operation, provided that a number of established facts are taken advantage of and certain measures introduced. This in fact was the intended purpose in selecting the assistance projects described in the annex to this document.

#### The facts

While few southern countries are in a position to undertake new industrial projects, the majority, nevertheless, have the capability and the displayed willingness to participate in the rehabilitation of their enterprises in difficulty, even though these countries may be ten years or so ahead of Mali in their industrial development. The problems of technical and administrative management are "textbook cases" for developing countries, and the way they are handled traditionally owes much to the "war therapy" (financial and organic restructuring, redeployment of the production apparatus, retargeting of markets, recourse to task forces for rapid realignments, introduction of management-by-objective systems, direction of efforts towards the elimination of constraints rather than towards optimal performance in the face of constraints, etc.).

Assistance by the countries of the south tends more readily to take a physical rather than a financial form. There are numerous countries that have well-designed questionnaires and project proposal portfolios, but lack the means for financing projects that they might have undertaken. Bilateral co-operation can be developed on the basis of technical assistance, provided that investors assume the responsibility for local expenditure (which the Malian partner is unable to do) together also, perhaps, with a part of the salaries of the expatriate aid assistants.

#### The measures

The breaking down of an assistance requirement into separate phases and modules in order to make it more accessible, rather than its formulation as a "package" calling for a difficult global and unilateral response. It is only through analytical work and co-ordination (between both the various components of the project and the partners) that co-operation can begin and progress; triangular or even more complex arrangements should not be rejected.

The setting of realistic goals, so as to make possible the harmonization of stated requirements and the co-operation opportunities offered.

The presentation of a coherent long-range vision and the proposal of a transparent framework designed to encompass the assistance project. For example, there are better prospects for obtaining subsidies for the support of an industrial maintenance enterprise than for providing solutions, one at a time, to the maintenance problems confronting ten or 12 individual enterprises.

### 2. An original co-operation formula: Sino-Malian co-management

Sino-Malian co-operation began with the independence of the country and has grown steadily stronger ever since. Specifically, the People's Republic of China was instrumental in the implementation of the following projects:

- A sugar complex (two farms and two sugar mills);
- Three rice plantations;
- The TAMALI tannery;
- The SONATAM match and cigarette factory;
- A tea production unit;
- The COMATEX textile plant;
- The EMAMA replacement parts manufacturing base;
- A pharmaceuticals manufacturing plant.

This co-operation has extended both to the supply of equipment and to participation in the assembly and start-up of the facility. In the operational area, technical assistance has been provided mainly in the form of advisory services. In developing countries this kind of aid formula frequently founders on pre-existing conditions whose effect is that the measures that are to accompany it fail to progress at the desired pace. It was out of an awareness of this fact that the Malian and Chinese sides decided to modify the assistance formula by adopting what has come to be known as the "co-management" principle.

This term implies a fresh view of the problem: there is no longer a Chinese partner dealing with a Malian partner, but rather a combined pool of Sino-Malian competence confronting the problems of the enterprise. The words thus conceal a veritable dialectical reversal.

Even before it was officially recognized as such, this formula was first applied in 1985 to the Malian Tannery Enterprise (TAMALI), and the results achieved since that time are worthy of mention:

- Estimated capacity since 1970: 75 skins/day with 264 workers
  - + Production in 1985: 300 skins/day with 67 workers
  - + Production from January to September 1985 higher than the accumulative production from 1970 to 1984
- Before 1985: 3 to 6 months delay in the payment of wages
  - + September 1985: Payment of a 13th month as a productivity bonus.

The Chinese partner contributed working capital in the amount of 110 million CFA francs, a market for a portion of the production, and also six technicians and managers. The Malian Government has assigned priority to the supply of rawhides from the Bamako slaughterhouse and meat-packing plant.

Recently this formula was officially adopted for the Malian Pharmaceutical Products Plant (UMPP).

**PART II. PROJECT PROPOSALS**

PROJECT DATA SHEET

PROJECT NO. 1

1. Project title: Renovation of the Secondary Generating Centres of the Malian Energy Enterprise (EDM).
2. Promoter: Malian Energy Enterprise (Energie du Mali - EDM).
3. Capacity: Renovation programme involving 4,315 kVA.
4. Location: Urban and suburban zones.
5. Estimated cost: 1,350 million CFA francs (\$US 3,857,143).
6. Objectives:
  - To introduce a rational system for the selection of equipment in order to facilitate both the management of spare parts and the performance of the maintenance function;
  - The use by EDM, for energy generation, of diesel engines on a continuous basis (and not merely as a primary or even secondary standby system, as is currently the case in the majority of developed countries that are serviced by a dense network of interconnected grids).
7. Justification and interest of the project:

What are involved are autonomous generating centres that are not connected to the national power distribution system and that supply the majority of the country's urban communities. These centres are equipped with diesel groups of different age and very varied origin. Because of the financial crisis and the obvious constraints imposed by geographic dispersion, it has not been possible to provide regular maintenance for a number of these units, which as a result now require overhaul or replacement.

EDM is a State enterprise in which ELECTRICITE DE FRANCE holds equity capital. It manages the country's thermal-electric generating plants and everything connected with the distribution of electric power.

The generation of hydro-electric power is the responsibility of the Upper Niger Water Resource Authority (OERHN).

EDM performs a strategic function and, thanks to the economic recovery programme, is today benefiting from a financial restructuring made possible by a readjustment of its rate schedules.



8. Co-operation desired:

The provision of reliable and unsophisticated equipment covering a range of 160, 200, 400 and 635 kVA; also, the supply of spare parts, coupled with favourable financing conditions.

For the firms and agencies concerned, this co-operative relationship implies:

- That they inform themselves about the programme for the renovation of the EDM system and the problems specific to the autonomous generating centres;
- That they provide technical documentation containing information on the performance of the equipment within the desired range, together with data on the specifications and capacity of the equipment when exported;
- That they should be willing to accept healthy competition with respect to the quality/price ratio, time periods, related assistance services for start-up and training, maintenance recommendations and financing facilities.

PROJECT DATA SHEET

PROJECT NO. 2

1. Project title: Computerization of the "Customer Management" System of the Malian Energy Enterprise (EDM).
2. Promoter: Malian Energy Enterprise (EDM).
3. Capacity: To be determined.
4. Location: Bamako and the principal urban centres.
5. Estimated cost: To be determined.
6. Objectives:
  - To computerize the customer management system so as to provide better service to customers and greater efficiency in the work of following up the collection of outstanding bills;
  - To introduce systematic procedures for subscriber accounts in the light of the changes in the number and distribution of customers in all of EDM's service zones.
7. Justification and interest of the project:

EDM is experiencing an obvious need to modernize and streamline its customer management system. Certain of its sister enterprises in countries of the south have been able to make profitable use of the advantages offered by micro-computer systems (price, flexibility, decentralization, etc.), adapting these systems to the problems specific to developing countries.

EDM is a State enterprise in which ELECTRICITE DE FRANCE holds equity capital. It manages the country's thermal-electric generating plants and everything connected with the distribution of electric power.

The generation of hydro-electric power is the responsibility of the Upper Niger Water Resource Authority (OERHN).

EDM performs a strategic function and, thanks to the economic recovery programme, is today benefiting from a financial restructuring made possible by a readjustment of its rate schedules.
8. Co-operation desired:

Three phases would be involved:

Phase I: Formulation of a Computerization Master Plan, which should incorporate EDM's limitations and possibilities (8 m/m).

Phase II: Delivery of hardware (micro-computers) and circuits; transfer and adaptation of the software (24 m/m).

Phase III: Start-up of the computerized management system (2 x 12 m/m).

PROJECT DATA SHEET

PROJECT NO. 3

1. Project title: Assistance in the reactivation of the Providence Tannery of Mali (TAPROMA).
2. Promoter: Providence Tannery of Mali (TAPROMA).
3. Capacity: 500,000 sheep and goat skins.
4. Location: Kayes.
5. Estimated cost: To be determined.
6. Objectives:
  - The search for a technical and commercial partner (possibly one and the same) for the restarting of production activities;
  - The establishment of a system of technical and administrative management for the enterprise.
7. Justifications and interest of the project:

A private enterprise established in 1976 at Kayes with the help of credit lines made available by the Federal Republic of Germany, TAPROMA has had to face problems connected with the promoter's misunderstanding of this area of activity, technical disputes regarding the imported equipment, a reduction in working capital due to non-productive expenses, and the lack of even minimal technical and administrative management.

The history of the enterprise so far is that it operated for only one year, during which time it turned out a product that failed to meet export standards.

TAPROMA represents a major investment for the creation of jobs in a region where unemployment is particularly severe.
8. Co-operation desired:

The technical partner would contribute in two phases:

Phase I: Preparation of a diagnostic survey of the installations following the closure of the facility in 1982, for the purpose of preparing a general overhaul plan indicating the amount of work to be carried out and the equipment to be replaced or added (2 experts x 1 month = 2 m/m).

Phase II: The establishment of a technical management capability (operations, maintenance and quality control) and the same for administrative management.

The first task consists in making the plant operational.

The commercial partner will offer a reliable export market and advance the working capital to cover a period of three months of business activity.

N.B. As for the Malian partner (TAPROMA), it will provide the industrial facilities (equipment, ground, buildings), free of all liabilities, in addition to ensuring that the slaughterhouses provide a supply of hides and skins on a priority basis (already decreed by the Government).

PROJECT DATA SHEET

PROJECT NO. 4

1. Project title: Technical assistance and joint venture for the reactivation of the Malian Wood Enterprise (EMAB).
2. Promoter: Malian Wood Enterprise (EMAB).
3. Capacity: To be determined.
4. Location: Bamako.
5. Estimated cost: Equipment sub-total: 150 million CFA francs (equivalent to \$US 428,572); grand total to be determined.
6. Objectives:
  - Search for a joint venture partner;
  - Supply of supplementary equipment;
  - Technical assistance concentrating on the reorganization of production and on financial and commercial management.
7. Justifications and interest of the project:

EMAB is the only industrial-scale woodworking establishment in Mali. Established after independence, it initially flourished thanks to such commercial opportunities as the furnishing and decoration of the H<sup>o</sup>tel de l'Amitié and the Malian Development Bank, not to mention regular orders from the Malian Government.

Later on, however, because of cash flow problems resulting from outstanding debts, the enterprise found itself increasingly unable to fulfil its orders.

EMAB is technically well equipped thanks to substantial support from Yugoslavia (15 machine-tools donated by that country are currently available at the enterprise).

As a contribution to the joint venture, the Malian partner will provide industrial assets consisting of land, industrial buildings, equipment and well-trained technicians loyal to EMAB, in addition to a guarantee of regular orders from the State.
8. Co-operation desired: The foreign partner will contribute:
  - (a) Supplementary equipment: lorries for transporting large logs, sawmill maintenance equipment, and a machine for the production of foam for the upholstering of furniture. The total estimated cost is 150 million CFA francs or \$US 428,572.

- (b) Managers, including, in particular, the future chief accountant and finance officer and also a maintenance technician.
- (c) With a view to a redeployment of activities, a marketing specialist for a six-month period (there is a need to identify a promising market slot different from the area of activity already in the hands of the crafts sector).
- (d) A production reorganization mission, once the redeployment plan has been prepared (2 x 6 m/m = 12 m/m).

PROJECT DATA

PROJECT NO. 5

1. Project title: Assistance in the reactivation of the Malian Food Preserves Company (SOCAM).
2. Promoter: Malian Food Preserves Company (SOCAM).
3. Capacity: Two production lines comprising:
  - (a) One production line for tomato concentrate with a capacity of 50 tons a day;
  - (b) One production line for fruit juice with a capacity of 4,800 cans a day or 1,500 soft aluminium containers an hour;
  - (c) The plant is also equipped to produce syrups and jams.
4. Location: Bamako.
5. Estimated cost:
  - Development of the tomato-growing area (to be determined);
  - The grand total including the supplementary equipment is to be determined.
6. Objectives:
  - To find new partners to assist SOCAM in expanding its activities and adding to their profitability;
  - To find a solution to the plant's raw material storage problems (fresh tomatoes);
  - To dispose of the production (market search).
7. Justification and interest of the project:

Established in 1978, SOCAM is a mixed-ownership company with capital of 152.5 million CFA francs (\$US 435,715) distributed between the Malian State (90 per cent), the SFDT (France, 6.5 per cent) and the CAMARET Co-operative (France, 3.5 per cent).

SOCAM is currently facing a problem with regard to its raw material (fresh tomato) supply. In order to solve this problem, the Government has made over to the company a 300-hectare plot of land (to be developed) for use in the growing of tomatoes. A test financed by the PAC and conducted in 1985 by the Agricultural Production Development Bureau (a French agency) over a 12-hectare area indicated an average yield of 41 tons per hectare. (The cost of developing one hectare has been estimated at 620,000 CFA francs or \$US 1,772.)

The tomato concentrate produced by the plant is destined for the Malian market, while the fruit juices and syrup may be exported.

UNIDO has assisted SOCAM in the introduction of the aluminium packaging procedure.

8. Co-operation desired:

Delivery of supplementary equipment for the plant, including:

- (a) A tamarind syrup bottling line (cleaning and filling);
- (b) A fruit-stoning machine for use with mangoes;
- (c) A pasteurization-cooling tunnel for five-litre cans of mango and guava pulp;
- (d) A tomato concentrate packaging line (doypack soft containers).

Financing for the development of 300 hectares for tomato-growing.

A technical partner with experience in the industrial growing and packaging of tomatoes.



PROJECT DATA SHEET

PROJECT NO. 6

1. Project title: Modernization of the machinery and equipment of the National Tobacco and Match Company of Mali (SONATAM).
2. Promoter: National Tobacco and Match Company of Mali (SONATAM).
3. Capacity: More than 1,000 million cigarettes a year.
4. Location: Bamako.
5. Estimated cost: 1,500 million CFA francs or \$US 4.3 million.
6. Objectives:
  - To equip the plant with reliable and unsophisticated technology as a replacement for the currently obsolete equipment and machinery;
  - To obtain soft financing conditions from suppliers for the acquisition of the new technology (machinery, equipment, etc.).
7. Justification and interest of the project:

SONATAM is a State company of an industrial and commercial nature with civil liability and financial autonomy. The plant comprises two production units: the "DjoliJa" cigarette factory and the "Eclair" match factory.

The purposes of the enterprise are:

  - (a) To exploit the country's tobacco and unprocessed wood for the production of cigarettes, matches and related products;
  - (b) The sale of these products and the search for markets and sales outlets;
  - (c) Assistance in the popularization of the best tobacco varieties in urban areas.

SONATAM's cigarette production turnover alone totals 8,000 million CFA francs or \$US 22,857,142.

In the face of changing socio-economic conditions, SONATAM requires more efficient equipment to satisfy the demand for cigarettes in terms of quantity and quality.
8. Co-operation desired: Supply of equipment as follows:
  - (a) For general preparation, an equipment unit with a capacity of one ton of tobacco an hour;

- (b) For cigarette manufacture, there is a need for the installation of four cigarette-making machines connected to four cigarette-rolling machines producing 2,000 cigarettes a minute:
- (c) For the packaging of the cigarettes, three combined packaging and cellophane-wrapping machines with a capacity of 150 to 200 packets a minute.

Technical assistance for the equipment installation phase and for the training of the technical personnel (operation, maintenance and quality control), with the number of consultants to be determined.

PROJECT DATA SHEET

PROJECT NO. 7

1. Project title: Expansion of the activities of the "Editions du Mali" Publishing Enterprise (EDIM).
2. Promoter: "Editions du Mali" Publishing Enterprise (EDIM).
3. Capacity: To be determined.
4. Location: Bamako.
5. Estimated cost:

Equipment:	377 million CFA francs or \$US 1,077,143
Additional buildings:	86 million CFA francs or <u>\$US 245,715</u>
Total:	463 million CFA francs or \$US 1,322,858
6. Objectives: Installation of new and more efficient equipment for the expansion of production.
7. Justification and interest of the project: Established in 1972, EDIM is a public enterprise whose objectives are:
  - (a) The publication of schoolbooks and texts of all kinds, a product line estimated to be very profitable. However, it has not been possible to undertake this activity although the market has been clearly identified (consisting of the National Pedagogical Institute and customers with the ability to pay).
  - (b) The printing of magazines and newspapers, which has also suffered because of equipment problems (the latter being very limited or of low performance). Of the existing newspapers, namely ESSOR, PODIUM, SUNJATA, BAARKELA and the JOURNAL OFFICIEL, only ESSOR and PODIUM appear with some degree of regularity.
  - (c) The carrying out of the work of printing, binding and stitching; this activity is the one that has been most developed, although the competition facing private and State printers in this area is particularly intense.

This poor performance by EDIM is explained by the inadequate means made available to it since its establishment.

The Malian Government's policy of publishing school textbooks extends to all forms of education, but priority is given to school texts designed for elementary education. The official policy with regard to this level of education consists in eliminating from circulation works that have been imported by Malian schools and of which, in most cases, only two or three chapters can be used by the teachers and pupils. Hence the need to undertake as an urgent measure the publication of texts specially designed by the National Pedagogical Institute for conformity with the entire range of national educational programmes.

Texts likely to be of interest to the consumer (teachers, professors, students and students' parents) will move more easily in view of the demand and also because of the support of the National Pedagogical Institute (one of whose chief missions is to evaluate and approve school textbooks in Mali).

In volume terms, the current school textbook market is estimated at 1,700 million CFA francs or \$US 4,857,143, according to estimates prepared by the National Pedagogical Institute.

8. Co-operation desired:

The private local partners will finance the new buildings, whose cost is estimated at 86 million CFA francs or \$US 245,715.

Supply of equipment by the foreign partner, the cost of which is estimated at 377 million CFA francs or \$US 1,077,143, and the provision of know-how.

Training of local personnel estimated at 6 m/m.

N.B. In the case of a joint venture, EDIM would make available its industrial assets, consisting essentially of industrial buildings and equipment valued at 377 million CFA francs or \$US 1,077,143.

PROJECT DATA SHEET

PROJECT NO. 8

1. Project title: Training/retraining programme for workers responsible for the operation and maintenance of the diesel equipment of the Malian Energy Enterprise (EDM).
2. Promoter: Malian Energy Enterprise (EDM).
3. Capacity: N.A.
4. Location: Bamako and urban zones.
5. Estimated cost: To be determined.
6. Objectives:
  - To provide technical training for the workers in charge of the operation and maintenance of the diesel equipment as part of the renovation of the secondary power-generating centres (see project No. 1);
  - Establishment of a programme of co-operation between EDM and similar companies in other countries of the South for an exchange of experience and experts.
7. Justification and interest of the project:

EDM is a State enterprise in which ELECTRICITE DE FRANCE holds equity capital. It manages the country's thermal-electric generating plants and everything connected with the distribution of electric power.

The generation of hydro-electric power is the responsibility of the Upper Niger Water Resource Authority (OERHN).

EDM performs a strategic function and, thanks to the economic recovery programme, is today benefiting from a financial restructuring made possible by a readjustment of its rate schedules.

EDM has traditionally sent its trainees either to the centres of the Association of African Electricity Producers and Distributors (APDEA) in Dakar or to Europe. While continuing to wish to take advantage of these highly useful training resources, EDM would like to contact other centres in other developing countries (such as Algeria and Tunisia in North Africa) for the training of an initial contingent of diesel operators. This training is part of the programme for the renovation of secondary power-generating centres that EDM wishes to undertake.

8. Co-operation desired:

The training of six diesel specialists for a period of five months each (possibly in Algeria and Tunisia). An assistance programme of this kind would be particularly welcomed by the countries that share with Mali the problems specific to the Sahelian region and that in fact have an infrastructure consisting of autonomous electricity-generating centres. Hence the suggestion that the request for training be addressed to Algeria and Tunisia.

The organization of a visit by high-ranking EDM officials (possibly to Algeria and Tunisia) in order to enable them to familiarize themselves with the problems and possibilities of the different parties in order that a programme of co-operation between EDM and its North African sister countries might be established on the basis, principally, of the experience acquired by these countries in the area of rural electrification or the use of low-tension pylons erected on circular concrete foundations. This co-operation programme might be undertaken at an inter-departmental or inter-divisional level of equal competence between EDM and the North African electricity utility companies (SONELGAZ of Algeria and STEG of Tunisia), in line with the example of the Association of African Electricity Producers and Distributers (APDEA).

PROJECT DATA SHEET

PROJECT NO. 9

1. Project title: Training of trainers/extension workers for the promotion of the spirit of enterprise.
2. Promoter: Centre for Industrial Studies and Promotion (CEPI).
3. Capacity: N.A.
4. Location: Bamako and throughout Mali.
5. Estimated cost: 27.65 million CFA francs or \$US 79,000.
6. Objectives:
  - To provide for the training of trainers/extension workers to permit the more effective identification and promotion of Malian entrepreneurs/enterprise heads;
  - To put into place pilot programmes for the training of Malian entrepreneur/enterprise head candidates.
7. Justification and interest of the project:

CEPI, a State-backed agency established in 1976, has as its purpose to contribute to the promotion and development of small and medium-scale enterprise and small and medium-scale industry in line with the policies and decisions approved by the Government of Mali, namely, the expansion of productive investment yielding high added value, the priority objective being the attainment by the country of food self-sufficiency.

Quite recently CEPI became aware of a programme for the training of trainers/extension workers conceived and developed by the Entrepreneurship Development Institute of India (EDII). This programme is of great interest to Mali and to CEPI in particular, whose mission is to encourage the spirit of enterprise, considering also the fact that each year 2,732 young graduates, including 840 at the higher managerial level and 615 at the intermediate level, find themselves without employment. These persons represent a natural pool of future entrepreneurs, and from this gradually cumulative number, 6,713 (1984) and 7,161 (1985) potential enterprise heads have in fact been identified. Accordingly, the aim of this project is to contribute to the absorption of the particularly severe unemployment among youth.
8. Co-operation desired: Phase I: Training for three trainers/extension workers during a period of six months, including three months of language training at Bamako and a three-month sojourn abroad (possibly in Gujrat, India, whose programme is well known in Mali).

Phase II: Assumption of the expenses for the establishment of three pilot programmes undertaken by the three trainers/extension workers possibly trained in India for the benefit of 90 entrepreneur candidates.

Assumption of the cost of one expert supervisor at Bamako, as part of the pilot programmes, for a period of three months.

N.B. The salaries of the three trainers/extension workers will be paid by the Government of Mali.



PROJECT DATA SHEET

PROJECT NO. 10

1. Project title: Technical assistance for the redeployment of activities of the Malian Road Transport Equipment Base (BETRAM).
2. Promoter: Malian Road Transport Equipment Base (BETRAM).
3. Capacity: To be determined.
4. Location: Bamako.
5. Estimated cost: Investments already made (industrial assets):
  - Buildings: 1,200 million CFA francs or \$US 3,428,572
  - Equipment: 500 million CFA francs or \$US 1,428,572

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Total: 1,700 million CFA francs or \$US 4,857,144
6. Objectives:
  - Preparation of a technical assistance programme for the optimum exploitation of the existing industrial potential;
  - Effective use of the equipment and facilities of the enterprise and the search for new outlets (specifically, for a specialized market niche).
7. Justification and interest of the project: Relying on financial assistance from the Federal Republic of Germany, BETRAM has built up a complex of buildings over a total area of 7 hectares, initially designed for technical training (1968).

In 1980 BETRAM received additional equipment from the Federal Republic of Germany, which was used to transform the centre into a logistical base for the maintenance of light and heavy vehicles. BETRAM also has its own refrigeration equipment department.

BETRAM's industrial assets, consisting of buildings and equipment in a very good state of repair, is valued at 1,700 million CFA francs or \$US 4,857,144.

BETRAM is currently experiencing severe competition from independent small-scale repair specialists operating in the same part of the market that it would like to gain for itself. As things stand, BETRAM's principal customer is the Government, which is very slow in paying.

A maintenance enterprise of BETRAM's size could play a very important role in servicing and repairing the numerous vehicles that, given their flexibility, still represent a competitive means of transport in comparison with the country's sole - and exceptionally overcrowded - railway. The opening up of an "industrial vehicle maintenance" slot could represent an additional future approach to the effective utilization of BETRAM's industrial assets.

8. Co-operation desired:

A technical partner to be responsible for:

- (a) The redeployment of BETRAM's activities (market study, customer contacts, search for new business, etc.);
- (b) The reorganization of production in accordance with the requirements of the new markets.

PROJECT DATA SHEET

PROJECT NO. 11

1. Project title: Assistance to the National Directorate of Industries (DNI) for the formulation and implementation of a standardization policy.
2. Promoter: National Directorate of Industries (DNI).
3. Capacity: N.A.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives:
  - To develop an awareness among local managers of the problems of standardization and quality control;
  - To identify the priority sub-branches in which standardization is to be introduced;
  - To collect international standards and adapt them to the specific characteristics of the Malian economy;
  - To establish quality control services at plants and factories.
7. Justification and interest of the project:

As part of the promotion of agro-food industries, the aim is to establish a standardization policy that will guarantee healthful conditions locally and permit Malian products to meet the quality standards required in foreign markets.

DNI is a State-promoted agency through which measures in respect of the country's industrial development are elaborated. The Directorate is concerned with the application of these policies throughout the nation. It centralizes, examines and initiates sectoral studies. A master industrialization plan is currently being prepared with the technical co-operation of UNIDO.
8. Co-operation desired:

The assistance requirement is estimated à priori at 24 m/m of expert services in standardization and quality control.

Supply of equipment for laboratories in being or to be built.

PROJECT DATA SHEET

PROJECT NO. 12

1. Project title: Restructuring of the assistance services of the Chamber of Commerce and Industry of Mali (CCIM).
2. Promoter: Chamber of Commerce and Industry of Mali (CCIM).
3. Capacity: N.A.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives:
  - To train CCIM personnel in accounting, management, marketing and the launching of small-scale projects not requiring the assistance of a study bureau;
  - To invigorate the industry and commerce assistance services.
7. Justification and interest of the project: The majority of private enterprises are suffering from the lack of an internal management capability in both the technical and the administrative fields. Expertise is rarely brought to bear on a particular and specific problem because of the lack of information and external contacts (in the case of the private enterprises) or because of administrative delays (in the case of State enterprises).

It is also common for potential promoters to spend as much as one or two years in negotiating with engineering consultancy offices for the preparation of a feasibility study, a crucial stage prior to the application for authorization. The assistance requirements of an individual enterprise rarely attain the critical mass necessary for a call for external assistance (whether in material or financial form).

CCIM represents a clearing house for merchants and industrialists; it also provides a channel par excellence for the transmission of information on both new institutional arrangements and profitable market opportunities identified through comprehensive surveys. Similarly, it provides a forum where potential promoters can seek information in the form of guidance, compare ideas, and explore new contacts.

The turnover for management study and consultancy services is estimated at 400 million CFA francs or \$US 1,142,858 a year.

8. Co-operation desired:

The technical assistance of a financial expert for the management of the funds collected and the revitalization of CCIM's Department of Studies. This assistance could stretch over a period of two years.

Financing of the services to be provided through the mobilization of internal and foreign resources for this purpose. The institution subsidizing a project of this kind will have the right of monitoring and evaluating the internal management of CCIM's Department of Studies.

PROJECT DATA SHEET

PROJECT NO. 13

1. Project title: Assistance to the Project Evaluation and Follow-Up Unit of the Development Bank of Mali (BDM).
2. Promoter: Development Bank of Mali (BDM).
3. Capacity: N.A.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives:
  - To strengthen the effectiveness of BDM's Project Evaluation and Follow-Up Unit through the provision of supplementary expert services (industrial engineers);
  - To include in each line of credit granted budgetary provision for the financing of one expert.

7. Justification and interest of the project: As the exclusive channel for the financing of industrial projects, BDM (and specifically SRIFI, <sup>1/</sup> which handles external financing) has had to face numerous problems with the 23 projects it was called upon to promote during the period 1979-1980.

Although its staff includes economists, SRIFI suffers from a lack of technical competence with respect both to the project evaluation stage (for the agreement in principle to extend credit) and for the implementation/worksite phase (for the gradual liberalization of the funds).

Similarly, the assessment of the working capital requirements for the operational phase is not as reliable as it should be.

The problem also consists in the fact that, because of past experience, the approach taken is overly cautious, which to some degree distorts the primary purpose of a development bank, namely, the assumption of a part of the promoter's risk.

The aim of this project is to strengthen the Project Evaluation and Follow-Up Unit through the services of industrial engineering experts who will confirm the technical formulae in use, plot realistic production build-up curves, propose accompanying measures to be undertaken by the promoter, and finally provide for the follow-up of the projects financed.

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<sup>1/</sup> Department of Relations with International Financial Institutions.

8. Co-operation desired:

The assistance might take three forms:

- (a) The full-time assignment to BDM of an industrial engineer to work within the Project Evaluation and Follow-Up Unit (24 m/m);
- (b) The establishment of a special budget, under each line of credit granted, for the financing of the services of an expert to work specifically on those projects that are to be financed through the line of credit in question;
- (c) The training of two local counterparts (training engineers) to take over the work of the full-time engineer assigned to the project following the conclusion of his mission. This training will be provided by an expatriate engineer in parallel with his primary functions in the area of industrial project evaluation.

PROJECT DATA SHEET

PROJECT No. 14

1. Project title: Support for the establishment of a private industrial maintenance company.
2. Promoter: To be identified:  
  
Under the sponsorship of the State Ministry for Industrial Development and Tourism.
3. Capacity: To be determined.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives:
  - Establishment of an industrial maintenance unit to respond to the rehabilitation requirements of industrial enterprises in Mali;
  - Upgrading of the existing industrial potential.
7. Justification and interest of the project: Mali suffers from a fairly general deficiency in the area of industrial maintenance, due principally to the following factors:
  - (a) Inadequate qualifications on the part of maintenance workers and the absence of practical standards for periodic inspections, servicing, systematic annual overhaul and preventive maintenance;
  - (b) The lack of sufficient working capital for a minimum supply of spare parts, lubricants and other expendable maintenance materials;
  - (c) Incompetence in working with the production equipment, leading to the improper operation of this equipment;
  - (d) The preference accorded to short-term considerations over medium-term objectives, with the result that corrective measures are taken only when malfunctions actually occur.

There is also a considerable potential for the small-scale production of spare parts on an informal semi-industrial basis.

What is being sought is the establishment in Mali of a private maintenance service company that would have its own permanent staff specializing in such fields as mechanical and electro-mechanical work, welding and hydraulic (fluid-actuated) systems, and that would call on task forces for its scheduled annual overhaul operations. A company of this kind could strengthen its position through reliance on a maintenance base like that provided by BETRAM (project No. 10).



In establishing this company, consideration might be given to the technical training of local specialists as an additional service to be offered.

The setting up of a company of this kind could exert a catalytic effect towards the creation of standard spare part supply pools, in addition to mitigating the problems caused by the country's land-locked geographic position.

8. Co-operation desired:

A project feasibility study taking into account the potential market represented by the target enterprises and the spare part manufacturing potential (4 consultants for 3 months = 12 m/m, with four different areas of specialization planned);

The supply of basic machine-tools and individual and group tool-sets;

Mobilization of funds for the partial financing of the services to be provided to the enterprises and the assumption of the costs of expert services provided by expatriate personnel;

The making available of a permanent core of six experts (one generalist, one mechanical engineer, one electrician, one welding engineer, one specialist in hydraulic systems and one planning specialist), who will have the parallel responsibility of training Malian counterparts;

The provision of a pool of specialists who might be called on as need arose and for limited periods.

N.B. In order to facilitate the establishment of a company of this kind, whose ultimate viability is assured but which would require financial support during its first two years, it is suggested that two or three major State enterprises announce their intention to be the first customers for both the maintenance (including repair work) and the training services to be provided by the new company.

PROJECT DATA SHEET

PROJECT No. 15

1. Project title: Establishment of a meat-packing and export enterprise in Mali.
2. Promoter: Malian private citizens and foreign partners, under the sponsorship of the Malian Foreign Trade Centre (CMCE).
3. Capacity: 1,000 tons of fresh meat a year, equivalent to 6,250 head of cattle.
4. Location: Bamako (headquarters) and Ségou (for the fattening of the livestock).
5. Estimated cost:

Equipment and buildings:	165.6 million CFA francs or \$US 473,143
Working capital (5 months):	205.9 million CFA francs or \$US 488,286
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Total	371.5 million CFA francs or \$US 1,061,286

Optional investment:  
Equipment: 50 million CFA francs or \$US 142,858  
Purchase of animals: working funds to be determined.
6. Objectives:
  - Production and export of fresh meat;
  - Augmentation of the national herds.
7. Justification and interest of the project: According to the latest estimates, the Malian herds number 6,216,000 cattle and 11,591,000 sheep/goats (1983).

The major portion of Malian animal resource exports consists of live cattle: 479,000 bovines and goats are sent each year to the Côte d'Ivoire and certain West African coastal countries. It would appear that the traditional export channels have become saturated.

However, as part of the policy adopted by the Malian authorities for the rationalization of stock-raising and the relief of pasture lands and watering points severely affected by the drought, there is a large export potential that has been estimated at 310,000 head of bovines and 55,100 tons of meat. These figures are based on a slaughtering rate of 13-15 per cent for bovines and 35 per cent for sheep and goats.

At present, very little if any use is made of the meat, although the essential conditions for increasing exports would appear to be assured, namely:

- (a) The availability of livestock of exportable quality (at least for the nearby coastal countries):
- (b) The existence at Bamako (provided that certain modifications were carried out) of cold-storage slaughterhouse facilities adequate for the preparation of carcasses under the conditions of hygiene required for export;
- (c) The existence of a nearby market (traditionally supplied with live animals) and potential markets further away (North Africa and, possibly, the Middle East);
- (d) The existence of local tanneries capable of processing the by-products (hides and skins).

Finally, as an additional advantage, this export trade would provide the Government and the economic operators concerned with a highly effective tool for the efficient organization of the country's herds with a view to placing the management of national livestock reserves on a profitable basis.

The formula chosen is that of a pilot enterprise on a scale consistent with Malian conditions that could be enlarged either by extension or through the addition of similar units in the event that it were to prove a commercial success. This enterprise would consist of:

- (a) A "Pasturage" section, to be responsible for the purchase and fattening of the lean animals for delivery to the "Export" section;
- (b) An "Export" section for the co-ordination of all aspects of the slaughtering of the animals at the Bamako meat-packing plant, quality control, the dispatch of the meat to the airport, marketing studies, drafting and conclusion of sales contracts.

8. Co-operation desired:

The Government is seeking one or more foreign partners who would be willing to set up a commercial enterprise in the form of a stock company or limited-liability company.

This project might also be integrated with a cattle feed production project, which would be the subject of a separate study.

N.B. This project data sheet has been taken from a study prepared by the International Trade Centre (UNCTAD/GATI) in collaboration with the United Nations Food and Agriculture Organization (FAO) for the Malian Foreign Trade Centre (CMCE).

PROJECT DATA SHEET

PROJECT No. 16

1. Project title: Establishment of the Bankoumana Sugar Complex.
2. Promoter: Under the sponsorship of the State Ministry for Industrial Development and Tourism.
3. Capacity:  
7,500 tons of lump sugar a year;  
22,500 tons of granulated sugar a year;  
11,600 tons of molasses a year.
4. Location: Bankoumana.
5. Estimated cost: 56,000 million CFA francs or \$US 160 million.
6. Objectives:
  - To guarantee a reliable supply of sugar for the country;
  - To reduce the deficit in the balance of trade (sugar imports account for more than 4 per cent of total imports);
  - Significant generation of employment (1,400 jobs).
7. Justification and interest of the project:

Mali's first sugar mill was built in 1964 at Dougabougou to the north of Ségou. This facility is managed by the Niger office (installed capacity: 4,000 tons a year). A second complex was built at Siribala, also under the administration of the Niger Office, with a capacity of 15,000 tons a year (both these complexes were erected by the People's Republic of China).

In 1980 Mali produced 18,200 tons of sugar, importing 6,700 tons. Since 1981 there has been a considerable rise in imports, which totalled about 28,000 tons in 1984, representing a cost of 5,500 million CFA francs or \$US 15,714,285.

In the face of this situation, the Government of Mali has since 1970 been considering the building of another sugar complex with a capacity of 30,000 tons a year for the purpose of eliminating imports by 1985-1990, the estimated consumption levels for that period being 50,000 tons a year.

A feasibility study, financed by the Caisse Centrale de Coopération Economique, was prepared in 1979-1980 by the French companies TECHNIP and CFDT. By the end of 1984 no financing had yet been obtained for the building of the refinery.

Under project SI/SLI/85/801, UNIDO is currently evaluating and updating this study.

The various aspects of this project are as follows:

- (a) Of a total area of 3,554 hectares, 3,134 will be irrigated. The selected method of irrigation will be the sprinkling system, with the water taken from the Niger (a 48-km network of irrigation ditches is planned, extending over 53 plots). The expected production is 290,000 tons, with an average yield of 95 tons per hectare.
- (b) All the sugar produced will be consumed locally, and initially the molasses will be exported to Dakar. Future plans call for the building of a fuel-alcohol plant.
- (c) The principal phases of the production process are: reception/weighing of the cane, storage, preparation, juice extraction, juice purification, evaporation, seasoning, centrifuging, drying and packaging (for more details see the feasibility study).
- (d) Additional planned infrastructure includes the following: the building of a village for supervisory staff and foremen, with an infirmary, a club house, a school, a guest house and sports facilities. Developed lots will be made available for the workers.

When operating at full capacity, this sugar complex will provide employment for 1,400 persons (seven managers, 138 administrative employees, 989 workers in the agricultural department and 255 plant workers).

8. Co-operation desired:

The Government is seeking investment financing at an interest rate of 7 per cent, totalling 56,000 million CFA francs or \$US 160 million, distributed over four years, with the entire amount to be written off in 20 years (five-year grace period and repayment over 15 years). This sum, which is very sizeable for a country like Mali, must be viewed in the light of the present cost of 30,000 tons of sugar on the international market (6,000 million CFA francs or \$US 17,142,856).

N.B. This project thus appears attractive both from the national point of view (foreign exchange balance for sugar imports/repayment of the loan) and from the point of view of the sugar refinery itself (repayment capacity and internal rate of return).

PROJECT DATA SHEET

PROJECT No. 17

1. Title of Project: Opening of lines of credit for industrial development.
2. Promoter: Under the sponsorship of the State Ministry for Industrial Development and Tourism.
3. Capacity: N.A.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives:
  - To invigorate and increase the means for financing industrial development;
  - To contribute to the effective implementation of the industrial units rehabilitation programme currently in progress.
7. Justification and interest of the project:

Mali lacks any sizeable internal capacity for the financing of industrial projects.

A number of countries have opened lines of credit either for financing private Malian enterprises or for facilitating the acquisition of equipment. Other countries have made approaches either for the financing of equipment purchases (e.g., Brazil, which has opened a line of credit in the amount of 1,000 million CFA francs or \$US 2,857,143), or with a view to participating in the capital of projects to be undertaken (the case of the Islamic Development Bank, which has announced its intention to make available a credit line of 1,000 million CFA francs).

There is a desire on the part of the Malian authorities to achieve the greatest possible diversification of the country's supply sources for products and equipment in order that Mali may break out of its present "captive market" situation.
8. Co-operation desired:

Financial institutions are being asked to open lines of credit for the financing of projects or equipment and also to announce their intention to participate in intrinsically profitable projects. By way of illustration, an overall volume of 50,000 million CFA francs or \$US 140 million would permit the creation of 5,000 jobs during the next five-year period, including the derivative service positions. This figure is to be viewed against the background of the 15,000 jobs currently offered by the entire industrial sector.

This project might be envisaged in conjunction with the project for the establishment of an Islamic financial institution (project No. 18), whose primary purpose would be the financing of industrial sector projects.

PROJECT DATA SHEET

PROJECT No. 18

1. Project title: Establishment of an Islamic Financial Institution.
2. Promoter: Private Malian and islamic financial institutions.
3. Capacity: N.A.
4. Location: Bamako.
5. Estimated cost: To be determined.
6. Objectives: To develop, organize and channel local savings to productive investment.
7. Justification and interest of the project:

The great majority of the Malian population professes the Islamic faith. Unlike the other Islamic countries, including certain countries south of the Sahara that have flourishing Islamic financial insitutions, Mali alone has not yet entered this field.

On the basis of an analysis of their own, a number of Malian private citizens (merchants, managers and industrialists) have formed an ad hoc committee for the establishment of an Islamic institution to be responsible for channelling the savings of large and small contributors to the support and expansion of economic activity.

The purpose of an institution of this kind would be:

  - (a) The granting of medium- and long-term loans for investment purposes;
  - (b) Short-term financing of working capital requirements;
  - (c) Equity participation in industrial projects;
  - (d) The management of private funds placed in time deposits.
8. Co-operation desired: The aim is that an Islamic financial institution should publicly declare its intention of promoting the establishment of a private Islamic bank in Mali. This kind of clearly announced intention would have the effect of ensuring the success of the subscription campaign, this being the firm belief of the members of the committee mentioned above. A possible first step might be the dispatch of a contact mission to the committee for the purpose of evaluating the possibilities and assessing the various conceivable scenarios.

N.B. Malian banking laws take into account the specific nature of the Islamic institutions and provide for arrangements in conformity with the operating rules of these institutions (Ordinance No. 84-19/P-RM of 22 June 1984 on the regulation of banks and Decree No. 142/PG-RM of 25 June 1984 regarding the modalities for the application of Ordinance No. 84-19/P-RM).