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UNITED NATIONS DEVELOPMENT PROGRAM/THE WORLD BANK

Report No. 7283-ANG

ANGOLA

AN INTRODUCTORY ECONOMIC REVIEW

(in two volumes)

Volume II

June 26, 1989

ANG/87/001

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FISCAL YEAR

January 1 - December 31

ANGOLA

AN INTRODUCTORY ECONOMIC REVIEW

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ECONOMIC DEVELOPMENT DURING THE COLONIAL PERIOD

A. Introduction

1. Unlike the majority of former European colonies in sub-Saharan Africa, which became independent in the late 1950's and early 1960's, Angola has been an independent nation only since 1975. The length of the Portuguese colonial presence in Angola (over 500 years) and its particular characteristics left a colonial legacy which continues to constrain Angolan economic development. The unique nature of the Portuguese colonial system is that it was based on an indigenous labor system that was never "free." Domestic slavery was legal until 1870 when it was replaced by a brutal system of forced labor (euphemistically called "contract labor") until 1961 when it was abolished in the wake of the nationalist uprisings. Moreover, since the 1920s, Angolan development policy focused primarily on raising the number and prosperity of the white settlers and increasing the coffers in Portugal at the expense of the indigenous Angolan peoples. Angola's best agricultural lands were seized by Portuguese settlers. Angola became the dumping ground not only for hundreds of thousands of largely illiterate Portuguese but also became the repository for Portugal's key exports such as alcholic beverages. Prior to the outbreak of the armed struggle in 1961, Portuguese economic interests enjoyed a virtual monopoly over investments in the colony and, given Portugal's own economic underdevelopment. this caused unique distortions in the Angolan economy not found in parts of Africa colonized by the British, French, or even the Belgians. Finally, the fact that over half of the 325,000 white settlers had never gone to school and the vast majority of the rest had less than four years of education, resulted in the Portuguese occupying almost every position in the modern economic sector from engineers and doctors to waiters and taxi drivers. Thus, shockingly few Angolans were trained in any skilled profession. The singularity of Portuguese overseas policy makes it particularly important to analyze the pattern of colonial development in Angola in order to understand the opportunities and constraints of the People's Republic of Angola fourteen years later.

2. Angola's colonial economy can be characterized through various stages or cycles of development. These cycles can even be named after the major export and its direction: slaves to Brazil, coffee to Portugal and oil to the United States, each cycle defining a period during which the external sector of the economy is dominated by a particular product, by a particular market or both. The analysis of Angola's development cannot neglect the interaction between economic dependence and colonial rule. For purposes of exposition, the colonial economic history of Angola can be divided into three broad periods. The first period includes the early alliance between the Portuguese and Congolese crowns, as well as the slave trade directed mostly to Brazil, (sometimes referred to as a South Atlantic link). The second period begins with the hundred years of transition from slaves to coffee, during which territorial occupation and settlement took place, and includes the emergence of a coffee export economy based on quasi-forced labor. In the forties, the Angolan economy initiated a growth

process that involved considerable immigration from Portugal, in response to the coffee boom. The white settler population increased from 44,000 in 1940 to about 325,000 by 1974. Generally favorable prospects for external trade were decisive in the evolution of internal conditions, reflected by changes in industrial regulation, in agricultural incentives, in labor laws and in monetary policy. A third period begins with the Portuguese military response to the 1961 armed revolt when some of the economic constraints of colonial rule where relaxed, allowing rapid industrialization to take place alongside the coffee economy and concludes with the beginning of the "oil boom" which immediately preceded the 1973 price increase by OPEC and the 1974 Portuguese revolution.

B. A South Atlantic Link

3. In the thirteenth century Angola was inhabited primarily by Koisan-speaking groups who were forced to migrate by the push of Bantu-speaking peoples whose migratory patterns and developed (slash and burn) economies took them into the territory. Some were well developed kingdoms (e.g., Luanda and Kikongo) who moved southward into Angola during the thirteenth and fourteenth centuries in search of new areas to cultivate.

4. The first encounter between Europeans and Angolans occurred in 1483 during a voyage of Diego Cao on his way to find a sea route to India. The initial contacts between the Portuguese and Kikongo were quite egalitarian and included the establishment of diplomatic relations between the two Kingdoms. The Kongo royal family even urged Lisbon to send missionaries to facilitate the conversion of Kikongo to Christianity. Within a decade of the first contacts, however, Portugal focused almost all attention on the slave trade and by 1526 the situation had deteriorated to the point that the Kongo King wrote to his Portuguese counterpart that the slave traders brought "ruin to the country. Every day people are enslaved and kidnapped, even nobles, even members of the King's own family." 1/

5. At the time, the Congo occupied a vast region, including the parts south of the present Congo and Zaire and north of Angola, where the capital was situated. The region was densely populated. The population lived mainly on the cultivation of a certain number of food plants such as massambala, massango and luco. 2/ On a lesser scale, banana, vegetables, sugar-cane and the palm tree were cultivated, the latter being used to make a fermented drink called malufo. This spirit constituted on of the country's principle handmade products, besides weaving and metal-working. While malufo was produced by the peasants and satisfied an important dietary requirement, the rest of production was reserved for the nobility. Metal-working (iron, copper and gold) was practised in this

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1/ Paiva Manso, Historia do Congo, p. 54.

2/ W.G.I. Randles, L'Ancien Royaume du Kongo des origines a la fin du XIX siecle (Ed. Mouton, Paris, 1968), p. 65. This book is the major reference for this period. A text from the end of the 16th century notes the sweet potato as the basic food.

part of Africa from the first century B.C. 3/ In the same way as palm was used to produce malufo, the production of cereals also gave rise to a manufacturing process for obtaining flour. The first European chronicles also note the raising of beef cattle, sheep, and poultry, but animal traction and the weaving of wool were not practised. 4/ Except for the sowing of the land, agricultural work was the responsibility of the women. Overall, available tools were extremely modest, although despite periods of drought or plagues, production was described as abundant.

6. Land belonged to the kingdom. On the death of a particular farmer, all his fixed property reverted to the King or traditional chiefs, who then decide on the future of the estate. Inheritance was therefore dependent on royal consent. The recorded testimonies agree that this policy prevented private wealth accumulation, so that the differences between rich and poor were determined for each generation by the political process. The peasants paid taxes to the village chief, who paid the provincial governor, who in turn paid the King; at each stage of the process the receiver kept for himself a certain percentage. Although some testimonies report that the process was quiet harmonious, other testimonies report that the collection of taxes almost always implied (principally in the backward regions) the resort to violence, provoking occasional revolts. 5/

7. Long-distance trade was controlled by the King or by the governors of the provinces. Salt from the coast and raffia products form inland areas were two of the main products exchanged. Some Portuguese chronicles note that the zimbo (a small shell from Luanda island) served as currency. However there is no solid evidence of the use of zimbo for the acquisition of food; it is merely conjectured that the zimbo may have served, in certain cases, for long distance trade. Moreover, the zimbo together with other products and even slaves, seem to have been used to pay taxes. 6/ The King is reported to have fixed the prices of

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3/ R.P.A., History of Angola, p. 34. "The blacksmith enjoyed considerable economic prestige ... he was frequently soothsayer, judge and witch-doctor. The fact of possession of metal weapons made certain tribes and peoples superior in offensive power over their neighbors who had only stone weapons. This explains how the Bantu, who arrived in the territory inhabited by the Koisan, settled there."

4/ Op.cit., Randles, p. 69-70. This and the following section are based on citations of H. de Bolonha.

5/ Cavazzi, cited in Randles, p. 76.

6/ Felner, History of the Kingdom of the Congo, cited by Randles, Op.cit.

products. 7/ Indeed, the analysis of documentation from the various periods suggest that such prices remained relatively stable over four centuries.

8. The first attempt at white settlement occurred in 1575 with the arrival in Luanda of Paulo Dias de Novais who landed with the title of "donatario" of the Angolan coast, a method of colonization used in Brazil. Novais and his men were more interested in finding the fabled (but nonexistent) silver mines near Cambambe than in establishing permanent white settlements. They also brought the pursuit of slaves carried out among the Kikongo in the north to the area around Luanda inhabited by the Kimbundu. A period of wars and incursions followed, during which the rumors about the existence of silver mines in Cambambe proved to be false. 8/ This coincided with the Brazilian depression, and forced the colonial power to search for a new economic use for the former ally. For about three hundred years, this new use was going to be the slave trade, which became the basis of all colonial economic activity until the mid 19th century. Since Angolan slaves were mostly sent to Brazil, a South Atlantic link emerged between these two Portuguese colonies. Throughout, the international market conditions were highly rewarding for the slave trade. 9/ Although the Crown continued to pursue a moralizing policy and prohibited the inland slave trade, this prohibition was probably not effective since it was declared in 1620, shortly before the second cycle of the Brazilian sugar boom.

9. The Dutch conquest of Brazil, in the middle of the seventeenth century, led Holland to seek control of the source of the slaves. The Dutch made strategic alliances with key Angolan leaders, like the famous Queen Nzinga, who helped them drive the Portuguese from the coast in 1640. The Dutch did not accede to Queen Nzinga's admonition to eliminate all Portuguese in the area as they found the Portuguese to be useful middlemen in the slave trade. Luanda was reconquered in 1648 by a Brazilian fleet led by the Governor of Bahia. Once the area was recovered by the Portuguese, the Dutch were naturally forced to evacuate the important slave markets of Luanda and Benguela (founded in 1617), and other lesser ports in the north. The Sa expedition was almost entirely financed by Brazilian merchants and undertaken despite the clear policy of Dom Joao IV not to offend the Dutch in the difficult times following the Portuguese restoration. The King even threatened to punish Sa, who nevertheless was the initiator of a period of 12 years during which the governors of Luanda were

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7/ Proyat (1776) cited by Randles, Op.cit.

8/ D. Birmingham, Trade and Conflict in Angola, 1483-1790 (Oxford: Claredon Press, 1966), p. 62.

9/ Bernard Founou: Cours sur le Developpment de l'Afrique - Amorce du Sous-Developpment: La Traite Negrire, quelques donnes chiffres (IDEP - Dakar, March, 1979)

Brazilians. During that period, the Brazilian slave trade became so predominant that there was a local revolt against the arrival of one of the governors in 1670, when appointing a new governor from Portugal, the Crown granted a Charter to the Luanda settlers for their protection.

10. During the Brazilian consulate, the conflict against Congo and Matamba for the control of the inland trade continued. The African Kingdoms were defeated between 1665 and 1681 and both Kings accepted a truce, becoming vassals of the King of Portugal. However, the Portuguese continued not to control the slave trade, given that they had to pay a toll to the Imbangalas for the caravans coming from the Londa Empire. For that reason, it was necessary to return to the regime of exchange, with prices dictated by the English and French competition in the north. By that time, however, the sugar boom was over and Portugal was going through a severe depression. The volume of the slave trade decreased accordingly.

11. There are no reliable records on the number of slaves exported from Angola and Congo during the period from 1500-1700. There is some agreement on the slave imports into Brazil which total 625,000. It is thought that about half came from Angola. However many slaves exported from Angola were declared, for tax purposes, as having Brazilian destination, although they would go to Spanish America instead. 10/ North European competition for African slaves picked up after 1650, due to the sugar boom in the Caribbean, after the Dutch had been expelled from Brazil. In the 18th century, the English and French controlled over 80% of the West African slave trade. Portugal, however, handled about two-thirds of the south Atlantic trade. In the period 1700-1850, almost 1.8 million slaves were exported by Angola and Congo, whereas Brazil imported about 3.6 million. Almost all of Angola's exports went to Brazil, and taking mortality into account, the total number of slaves exported from Angola may have been as high as 2.5 million. The anticipation of the end of the slave trade led to enormous slave imports into Brazil in the late 1820's followed by a sharp drop in the early 1930s. However, the coffee related demand for labor maintained slave imports at a high level until the middle of the century. At the end of the period, there is little doubt that Angola and the Congo were severely depopulated as compared to the 16th century. Contrary to what seems to have occurred in West Africa, the increase in population brought by new food products like maize and manioc was not sufficient to offset the drain of the slave trade.

12. The colonial trade mechanisms lay basically in the relationship between the powerful coast merchants and the traditional chiefs inland or in the wandering activities of the hawkers, the small white, mixed race and black merchants, components of an incipient creole society. It is in this creole society that attempts at economic diversification were made several years before the abolition of slavery. In fact, in 1780 an active economic

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10/ Jorge Braga de Macedo, Colonial Development of Angola: The Rise and Fall of a South Atlantic Link (mimeo, Yale University, March 1978). Estimates of the total number of slaves shipped from Angola during this period range from 750,000 to 1 million.

policy was pursued in Angola under the governorship of Sousa Coutinho, leading, for example, to attempts at producing iron in Nova-Oeiras, near Massangano. These efforts collapsed after Coutinho's departure but when the Brazilian demand picked up again, they were replaced by attempts to expand east and south. In 1830 the first coffee plantations appear in Massangano and Ambaca and cotton is grown in Golungo. At the same time, trading settlements like the Dondo, on the banks of the Cuanza, gained importance and Portuguese coming from Brazil settled in the Namibe desert where Mocamedes was founded. Most of Angolan foreign trade was with Brazil, the slaves being paid for by Brazilian cane liquor and gold.

13. Slavery was abolished in three phases, spanning over forty years. First, there was the prohibition of slave exports in 1836, followed by the abolition of slave trade under the Portuguese flag six years later; finally there was the abolition of slavery itself, in 1878. The prohibition was felt as a great loss and in the 1830's the idea of remaining associated to prosperous Brazil found many supporters in the local "comprador" class. Nevertheless, the pro-Portuguese faction won and some efforts were made to develop a tropical export economy. Wax, ivory, palm oil, and peanut exports came to the fore after the slave trade subsided. In 1870, the rubber boom spread through the territory and, until 1915, this product was to be Angola's first export, with yearly averages on the order of 2,000 tons. 11/

C. SETTLEMENT AND CONTRACT LABOR

Territorial Occupation

14. At the Berlin Conference in 1885, the principle of effective occupation was accepted over the Portuguese idea of priority of discovery. The partition of Africa imposed obliged Portugal to effectively occupy the territories it claimed to have discovered. This led to renewed interest in the exploration and the "pacification" of the interior, and to a debate over the use of the colonies. The debate was dramatized by an English Ultimatum in 1890 against the Portuguese idea of linking Angola and Mozambique by land (the so-called "pink map"). In Angola, Portugal had occupied Luanda and its immediate hinterland since 1575, and Benguela and surrounding districts since 1617. However, only in the 19th century can the Portuguese presence be considered stable in parts of the north (south of the Kingdom of Congo) or on the coast south of Benguela). In 1906, the settled area refers mostly to the zone of influence of the Benguela railway, built by the English with the purpose of transporting the minerals from Katanga and the Copperbelt and owned mostly by Tanganyika Concessions. The scant penetration and its pattern demonstrated the considerable dependence of the colony on external factors. Moreover, it suggested that after all these centuries, Portugal's colonial policy had been unable to

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11/ Joao Maria Cerqueira d'Azevedo, Subsidios para o Estudo Economico de Angola nos Ultimos Cem Anos (Luanda, 1950).

secure an administrative occupation comparable with that achieved by the other partners in the Berlin Conference. This explains the statement that the effective Portuguese presence was limited to 65 years in about 80% of Angola's territory. 12/

15. At the end of the First World War, when various military occupation campaigns were in progress, the international price of rubber fell. This trend continued and, in the 1930's, it forced the disappearance of rubber from the list of Angolan exports, where coffee already comes first in 1926. During this period of falling export prices, and national humiliation from the British ultimatum, some measures of colonial policy became relevant, such as the customs restrictions of 1892, which attempted to transform Angola into a closed market for Portuguese wines and textiles. Angola would thus be prohibited from manufacturing spirits which had become one of the main imports. In 1906, moreover, the native poll tax was introduced to alleviate the continuing crisis of the Angolan public finances and facilitate the recruitment of forced labor.

16. Simultaneously, important railway lines began to be built, linking the coast to the interior of the country. In 1909, the Luanda-Malange Railway was inaugurated, crossing a large segment of the territory where the commercial exchanges and the plantations had acquired considerable economic importance. The construction of the Benguela Railway (C.F.B.) was initiated six years earlier, though only in the 1930's does it attain the objective of reaching the eastern frontier to serve as the outlet for mining production from the Belgian and British possessions. A third railway was to connect the port of Mocamedes to Lubango, where the Portuguese had established a colony since the end of the 19th century. International investment in Angola was reflected not only in its use as a corridor by the Benguela Railway, but also by investments in the mining sector, especially in the diamond area of Lunda, where an association of English, South African, Belgian and Portuguese interests gave rise to Diamang in 1921. In 1929, the production of diamonds had reached 250 thousand carats and employed over 6,000 Africans as well as 155 Europeans.

Monetary Reform

17. The negative effects of the Great Depression on the prices of raw materials, three successive locust plagues in the 1930's and budget mismanagement contributed to the colony's economic difficulties. A monetary reform designed to stabilize the Angolan currency was introduced in 1926. This was the origin of the "angolar" (which enjoyed fixed parity with the Portuguese escudo) as well as of the "Junta da Moeda de Angola" (Angola Monetary Authority), a Government Department controlling the matters dealing with currency circulation as well as the management of the Monetary Reserve Fund. The Authority supplied the colony with the amount

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12/ Gerald J. Bender, Angola Under the Portuguese- The Myth and The Reality, (Berkeley: University of California Press, 1978), Chapters 3 and 4. A map of the settled area in 1906 is reproduced in Randles, op. cit.

of "angolares" to cover transfers from Portugal as well as Portuguese Escudos in Lisbon to cover transfers from Angola. The Bank of Angola began to issue angolares in 1928.

18. Despite this reform and the fact that the country's finances were kept under control until the end of the fifties, monetary difficulties plagued the colonial economy since monetary creation was directly linked to falling export revenues. The transfers of the settlers to the mother country and the slump in the export business opened a trade balance deficit in 1929, leading to the promulgation of the "Acto Colonial" in 1931, where the social, economic and financial policies of Lisbon for the colonies took constitutional form. In the face of the persisting crisis, the Portuguese government imposed credit ceilings, set up an Exchange Fund and restricted the transfer of funds, requiring the surrender of 75% of export receipts and a strict control of imports. These measures went against the objective of transforming Angola into a Portuguese settlement colony. Regarding authorization for transfer of profits, the restrictions were less severe, suggesting that the objective of attracting foreign capital was seen as instrumental in settling the territory. Government control, relaxed after the coffee boom in 1946 and again in 1963 when monetary integration of the so-called "Escudo Zone" was introduced, was to return forty years later with the restriction on payments in 1971. In the meantime, the economic stabilization and recovery of the colony was initiated with the reduction of imports, thus allowing a trade balance surplus during the Second World War.

The Coffee Boom

19. During the war, Portugal increased its share of Angolan imports from 39% to 65%. At the same time, the occupation of land by the settlers increased rapidly, mostly in the north. Official statistics refer the share of the land controlled by the settlers as having increased from 12 to 40% in two years, probably an exaggeration. One of the means used to spread control over land was to demarcate the estates to encompass African coffee production as "natural growth". Production in 1946 can be considered the result of land occupations at the beginning of the decade, since the coffee trees needed five years before the first harvest. In 1945, diamonds were the principal export in value terms, but in 1946 despite a 40% increase in diamond exports, coffee exports became the main export, reaching over 46,000 tons. Coffee was to dominate the list of products exported by Angola from 1946 to 1972. The rise of coffee prices in the world market after the start of the Korean war in 1950, stimulated coffee cultivation further, and turned out to be a powerful attraction for the immigration of settlers from Portugal. The white population increased from 44,000 in 1943 to 173,000 in 1960, which together with the 53,000 of mixed race represented 5% of the total population of 4.8 million. In any event, demand for skilled labor in Angola was so strong that, from the mid - fifties, it was no longer necessary to have a "letter of appointment", generally issued by the employer in the colony and guaranteeing that the settler/immigrant could find work there.

20. Besides coffee, whose share of total exports remained between one-third and one-half during the fifties, Angolan diamond and sisal exports normally made up the other half (Table 1). Lesser export products were sugar, cotton, manioc flour, fish-meal, dried fish and corn.After 1957, iron-ore began to be exported and in 1960, it already ranked as the fifth export. The forties were a decade of accelerated growth, due to the favorable trends in raw material prices, especially coffee and cotton. The subsequent stagnation starting in the mid-fifties coincides with the fall of raw material prices despite the increased quantities exported. During the same period, close to one half of imports was accounted for by wines and spirits, textiles, freight vehicles, bulk and work iron, industrial machinery and equipment, and railway material (Table 2).

21. Angola's principal customer in the fifties was the United States, with about one fourth of exports. The share of Portugal declined from about the same to less than one fifth, whereas the share of the United Kingdom and Holland rose from one quarter to one third during the same decade. Angola's main supplier was Portugal, with close to one half of the total, with the United Kingdom and Germany providing about one quarter of imports and the United States accounting for about 10%. The predominance of Portugal in Angola's imports, while exacerbated by the legislation reserving the Angolan market for certain Portuguese products, such as textiles and wines, was not as pronounced as in other European colonies, perhaps a reflection of the mother country's relative underdevelopment.

22. The rise in the value of coffee exports after 1946 helped the Angolan trade balance, which showed surpluses between 1950 and 1956, the largest one being recorded in 1953. From 1957 to 1960, the trade balance was in deficit, due to both the temporary fall in the price of some exports (coffee, sisal and maize), and a sustained growth in imports, mainly of textiles, wines and equipment. Nevertheless, the rate of growth of imports declined sharply over the period. This sharp drop in the pace of imports did not prevent a serious exchange crisis. Although some restrictions on the spending of foreign exchange earnings had been imposed already in 1955, more drastic restrictive measures were imposed by the Lisbon authorities in 1959. Residents were required to surrender to the territory's Exchange Fund approximately 90% of foreign exchange earnings, besides adhering to a list of priorities for imports. This situation remained in force until 1963, when a new system of payments came into force in the "Escudo Zone".

Colonial Policy of the "New State"

23. Integrating the colonies in a Portuguese economic union was one of the objectives of Salazar's "New State". Indeed, the Colonial Act mentioned the principle of "natural solidarity" between the metropolis and the colonies in article 34. This natural solidarity was said to be the foundation of the various economies, and stemmed from the "moral and political links" between the metropolis and the colonies. In the fifties, Portugal exchanged manufactures for tropical materials with its overseas territories. However, the level of development of Portugal and its

colonies, implied a pattern of trade for metropolitan Portugal which made it unlikely that the "Escudo Zone" would be able to exercise monopoly power in international trade, in line with the objective of collective self reliance desired by Salazar.

24. The Political Constitution of the Portuguese Republic was enacted in 1933, but it was not until 1951 that the philosophy of economic integration with the colonies was fully accepted. Article 34 of the Colonial Act was thus replaced by article 158 of the Constitution, and a paragraph was added which clearly stated the objective of national integration: "The economic reorganization of the overseas territories must integrate itself with the general economic organization of the Portuguese nation and participate through it in the world economy. To reach the aims stated in this article, the free circulation of products within the national territory should be facilitated by appropriate means, including the gradual reduction or elimination of tariff duties. The same principle will apply insofar as possible to the circulation of people and capital assets". In the same statute, the colonies were renamed "overseas provinces" - a traditional label which had been abandoned after the Republican revolution of 1910.

25. At the time, though, Portuguese attempts to establish an economic union with the colonies began to clash with the general European trend toward decolonization. Thus, in 1953, when countries like France and England were starting to prepare for the decolonization of their colonies, Salazar's government promulgated the Lei Organica do Ultramar (Overseas Territories Act), stating the objectives of Portuguese presence as "exploiting the resources and the peoples" together with "raising the living standards of the natives within the framework of social justice".

26. Steps were thus taken to facilitate trade between the various Portuguese customs territories, so as to move towards a customs union. A decree in March 1957 established free trade among the different overseas provinces as far as their domestic production was concerned. It was also decided that metropolitan imports from overseas would only pay 30 percent of the minimum tariff and some products -- such as tea, cattle, lumber, fruit and fish -- were free of duties. Moreover, imports from metropolitan Portugal were generally granted a 50 percent rate reduction in the tariff of the overseas provinces.

Contract Labor and International Factor Mobility

27. It was therefore in the fifties that the authorities in Lisbon created a framework that would justify their presence in African territories, despite the shifting international values and the increasing reluctance of international agencies to condone European colonialism. The number of home-based companies that began to invest in the colony increased, and many settlers whose prosperity derived directly or indirectly from the coffee boom started a considerable number of small and medium-sized companies. In all cases the availability of local labor was the basic condition, whether by the practice of low wages or by the resort to so-called contract labor ("contratados").

28. Manufacturing industry, very incipient and geared to the local urban population, was based on the refining of sugar, treatment of tobacco, spinning and weaving, soap-making and fish derivatives (mainly fish-meal). The cement, beer and textile industries (those carrying largest weight in the manufacturing sector), the large agricultural companies and the import-export trade were tied to Portuguese capital, apart from the monopoly of all Angolan maritime freight, which was held by Portuguese companies. Foreign capital was dominant in the Benguela Railway, in the mining sector (mainly diamonds, copper, manganese and iron) and also in some agricultural companies such as Cotonang and SETA which had Belgian/Portuguese and American/Portuguese capital respectively. Industrial licensing continued to bar entry to the colonial economy for industries that might have generated competition with Portuguese exports into Angola. Hence he Angolan economy continued to be sustained by mining and agricultural activities.

29. The expansion of the plantations and the mines and the launching of work on infrastructure created a strong demand for labor, in part satisfied by the methods of recruitment already described. More specifically, recruiting officers provided forced labor in the diamond mines and plantations, while police raids provided the labor for public works, especially the opening of new roads. The vast majority of the contract labor was recruited among the farmers and herdsmen of the central provinces. Prior to the fifties, the number of forced workers is difficult to determine. Recruiters travelled all over the bush and managed to obtain the number of workers that had been promised to the companies. The methods ranged from capture for non-payment of taxes and for misdemeanors to the corruption of some tribal chiefs. An alternative form of recruitment was through the imprisonment, in the cities, of natives ("indigenas") who were not carrying a valid work permit. The use of forced labor was to diminish towards the end of the fifties, in the face of resistance from the population and the beginning of nationalist struggle and international pressures. In 1961, labor policy would be changed with the abolition of the Native Work Code (dating from 1928) and its substitution by the Rural Work Code, which defined working conditions in farms and mines.

30. In the fifties, the majority of the indigenous population was employed in agriculture, and the commercial network, which extended from the principal markets of Angola to the hinterland, was rooted in the purchase of agricultural products and the sale of imported products. The white population which lived from agriculture possessed large estates or resided in the settlements. As the name indicates, these were zones in which the settlers' families were fixed, developing the agro-livestock potential of certain areas of the territory, which had been selected by the central government authorities. The regime of settlements was intended not only to provide an incentive for the immigration of Portuguese farmers, but also to rationalize and improve farming production, bearing in mind the requirements of the export markets and domestic consumption (Table 3). The creation of new agricultural bodies - farm cooperatives - also began to be encouraged. Together with this associative movement, there was a growing intervention of the Provincial Agricultural Technical services,

chiefly in the "campaigns for the stabilization of indigenous/itinerant agriculture, with the aim of organizing indigenous rural life, creating a class of small, settled farmers, which both facilitated technical and social assistance and protected the soil against erosion".

31. The prevailing social structure could be roughly described in terms of the following categories: (a) a dominant class whose representatives remained in the colony for the term of their "service commissions", useful even as a means of promotion in metropolitan public life (in a sense this was an "absentee" class, because most of its members did not reside in Angola); (b) an upper middle class consisting of resident Europeans (and their descendants) who became owners of medium-sized companies or attained top positions in business or public administration, thus controlling the economic life of the colony; (c) a lower middle class with mixed racial characteristics, though whites predominated (at the end of the fifties, it included about half of the 172,000 white inhabitants, almost all the 50,000 "assimilated" blacks and nearly all of the 53,000 mixed-race people); small proprietors, salaried employees and petty officials were included in this social layer, from which the forces behind the fight for independence were to emerge; (d) an urban proletariat, divided into two types according to race: a large number of white workers having a standard of living comparable to part of the lower middle class, and employed rural workers, entirely black, and with lower wage levels than the urban proletariat; and (e)in the four or five cities, and chiefly in Luanda, a kind of "lumpen-proletariat" became noticeable and included the majority of the black population who lived in the "muceques" surrounding the capital, as well as white street vendors and under-unemployed workers.

32. Although official statistics on earnings by race are unavailable, it is estimated that in the mid-fifties. Europeans earned a daily wage between US$100 and US$120, Cape Verdeans between US$60 and US$80 and black urban workers between US$10 and US$20. The wage differential, reflecting the lack of skills of the Angolan black worker as well as race, was even greater with agricultural workers, for whom daily wages ranged from US$6 to US$10. These wage differentials and the poor working conditions in rural areas led to internal migrations to the cities (mainly Luanda). In the civil service, the wage categories were practically the same as in Portugal, though fringe benefits were sometimes higher. Social stratification roughly matched racial differences. Thus, as a rule, management posts (even at the middle level) were held by metropolitan Portuguese; subordinate positions were occupied by Angolan whites, those of mixed-race and unqualified metropolitan Portuguese whites, while office boys and unskilled workers were black.

Economic Causes of Nationalist Rebellion

33. In 1960, in the north of the country, the coffee boom led many settlers to apply constant pressure to enlarge their plantations, disregarding the rights of the black owners. Simultaneously, deprivation and discontent in the countryside was attributed to the high prices charged by the traders in the hinterland and the low quality of the products they sold. While the resentment towards the bush traders was common in the

whole territory, native property rights were more respected in the rest of the country than in the coffee growing region. The occupation of land by settlers was practiced on a smaller scale in the center, and was almost non-existent in the extreme south of the country, where the herdsmen kept possession of their cattle.

34. Perhaps because of the coffee boom, but certainly as a reaction to the drastic increase in the Portuguese population (up 570% from 1950 to 1960 in the coffee district of Uige), political/cultural movements espousing African nationalism grew during the early fifties. In 1952, 500 Angolan nationalists sent a petition to the United Nations requesting the end of Portuguese rule. In 1953 the Party for the United Fight of Angolan Africans, was founded and became the MPLA in 1956. The presidential elections of 1958 in metropolitan Portugal revealed also that a number of settlers were against Salazar, since the opposition candidate Delgado is thought to have won in Luanda. The campaign led to the arrest of 57 nationalists (the majority considered of mixed race) in December 1959. This political arrest set a course that would culminate in the beginning of an armed struggle for independence in February-March 1961, followed by a generalized insurrection in the northern countryside.

35. The lack of organization and technical means on the part of the northern rebels, their cruel treatment of the settlers and the prevailing tribalism obstructed the progress of the insurrection itself. The rebels controlled various agricultural and plantation communities in the then district of the Congo, causing damage to equipment and buildings, but leaving the coffee trees practically unscathed. The reaction to the rebels came with a vengeance: between 8,000 and 30,000 African Angolans were killed, the former being the Portuguese official figure and the latter being the one the United Nations committee accepted. According to the same source, by December 1961, another 150,000 inhabitants from the northern rural areas fled to the Republic of the Congo-Leopoldville.

36. The events of 1961 led to reformist measures, supported by a new reinforcement of the military presence in Angola. In particular, these reforms allowed the access of a greater number of Angolans to secondary education and intermediate posts in public administration as well as the changing of work relations, with the substitution of the Native Work Code by the Rural Work Code. The resorting to contract labor became more and more sporadic. This contributed towards the creation of a more modern labor market, despite the limitation derived from the racial composition of the unskilled labor force. Because a large share of immigrant labor from Portugal reached the colony with very limited skills, the increase in the labor inflow did not improve the skill mix as much as it changed the racial mix.

D. Soldiers and Industrialization

37. The direct effects of the 1961 nationalist rebellions on productive capacity were rather small. Only the cultivation of cotton was seriously affected by the armed struggle, especially since its production area - the Cassange basin - was the scene of serious incidents in the

aftermath of peasant protests. This led to a massive flight of workers, who were not replaced. In the coffee area, on the contrary, thousands of new workers were hired in the central plateau and sent north. The difference was probably due to the realization that the Angolan economy depended much more on the export of coffee than on cotton. As discussed in the following section, as a result of the events of 1961, the Lisbon authorities also abolished some laws and regulations, thus increasing the number of economic activities the colony could develop; they also improved wage conditions and created "rural markets", where the surpluses of the peasants could be sold in an organized fashion. These new policies, together with the rising Portuguese immigration and military contingent stationed in the territory, created employment and increased overall purchasing power, laying the basis for the expansion of industrial activities as well as coffee production.

38. In the sixties, Angolan exports continued to be dominated by the coffee/diamond tandem. Sisal remained the third most important export product until 1968, when it was replaced by iron ore. Oil already ranked fourth in 1969 and second by 1971. In 1973, oil became the lead export, followed by coffee, diamonds and iron ore. Other products carrying weight in the export trade were sisal, cotton, sugar, manioc flour, fish products, timber, palm-oil and, after 1969, bananas. Angola's main customer in 1961 was still the US, but from the following year until 1972, it was replaced by Portugal, which bought about one third of Angola's exports, both agricultural products and minerals. Portugal was not always the final destination though, since diamonds were re-exported to the United Kingdom. In 1973, the US would again top the list of countries purchasing from Angola (with 28%), mostly due to oil and coffee exports. Portugal accounted for about one quarter of exports, followed by Canada, Japan, and major European countries.

39. From 1962 onward, the Angolan economy started to recover from the 1957-60 exchange crisis as well as from the temporary fall in the prices of its exports. A comparison of international price indices for coffee and the price of Angolan coffee shows that the years 1963/64 and 1972 were the only ones in which the international price index rose more than the Angolan index. Despite fluctuations in the relative price of Angolan coffee, export earnings grew rapidly and the balance once again recorded a surplus. This was to continue until the end of the colonial period (with the exception of the years 1967 and 1968, as a result of a strong rise in imports of equipment and motor vehicles). The strength of the external balance is evident in the data presented in Tables 6 and 7 below.

40. Unlike the early coffee cycle, during which the structure of merchandise trade seemed to change more on the export than on the import side, a change was noticeable in the composition of imported goods after 1965. Growing imports of transport equipment, industrial and farming machinery and equipment, raw and worked iron indicated the effort to equip the light manufacturing and extractive industries as well as the creation of infrastructure, such as roads and other forms of communication. The rising military contingent may also have helped step up the importation of Portuguese food and drink products, as well as textiles.

41. Regarding the supplier countries, Portugal remained at the top of the list even though its share of Angola's imports gradually diminished from 44% in 1961 to 26% in 1973. In 1971, Portugal's share was still larger than the combined share of the next three suppliers, Germany, the US and the UK, with about 10% each. Despite the possible demand bias for Portuguese consumer goods, a pattern similar to the one which followed the protectionist regime of 1892 can be observed in the structure of trade during the sixties. Despite the increase in volume, Portugal's share was decreasing significantly.

A New Colonial Economic Policy

42. As mentioned above, after the events of February 1961, the Lisbon authorities felt the need to reinforce the Portuguese presence in the territory. To this end, the Portuguese government adopted a series of measures which stimulated export-led economic development and industrialization in Angola. This was also the policy that the Portuguese government was pursuing for the development of the mother country, in the framework of the European Free Trade Association (EFTA), of which Portugal was a founding member since 1960. At that time, Portugal's accession to the General Agreement on Tariffs and Trade (GATT) required the creation of an additional free trade area with the overseas territories, in such a way as to avoid the application of the most favored nation clause to the trade between GATT partners and the Portuguese colonies.

43. A significant step was taken by a Decree in November 1961 which abolished all barriers to the free circulation of domestic products within the various territories of the nation. As general economic conditions warranted, capital account liberalization was also to be attained. The abolition of customs duties was to be implemented progressively, in accordance with the level of imports. Existing quantitative restrictions, or the introduction of new ones were to be justified on grounds of facilitating the adaptation of economic activities to the new conditions of competition or in situations where a particular sector was experiencing difficulties which threatened the economic situation of a region and no other measures could be taken. This Decree also took measures to promote the elimination of disparities between legal and administrative systems, which hindered inter-regional trade, as well as the improvement of transportation. Finally, the Decree contemplated the liberalization of exchange controls between territories.

44. Even from a strictly commercial viewpoint, Portuguese economic integration had much weaker effects than the integration of the metropolitan area with Europe, including both the European Free Trade Association to which Portugal belonged and the European Community, with which it signed a free trade agreement in 1972. In the fifties, the share of the overseas territories in metropolitan Portugal's imports declined while the corresponding share increased for exports. In the sixties, however, both shares declined significantly. In 1972, the share of Europe in metropolitan Portugal's trade reached 56% for imports and 62% for exports, up from 40% in 1954, while the corresponding figures for shares of

all the "overseas provinces" were 10% (down from 17% in 1954) and 15% (down from 25% in 1954). The introduction in 1961 of a free trade area with the overseas territories was therefore not as important economically as it was politically.

45. Accordingly, an exchange rate union was set up in 1963, which was maintained until 1971. The new system of payments, known as the Escudo Zone, started from the principle that there would be no shortage of foreign exchange in any of the component parts of the system. If this should occur, the Monetary Fund of the Escudo Zone would intervene, granting credit to the Exchange Fund of the colonial territory in deficit. For example, an Angolan importer who purchased merchandise from Portugal would have to pay his debt in "Angolan" escudos to the Exchange Fund which was managed by the Bank of Angola, which would then automatically effect the transfer, in Portuguese escudos, to the creditor in Portugal.

46. The improvement in the foreign exchange situation thus allowed the liberalization of payments outside Angola. The system of designating priorities for transfers, in force since 1955, was abolished. The surplus in the overseas territories' external payments contributed to the overall surplus of the "Escudo Zone" in the period. Despite the emergence of a growing trade deficit after 1964, invisible receipts allowed a surplus on the current account throughout the period. Similarly, despite a deficit on capital account between 1963 and 1968, the overseas territories contributed to the accumulation of reserves at the Bank of Portugal, a situation not unlike the Franc Zone during the same period.

47. An "Investment Code" was also enacted in April 1965 to strongly encourage the flow of foreign capital to Angola. This Code - which also coincided with a greater opening of the Portuguese economy to foreign investment from other countries in the Organization of Economic Cooperation and Development (OECD) - was seen as a signal for the start of the "race for the progress of Angola". The Lisbon authorities wanted to be able to count on the military, political and economic support of the major OECD countries. Therefore, they could no longer keep exclusive control of such widespread natural resources; it was necessary to share them. Later in 1965 scheme of "new industrial licensing" was revoked, cancelling the previous legislation that prohibited the setting up of new industries in the colonies, especially textiles.

Coffee-Led Industrialization

48. These new policies contributed to the year 1965 being a turning point in the growth of the Angolan economy. From a level of about 17% of gross domestic product in the early sixties, the industrial sector (including extractive and construction industries as well as manufacturing proper) reached 38% of GDP in 1970. Metropolitan and foreign capital were concentrated in both the more capital-intensive extractive industries such as diamonds, oil, iron ore, petroleum derivatives, cement and the more labor-intensive activities of the agricultural sector, such as coffee, cotton, sisal, sugar, tobacco. In addition to these activities, which in one way or another used natural resources, several manufacturing

activities were created in the sixties, particularly during the second half of the decade, including chemical products, paper, glass, electric cables, paints and metal containers.

49. Industry was very dependent on Portugal from where a high percentage of raw materials and semi-finished products came. The Portuguese authorities encouraged the process by exempting those materials and products from import duties. There were also tax exemptions granted by the Overseas Minister for the new industries to be created in the colony. These exemptions and tax incentives allowed the development of some industrial zones, centered in the Luanda area and to a lesser extent in the area of Lobito and Benguela. Moreover, in 1971, pressure from local industry forced Lisbon to adopt protective customs measures against competitive imports.

50. The sectors of activity that dominated local industry were: food and beverages, textiles and tobacco, contributing (in the 1966-71 period) an average of about 54% to the global value of sector output (Table 5). The food and drink industries alone accounted for 44% of total output. Overall manufacturing industry grew, between 1962 and 1967, at an average annual rate of 15%, and, from 1968 until independence, at a rate of 20%. This growth reflects the effects of economic measures such as the Investment Code, new Rules of Industrial Licensing, dismantling of Customs tariffs, tax exemptions, and investment in transport infrastructure, adopted in the mid-sixties and incorporated in the Interim Development Plan (1965-67) and the Third Development Plan (1968-73).

51. Although Angola had one of largest industrial sectors south of the Sahara, the participation of the manufacturing sector in exports from Angola was weak. As shown in Table 5, the average percentage of gross industrial production exported was about 20% during the 1966-71 period, the rest being absorbed by the domestic market. By 1973, the food and beverage industries represented about 6% of the total export value, the chemical industry about 0,4% and textiles about 6%. With respect to the textile industry, more than half of the value of these exports was accounted for by cotton wool for metropolitan Portugal, and the remainder by fabrics and other textile articles exported to Zaire and Sao Tome and Principe, according to the Bank of Angola (1973 Report). The local textile industry (which had strong competition from Macao) concentrated basically on seed-removal or ginning and pressing of cotton, spinning, weaving and finishing of cotton, the shredding of sisal and rope-making. Malange was the main center of the cotton textile industry, with the factories of Cotonang and the city's Agricultural Cooperative.

52. In addition to the increased industrial activity, large- scale agricultural and other projects were also implemented in the sixties and early seventies. The Rural Extension Missions were created in 1971, to co-ordinate projects for the development of zones with agricultural potential, in much the same way as the settlements created in the fifties. Besides the promotion of agro-livestock activity, these projects were also intended to improve the living conditions of the peasant population. In the Lunda district, the activities of Diamang became quite significant in

the late sixties, when production reached 2 million carats. About 20,000 people were employed by the company, which also had a dominant role in providing the region with infrastructure.

Colonial Finances

53. Angola had its own budget, containing all of the revenues and expenditures authorized by the Central Government. Expenditures had to be fully covered by the revenues obtained from the colony's resources. From the thirties onward, Angola's general budget always showed an overall surplus. However, after 1961, the effort required by the colonial war, which was not entirely supported by the extraordinary tax for the defense of Angola, caused the budget surplus to drop, and even required borrowing at times. The budget structure, which did not change much from 1930 through 1973, included an "ordinary budget" and an "extraordinary" budget. Ordinary expenditures included civil service and its management. Revenue sources included direct and indirect taxes, taxes on industries subject to special tax schemes as well as taxes on other activities. Until 1973, the direct taxes were the most important revenue source, but after that year the taxation of industries subject to a special scheme (e.g., oil products) took the lead because of the large increase in oil production. Taxes accounted for half of revenues and state property provided about one quarter. The extraordinary budget included development expenditures on social and economic infrastructure. Up to the end of the fifties, these expenditures were mostly borne by Angola itself in view of the large surplus available. From the sixties on, extraordinary expenditures were mostly financed by loans provided by Portugal as well as shares of Diamang profits, sales of bonds and proceeds from a tax on extraordinary rents (imposto de sobrevalorizacoes).

Money and Banking

54. The rapid growth of the Angolan economy was facilitated by the liberalized payments system. Even though the Escudo Zone seemed beneficial to the metropolis (where most of Angolan savings were transferred through an increase of imports and over-invoicing as well as remittances from the settlers) it turned out to generate large foreign exchange payments on Angola's behalf, so that it accumulated liabilities to the Monetary Fund. Indeed, the liberalized system of payments was to be abolished again when the financial system was seriously strained by an extraordinary volume of delayed transfers. In November 1971, Lisbon once again introduced limitations with a view to "stopping the accumulation of the so-called `delayed transfers' from the province to the metropolis, and trying to create the conditions required for the regularization of those `delayed transfers' (see Table 6 on the balance of payments).

55. The general principles in the decree which re-imposed exchange restrictions were the following: a) the limitation of transfers from each of the overseas provinces abroad (including other national territories as well as foreign countries) to the extent of the cover obtained by the same province; and b) the channelling to the official market means of payment which fed the parallel foreign exchange markets, to prevent unofficial

dealings in escudos or in foreign currency. Thus, the colonies were subject to prior registration of imports, exports and re-exports, as well as to "special and prior" authorization of current invisible transactions, and the import and export of capital. At the time, there was concern in Portuguese government circles about the effects of the limits imposed on imports (especially Angolan and Mozambiquan) on Portuguese exports, assuming that such limitations "of merchandise from the metropolis are reduced to the barest minimum for the realization of that objective". The list of priorities for the spending of foreign exchange favored the import of equipment and raw materials to the detriment of other current consumer goods. In other words, the exchange system which came into force in 1972 reinforced the Code of Investment of 1965, trying to turn it into a true instrument of development for Angola, based on the transformation of agricultural and mining products.

56. Accelerated growth dating from the early sixties was accompanied by a strong money supply increase (about 843% from 1960 to 1973). During that period, the share of currency fell from 28% in 1960 to 6% in 1973. The high level of banking time deposits are shown in Table 7, as an indicator of the financial development experienced by Angola. Another indicator of financial development, the income velocity of money, doubled in the ten years from 1960 to 1969. By then, the growth of money supply at a rate higher than the GDP played a role in the appearance of a parallel exchange market where the Portuguese escudo brought 10 to 20% more than the official exchange rate. Moreover, a certain inflexibility of the system of payments between the two countries in force since 1963 raised difficulties in obtaining Portuguese escudos in time to meet the growing demand due to the acceleration of economic growth.

57. Another indication of its financial development is the considerable banking network Angola acquired. The commercial banks (including the Bank of Angola founded in 1926) were connected to the metropolis (Banco Comercial de Angola, a branch of Banco Portuges do Atlantico; Banco de Credito Comercial e Industrial, a branch of Banco Borges & Irmao; the branch of Banco Pinto & Sotto Mayor of Lisbon) or to foreign banks (Banco Totta Standard de Angola an association of Banco Totta and Standard Bank of England; as well as Banco Inter-unido an association of Banco Espirito Santo and The First National City Bank). In addition to the commercial banks, special investment banks also operated in Angola, mostly engaged in credit operations covering real estate, industry, agriculture and cattle-breeding. These included Instituto de Credito de Angola, Banco de Fomento Nacional, and Caixa de Credito Agropecuario.

The Origins and Role of the Oil Enclave

58. Although oil only becomes the main export product of Angola during the last two years of the colonial period, drilling and searching had begun much earlier. In 1952, the Ministry of Overseas Colonies had been authorized to sign a mining concession with Companhia de Combustiveis do Lobito (Carbonang). Carbonang established the Missao de Pesquisas de Petroleo (Petrofina) which began working in a coastal region between the rivers Kwanza and Zaire. In 1955, oil was discovered in a region near Luanda

called Benfica. Oil extraction began in 1958, in small quantities. Only after 1968 did oil become noticeable in the list of Angolan exports, with 0.1% of the total value of exports. In the following years, though, oil exports increased, rapidly becoming one of the key exported products.In 1973, oil overtook coffee as Angola's first export product and by 1974,oil export values were higher than the combined total of coffee, diamonds, iron, sisal, cotton, fish, fishmeal and corn. As of the end of 1973, there were four companies with a concession for search and exploration, the most important being the Cabinda Gulf Oil Company (CABGOC), a subsidiary of Gulf-Oil.

A Fragile Pattern of Growth

59. Despite the limitations of the data, the output figures reported in Table 8 show a pattern of accelerated output growth in the mid to late sixties, which becomes increasingly inflationary in the last years of the colonial period. The effect of the government budget on the one hand and external constraints on the other, on this pattern of growth are illustrated in Table 8. Throughout the period, private savings exceed private investment, the difference fluctuating from 2% to 7%. This is consistent with acceleration of growth in the mid to late sixties, when the new colonial policy began to have a positive effect on industrialization, and induced greater investment opportunities. Indeed, the decomposition of this difference between public dissaving and foreign investment confirms that growth accelerated in the late sixties, inducing an overall budget deficit of 5% of GDP in 1971, whereas in the late fifties and early sixties the deficit was less than 2%.

60. To understand Angolan development in the late colonial period, it is important to examine relative price movements, as suggested by the ratio of output deflators in Portugal and the United States and in Angola, given that the nominal effective exchange rate measured with equal shares for the two countries remained fixed until 1971, and only registered a slight revaluation in 1971 and 1973. A real devaluation of about 6% over the second half of the fifties is evident, exactly offset by a real revaluation over the second half of the sixties, and stability of the real exchange rate in between. In the early seventies, however, there was a change in the macroeconomic balance, with the savings/investment gap disappearing in 1973, and a real revaluation of 20% developing between 1971 and 1973, and of 25% between 1973 and 1975. It is clear that the extraordinary improvement in the terms of trade may make Angola in the early seventies another example of the so-called Dutch disease, observed in many developing countries, whereby manufacturing is discouraged and loses competitiveness due to the export of mineral resources.

61. The real appreciation of the Angolan currency also appears to be a strong reason to doubt that the coffee-led industrialization could ever have turned colonial Angola into a newly-industrializing country, even without strong protective barriers. The income elasticity of imports was originally close to 2, but it was negative in 1972 - a consequence of the change in the payments regime - and fell below 1 in 1973. A comparison of receipts from trade taxes and imports does not suggest an increase in

protection, but the elasticity remains about 1.5, suggesting that the level might be considerable in light of the free-trade objective. In any event, given the available evidence, the demise of coffee-led industrialization was due largely to oil and exchange rate appreciation rather than changes in tariffs, given that the changes in payments regime implied stricter exchange controls.

62. The oil boom thus obscured the fragility of the industrialization pattern brought about by the combination of primary product exports and a rising urban population, increasingly made up of soldiers, as well as a growing group of settlers and mixed groups, with no political allegiance to colonial rule. Put another way, the policies of 1965 and 1971 did not prevent a duality in Angolan economic development. The peasantry, and to a much lesser degree, the urban worker may have in fact suffered from perverse changes in the distribution of income during the process. Gross domestic product per capita in 1972 was about $200. While this places Angola among the highest levels in sub-Saharan Africa, it masks large discrepancies between the income of the white and "assimilado" population and the remaining 90%. Per capita income of the black population was less than 10% of average white and "assimilado" incomes (though there were significant variations in the latter category). In addition to this perverse pattern of income distribution, education and health standards did not significantly differ from the ones observed in African countries with lower incomes per head. This suggests that, whatever the effect of colonial rule in bringing Angola to the middle-income level in the early seventies, it did not bring higher social welfare at the time of independence (See Table 9 for some Angolan social indicators). Moreover, even at similar income levels, there were qualitative differences between the social services available to the African population relative to the Portuguese soldiers or even the population of Portuguese descent.

E. ECONOMY AND SOCIETY AT INDEPENDENCE

63. The revolution of April 1974 in Portugal led to a decisive political opening in all territories under Portuguese administration. Though at the time the war was not very intense in Angola, the Portuguese revolution did not put an immediate end to it. There were three cease-fire agreements, the last of which was signed about the middle of the year. Meanwhile, several incidents occurred in Luanda, giving rise to racial confrontations. The major economic consequences of these incidents were a strike explosion, especially a strike on the part of the stevedores and other port workers, and the total destruction of shops established in the African residential area ("muceque"). The port strike was important for two reasons. In view of the strategic importance of seaports in the Angolan economy, the interruption of port activities was reflected in almost all other economic activities. Secondly, the hardship involved in loading and unloading ships made the workers more aware of how low the pay had become, given the change in political environment. Another crucial link of the colonial economy with the rest of the world was cut when the banks also went on strike. There, the great majority of clerks was white or mixed; nevertheless, the strike found a virtually complete acceptance.

64. The destruction of the muceque shops also had a major economic and social impact. These shops were owned by Portuguese traders who controlled almost all the distribution of staples and other essential commodities. The muceque merchants were a symbol of colonial oppression, which was reinforced every day since the shops made evident how weak the purchasing power of black families was. Customers also found falsified products, weighing and measuring frauds as well as threatening and racist behavior. Among whites, the muceque business was seen as the result either of the lack of skill or capital to set up another commercial activity. The muceque merchants and, to a lesser extent, the traders in the bush, were led to exploit all the opportunities for quick profit at the expense of the native population, so as to get enough capital to start a more comfortable - so called "rich"-business. The resentment against these merchants made them a logical target for anti-colonial feelings among the population.

65. The bush merchants were not only devoted to sell but also to buy products from peasants and re-sell them to wholesalers. These dealers went out of business later than the muceque dealers did, and rarely as a result of direct violence upon them. Most fled when overall village safety was at stake or the threat of agitation became intense. When these two groups of merchants vanished, a source of social tension and occasional racial conflict ended but a serious problem came to the fore: the supply and distribution channels vanished and no alternative arrangements were in place. The lack of internal trade activity, together with the existing military and political conditions created an atmospher a) If the colonial economy was first hit by the deterioration of foreign trade and commercial and financial activities, the entire colonial society quickly collapsed after civil rights were restored for the whole population. People responded in a way that seemed to reflect the importance of their roots in the country: most of the adults made plans to leave while many of their grown children born in Angola, mixed as well as white, initially chose to stay. Those plans notwithstanding, a massive exodus of the Portuguese population began.

66. Beginning in the last quarter of 1974, over-invoiced goods began to be supplied against import contracts, as a way to smuggle out foreign currency, further reducing the quantity of goods imported, since prices had also increased sharply in the wake of the oil crisis. The production stoppages also explain why machinery imports fell by a much greater percentage than imports of consumer goods. A good example is the pattern of automobile imports, which were subject to quantitative restrictions. In 1974, the overall figures fell by 50% relative to 1970, and the share of commercial vehicles dropped from 38% in 1970 to 10% during the same period. Value figures reported in the 1974 Report of the Bank of Angola show a 15% increase in 1971, no change in 1972/73 and a drop of 50% in 1974. For export trade, due to a terms of trade improvement of about 75% implied by the oil price rises, quantities were slightly reduced but values almost doubled.

67. In contrast to most of the colonial period, on the eve of independence, the financial situation of the country was excellent. However, the economy was quickly disintegrating, with the collapse of

distribution networks and the subsequent fall in production in 1975. Against the background of declines of 30% in economic activity and even higher figures for exports, small industry geared to the domestic market was temporarily stimulated by wage increases in 1974. According to the booklet of official statistics for 1974, food industries increased output by 25% and textile industries increased by over 40%.

68. After the mid-1974 cease-fire agreements with the Portuguese, an intense social and political upheaval, soon to have significant military consequences, was felt throughout the country, but mostly in Luanda. At year-end, the Alvor agreement, between the three parties recognized by the colonial authority, namely the Popular Movement for the Liberation of Angola (MPLA), the National Front for the Liberation of Angola (FNLA) and the National Union for the Total Independence of Angola (UNITA) established the date of independence as November 11th, 1975 and determined the conditions for the transition government. It was formed by an equal number of Ministers from each one of the three Movements as well as from the Portuguese Government. A triumvirate performed the functions of Prime Minister according to a monthly rotation. The Portuguese Army as well as armed people attached to the three Movements formed the Mixed Armed Force of Angola.

69. Only two months after the transition government was sworn in, though, new encounters took place between the MPLA and FNLA, simultaneously with widespread armed robbery in the muceques, leading the urban population to feel more and more insecure. By the middle of 1975, when the transition government was almost paralysed, a reconciliation attempt took place in Nakuru, Kenya, resulting in a protocol signed by the three different parties. However, this protocol did not last longer than a few weeks and was followed by open war between the liberation movements, this time involving UNITA as well. In August 1975, the Angolan territory was divided into three zones, with Luanda held by the MPLA and the Portuguese Army.

70. A short while after the transition government began, the Minister of the Economy, who had been selected by the Portuguese, submitted an Economic Programm for accelerated growth based on the existing infrastructure and on the production levels obtained before the Revolution. A reduction in foreign dependence and a better distribution of resources were other objectives included in the development policy recommended by the transition government. To follow this program, Angola had to keep growth rates equal to those of the past years and correct some of the previous distortions, especially in income distribution. This required respect for the Alvor Agreement, no resort to violence and the possibility of carrying out elections and forming a stable government. At the same time, it was necessary that most of the technical and professional labor force remain in Angola. As none of those conditions were met, the program did not begin to be implemented.

71. When shortly after the cease-fire of Nakuru, violence resumed, there was a sudden change in the attitude of the Portuguese. Very quickly, nearly all farms were abandoned not only by the farmers themselves but also by workers who had no pay and feared military attacks. The same

applied to most of the small and middle-sized industries, while commercial activity in towns was mostly confined to drawing down inventories. With the interruption in supplies, and the massive flight of Portuguese owners and technicians, together with the paralysis of most banks, Angolan industry suffered a devastating blow from which it has not yet recovered. The same characteristics manifested themselves in construction activity, which was already in recession. The exodus of the Portuguese, both from public and private management and other technical activities, created an enormous vacuum, since an insignificant number of Angolans had the chance to get proper skills, and some of those who did also left the country.

72. As the colonial administration ceased to function without being replaced by any of the liberation movements, taxes were not collected and maintenance of infrastructure ceased. Large businesses (commercial, agricultural or mining) kept their local management but limited their activities as much as possible to a mere presence. For security reasons, even oil production was suspended for a few months. As far as transportation was concerned, the Luanda airport and the seaports operated under top priority of evacuating the Portuguese people and their belongings. It is estimated that Angola lost by destruction or smuggling 75% of its stock of trucks, which was about 27,000 vehicles. Finally as a result of the country's division into three warring zones, any regular long distance communications, including postal services, were suspended.

73. When Luanda was taken by the MPLA, the FNLA and UNITA ministers took cover in their own zones of influence. The first foreign troops entered the country and on November 11, 1975, which had been designated as Independence Day, the colonial period ended and all the conditions for a protracted economic and social crisis were in place.

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THE ANGOLAN ECONOMY IN COMPARATIVE PERSPECTIVE

1. This Annex presents some comparisons between the social and economic conditions of Angola and those of other countries in Sub-Saharan Africa. Such comparisons are based on statistical data which are of especially poor quality and should therefore be viewed cautiously. 1/ Nevertheless, they can provide a useful general portrait of Angola's economic and social development in comparative perspective.

2. Social conditions in Angola are among the lower range of those found in low-income countries, where low-income countries are defined as those with 1986 per capita gross national products of US$425 or less. In Angola, life expectancy at birth in 1986 was 44 years, compared to an average of 6[illegible] in low income countries and an average of 50 in Sub-Saharan countries. Related social indicators also place Angola in the lower range of low-income countries. It is estimated that in 1985, 160 infants out of 1,000 born in Angola died before reaching one year of age. This compares with an average of 69 for low-income countries and an average of 113 for Sub-Saharan Africa.

3. Indicators of health conditions also place Angola in the lower range of low-income countries. Per capita daily calorie intake in Angola was estimated to be 1,926 in 1985 which compares to an average of 2,329 for low-income countries, and 2,024 for Sub-Saharan Africa. The estimated population of 15,521 per physician in Angola in 1985 compares with an average of 6,050 for low-income countries (1981 data), and 25,310 for Sub-Saharan Africa (1981 data).

4. While indicators of social conditions in Angola place it in the lower range of low-income countries, on the basis of per capita GNP, Angola would be placed in the lower range of lower middle-income countries. However, it should again be emphasized that in view of the incomplete data on the Angolan economy, any GNP estimates are necessarily crude. Keeping this caveat in mind, in 1986 Angolan per capita GNP was equivalent to US$97. This compares to a 1986 average of US$270 for low-income countries, US$370 for Sub-Saharan African countries, and US$750 for lower middle-income countries. With the partial recovery of oil prices in 1987 and increased oil production, Angolan per capita GNP in 1987 climbed to US$37.

5. The structure of production in Angola differs from the average for Sub-Saharan Africa in that agriculture and fisheries contribute a

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1/ In the intercountry comparisons that follow, data for countries other than Angola are from the World Bank's World Development Report 1988. (Oxford University Press: 1988). and World Development Report 1988 (Oxford University Press: 1987).

significantly smaller share of output. For example, from 1980-87, 21.0 percent of Angolan GDP at 1980 official prices came from agriculture and fisheries, 44.7 percent from industry, and 34.3 percent from services. This compares to a 1986 average in Sub-Saharan Africa of 36 percent from agriculture and fisheries, 25 percent from industry, and 36 percent from services. The difference is explained mainly by the impact of the war on rural areas and by the large share of oil output in Angolan GDP..

6. The structure of aggregate demand in Angola is much more oriented toward government consumption and away from private consumption in comparison with most other countries in Sub-Saharan Africa. From 1982-87, government consumption in Angola averaged 30% of GDP, private consumption averaged 52%, gross domestic investment averaged 17%, and exports of goods and non factor services averaged 42%. This compares with a 1986 average for Sub-Saharan Africa of 13% for government consumption, 74% for private consumption, 14% for gross domestic investment, and 19% for exports of goods and non factor services. The comparatively large weight of government consumption reflects mainly the burden of war expenditures on the budget. In Angola, defense accounted for almost 44% of recurrent expenditure in 1984-87. In addition, large expenditures are incurred for military equipment. In Sub-Saharan Africa, defense expenditures as a percentage of total central government expenditure averaged 11.2% in 1985.

7. In the area of government finance, Angola is notable for the large proportion of government revenue that it derives from the petroleum sector. In recent years this proportion has varied between 40% and 60% since fluctuations in oil prices introduce a strong element of instability in the budget. On the other hand, non-oil taxes are relatively low, averaging 10% of non-oil GDP in 1985-87. In Sub-Saharan Africa, the average ratio at taxes to GNP was 17% in 1985.

8. The Angolan budget deficit, at 8 percent of GNP in 1985-87, is more than twice as large as the average for Sub-Saharan Africa (3.3% of GNP in 1985). The budget deficit has been a major cause of the rapid growth of the broadly defined money stock in Angola, which has averaged 15% annually from 1980 to 1987. In Angola, this growth in the money supply did not result in open inflation in the official market because of tight and pervasive price controls and the fixed exchange rate, which at present is grossly overvalued. However, strong repressed inflationary pressures are evident in Angola in the extreme scarcities of goods offered at official prices and in the very large differences between prices in the official and parallel markets (which tend to range between 1 to 20 and 1 to 60).

9. The structure of Angolan merchandise exports is more unbalanced than usual due to the extreme dependence on petroleum exports. In Angola, fuel and mineral exports comprise about 95% of total exports while the other 5% consist of other primary commodities. The average Sub-Saharan African country derived 48% of its merchandise export earnings from fuels, minerals, and metals, and 17% from other primary commodities. The only Sub-Saharan African countries which share Angola's extremely unbalanced dependence on the output of one sector are Zambia and Nigeria, which derives 96% and 94% respectively of their export earnings from mineral exports (copper and oil).

10. Angola's holdings of gross international reserves are characteristic of the low levels generally held by low and lower-middle income countries. Angola's reserve holdings from 1984-87 covered on average about 1.3 months of imports. This compares with a 1986 average of 2.1 months coverage for Sub-Saharan African countries. In the area of external debt, Angola's situation is also fairly characteristic of other Sub-Saharan African countries. In 1987 Angolan external debt was 70 percent of GNP and Angola devoted about 22% of its exports of goods and services to servicing its debt. It is estimated that fully servicing its debt in 1987 would have required about 25% of its exports of good and services. The average external debt as a percentage of GNP in Sub-Saharan Africa stood at 39.1 percent in 1985. The average for debt service as a percentage of earnings from exports of goods and services for Sub-Saharan African countries was 21.5 percent in 1985.

GOVERNMENT INSTITUTIONS

General Aspects

1. The Popular Movement for the Liberation of Angola, MPLA, was founded in December 1956 with the objective of liberating the country from colonial rule. The armed struggle against the Portuguese colonial regime began in February 1961. After a period of struggles with other rival liberation movements in 1975, the MPLA assumed control of the Government when Independence was proclaimed in November 1975.

2. In December 1977 the MPLA became a party, and renamed itself MPLA - Labor Party (MPLA-PT). The MPLA-PT declared itself the "leading force of the Angolan State and Society", organized and acting "according to the principles of Democratic Centralism" and having as its strategic objective the construction of socialism. Party structures are involved to some extent in all aspects of the country's social, economic and political activity. The MPLA-PT is associated in particular with all major decisions concerning the country's economic management. In addition to guiding the activities of administrative departments, enterprises and trade unions, which are the three focal points of the country's economic activity, the Party also defines basic principles and policies. Constitutional Law reinforces the dominant position of the MPLA-PT, particularly through Article 2 which gives the Party "the economic and social leadership of the State in its efforts to construct a Socialist Society". It should be noted that although party structures are supposed to be visible in all areas of economic activity, in fact this has not always been fully realized.

The Organization of the MPLA-PT

3. The MPLA-PT's higher organs are:

(i) The Congress, at the national level, whose functions include electing the President of the Party, determining the orientation of internal and external policy;

(ii) the Conference, held at national, provincial, municipal and communal levels, which is responsible for orienting regional activities according to the decisions of the Congress and of other central organs of the Party;

(iii) the Assembly of Members, held at the level of base organizations, which are structured in cells and committees formed in work places, residential units, etc., and are grouped spatially within the country's administrative framework, namely communes, municipalities and provinces;

(iv) the Central Committee, which ensures the direction of the Party in the periods between the Congresses, and the Political Bureau, which directs political activity between Central Committee meetings; and

(v) the President of the MPLA-PT, who is a full member of the Central Committee and of the Political Bureau, elected by the Congress. The President of the People's Republic of Angola is the President of the MPLA-PT.

4. The MPLA-PT guides and directs the work of popular and social organizations, such as the National Union of Angolan Workers (UNTA), which is a non-Party organization. The Party's orientations are transmitted through the influence of MPLA-PT members within this organization.

General Organizational Aspects of the State

5. The People's Assembly is Angola's supreme organ of State power and it normally meets twice a year. Law 2/86 introduced important modifications in government structure. The posts of Minister of State were created for Economic Affairs, Production and State Inspection and Control, in addition to Defense. The Ministers of State were charged with the task of co-ordinating the activities of the various ministries in their "sphere". New changes were introduced at the beginning of 1989, including the apparent restructuring or elimination of the Ministry of State for the Productive Sphere.

6. Two other organs of the State apparatus should be noted, the Council of Ministers and the Council of Defense and Security. The Council of Ministers has the traditional functions of organizing, directing and coordinating all the ministries' activities. It is also charged with preparing the National Plan and the General State Budget for discussion and approval by the People's Assembly. The Council of Defense and Security was created in 1984 and assumes the functions of the Council of Ministers in the periods between meetings of the latter. It is presided by the President and constituted by the Ministers of Defense, Interior and Security, the three Ministers of State and others. Since it is a more flexible body than the Council of Ministers, it has been particularly important in making decisions regarding economic policy.

7. Territorially, Angola is divided for political and administrative purposes into provinces, municipalities, communes, neighborhoods and settlements. The People's Assemblies are the highest organs of State power at each level of the territorial division of the country. The executive organs of these Assemblies are the Provincial, Municipal and Communal Commisariats. The Commissariats are directed by a Commissar who is the representative of the President and of the Government at the provincial level. Law 8/81 which establishes local state institutions, has not been applied. Therefore, certain basic legal instruments for decentralizing administrative actions have not been created.

8. The lack of operating regulations is in fact, a quite common situation in Angolan economic administration. Thus, operating regulations do not exist for the National Price Directorate, for example, or for a large proportion of the National Directorates covered by the Ministries. These institutions were created, given personnel and other means for functioning, but were not given operating instructions: what and how they should do was not defined. Nor were their employees's jobs defined. Thus, a large part of public administration lacks a description of the activities it is supposed to perform.

The SEF Secretariat

9. An Economic Commision presided by the Head of State and including 13 Ministers was created in 1988 to discuss all the important decisions in the area of economic policy and in particular to approve the legislation and all the more important measures required by the implementation of the SEF program. The Commission comprises three sub-committees for economic affairs, for the productive sectors and for social affairs, respectively. The Commission is supported by the Secretariat of the SEF, which prepares the proposals of decisions, the draft laws and the analysis of the problems submitted for discussion.

THE SYSTEM OF NATIONAL ACCOUNTS IN THE PEOPLE'S REPUBLIC OF ANGOLA

Introduction

1. This Annex has the following purposes: (a) to provide a brief presentation of the current system of national accounts and of its scope and limitations as regards national product and expenditure; and (b) to analyze the difficulties involved in establishing a unified system of national accounts.

GDP Estimates Using the Factor Income Approach

2. The gross domestic product at factor cost (GDP fc) refers only to official transactions, and consists of total factor income, as presented in the various ministries' reports on financial execution of the National Plan. Although limited in scope, the methodology for this calculation is satisfactory. However, the quality of the calculations is constrained by the enterprises' accounting capability. In addition, the National Accounts Center does not have the direct access to the enterprises' balance sheets that would enable it to assess the quality of the data. Information by enterprise is furnished only in the reports on industry and fishing; the remaining execution reports provide only aggregates, some of these being incomplete, so that indirect estimates must be used, with varying degrees of reliability. It must also be noted that the calculations are performed by the supervisory ministries, and therefore do not correspond exactly to the standard economic classifications for output by sector. For example, sugar production is included in the industry accounts, because agroindustry enterprises are supervised by the Ministry of Industry.

3. The following paragraphs describe the scope and the quality of the calculations of value added by sector.

(a) Agriculture and Livestock

This includes the activities of state enterprises, associations, and the output of small-scale farmers traded by the state through the Ministry of Internal Commerce. It also includes Frescangol marketing (i.e., the distribution of imported meat). It excludes on-farm consumption and the parallel market. It is estimated that only 10% of output passes through the official market.

(b) Manufacturing and Mining

This includes output from state, mixed, and private enterprises, together with the production and processing of sugarcane by state enterprises in Benguela and Bengo. The calculation of value added in this sector covers approximately 80% of total activities.

(c) Fishing

This includes fishing itself (with six state enterprises, one being a joint venture with the Soviet Union, and fishermen's cooperatives); fish processing (ten state enterprises, together with the enterprise Manpesa in Benguela, which was excluded from the 1983 and 1985 figures because of delays in the provision of data); ship repair (four enterprises, three belonging to the state, and one being a joint venture with Portuguese nationals, i.e., the former Sorefame); salt extraction (accounts for the two state enterprises are included, although there are certain private enterprises that were excluded, mainly in Namibe province); and wholesale fish marketing (four enterprises, retailing being part of the commercial sector). Not included are output produced by fishermen not belonging to organizations (this being sold in the parallel market), own consumption, and the output from two salt-extracting enterprises in Namibe. In addition, the accounts exclude half the landings resulting from operating agreements with non-Angolan enterprises, although the tax on fishing rights paid by foreign fleets is included.

(d) Transportation and Communications

This includes enterprises operating road transportation (64), rail transportation (four), airlines (two, one of which is TAAG), ports (five), and communications (three). Accounts in this sector do not include transportation-related enterprises supervised by other ministries, and whose accounts are reported by those ministries, such as fishing and internal commerce. There are also some transportation-related enterprises whose accounts are not recorded anywhere (as in the case of industrial enterprises). The accounts also excluded small private freight and passenger carriers.

(e) Construction

This includes state and private enterprises concerned with construction, engineering, the manufacture of construction materials, and the Angola engineering laboratory. It excludes self-construction and construction by non-Angolan enterprises operating in the oil sector (drilling activities are regarded as part of the oil sector, but the accounts for the construction of houses, buildings and other works are not recorded anywhere), and in the energy sector (i.e., Gamek in Kwanza). It is estimated that value-added calculations cover only 50% of the sector.

(f) Petroleum

The accounts include: indirect taxes, profits, payroll, and depreciation (Sonangol); and direct taxes from non-Angolan enterprises, and refinery profits. They exclude payroll, profits, rentals, depreciation, interest from non-Angolan enterprises, and

Sonangol rentals and interest. Although Sonangol does not provide balance sheets for inspection and recording in the national accounts, the statistics are reliable, and include about 70% of value added generated by the sector.

(g) Energy

This includes only payroll, depreciation, profits and direct taxes relating to the five electric power enterprises in the sector. It does not include rentals and interest for electric power enterprises, or household production of charcoal and fuelwood.

(h) Commerce

This includes retailing, hotels and catering, worker's food services, and social consumption (e.g., hospitals, creches, etc.). Retail value added is calculated from the commercial fund (**fundo mercantil**)--i.e., deposits in BNA (the National Bank of Angola) by private, state and cooperative retail enterprises--and from the marketing margin (officially set at 25%), excluding administrative expenses (published in the Ministry of Commerce's execution report). This results in a value added of between 15% and 18% of GDP. The commercial fund information provided by BNA is comparable to the data in the National Plan's financial execution report, so that the statistics used can be submitted to a reliability analysis. Not included are the parallel market, the wholesale fish market (which is included in fishing), or the supply of spare parts (which is included in the transportation subsector). Data quality is low, because calculations are based on subjective assessments.

(i) Services

This includes payrolls for central and provincial governments, education, health, culture, social services (excluding creches, which are free) and defense. The source is OGE, and data quality is good. Excluded are payments in kind to the armed forces (i.e., food, drink, tobacco, and clothing). Food baskets provided by BNA, the Ministry of Planning and the oil and energy industries are bought by government personnel, and therefore regarded for accounting purposes as part of the commercial fund. In the case of the Ministry of Planning, the baskets are bought from Angoship, a private enterprise providing supplies for vessels. The enterprise uses the resulting revenue (in Kz) to buy US Dollars from the Government at the official price.

4. For calculating gross domestic product at market prices (GDP mp), indirect taxes are added to the gross domestic product at factor cost (GDP fc), and subsidies are subtracted. Indirect taxes include those applied to the production and consumption of industrial alcohol, petroleum products, liquified gases, domestically produced beer, imported beer, and other taxes on production and consumption, together with national reconstruction stamp

taxes, tax payment certifications (selo de verba), the oil industry output tax, export and import levies, taxes on services, and the people's resistance tax. The people's resistance tax is incorrectly classified as an indirect tax, because it is really a surtax applied to income taxes payable by natural and legal persons. The sources used in calculating indirect taxes are the National Plan's financial execution reports (which contain the enterprises' own figures). These show a small statistical discrepancy with the data published by the Ministry of Finance (which indicate the figures for budget execution). Included as subsidies in the calculation of national accounts are all losses published in the National Plan's financial execution reports; i.e., total subsidies to state enterprises (UEEs) are equal to OGE transfers (i.e., losses from UEEs plus allocations of available own resources and price subsidies) plus loans to enterprises from BNA, covering the difference between total losses and resources provided by OGE. Such a classification is incorrect, because the loans are not used solely to finance the enterprises' deficits, even if interest and amortization payments are later deferred.

GDP Estimates Using the Product Approach

5. The Angolan authorities, with the assistance of the United Nations Development Program (UNDP), have prepared preliminary estimates of GDP based on the value added production approach using 1980 official prices. While these estimates are preliminary, they represent an improvement in the estimates of subsistence agricultural production and are not thought to be as distorted by delays in delivery of the required information. The estimates have been prepared for 1980-87 using data mostly from the firm level, complemented by indirect estimates and ministry information to complete the available data series and to check the reliability of the aggregates. The defined sectors follow the Angolan classification of economic activities, but can easily be translated into the standard UN classification.

6. The following paragraphs describe in more detail the estimates of the valued added production of each of these sectors.

(a) Industry. This includes the following extractive and manufacturing activities: power energy, mining, metallurgy, metal construction, electronics, machinery, chemistry, rubber, printing, lumber, paper, construction materials, transport materials, glass ceramics, textiles, clothing, leather goods, food, beverages, coffee, sugar, tobacco and other industries. Production is by state, mixed, and private firms as well as foreign enterprises. These data account for about 90% of the sector's production. The remaining component comes from estimates of the output of small producers not under government supervision. These estimates were based on previous studies of production capacity and indirect information.

(b) Construction. This includes the construction activities of state enterprises (under the Ministries of Construction,

Energy, and Petroleum), foreign firms, and self-construction. The self-construction estimates are based on population growth, size of a standard house, cement consumption, and international indicators.

(c) Agriculture, Forestry and Fishing. This includes farming, cattle raising, forestry, and fishing activities of state enterprises and of about 850,000 small producers working in associations or individually. It includes production for self-consumption as well as production for the market by state enterprises and small producers. The self-consumption estimates are conservative and are based on the size of the farming areas, average productivity, nutritional habits, and population growth.

(d) Transportation and Communication. This comprises railroads, air, coast and ocean shipping activities, including loading, unloading, and expedition services. Data on communication services were collected from the relevant enterprises under the supervision of the Ministries of Transportation and Communication. Highway transportation of passengers are freight were collected from public enterprises under the supervision of the Ministry of Transportation. These estimates are currently being revised to include mission information as add private transportation.

(e) Commerce. This includes retail and wholesale activities, rural trade, hotels and foreign trade. The commercialization margins were estimated from state enterprise sales and purchase data. Preliminary estimates of the value in the parallel market are also included. The product approach estimates of the value added in the commerce sector are an improvement over the previous factor income approach because they include the commercialization margins for trade in rural areas and foreign trade. They are also based on actual measure of commercial margins rather than the fixed official margins used in the factor approach. The commercialization margin from oil exports is not yet included, but exports of oil are included in the industrial value added at FOB prices.

(f) Services. Estimates of the value added in the service are based on the budgeted salaries in the sector.

Per Capita U.S. Dollar GNP Estimates

7. In deriving an estimate of Angolan per capita GNP in U.S. dollars, it is better to rely on the data from the production approach rather than the factor approach due to the former's greater comprehensiveness and better methodological foundation. However, a major drawback of the

production approach data is that calculations are reportedly based on 1980 official prices and cover a period in which there were major changes in the relative price of oil and non-oil production.

8. Since the authorities specified the 1980 value added in the oil sector by converting dollar oil sales and costs of production into kwanzas at the official exchange rate (29,918 kwanzas to the U.S. dollar), the 1980 oil sector value added in U.S. dollars is obtained by using the official exchange rate to reconvert the data into dollars. Using the authorities' estimates of oil production value added for subsequent years at 1980 prices, an index of the real value added from oil production for 1980-87 can be constructed. This index, combined with the annual average dollar prices of Angolan oil from 1980-87, permits an estimate of the nominal value added from Angolan oil production.

9. Converting the value added from non-oil production into U.S. dollars is more problematic. From the authorities' production estimates using 1980 official prices, and indices of the real quantity of non-oil production value added can be constructed. However, it would be misleading to use the official exchange rate to convert the 1980 kwanza value of non-oil production into U.S. dollars since there are strong indications that the official exchange rate was overvalued. In fact, the official exchange rate, which was established in May 1976, had by 1980 substantially appreciated in real terms. Rough estimates indicate that the 1980 purchasing power parity exchange rate for officially prices goods should be depreciated 23% relative to the official exchange rate. Using this estimate, to obtain a U.S. dollar measure of non-oil production for 1980, indicates that oil production was 29% of GDP at factor cost. Since alternative estimates have placed oil production as 30 to 35% of GDP, the resulting U.S. dollar GDP estimate for 1980 appears reasonable, but perhaps biased up slightly. Finally, assuming that the dollar price of non-oil production grows at the same rate as the U.S. GNP deflator, a nominal U.S. dollar estimate of non-oil production is obtained for 1980-87.

10. From the U.S. dollar estimates of oil and non-oil production as well as population and net foreign factor income estimates, an estimate of Angolan per capita GNP in U.S. dollars is obtained. This estimate is presented in the Appendix in Table C.3.

GNP from the Expenditure Side

11. There is no official calculation of GDP from the expenditure side. Accounts for the public, financial and external sectors are incomplete, and their structure is unsuited to the preparation of national accounts. In addition, there is no coordination between the Ministry of Planning, the Ministry of Finance, and BNA in the use of data. Examples of the inadequacy of existing accounts are that the government budget makes no provision for interest payments on external debt payable by the Treasury, it does not record external debt managed by BNA, and the government accounts for not provide any means for calculating gross fixed capital

formation (GDCF) by the Government and by state enterprises. Balance of payments figures for capital goods imports are not reliable. Because data on long-term loans are also incomplete, it is difficult even to estimate such imports indirectly, i.e., on the basis of capital flows.

Obstacles to the Implementation of a Unified System of National Accounts

12. Developing a reliable, unified system of national accounts requires that it become a political priority. This will be done only when the government is convinced of the importance of national accounts for economic planning, monitoring, and evaluation. Once the political decision has been taken, establishment of a unified system of national accounts will depend on three factors: organization, discipline, and resource.

13. As regards organization, it is recommended that a Department of National Accounts be established, subordinate to the Director of Planning at the Ministry of Planning. This measure is justified by the need to establish a link to BNA and the Ministry of Finance. Currently, there is merely a project (under an agreement with the UNDP) for establishing a system of national accounts, in which the national project director must fulfill a number of extremely demanding functions such as those of Director Planning at the Ministry of Planning, Technical Secretary of SEF, Director of the Department of Economic and Social Affairs of the Central Committee of MPLA-PT, and National Director of the National Accounts Project. It is proposed that the Department of National Accounts should be the responsibility of the Head of the Planning Board, together with the Department of Foreign Exchange for External Trade, Planning Methodology and Control, International Finance and the Data Processing Center. An alternative would be to make INE responsible for national accounts. This possibility should be considered after the implementation and consolidation of the system of national accounts. However, during the initial phase, the preparation of national accounts should be kept separate from the compilation of basic statistics, which is INE's function. Such a separation would enable qualified experts to be deployed exclusively in the preparation of national accounts.

14. In whatever department the national accounts are prepared, it is imperative that efforts to improve the national accounting framework be closely coordinated with the work on basic statistics done in the INE. The national accounts will only be based on reliable, well-defined data when the INE fulfills its role as the central institution which specifies classifications, defines statistical concepts, develops survey methodologies, designs questionnaires, and provides a central source for the exchange and publication of national data. Currently, the INE's performance of these crucial functions is far from satisfactory. Consequently, any attempt to improve the national accounts must be combined with a major effort to upgrade the ability of the INE to provide comprehensive and accurate economic and demographic data in a timely fashion.

15. Establishing a form of discipline by which economic agents will provide the data necessary for operating the unified statistical system

will be a difficult obstacle, and will require firm political will on the part of the country's leaders. An indication of the lack of discipline in this area was provided by the enterprises' response to the attempt to establish the SCOPO (the Operating Control System for the National Plan). The main 172 enterprises in the country were to provide monthly data on 163 selected indicators. INE was to use these data to prepare a monthly report monitoring execution of the Plan. So far, only nine enterprises have complied.

16. It must be recognized that developing a national accounting system that can be used with confidence to monitor the economy, measure the impact of policy changes, and serve as a basis for national economic plans will require a substantial commitment of scarce human resources. While in the short run it is advisable for the government to contract outside experts to aid in establishing basic statistical methodologies and procedures, it is imperative that high quality counterpart personnel are also involved to sensitize the experts to local conditions and to continue the development of the national accounts after the foreign experts have departed. Establishing technical training programs for personnel involved in data collection and analysis should also be a priority.

17. Finally, it should be noted that UNDP is currently involved in a technical assistance project (ANG/84/001) directed toward improving the national accounting system. While the project has made significant steps in this direction, its scale is too small to adequately address Angolan needs and it has been hampered by delays. For example, the project called for stationing in Angola two experts in fiscal accounts and the balance of payments, but this has not yet occurred because, of apparent delays in appointing Angolan counterpart personnel. Moreover, project participants spent almost the whole of 1986 preparing basic statistics to be used in the national accounts. Consequently, it is suggested that UNDP and the Angolan authorities extend this project for at least another year and broaden its scope to include upgrading the process of collecting and analyzing basic descriptive statistics.

LEGAL FRAMEWORK OF SEF

1. The content of the SEF program is such that it requires adjustment of major areas of the law. The Government of Angola has already published new legislation on foreign exchange, economic activities in general, securities, foreign investment, and state enterprises. This annex provides an overview of the content of these various legislative initiatives. Their development at the regulation level is at an advanced stage and legislation on procurement is also under preparation. Legislation governing the banking system, enterprise management and economic planning has also been approved.

2. The following overview of the legislative measures taken so far by the Angolan Government show the commitment with which it is pursuing the implementation of the SEF program and its institutionalization. In particular, the changes made in the area of foreign investment and public enterprises are worth highlighting. Foreign investment outside the context of mixed economy enterprises is now permitted in other than import substitution activities, the approval process has been simplified, and arbitration is recognized as a means of solving investment disputes. In the field of public enterprises, the emphasis is on providing effective autonomy, on the enterprises taking responsibility, on reducing the number of supervisory bodies and delimiting more clearly their supervisory function. As stated above, there is a series of legal instruments under preparation which will develop those reviewed here and complement them. It is to be hoped that their application will be in the same spirit with which they have been or are being prepared.

Exchange Law (Law 9/88)

3. The exchange law establishes the obligation of delivering to the exchange authority (the Minister of Finance) the foreign exchange received by the residents, forbids compensation of debts and credits between residents and non-residents, and limits the ability to carry out exchange functions to the entities so authorized by the exchange authority. One of the reasons for issuing the new law is the fact that exchange legislation is very dispersed, out-of-date and unknown to the public at large. The law applies to the state enterprises (unidades economicas estatais) but not to the State itself and its services or to public collective entities.

4. The Central Bank is responsible for managing the foreign exchange and resolving any doubts on whether a person or entity is or is not a resident for purposes of the exchange law. Only with Central Bank authorization may residents open foreign exchange accounts or non-residents foreign exchange accounts with national credit institutions. The law has detailed provisions on monetary and jail sanctions for foreign exchange contraventions. The Central Bank has also exclusive responsibility to institute any suits for breaches of the Exchange Law.

5. The Exchange Law has been developed by three regulations approved but not yet published. They cover current operations of invisibles, operations related to goods and operations related to capital:

(i) capital operations need authorization by the Central Bank and beyond a certain level by the Minister of Finance. Foreign investment will need to be authorized and registered by the Central Bank. The Central Bank is responsible for issuing the corresponding licence;

(ii) goods operations: the import, export or re-export of goods requires a licence. The licensing authority is the Ministry of Foreign Trade. The first fortnight of each month the Central Bank will inform the Ministry of the maximum amount of foreign exchange available for licences to be issued the next month. Priority in the issuance of licences is given to those which will meet the objectives of the National Plan. Overall, the distribution of licences is left with the licensing authority;

(iii) invisibles: The licensing authority is the Central Bank which may give global licences for up to 180 days when it is necessary for the activities of the beneficiary.

Law on Economic Activities (Law No.10/88)

6. This law is a basic or framework law to regulate economic activity in the country. It applies to activities related to the production or distribution of goods or the rendering of services with the objective of making a profit. The State reserves itself activities in central banking, military industry, distribution of water and power, basic sanitary services, telecommunications, transport, except for short range maritime transport, and port and airport administration.

7. No economic activity may be performed without previous authorization by the competent authorities. Economic activity may be developed individually or through enterprises. Enterprise activity may be performed by state enterprises, mixed enterprises, cooperatives and private enterprises. State enterprises are classified as enterprises to which the Law of State Enterprises applies, which means enterprises owned by the State but operating under commercial law. Mixed enterprises are those established by state funds or state enterprises and private capital (national or foreign).

8. The law recognizes the right of individuals to practise their own professions independently and the right of individuals and companies to associate to further their economic and professional interests. Except for central banking and military industry the Council of Ministers may, exceptionally, authorize the performance of economic activities by other private parties in the other sectors reserved to the State. Natural resources owned by the State in terms of the Constitutional Law may be explored only through concessions or other regime not involving the transfer of ownership.

9. The Law gives the Council of Ministers 60 days to define the rules for the reorganization of the public enterprise sector in order to establish sector and regional priorities and criteria of economic, technical and

financial viability. The Council of Ministers is charged with revising the legislation on establishment and functioning of cooperatives, nationalization and expropriation, intervention of the State in private enterprises, and licensing of economic activity. In the meantime, any intervention of the State in private enterprises on the basis of the existing legislation requires authorization by the Council of Ministers.

Securities Law (Law No.8/88)

10. This law regulates the issuance of treasury bills with the objective of raising financing for the national budget and to balance the monetary resources distributed as salaries to the level of goods available. In addition, it was necessary to create a legal instrument to give the State the possibility of proceeding with the financial restructuring of state enterprises and to channel national savings towards the financing of investments.

11. The law provides for the following types of securities:

(a) Savings bonds described as bearer bonds with maturities ranging from 12 to 18 years. Savings bonds may be subscribed by individuals, residents in Angola, and will be denominated in kwanzas but, at maturity, the holder may receive the total or partial amount of the bond in foreign exchange.

(b) Development bonds which will be nominative, with a maturity of up to 7 years. Development bonds are intended to be subscribed by collective entities and the interest or the capital of these bonds may be paid in foreign exchange. The funds raised by the issuance of these bonds will be used exclusively to finance investments included in the general budget of the State.

(c) Restructuring bonds which will be nominative with maturities ranging from 5 to 10 years. Restructuring bonds are meant for creditors of bankrupt public enterprises and, in conditions to be determined, could be converted into development bonds.

12. The People's Assembly will determine annually the global limit of the bonds to be issued under types (a) and (b). Restructuring bond amounts will be decided by the Council of Ministers. The bonds will be exempt from taxes, may be pledged and can't be subject to expropriation or any other act of intervention by the State.

Foreign Investment Law (Law No.13/88 of June 16, 1988)

13. This law abrogated the previous law of 1979 which was never developed by the necessary regulations. It has as an objective to improve the organization, function and supervision of the Government related to foreign investments, and to simplify the process of negotiation and approval. This law expressly leaves standing the laws applicable to petroleum and mining to the extent that they don't contradict it.

14. Foreign investments will be permitted by entities of adequate technical and financial capacity provided that the investments are in accordance with the social and economic development interests of Angola. The law excludes from investment by non-residents the areas of defence, central banking, education, health, water supply and sewerage, electric power, postal services, telecommunications, social communications, administration of ports and airports, air transport, long range maritime transport. This list notwithstanding, the Council of Ministers may authorize specific investments in areas complementary to those so listed.

15. A foreign investment may consist of the actual transfer of funds, supplier's credits, equipment or rights to industrial processes. The law foresees the creation of an organ for the application of the law which will be responsible for the evaluation of investments. In the concrete case of equipment, its value will be the actual market value. The law does not provide for the basis of valuation of rights to industrial processes or suppliers' credits. The Council of Ministers is competent to determine the priority areas in which foreign investment should take place; although this determination was due 90 days after the date of the law, none has been done yet.

16. Foreign investment may take place through the following possibilities:

(a) Mixed Enterprises of a foreign company with a state enterprise. The state enterprise should have 51% of the equity unless the Council of Ministers permits a lower percentage.

(b) Joint Enterprises of a foreign investor with a non-statal national investor.

(c) Private Enterprises entirely owned by the foreign investor.

17. The law specifically provides that in the first three cases the requirements of commercial laws regarding the establishment and registration of companies apply. In the last instance, it goes further to say that the companies so established will be regulated by commercial law.

18. The law recognizes a just and equitable treatment to the investors and in particular it guarantees the repatriation of profits or of the foreign investor's share in case of liquidation or sale of the enterprise. In both instances, the prior authorization of the Minister of Finance is required. In case of expropriation, the investor will be given "just compensation".

19. Entities established under this law may be given certain incentives, such as the exemption or reduction of income taxes and customs duties on inputs or outputs. They may also benefit of other incentives available under existing legislation in cases in which they reinvest profits, develop activities of a social character, and train and use local labour and management.

20. A specific investment proposal must be presented to the organ yet to be established referred to in paragraph 24 above which will evaluate it

within 90 days. After evaluation, it will make a recommendation for approval or rejection to the Minister of Planning. If the Minister accepts the recommendation of approval, the investment proposal is forwarded to the Council of Ministers for final approval. The Council of Ministers has 45 days to decide from the date of evaluation. The organ referred to above will keep an investments register.

21. In case of disputes between the foreign and local investor which can't be solved amicably, the parties may have recourse to arbitration according to UNCITRAL rules. It should be emphasized that the disputes which may be subject of such arbitration are not those involving the State but only those between the local and foreign partners. Thus, in the case of expropriation, there would not be the possibility of submitting a dispute regarding compensation to arbitration.

22. The law leaves a number of matters to future regulation. These include areas of priority for foreign investment, compensation in case of expropriation, guarantees which might be required from the investor, terms of the contract to be signed between the investors after approval of the investment, and obligation of employment of local labor.

23. In addition to future regulations of the foreign investment law, there are a number of other laws which will be of interest to investors and which will affect the assessment of whether to invest in Angola is an attractive proposition. The main ones would be the Labour Code, Tax and Exchange laws and the Portuguese Commercial Code of 1822 which is still in effect in Angola.

24. It would be very useful if as soon as the various regulations have been published, a publication for investors be issued with practical advice and guidance on all the relevant legal norms and administrative procedures applicable to foreign investment in Angola. This publication could also include information on bilateral treaties on investment protection, double taxation, or recognition of arbitral awards.

Law of State Enterprises (Law No.11/88)

25. It is the objective of this law to improve the conditions of execution of the planned economy, to reinforce the autonomy of the state enterprises, to increase their efficiency and rentability, to increase their influence in the distribution and commercialization of their products, and to improve the process of constitution and organization of state enterprises.

26. State enterprises are defined as those owned by the State with separate juridical personality, and administrative, financial and patrimonial autonomy. The law states the principle of autonomy in the management of the enteprises and, except as provided by the law, no organism of the State or other third party has any right to interfere in the conduct of the enterprise business. State enterprises are expected to generate profits, to charge for their products or services and to be self-financing. Enterprises should be managed so as to increase efficiency and productivity, to make investments based on their rate of return, and assessment of risk and of period needed to

recover the invested capital, and to increase the professional level and the working conditions of their workers.

27. State enterprises are obliged to prepare multi-year plans and budgets and annual plans and budgets. They may fix the prices of their products on the basis of current legislation and are subject to taxation. They respond of their obligations with their own patrimony. The State is not liable for their obligations.

28. At the time of their constitution, the State provides each enterprise with a "fundo de constituicao" ("establishment fund") which would be in an amount adequate for the exercise of the enterprise activity. Profits after taxes will be allocated in accordance with the following priorities: constitution of a legal reserve as required by commercial law, of an investment fund, and of a social fund. Any remaining profits will be distributed to the State as owner of the enterprise and to workers in order to recognize their individual performance.

29. The supervision of the enterprises corresponds to the Ministries responsible for the sector (Ministro de Tutela) of the activity concerned and Finance. The sector Minister guides and supervises the activities of state enterprises by defining the development policy of the economic activity concerned, approving the multi-year plans and budgets proposed by the enterprise, evaluating the performance of the enterprise, appointing the administrators and directors and approving the enterprise accounts. In case of companies of large dimensions, the Council of Ministers may require approval by the Minister of Planning of the multi-year plans and budgets and of the investment programs of the enterprise.

30. Enterprises may only be created by the Council of Ministers by decree. They are subject to the registration requirement of commercial law.

31. The organization of the enterprises consists of a Board, the Management, a Management Council and a Fiscal Council. For the medium and small-scale enterprises these organs are reduced to a Director, Management Council and Fiscal Council.

32. The Board has responsibility for preliminary approval of the multi-year plans and budgets, investments, follow up the activities of the enterprise, approve the internal regulations, present the proposals for the appointment of director general and evaluate his performance, and approve price proposals. The members of the Board consist of a President appointed by the Council of Ministers or the "Ministro de Tutela" depending on the size of the enterprise, one Board member each by the "Ministro de Tutela" and the Minister of Finance, one member elected by the workers, and the Director General. If the Board consists of only three members, the President is the Director General appointed by the Ministro de Tutela. The other two members are appointed by the Minister of Finance and the workers. The Board meets every three months and decides by majority of its members.

33. The Management consists of the Director, Deputy Director and those responsible for various areas of the enterprise (area managers). In the case

of large enterprises, the Director is appointed by the Ministro de Tutela as proposed by the Board, or by the Ministro de Tutela without any further intervention of other parties in the case of smaller enterprises.

34. The Management Council is a consultative organ which the Director needs to consult on the draft plans of the enterprise, accounts, report on the execution of the plan, sales of fixed assets, investment programs, classification and training of workers, management appointments and criteria to give premia to compensate good performance. This Council is composed of the Director, area managers, two party representatives, and one representative of the trade union.

35. The Fiscal Council is basically responsible for checking compliance with the laws by the enterprise and giving its opinion on the accounts. It consists of a president and two members. The President and one member are appointed by the Minister of Finance and one member by the Ministro de Tutela. In small enterprises, the function of this Council may be performed by one person appointed by the Minister of Finance. All members of the Fiscal Council will need to be registered accountants and not be staff of the enterprise.

36. The statute of manager of public enterprises will be regulated separately and the regulation will provide for a definition of the technical requirements, duration of the mandate, cases in which they may be removed and accountability.

37. In addition to the participation of workers in the Board and in the Management Council, the law provides for Workers Assemblies which will "analyze" the drafts of the plan and budget of the enterprise, degree of execution of the plan, productivity level, working conditions and compliance by the enterprise with the labour legislation.

38. The extinction or dissolution of a state enterprise is the responsibility of the organ which created it. The commercial laws of bankruptcy or dissolution of companies do not apply to state enterprises. Consequently, the law provides for a special liquidation commission which will dispose of the assets of the bankrupt or dissolved enterprise and settle the claims. The State will pay out of the budget any claims accepted by this commission which the assets of the enterprise are not sufficient to cover.

39. The new law will be applied to existing enterprises as determined by the Council of Ministers on a case-by-case basis and as part of the process of financial restructuring of the public sector. The success of the new law will depend on how effectively it is applied in terms of non-interference, accountability and how effectively prices and salaries are also liberalized.

THE TAX SYSTEM OF ANGOLA

1. Tax revenue in Angola is derived from four main sources: taxes from the exploitation of petroleum, taxes on income, taxes on production and consumption, and taxes on international trade.

Taxes on Petroleum

2. The government receives revenue from exploitation of Angola's oil reserves in the form of royalties, taxes on profits and a share in the profits of Sonangol, the state-owned oil company. Two types of agreement govern the relations between the government and the operating companies. The tax regimes applied by these agreements differ in their impact on government revenue. The joint venture agreement between Sonangol and the foreign partners is the oldest type. Under this agreement, Sonangol, the sole concessionaire for oil exploration and production, shares the investment with foreign companies. The joint venture pays three kinds of taxes: (a) a royalty, currently 20% of crude oil sales; (b) a tax on profits of 65.75%; and (c) a tax on excess profits (transaction tax) of 70%.

3. Under the more recent production sharing agreements, Sonangol subcontracts with foreign companies to undertake the exploration and production operations in return for a share in the output. The foreign company retains part of the output (maximum 50%) to cover its costs ('cost oil'), and pays a 50% income tax on its share of the remainder of the output ('profit oil'). In addition, the government receives a share in Sonangol's profits. The principal difference in fiscal impact between the two agreements lies in the tax yield over time. Compared to a joint venture, the production sharing agreement yields less revenue in the early years when high initial costs result in retaining the full 50% 'cost oil' allowance. Furthermore, it tends to provide Sonangol, rather than the treasury, with the largest part of Angola's share, while in joint ventures the bulk of the revenue accrues directly to the government in the form of taxes. In 1986, joint ventures accounted for approximately 80% of government revenue from oil. Table VI.1 shows a breakdown of government revenue from oil.

Table VI.1: PETROLEUM TAXATION, 1980-88
(Kz. billion)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Royalty	6.4	9.1	6.8	7.0	11.2	10.2	6.4	8.7	9.0
Income tax	17.6	26.6	10.7	14.6	14.0	11.8	7.9	12.5	9.4
Transaction tax	8.3	8.4	3.5	5.0	17.0	19.7	6.7	11.7	13.7
Transfers from Sonangol	1.6	1.1	0.1	-	-	-	9.0	2.9	3.8
TOTAL	33.9	45.2	21.0	26.7	42.3	41.7	30.1	35.8	35.8

Source: Appendix table D.1

4. Since 1980, price and output of oil have moved in opposite directions (see table VI.2). A strong rise in production followed a slump during 1972-82. The latter resulted from a lack of exploration and development during the few years after independence. Output then doubled between 1982 and 1986, which cushioned the effect of the fall in the oil price, and contributed to the recovery from 1982 to 1985. However, changes in price and output differ in their impact on revenue due to the nature of the tax regime. Since profits from oil operations are the primary source of oil taxes, and excess profits are highly taxed, government income from oil reacts more sharply to variations in price than in production. Another factor that prevented the full revenue impact of the price decline in 1986 from being felt was the large transfer of profits from Sonangol in that year (Kz 9 billion), which included arrears for 1983-85 when no transfers were made.

Table VI.2: CHANGES IN PRICE AND OUTPUT OF CRUDE OIL, 1980-86
(1980 = 100)

	Price	Output
1980	100	100
1981	110	95
1982	86	96
1983	87	132
1984	86	151
1985	81	171
1986	45	208

Source: IBRD: Angola, Energy Assessment.

Taxes on Income

5. This category includes four types of taxes: transfers from public enterprises, corporate income tax, personal income tax, and a tax on income from capital. Together they are the principal source of non-oil taxes, accounting for between half and two-thirds of the total. Income taxes on the whole have not performed well, judging by their average nominal growth of 2-1/2% a year since 1980. This has been largely due to a lack of growth in the transfers from public enterprises which account for the bulk of these taxes. However, the other tax components show a more encouraging trend.

6. Transfers from public enterprises. Public enterprises have to remit part of their profits to the state. Until recently this share was: 90% for firms in the productive sectors, 97% for those in the petroleum sector, and 98% for service industries. With effect from 1986, the transferable portion has been reduced to a flat 50%. The share of these transfers in total taxes on income declined from around 80% in the early 1980s to 67% in 1985 and 62% in 1986. As most enterprises have greatdifficulty in preparing timely accounts, the transfer to the State is

calculated on the basis of the planned financial results for the year as agreed by the management and the Ministry of Planning. It is payable in quarterly installments. When actual data become available, adjustments are made.

7. In 1986, the financial sector accounted for the largest share of profit transfers (23%), followed by internal trade (19%) and fisheries (17%) (see Appendix table D.2). Of the 137 enterprises (excluding Sonangol) that made transfers that year, 3 firms account for 30% of total transfers (BNA, Cafangol and the National Lotteries), and the 10 largest contributors for 57% of the total. However, the profits on which they are based do not always represent genuine operating results of these companies. E.g., the profits of Cafangol include increases in the value of large state-held stocks of coffee, and the results of fishing enterprises include part of the fish catch of foreign operators.

Table VI.3: TRANSFERS TO GOVERNMENT FROM SELECTED PUBLIC ENTERPRISES, 1984-86, (PERCENTAGES)

	1984	1985	1986
BNA	30	11	12
National Lotteries	11	8	10
Cafangol	2	15	10
Edipesca (Namibe)	5	5	7
Edipesca (Luanda)	5	5	1
Expedicao conjunta	--	3	5
Emprotel	--	6	--
Frescangol	--	--	4
Other	47	47	51
TOTAL	100	100	100

Source: Ministry of Finance

8. Corporate income tax. A basic rate of 35% is levied on the income of enterprises in the private sector, including so-called mixed enterprises in which the state has a share (imposto industrial). In addition, there is a progressive surtax ranging from 2 to 30% imposed on the same income (imposto de resistencia popular). While the maximum tax rate on enterprise profits is, thus, 65%, the average is around 50%, which equals the current share of profits transferred by state enterprises. The share of corporate income tax in total tax on incomes rose from 14% in 1980 to 28% in 1986. The government intends to merge the basic tax and surtax, and impose a single tax on profits of all enterprises, public and private.

9. Personal Income Tax. Income tax rates range from 1% to 40% for wage and salary earners, deducted at source, and from 3% to 60% for those independently employed. The system is quite complex, and collection problems are severe, although there has been a considerable improvement in

tax yield in recent years. Nevertheless, total tax collected, including from those independently employed, represented only 3% of the total government wage and salary bill in 1986, and less than 6% of non-petroleum taxation.

Taxes on Production and Consumption

10. These indirect taxes include duties on petroleum products consumed locally, on production and consumption of beer and about a hundred other products whether produced locally or imported, stamp duties, and royalty on diamonds. Together they accounted for 22% of non-oil taxes in 1986. After stamp duty, the most important source of these taxes is the duty on beer. However, beer production, and thus the tax yield, is sensitive to the availability of imported inputs, which accounts for the fall in revenue in 1986, when foreign exchange allocations to industry were reduced. Moreover, theft and payment-in-kind of workers is widespread in industry and further reduces the indirect tax base.

Taxes on International Trade

11. Given Angola's relatively high level of imports, taxes on imports could be a significant source of budgetary revenue. However, in 1985 the effective duty on (recorded) merchandise imports was only 9.4%, having dropped from 15.5% in 1982. These import duties have been contributing between 15 and 25% of non-oil taxes. An outdated import tariff, serious collection problems, and a shrinking tax base account for the low yield of these taxes. The tariff, which dates from 1953 and contains many specific duties, has never been brought up to date. As a result, many imports carry low duties. Moreover, the tariff structure is complex and hinders implementation.

12. The collection problem has several causes: the import tariff is complex, which makes proper application difficult; the Customs service operates with about a third of its estimated personnel requirement, and staff lack necessary qualifications; 1/ available transport, communications and office equipment are totally inadequate; and due to the war, the surveillance of borders is hazardous and communication is difficult. Tax collection is further affected by the decline in the volume of imports on which duty is paid. Many imports are covered by exemptions issued by various authorities, and tax evasion is widespread. The latter is made easier by the lack of authority customs staff have in the port. Army, police, port security staff and others interfere with the customs operations. Many take advantage of the lax application of procedures governing importation and clearance of goods; unauthorized imports are a major source of supply of the parallel market. 2/

1/ According to one estimate, the Customs service requires a total of 2,800 staff. Its actual strength is only 832.

2/ More than 50% of imports are said to enter Angola without an import license.

AGRICULTURE

A. Agricultural Performance, Policy and Production Response

I. Agricultural Performance. Seventy to eighty percent of the population derive a living from agriculture, which generates about 20 percent of official GNP. 1/ With an area of 1,246,000 km^3 (481.3 thousand square miles) and diversified ecological setting, Angola can grow a large variety of tropical and semi-tropical crops. Extensive areas are suitable for grazing with the Southern regions free from the tsé-tsé fly. Arable land is plentiful with estimates ranging from five to eight million hectares. There is potential for significant production of a broad variety of agricultural, livestock and fishery products, including, corn, cassava, beans, sorgum, sunflower, millet, potatoes, coffee, citrus, cotton, sugar, tobacco, bananas, palm oil, sisal, beef, pork, poultry, forestry and fish products. This range of crops can adapt to most soils and climatic conditions, ranging from cereals grown under irrigation in the cold season in the plateau region, to other cereals suited to the hot, rainy season; from robusta coffee in the forests (matas) of the Northeast to arabica coffee in the central plateaus; or from oil palm in Cabinda and Zaire Province to olive trees and vines in the Bero and Giraul lowlands, in addition to the country's forestry, livestock and fisheries potential. In the Maiombe and Dembos massifs, valuable forestry species abound such as African mahogany. Forests in the East and Southeast contain sizable stands of other worthwhile tree species. Eucalyptus and pine, of proven economic value, perform well in commercial plantations, especially above the 1,200 - 1,300 meter line.

2. Agricultural production, including livestock and fishery products, grew steadily until the disruption by the anti-colonial war. Angola was self-sufficient in all major food crops. The production of maize, the basis of the diet in the heavily populated central zone, had reached 710,000 tons in 1971, sufficient to permit significant exports (112,000 tons). Surpluses of other food crops, notably bananas, rice, sugar and palm oil, were also exported. Angola produced enough tobacco to satisfy its own needs and, in addition to being the fourth largest exporter of coffee, it was also one of the world's major producers of sisal. Exports of forestry products were considerable and livestock resources were abundant. According to the 1971 census, the last census available, there were more than 2 million heads of cattle and nearly a million goats. Moreover, Angola's long shore line (1,600 km) and Benguela's sea current provide rich potential for fishing along the Southern seaboard. In 1972, the fish harvest reached 600 thousand tons.

3. Since independence, agricultural output has experienced a dramatic decline which has affected virtually all products. The sudden departure of

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1/ This represents only agricultural production marketed through official channels, which is estimated to be 10 to 15% of total production.

the Portuguese resulted in the abandonment of most of the Portuguese-owned and managed farms, and created a manpower vacuum in many areas that are crucial to the effectiveness of agricultural operations, such as agricultural marketing, transport, input supply and research. Another major cause of the poor agricultural performance since independence is the war. The limited access to the rural areas, the destruction of infrastructure, the disruption of families and communities, and the budgetary demands of the war have had an immense impact on agricultural activity. Finally, an equally important contributory factor has been the failure of agricultural policy and government intervention to provide producers with adequate incentives and the necessary support services.

4. The current situation in the sector is in stark contrast to both pre-independence production levels and to Angola's agricultural potential. Appendix Table F.1 presents estimates of current output levels for a range of agricultural products compared to pre-1975 figures. Production of the principal staple foods (maize, cassava, sorghum, millet) is estimated at 25-35% of the maximum output achieved just before independence. Production of many other crops (tobacco, sisal, cotton, palm oil, groundnuts) does not even reach 10% of earlier levels. While the number of cattle declined by only about 20%, and the goat population actually grew by around 50%, the number of swine as well as beef production were well below previous levels. The fish catch had dropped to a fourth of the 1972 catch as the Portuguese exodus deprived Angola of its fishing fleet and expertise.

5. Angola has been transformed from a country self-sufficient in food to one dependent on increasing food imports, including food aid, and on the verge of famine. Food aid requested for 1987/88 amounted to 200,000 tons of cereals, three times morer than the 68,000 tons requested in 1983/84. The ability of government to finance commercial food imports diminished from 238,000 tons in 1983/84 to 94,700 tons in 1986/87. In addition, 18,000 tons of meat were imported in 1987.

6. Agricultural exports have virtually dried up. Production of coffee, until 1973 the principal foreign exchange earner, had fallen to 13,500 tons in 1987 as compared to 240,000 in 1974. Timber exports in 1985 were only 14% of the volume exported in 1973. A number of products that were previously exported are now imported (e.g., sugar, palm oil, beans).

7. Agricultural Policy. The massive abandonment of the Portuguese-owned and managed farms at independence created a vacuum with which the new government had to deal. With commercial private sector agriculture disintegrating, a centralized organizational set-up was introduced in an attempt to quickly fill the gap and establish a state controlled agricultural model. The central government institutions dealing with agriculture, have since formally administered prices, production, investment, marketing, distribution, exports, imports and all other aspects of the sector. They have attempted this in the face of severe technical, human resource, and administrative deficiencies. Central planning, price controls and other macro-economic distortions, together with the neglect of the peasant sector, which was the major producer of food, eliminated incentives.

Prices at all levels have been centrally determined and rarely changed and consumer goods have become increasingly scarce in the countryside.

8. A plethora of agricultural agencies has been established in spite of severe deficiencies in qualified staff. Only 1 percent of the labor force under the jurisdiction of the Ministry of Agriculture is classified as technical and most agricultural schools are closed. Under the Ministry of Agriculture alone, there are more than one hundred public enterprises and agencies. They include state farms and integrated agrarian complexes, as well as specialized forestry enterprises, service companies, etc. Under yet different bureaucratic jurisdictions, other public entities are responsible for agro-industries such as sugar cane, the production of agricultural implements and materials. In summary, Angola's initial experiment with centralization and administrative controls is understandable, in view of the post-independence disruption and insecurity and is to a large extent a reaction to the harshness of the Portuguese system of private sector exploitation and the subsequent the disarray following the massive exodus of Portuguese farmers and traders. Nevertheless, the maintenance of these policies despite the obvious constraints and failures is now recognized by many Angolan policy-makers as a mistake.

9. In addition to the problems of security and inadequate policies, investment in agriculture has been limited and poorly planned and implemented. In 1986, for instance, of the US$12.6 million in foreign exchange equivalent originally approved for investment, only US$2 million was made available, in view of the severe balance of payments constraints. Moreover, while a cursory review of the 1986 investment performance shows a level of implementation exceeding 100 percent, it appears that 69 percent of the total investment for agriculture went to build 900 residences in Kuanza-Bengo, a questionable project not contemplated originally in the Ministry of Agriculture's plan. In contrast, only 47 percent of the planned investment for training and support services took place.

10. Production Response. Country-wide agricultural development is not possible at this time because of the war. As a result, two different situations of geographic response are examined. (a) secure areas; the part of the country where agriculture can be freely carried out consists primarily of the western coastal strip and amounts to about 20% of Angola's land area. The supply of agricultural products from these areas is of considerable importance. Three million inhabitants, or 38% of the population, live there, the majority concentrated in the urban centers of Luanda, Lobito, Benguela, Lubango and Namibe. And (b) insecure areas; the rest of the country's territory is subject to considerable security constraints and limitations of movement. Agricultural development in these areas is restricted and localized, confined to the perimeters of main urban centers. These areas are often refugee centers where survival depends on supplies brought in from outside.

11. The secure area where agricultural supply response to policy reform is now possible can be divided into two zones: (a) the South-Southwest Zone(S-SW); this extends from Lobito-Benguela to the Cunene and consists

largely of the territory of the Fifth Military Region (provinces of Namibe, Huila and Cunene). Areas of greatest potential are the Huila Uplands, the mid-Cunene Valley and the plateau strip from Lubango to Matala/Capelongo; and (b) the North-Northwest Zone(N-NW); this consists of the coastal strip from Cabinda to Sumbe (formerly Novo Redondo), of varying width but widest in the Soyo and Luanda-Dondo areas, coinciding with Baixo Cuanza.

12. In the South-Southwest Zone(S-SW) zone, the Huila Uplands and the strip extending eastward to the Cunene (Matala-Capelongo) have high agricultural production potential, especially for maize growing. Within a short period (four years), Huila could probably supply the entire S-SW region's market grain needs, estimated at 90,000, t/a in addition to the farmers' own consumption of about 70,000 t/a. Infrastructure is mostly in place in this area. The traditional sector plus a number of medium-size commercial farms in the plateau area are expected to respond quickly to incentives. About 25,000 tons of maize were marketed in the course of the current farm year (1986-87), compared with 8,000 tons in the previous year following an improvement in incentives for farmers. Huila could also contribute substantially toward meeting the region's demand for beans, potatoes, sweet potatoes and various fruits (pears, apples, citrus and plums). Livestock potential is considerable in the S-SW region, particularly for cattle. Sufficient surpluses to meet the regional requirements, estimated at 8,000/10,000 tons of beef per year, are possible in the short run. Potential exists to meet the needs of the N-NW region as well, which includes the densely populated Luanda area. The region also has considerable potential for export crops of which cotton and tobacco are the most promising. Processing facilities for these crops exist in Benguela. The alluvial plains of the Benguela and Namibe areas in the S-SW offer high potential for irrigated agriculture. The supply of horticultural products and tropical fruit (bananas, papayas, mangoes, avocados) is easily assured from the truck-farming area of the Cavaco in the Lobito-Benguela area and those in Bero-Giraul in the Namibe area. Fruit canning plants in Lubango and Lobito can be reactivated.

13. The North-Northwest Zone(N-NW) includes the city of Luanda. Improving agriculture in this region is essential. Shipments of food from Huila, in addition to what is already brought in by air, are problematic because of the long distances involved and the lack of security. The N-NW Zone will have to rely on its own resources. Cultivation of the basic food staple, Cassava, is best suited to the N-NW area. Cultivation of this crop has already been considerably expanded in the areas around the capital. Cassava is now grown on many thousands of hectares of "musseque"-type soils on the Luanda plateau. Its expansion into the interior of the strip has been continuing steadily, despite the fact that unit yields have fallen sharply as a result of viral diseases. Another major crop is sweet potatoes which is grown in the wet lowlands. Various forms of peas and beans such as the cowpea, the pigeonpea or Angola bean and the hyacinth bean are also grown, while maize is also becoming quite popular. Fruit and vegetable growing in the Luanda surroundings are carried on by large numbers of family-type operations. This source constitutes the main supply of fresh produce for the capital. A wide variety of horticultural products are grown in the dry season and tropical fruit the year round.

14. Since rainfed crops are likely to contribute most decisively toward resolving the regional food problem, it is on them that development efforts should be focussed. Nevertheless, because of rapid population growth and land scarcity arising from a lack of security, irrigated agriculture should also be considered. From a technical point of view, prospects for irrigated agriculture in the N-NW strip are good. Land suitable for irrigated crops in the Lucala-Mucoso zone have been identified. Development of 30,000 ha based on gravity-type irrigation would be feasible through diversion of the Lucala river. Until such time as this area comes under irrigation, efforts in the river plain will be limited to the areas that are least affected by flooding. A wide variety of crops is raised in this area (bananas, oil palm, mangoes, papayas and citrus) together with a range of horticultural products. A substantial proportion of the agricultural products sold in the Luanda markets today comes from this region.

15. The N-NW strip is also suitable for cotton. It used to be grown in large parts of Bengo and Cuanza Sul provinces and especially in the Catete, Dondo, Porto Amboim and Sumbe areas where industrial-scale cotton ginneries are still to be found. Peasant farmers are familiar with the crop and the traditional system of cultivation practices. They should readily respond to policies and incentives aimed at reactivating cotton production. Livestock potential in the secure areas is especially promising in the coastal area south of the Longa river down to the Balombo Falls, with tens of thousands of hectares of prairie land on the Porto Amboim and Sumbe plateaus. This used to be an extensive commercial ranching zone with some tens of thousands head of improved cattle, while the raising of Karakul sheep was becoming a significant activity. Reactivation of stock raising in this zone should not present major difficulties. The forestry sector is also of significance in the N-NW region with a considerable production potential in the Maiombe forests in Cabinda and the Dembos in the interior of Luanda-Ambriz. Forestry development should focus on Cabinda province for a number of reasons including the proximity of the forests to the ports of shipment and the existence in the area of infrastructure facilities, most of which are still usable or can be rehabilitated.

B. Major Agricultural Products

16. This chapter presents in some detail the characteristics of the major agricultural products. The areas referred to are the 36 agricultural zones (AZs), identified in Map 1 attached to this Annex. They were delineated by the Angola Agriculture Study Mission, 1970-71 (Missão de Inqueritos Agricolas de Angola). They represent homogeneous units on the basis of soil, economic and environmental characteristics.

(1) Crops and Forestry

17. Cotton was for decades confined to the semi-arid coastal strip (AZ 7/8 and 15) where production fluctuated because of low and irregular rainfall. Cotton growing in the Cassange Basin (AZ 9) was more satisfactory due to more and regular rainfall. In the coastal zone cotton is grown on heavy soils (vertisols) known locally as the "black Catete

soils" (terras negras de Catete) which retain water very well. Starting in the mid-sixties cotton spread to other regions, covering large areas in the Cubal and Quilengues regions (AZ 23 and 27) where rainfall patterns are much more favorable than along the coast; also to the Malange plateau, especially in the Cacuso and Cota regions (AZ 13/14). Cotton-growing potential also focused in other areas, notably the alluvial fringes of major rivers in the semi-arid South and Southwest, more particularly the extensive Cunene lowlands and adjacent areas. Total production of 86,000 tons, of which 25% (19,992 tons) from peasant holdings and 75% (62,795 tons) from the commercial sector, was reported in the 1970/71 crop year. At present cotton production is down to about 300 tons. Peanuts (Ground Nuts) are a traditional food in northern and eastern Angola. In the traditional growing areas, peanuts do well on recently cleared light soils. Peanuts are a traditional smallholder crop grown for both on-farm consumption and for sale, promising quick response to production incentives. Production in 1970/71 amounted to 26,936 tons, mostly from the smallholders, although commercial production was rising sharply at the time, notably in the Cubal-Ganda region (AZ 23). Present production is only, about 1,700 tons.

18. Rice is an important crop in the areas of the Cuquema and Songo Rivers. Smallholder rice growing takes advantage of the temporary flooding during the rainy season which coincides with the growing cycle. Yields vary depending on fluctuations in water levels. Rice is grown commercially in regions such as the Quibala (AZ 17), where the flooding of river bottom lands can be controlled, and on higher elevations in northeastern Lunda (AZ 10), where upland rice is grown. The semi-arid belt in southern Angola, particularly the vast river plains of the Cunene and Cubango, should also be able to produce high rice yields. In 1971/72 paddy (unhulled rice) production amounted to 57,604 tons. Smallholder production was approximately 52% of the total. At present rice production is estimated at about 800 tons. Bananas grow throughout much of the country and are an important element in the local diet. Areas of greatest potential are limited, however, to the littoral and sublittoral zones north of the Coporolo, extending from the shoreline to 400 m elevation (AZ 2,4,7/8 15 and the northern portion of 22/29). Because this section of the country is prone to drought, irrigation is needed, and deep, fertile soils with the correct characteristics are required. Best conditions are found in the lower reaches of the main watercourses. These river valleys offer the most favorable climatic conditions: high mean annual temperatures (above 23-24 degrees C), stable temperature and weather conditions. Commercial banana growing started early in the sixties in the Cavaco Valley (Benguela), spreading to favorable areas in the Cuanza, Dande, Lifune, Cubal and Cuvo Valleys. Exports totaled 75,000 tons a year in 1974 and 1975. About 25,000 tons are produced at present.

19. Potatoes: Potato cultivation spread considerably during the sixties. Growing was initially confined to higher elevations (above 1,600-1,700m) in the Central Plateau, in the mountainous region of Vila Flor - Quipeio. The cultivation soon extended beyond to the Central Plateau (AZ 24) and in surrounding transitional zones (AZ 17 and 31). The Cela region became particularly important for commercial growing, in the early sixties,

as the main supplier of potatoes for the Luanda market. Outside the plateau region, potatoes can be grown during the cooler season, where the lower the temperature, the better the results. Potential also exists in the alluvial bottom lands along the coast south of the Rio Catumbela, particularly the valleys of the Cavaco (Benguela) and the Bero and Giraul (Namibe). In 1971/72 production amounted to 138,757 tons with 54 percent from the commercial sector, and 46 percent from the smallholder. Production has since declined to about 8,000 tons. Sweet Potatoes are an important local food staple, following cassava and maize in importance. They are grown widely throughout the country, on land adjacent to river bottoms. They require relatively fertile soils, either dry (or not very susceptible to flooding) or growing on higher ground or hillsides in rainier areas. They are usually associated with other crops (intercropping). Yields are best in the humid and subhumid areas with higher mean temperatures; they do less well below latitude of 14 degree S. Estimated production was about 250,000 tons in 1973. Present production is estimated at about 100,000 tons.

20. Robusta Coffee is grown over a wide area, ranging from the northern and northwestern frontier zones to latitude 12 degree S along the mountain relief between the sublitoral zone and the subplateau region in the interior. This area benefits from ocean moisture which helps form on-shore fogs of considerable duration in the dry season, offsetting the lack of rainfall. This sustains the dense semideciduous type forest where robusta coffee (coffea canephora) is a subforest shrub. Growing is largely confined to Dembos-Uite (AZ 3) and Libolo-Amboim (AZ 16), occupying only a fraction of the potentially suitable area, particularly in the case of Dembos-Uige, where plantations can be established under the cover of the natural forest. Certain savanna areas (AZ 17) bordering the forest and enjoying similar climatic and soil conditions (paraferralitic soils and ferrisols), are also favorable for coffee plantations under forest cover. Arabica Coffee: Favorable conditions for arabica coffee are found in the central region above elevations of 1,400 - 1,500 meters where mean temperatures fluctuate in the 18-19 degree C range and mean annual rainfall is in excess of 1,300 mm. These areas are associated with a particular type of paraferralitic soils (thick, agrillaceous and well structured), with capacity to retain and store water for the 5-6 month dry period. Serra da Chicuma, where commercial growing predominates, and Andulo-Nhareia, where smallholder production prevails, are traditional arabica growing areas. (AZ 24). Output of arabica coffee is small, representing not more than 4-5% of the total quantity of coffee traded. Total coffee production (robusta and arabica) reached 240,000 tons in 1974 but has declined to 13,500 tons since then.

21. Sugar Cane is grown over a vast expanse of Angolan territory (AZ 7/8, 17, 22/29, 23, 27, 33, 34, 35 and 36). Production scale requirements and high costs of sugar mills limit the potential areas. Irregular rainfall in areas otherwise suitable make irrigation necessary. Consequently sugar mills were all established on the coastal belt and on the margins of large rivers, where--in addition to large tracts of suitable alluvial soils--they found a convenient and assured source of irrigation water. This low-lying littoral and sublitoral zone, particularly the

alluvial lowlands of the Cuanza, Lucala, Longa, Queve and Coporolo, represent the country's potential sugar-growing reserve. The Lower Cunene region (AZ 34) with its favorable climate holds high potential for industrial-scale production. Now that the flow of the Cunene has largely been regulated (Gove reservoir), water could be made available to irrigate land suited to growing cane. In 1970/71 sugar production was 75,864 tons. By 1974/75 it had risen to 80,000 tons. Thereafter production declined sharply, and is now at less than 15,000 tons a year; one of the four refineries (the Açucareira do Bom Jesus) has in the interim suspended operations.

22. Beans: Various types of beans are consumed by the population. Mention should be made of the different varieties of kidney bean (Phaseolus vulgaris) and cowpea (Vigna unguiculata) which grows just about everywhere, frequently in association with other crops, mostly in the plateau areas of central Angola (AZ 17, 23, 24, 25 and 31). Beans are a standard item in the popular diet, a good source of protein consumed daily when available. Yields fluctuate with soil fertility and cultivation practices. Other types of "pea" and "bean" are Angola, Congo or pigeon peas (Cajanus cajan) and hyacinth beans (Lablab vigor), characterized by their hardiness and adaptability; the former are of particular interest for northern Angola, especially the drought-prone areas (AZ 2 and 7/8). Production in 1970/71 amounted to 65,479 tons, with the peasant sector accounting for much of the total. Commercial growers contributed less than 4 percent. Production has declined significantly since then to 2.5 thousand tons.

23. Fruit: Economically significant fruit growing for which conditions are favorable include pineapples, mangoes, papayas, passionfruit (maracujá), guavas, avocados and various types of citrus. Pineapples adapt readily to medium-elevation subplateau conditions with well-drained ferralitic soils of medium to light texture, conditions found in large parts of AZ 4, 5, 13/14, 17 and 23. Mangoes and papayas are widely distributed but they do best in hot, humid regions without major temperature fluctuations, and deep, well-drained, fertile soils. This explains the preference for low- to medium-elevation areas in the northern half of the country, more particularly AZ 2, 4, 7/8, 13/14, and 17. Passionfruit, guavas and avocados grow readily in large parts of the country, and do best at medium elevations in the subplateau and plateau regions. Citrus fruit, including oranges, tangerines, lemons and grapefruit, adapt well to ecological conditions found in Angola, provided suitable soils are chosen and irrigation offsets lack of water during the dry season. Certain areas lend themselves to large-scale expansion of citrus growing for juice concentrates. These areas are in the southern half of the country (AZ 31, 33, and 34).

24. Sunflower became an important crop in the provinces of Malange, Cuanza-Sul and Benguela. Seeds were processed locally for oils and fats. As a commercial crop, it would be of potential interest in the South and Southwest, largely between latitudes 12 degrees S and 15 degrees S (AZ 23, 27, and 31) where there are large areas suitable for sunflower cultivation. With proper cultivation techniques, fairly high yields should be possible, making sunflower growing an attractive proposition for Angola. From a

start in the early sixties, production rose steadily to almost 20,000 tons a year (17,930 tons in 1970/71). Present production is negligible. Cassava is the most widely consumed food of the local diet. It is a traditional crop in the northern half of Angola, (AZ 1, 2, 3, 4, 5, 6, 9, 11, 13/14, 19, and 21). Climate and soils are very favorable for cassava: 6-7 month rainy season followed by a dry season, rainfall ranging between 700 mm and 1,400 mm, mean annual temperature from 21 degrees C to 26 degrees C, and relative humidity averaging 65% over the year. Cassava is eminently a peasant crop. Production amounted to 1,134,262 tons in 1970/71, exclusively from the smallholder sector. It is presently down to 250,000, though this estimate is very tentative.

25. Sorghum (known locally as massambala) is a cereal characteristic of hot, dry climatic zones, found particularly in the semi-arid band occupying the South and Southwestern parts of the country (AZ 27, 30, 31 (southern portion), 33, and 34). Sorghum, and also millet, another cereal resistant to drought, are closely linked with the traditional practices of pastoral peoples who engage in subsistence farming and cattle raising. Sorghum is relatively undemanding in terms of soils and cultural practices, and it adapts well to heat and drought. It provides a good dietary complement to the milk and dairy products which are the mainstay of the local population. Production estimates are difficult to make. Millet (known locally as massango) is grown in the broad stretch of southern Angola that extends from the Cunene to the Cuando, (AZ 32, 33, 34, 35, and 36). Millet is characterized by its hardiness, and is more drought resistant than sorghum. It is well adapted to the poor sandy soils of the South and Southeast. Like sorghum, it is typical of the subsistence agriculture of pastoral peoples, who frequently establish their plots (lavras) in areas that have been manured by their cattle.

26. Maize is the basis of the diet in the densely populated central region of Angola. It is grown over a wide area. Essentially a rainfed crop, it is the cornerstone of smallholder farming (AZ 17, 18, 24, 25, 30 and 31). Most favorable conditions are found between latitudes 14 degrees S and 15 degrees S, with precipitation in the 800-1000 mm range concentrated in a relatively short period of 4-5 months. This characteristic rainfall pattern changes from S to N, with the rainy season growing longer and having a brief dry period (known as the pequeno cacimbo) separating two periods of heavy rainfall. Well-structured argillaceous soils are well suited to this crop, particularly those with vertic characteristics and even tropical fersialitic and parferralitic soils. Until the mid 1970s, Angola produced sizable maize surpluses. Output in 1970/71 amounted to approximately 709,750 tons, of which almost all came from the peasant sector. We estimate present production to be about 250 to 300 thousand tons a year, mostly for home consumption.

27. Oil Palm (elaeis guineensis) grows in a band of territory in the N and NW up to an elevation of 500-600 m. Oil palm trees are found in the hot, humid valleys (AZ 1, 2, 3, 4, 6, 7/8, and 15), where dry-season water requirements are met by groundwater close to the surface. Palm oil plays a major role in the local diet, extending far beyond the tree growing areas. Smallholder cultivation would be of considerable interest along the banks

of the major watercourses. Oil production was in the 20,000 ton range in the early 1970s with the smallholder sector accounting for about 10 percent of the total. Production has since declined to negligible levels, about 600 tons in 1986. Sisal: Angola was one of the world's major sisal producers. This fiber was grown in two main regions: north of the Cuanza, in the subplateau region of Lucala-Cacuso (AZ 13/14), and South, in the Bocoio-Cubal region and subplateau region (AZ 23). In addition to these areas with favorable transportation infrastructure (with the southern area also benefitting from proximity to the port of Lobito), sisal plantations were also found in other parts of the country, notably the interior plateau in Kuanza-Sul. Yields were generally high. The Lucala-Cacuso subplateau zone can be identified as the most favorable area for this crop. (AZ 17,23 27). The region generally has a subhumid climate with a relatively hot six-month dry season followed by a rainy season with precipitation averaging 800 - 1,100 mm. and good soils. Sisal cultivation has virtually ceased today. Production was around 48,000 tons a year in 1970/71.

28. Tobacco is an important smallholder crop especially in the Cacuso-Cota area (AZ 13/14) and a significant commercial crop in the Southwest, particularly in the Quilengues-Chongoroi area (AZ 27). Smallholder production is in small plots using simple technology to produce a dark air-dried tobacco with ready local market. Commercial growing is practiced on the moderately fertile light or medium-textured soils found along the banks of the major rivers of the Southwest, yielding high quality flue-dried yellow tobacco. In addition to the traditional tobacco-growing areas listed above, other regions also lend themselves to this crop, notably AZ 25, 31 and 34. Tobacco production satisfied the needs of the Angolan market. Three processing plants (two in Luanda and one in Benguela) were fully employed. In 1973, 4,800 tons of Virginia and Burley type tobacco were produced, including a few hundred tons of dark tobacco produced by the smallholder. Today production is negligible. Wheat growing was widespread in the higher-elevation areas of the planalto, particularly in the Central Plateau (AZ 24) and the Huila Highlands (AZ 30), where it is cooler during the rainy season. Cooler conditions coincide with the crop's vegetative cycle, making it rather susceptible to rust and causing considerable fluctuations in output. Thus, whereas production in the fifties was in the region of 30,000 tons, the 1970/71 harvest amounted to only 22,566 tons. The smallholder sector contributed 43% of the total. Trials at the Cunene Experimental Station for Irrigated Crops (AZ 34) with irrigated wheat, produced excellent results, effectively controlling the rust problem.

29. Forestry Resources: Angola's forestry resources and potential are considerable. In 1973, 182.0 thousand tons of forestry products were exported. In 1985 wood exports were 24.9 tons, up from 1.2 thousand tons in 1980 (Appendix table F.6). Maiombe in Cabinda (AZ 1) and Dembos (AZ 3) regions have the main forestry potential. Dense humid forests are the centers for the production of such valuable species as mahogany, mulberry, tola and limba. Worthy of mention are other stands of forest in other parts of the North and Northeast, (AZ 6), containing noble species (panga-panga), (AZ 4). In the East and Southeast of Angola, (AZ 26/28, 32 and 35), the dry forest or open forest stands growing in the vast territory

covered by Kalahari sand also include a variety of species of economic value such as girassonde and mussibi. The potential for exotic species of trees such as eucalyptus and pine is considerable. Eucalyptus grandis and E. saligna adapt well, particularly at elevations above 1,200-1,300 meters. A number of pine species do well, notably pinus patula, found in extensive areas at higher elevations. The eucalyptus area exceeded 150,000 ha in the early 1970s, with the wood produced going to the Alto Catumbela pulp mill and the Benguela Railroad. A second pulp mill was under construction in the mid seventies but was never completed. The Alto Catumbela pulp mill has been out of operation for several years.

(2) Livestock

30. Livestock potential is significant though production faces similar difficulties as the rest of agriculture. Water has become a major problem. Livestock acquires special importance in the immediate future considering that about 45 percent of livestock is found in relatively secure areas. Native livestock herders, pastoralists, raised cattle as a way of life long before the arrival of the Portuguese colonizers in the 1500s. In the early colonial period Portuguese merchants exchanged goods for animals with the pastoralists. As the colonial rule became more established, merchants turned farmers and cattle raisers while continuing to trade with the native people. Later, large scale ranches were established with improved animal stock and increased commercialization. The pastoralists travel from place to place as a way of life, searching for water and grass, trying to escape from tripanosomiasis transmitted by tsé-tsé fly. For them cattle are the main source of food, beef and milk, which is bartered for goods. They are also the peasant's status symbol. Cattle raising, due to its economic, social, religious, and cultural characteristics, is the center of a peasant's life in these regions, the standard of value, and cattle are part of the festivities of birth, puberty, and wedding. Though pastoralism and ranching are different systems of cattle raising, the two became interdependent. The ranchers were the main source of meat, the pastoralists were an alternative source, with the stock they maintained as their security and savings. The disruption of ranching at independence and the neglect of the pastoralists, compounded by security problems and lack of goods for exchange, reduced beef production from 24.5 thousand tons a year in the early seventies to 3.5 thousand tons at present. Having been a meat exporter in the early 1970s, Angola imported 18.0 thousand tons of meat in 1986.

31. Beef Cattle raising in the South and Southeast is dependent on the availability of water. Water tends to limit, even more than pasture, the reproduction rate and herd size. In the traditional pastoral zones (AZ 22/29, 23, 27, 30, 31, 33, 35 and 36), cattle numbers reflected the limitations imposed by the environment. Numbers would decline sharply at the height of the dry season, when the animals were obliged to crowd around the few sources of water. Many would die from lack of food brought on by overgrazing. Action was taken in the mid-fifties to break the boom-and-bust cattle cycle of abundance followed by drought. These measures took the form of providing, throughout the region in question (AZ 22/29, 33, 34 and 35), a series of livestock watering facilities by tapping underground

water resources and constructing reservoirs. The results of these measures were spectacular. Instead of the old pattern of disastrous concentrations of animals around the few permanent water sources and on the banks of the Cunene during periods of crisis, the herds remained uniformly distributed across the territory, allowing a significant increase. In the course of some two decades, this expansion in grazing areas in the South resulted in an increase of one million head of animals (from 1.8 million in the mid fifties to approximately 2.8 million in 1974/75). The commercial sector increased significantly, with grazing areas ranging in size from 5,000 ha to 20,000. The period saw the establishment of several dozen large cattle ranches. Meanwhile beef cattle raising spread outside the traditional pastoral areas of the South into the plateau region (AZ 13/14, 17, 24 and 25) where oxen had hitherto been associated with farming only as work animals (for plowing and animal traction). The harshness and difficulties of the environment (poor natural pasture and inadequate health conditions) were overcome through proper disease and pasture control. The central region became a favorable area for stock raising, and in some respects more promising than the traditional areas in the South, as it was possible to raise a higher number of animals per unit of land without water availability problems. A large industrial abattoir was established in the city of Huambo, processing several hundred head of cattle a day. Cattle raising in Southern Angola is becoming increasingly difficult. South-African troops have been systematically destroying the water spots (artesian wells, small dams and water pools), most of which are now unusable. In consequence of the water problem, security and policy conditions, several areas where cattle were previously raised are now almost deserted.

32. Dairy Cattle: To judge by the success achieved in Cela where output reached 120,000 liters of milk a day after just a decade of operation, Angola's dairy potential is considerable. In many other parts of the country, particularly in the higher-elevation plateau regions, potential is as good. At independence, Angola had three main dairy production centers. The largest of these was the Cela-Catofe dairy with some 60,000 cows producing 120,000 liters a day, followed by Huambo (30,000 liters/day) and Matala/Capelongo (15,000 liters/day). Apart from these modern well-equipped creameries (pasteurized and sterilized milk, cheese and butter), there were also smaller production facilities near the towns of Lubango, Benguela and Luanda. Goats represent a major source of animal protein for the local population and are resistant to drought. Like pigs, goats are found throughout the country. Their concentration was highest where a system of markets existed, geared to the consumer market in Luanda.

33. Herd Estimate: The likely distribution of cattle and goats in these provinces is shown in Table VII.1.

TABLE VII.1 Distribution of Cattle and Goats in Southern Angola

Province	Cattle	Goats
Huila	45%	63%
Cuneme	30%	14%
Namibe	10%	9%

Source: Ministry of Agriculture and Mission estimates.

According to the 1971 census, the last census available, there were 2,244,000 cattle and 872,000 goats. The Ministry of Agriculture estimated that in 1984 there were 5,408,000 cattle and 2, 101,000 goats. For these estimates, it was assumed that the annual net growth rates remained the same since independence as in the colonial period, i.e. an average growth rate of 7% per year for cattle and goats. A 7% growth rate, however, is excessive for the conditions prevailing in Angola since independence. The Mission estimates that cattle and goats have had a more modest rates of increase: 5% from 1971 to 1975, 2% from 1976 to 1981; 1% from 1982 to 1987. Thus in 1987 the cattle stock of Angola should be closer to 3,420,000, and the goats to 1,300,000 animals (Appendix Table F.1).

(3) Fisheries

34. Angola has a rich 1,600 km long shore for fishing. The Benguela's sea current improves the potential for catch along the Southern seaboard. The 1972 fish harvest reached 600 thousand tons. The Portuguese exodus in 1975 depleted Angola of its fishing fleet and expertise and the catch declined to as low as 76 tons in 1983. Present estimates are around 195,000 tons. Some estimates are as high as 470,000 tons. The increase is due to the agreements the Angolan government reached with foreign companies to fish Angolan waters. These contracts helped to increase the catch, of which Angola receives 15 to 20%. The problem with these arrangements is that Angola does not have the means to independently verify the catch. Thus, although it is estimated that in 1985, 470,000 tons of fish were caught, reported amounts were only 195,000 tons. The technologies used by some foreign fishing fleets are endangering future potential. It is suspected that some use sucking techniques, which cause irreparable damage to seashore plankton. There have been reports of deterioration in fishing locations.

C. Rural Structure

35. Producer Organization. Policies regarding the organization of agriculture since independence have emphasized state or collective ownership. In the words of Agostino Neto, Angola's founding president, soon after independence, "Thousands of Angolans are owners of the means of production. We know very well how difficult it is in rural areas to

transform these small-holdings into cooperatives or state farms. . .". 2/ However, some private commercial farms continued to exist and the present S.E.F. program encourages the expansion of private commercial farming and gives greater attention to the individual peasant producer. 3/ Two main forms of production organization were established:

1. The AUPs (Agrupamentos de Unidades de Produção) or State Farms. Abandoned commercial farms were combined into state-owned production units with managers and workers as public employees. In the case of coffee they are known as " empresas territoriais de café " (ETC). AUPs depend on the Government for financial support and almost without exception, they have incurred substantial losses. In 1986 the reported losses of state agricultural enterprises were 1,815 million Kwanzas, or U.S. $61.3 million at the official rate of exchange (Table VII.2). The AUPs reported a loss of 477 million Kwanzas, or 26% of the reported financial loss of the enterprises under the Ministry of Agriculture.

Table VII.2: Losses of State-owned Agricultural Enterprises
('000 Kwanzas)

	1983	1984	1985	1986
AUPs (State Farms)	1,259,957	714,800	399,073	476,590
Comp. Agrâr. e Empresas Locais	849,084	738,100	456,843	449,816
Emp. Territ. Café	396,537	725,600	1178,771	951,519
Emp. de Serviços	923,867	245,700	47,768	379,737
Emp. Sect. Florest	-	-	52,394	261,512
EDAs	-	-	-	54,825
TOTAL DEFICIT	**1,581,711**	**2,424,200**	**2,134,849**	**1,814,525**

Source: Relatorio Sobre a Actividade do Sector Agrario em 1986, Ministry of Agriculture, 1987. This table does not include ENCODIPA which comes under the Ministry of Commerce. Its deficit was reported to be at about 100 million Kz in 1986.

2. Peasant Associations. Intended originally to be collectives, some as cooperatives, they have become agglomerations of peasant households making their own production decisions. Their presumed advantage is

2/ As reported in M. Wolfers, and J. Bergerol, Angola in the Front Line, Zed Press, 1983 p. 140.

3/ The Angolan constitution allows private ownership: "private activities and property, even those of foreigners, so long as they are useful to the country's economy and to the interests of the Angolan people"

priority access to government services and inputs. Unlike state farms, peasant associations do not collectivize production.

36. Despite the effort to change the rural structure to conform to ideological considerations, the underlying peasant organization remains the same as it was before independence. Today the rural structure consists of three major groupings: (a) declining large-scale state farms; (b) relatively small numbers of Portuguese farmers known as "cooperantes," producing mainly fruit and vegetables; and (c) a large and dominant sector of peasant (small holder) agriculture. Various types of producers make up peasant agriculture. They include pastoralists herding in the Southern regions; small scale farmers producing maize, sorgum and cattle in the transitional zones of the pastoral areas of the South; small farmers of the fertile and densely populated central plateau; small farmers in the coffee areas; small farmers growing cassava as their main staple in the Northern and North Eastern regions and in the tropical forest; and a small number of hunters in the far South. The typical peasant family cultivates 1.5 to 2.5 ha with subsistence crops. Rotation and intercropping is the usual practice. Tools are rudimentary with the hoe most common. Animal traction is used in some areas as in the fertile areas of Huila province. We estimate that there are about 800,000 to 1,000,000 peasant family units.

37. Whereas peasant agriculture remained essentially unchanged since independence, commercial farming which flourished in colonial times, has almost disappeared. The Portuguese colonial policy supported settlers from Portugal with land grants and financial incentives (coffee, cotton, citrus, tobacco, beef, poultry, etc.) Substantial investments were made in infrastructure such as irrigation and transport in support of commercial farming. Efficiency varied, with highly productive farms in the minority, many of which belonged to urban-based industrialists and businessmen. Farm size varied, with some farms as large as several thousand hectares. Commercial livestock production is estimated to have been as high as 40% of the total. The commercial sector was supported by agro industries, marketing and processing infrastructure. Animal feed mills catered to the dairy, swine, and poultry industries. Other industries included flour mills, slaughter houses, fruit canning, vegetable processing, tobacco, and cotton processing.

38. Marketing. The Ministry of Internal Commerce (MIC) is responsible for the supply and distribution of goods in both rural and urban areas. In rural areas MIC is expected to supply consumption goods in exchange for agricultural products. However, the distribution of meat comes under the Ministry of Agriculture. Between twenty and thirty thousand merchants performed the rural marketing function before independence. Most combined trading with farming and cattle raising. The variety and flexibility of the large number of private traders and entrepreneurs responded to the local conditions in ways which the present centralized national trading system is not able to do. The availability of consumer goods and access to them by the peasantry determine the amount of rural surplus available for exchange. The present system is failing to provide these needed goods, both consumer goods and agricultural inputs. As a result, the peasant is no longer producing for the market but only to meet his family's needs. In

response to this situation, a sizable parallel market developed with prices that range from 20 to 60 times official price. With such major markets distortions, government stores have few goods to offer. It is estimated that up to 90% of family income in Luanda is consumed in the parallel market. Imports and food aid are increasing dramatically to close the food gap. As most peasants have sufficient cereals, imported food goes to meet urban demand, the needs of the armed forces, and the displaced.

39. It is difficult to estimate how much of the domestic agricultural production moves through official channels, although it could not exceed 10 to 15% of production. For instance, in 1986, maize production through official channels was 18.6 thousand tons. In contrast, total maize production is estimated to be about 300 to 350 thousand tons, having been as high as 700,000 tons in 1971. Consumer goods, when available in rural areas, can be purchased up to the value of the produce the peasant supplied the store at official prices. The shelves of these stores, however, are empty and what goods become available move quickly to the parallel markets. Greater reliance on market forces is needed, not because such reform is in itself sufficient to encourage agricultural development but because the flexibility which markets allow is a prerequisite for other requirements of long-term agricultural development.

D. Agricultural Support Services

40. The Ministry of Agriculture is responsible for most agencies and organizations that provide services to agriculture. Their effectiveness is seriously compromised by excessive centralization and a shortage of qualified staff. In the provinces, the Ministry of Agriculture is represented by the Delegation (Delegação) with "directorates" supporting peasant associations, livestock, conservation, and other corresponding services from the national level. The emerging attention to the neglected peasantry is mistakenly perceived as requiring the creation of another layer of costly official institutions. The recently introduced agricultural development stations (EDAs), for instance, are already burdened with Departments of Planning, Finance, Human Resources, Technology, Supply, etc., another cumbersome bureaucracy. Agricultural policy should move in the opposite direction and should rely less on the public sector because of the latter's severe human, financial and organizational constraints. Some of the agricultural support services provided are described below.

41. Mechanization: ENAMA (Empresa Nacional de Mecanização Agricola) provides mechanical services to agriculture. It is involved in ground clearing, leveling, and construction of earthworks for reservoirs. ENAMA's work is presently concentrated in the most secure areas in the south and in large scale state farms. In the absence of precise data it is difficult to assess the performance of the ENAMA. It is unlikely, however, that tractor cultivation, with some exceptions, is economic in the conditions prevailing in Angola. Scarcity of technical and material resources have severely affected the work of ENAMA as well as the rest of agricultural services. In 1986 less than 2% of the work force of ENAMA was classified as technical. More than 70% of its tractor fleet was inoperative due to lack

of spare parts and maintenance problems. The parts problem is complicated by a lack of uniformity in makes of equipment, a problem that is aggravated by individual donors promoting their own brands of equipment.

42. Fertilizer and Implements: DINAMA (Distribuidora Nacional de Materiais Agricolas) is responsible for the procurement and distribution of implements, fertilizer and insecticides. It distributes these materials on the basis of a national master plan for the agricultural sector as elaborated by the Ministry of Agriculture and approved by the Ministry of the Plan. DINAMA is heavily dependent on imports (Appendix Table F.4). There exists some Luanda-based capacity to manufacture small equipment such as machetes, hoes, and plows. In 1987, domestic production of implements was at a standstill, however, because of a lack of raw materials. All chemical fertilizers are imported. DINAMA has warehouses in Luanda and in the provincial capitals with outlets in some localities, which sell directly to the public and act as distribution points for delivery to state farms, peasant associations, etc. However, even when fertilizer and other inputs are available, transportation is a major constraint. The transport fleet of DINAMA cannot meet the demand for transport of large volumes of materials over long distances on poor quality roads. The problem is exacerbated by the high percentage of equipment out of commission, estimated at about 70% of the fleet. The security situation further hinders distribution.

43. Seeds: AGROSEMENTES is responsible for the purchase and distribution of seeds. Agrosementes was formed under the Ministry of Agriculture in 1983. Until then ENCOPIDA was responsible for this service. Seed distribution is given high priority by the Ministry of Agriculture. The amounts of seed distributed have been increasing in recent years. The distribution of maize seed increased from 773 tons in 1984, to 1,668 tons in 1985, and 1,994 tons in 1986. There has been some improved seed production under Yugoslavian supervision. There are plans for seed development in multiplication centers in a number of areas. Even when seeds are timely distributed the productivity of hybrid seeds is dependent on the timely availability of fertilizers (supplied by DINAMA). The coordination of complementary inputs has not worked well. AGROSEMENTES emphasis upon hybrid maize appears to be of limited relevance to the mass of peasants for whom the supply of proven local varieties might well be more beneficial.

44. Marketing and Distribution of Goods: ENCODIPA (Empresa Nacional de Comercialização e Distribuição de Produtos Agricolas). ENCODIPA provides consumer goods to rural areas in exchange for agricultural products. Until 1981 ENCODIPA was in the Ministry of Agriculture. Since then it has been under the Ministry of Internal Commerce. It operates through commercial outlets in urban and rural areas. The amounts of goods procured and distributed by the Ministry of Internal Commerce are determined by the central government, as are the distribution among provinces and between cities and the countryside. The goods available through ENCODIPA fall far short of need and the system as presently functioning does not provide adequate incentive for production and exchange. Extension Services: The "dinamizadores rurais" (rural

mobilizers) can be considered a type of rural extension agents. Approximately 1,000 dinamizadores have been trained since independence. Attrition has been around 30%. Their preparation is poor with only about one-third receiving any training in agriculture. Many receive only six months of training in total, some only three months. There does not seem to be any linkage between the work of the dinamizadores and the other services to agriculture.

45. Agricultural Development Stations (Estaçoes de Desenvolvimento Agricola - EDAs) are a recent introduction and a response to the failures of other institutions. EDAs aim to support peasant associations by helping with organization, technical, financial, and marketing services. The intention is to transform the state farms into peasant associations. Unlike state farms peasant associations do not collectivize production. The EDAs were designed to fill the gap between DINAMA and AGROSEMENTES and the peasant. They are to receive supplies and deliver them to the peasant associations through lower level Centros de Desenvolvimento Agricola (CDAs). The CDAs in turn direct the activities of the dinamizadores rurais (extension). EDAs are flawed by the same structural and strategic inadequacies found in the overall agricultural structure and policy. They face the same problems as all institutions set up to serve agriculture, notably a lack of training, an excessive centralization, and a lack of resources.

46. Agricultural Education and Research. (a) Agricultural Education. The institutions which serve agriculture, whether private or public, depend upon skilled people. The scarcity of trained people at all levels is enormous. The colonial regime provided little training to Angolan nationals. Decolonization and the withdrawal of trained persons depleted all sectors of the skills needed to manage agriculture from the most basic level. The situation of the agricultural schools described below shows the poor state of agricultural training facilities.

47. The Agricultural School at Huambo began graduating Eng. Agronomos (general agricultural degree) in 1983. It expects eight to ten graduates a year in agriculture plus four to five in veterinary science. Of about 80 students admitted, 75% dropped out the first year. Staff, materials and general infrastructure are very deficient, and lack of food is a main reason for the high drop-out rate. Of the elementary and secondary level agricultural training schools in Angola, none is fully operational, due mainly to the security situation. They include:

(1) Escola de N'Gangassol; Situated in the province of Malange, it was inaugurated in 1979 to offer training in basic agriculture, livestock, cooperative development, accounting and agricultural mechanization. The plan was to have 300 students. Because construction was not completed, the maximum capacity is 80 students. As of August 1983 this school has been closed due to the gravity of the military situation.

(2) Escola de Mecanização de Sumbe; this school is located in the province of Kuanza-Sul. It was inaugurated in 1979. Its objective is training in agricultural mechanization at the regional level. Its planned capacity was 200 students, but construction was never completed. Though

enrollment reached 59 students, the facilities proved inadequate. The deterioration of the military situation in the area forced the school's closing in March of 1984.

(3) Escola de Mecanizaçaao de Huila; this school is situated in the city of Lubango. It was inaugurated in 1978 as an agricultural mechanization training school to serve the needs of the provinces of Huila, Namibe, Kunene and Kuando Kubango. The school has a maximum capacity of 120 students, and being located in a secure city continues to be in operation.

(4) Escola Agraria do Café da Gabela; this school is in Gabela in the province of Kuanza-Sul. In 1978, 127 students studied courses in sanitation. Its present state is not clear, but it is probably closed.

(5) Centro Comandante N'zage (Huila). Closed. Offering only occasional seminars.

(6) Centro de Formação de Dinamizadores Rurais para o Cafe do Kilombo (Kuanza-Norte) has been closed since May 1982 because it has no eating facilities. There is lack of water, light and food.

(7) Centro de Formação de Quadros do Huambo; has been closed since 1982 for regular courses. A few training courses are given intermittently in the province.

48. With such limitations in training facilities and the exodus of qualified personnel at independence, human resources for agriculture are practically non-existent. The human resource deficiencies and the long time needed to reach even a minimum critical manpower level call for alternative less human-resource intensive paths. Even when institutions such as those for extension and research are considered immediate prerequisites to agricultural development, simple and very selective forms should be encouraged rather than the wholesale transplant of institutions from environments with ample human resources. A better understanding of already existing peasant systems and their improvement might be a better approach to rural development in these circumstances.

49. (b) Agricultural Research: The Instituto de Investigação Agronomica has a staff of six agronomists, five of whom studied at Huambo. The institute is the entity responsible for agricultural research in Angola. It is located at Chianga, 25 km from Huambo. Before independence the institute had 60 professionals, some with graduate training. With the Portuguese exodus only one remained. There are no Angolans with MS or PhD degrees in agriculture disciplines in the country. The lack of trained people and the dismantling of the limited agricultural research at independence, left Angola with no research capability. Some sporadic contacts with international research centers take place (CIMMYT, ICRISAT,

INTSORMILL) 4/ and national programs, such as with EMBRAPA in Brazil. Such linkages, when systematic and over the long term are vital to Angola's needs for agricultural development. For this to happen, however, a minimum of human resource development must take place. More interaction with international research efforts is of benefit to Angola and must be encouraged. The necessary two way scientific communication, however, can take place effectively only when national professionals with minimum scientific and research method training are available. Without Angolan professionals agricultural research will remain dependent on external human resources and Angola will not acquire the capability for adaptation and continuity.

E. Agricultural Policy Adjustment and Reform

50. Policy Adjustment and Response. The memory of colonial exploitation and the identification of that period with a liberal market-based agricultural policy, should not prevent the return to greater market reliance. The objectives of SEF are an indication that Angolan economic policy is beginning to make this distinction. The distribution of power and land ownership are now different from that in the colonial period. The possible adverse effects of market-based agricultural policy can be dealt with through corrective measures and selective controls. The balance between social and economic objectives in agriculture does not have to preclude incentives for individual production, especially from the peasantry.

51. The Government authorities consulted by the Mission wre unanimous about the need for urgent reform of agricultural policy. Policy reform is prerequisite to the neened technical assistance, institution building and agricultural investment for the country's long-term agricultural development. Present production levels are so distant from production possibilities and past performance, that an initial positive response is assured. A program of agricultural policy adjustment should draw from experience elsewhere in Africa and should include: (a) production incentives through remunerative prices and the availability of consumer goods and inputs in the country-side; (b) institutional reform encouraging local intermediaries and private transport for marketing and distribution; (c) investment for rehabilitation of storage and transport; and (d) coordinated and focussed technical assistance and training to strengthen selective support services for agriculture.

52. Agricultural supply response to price incentive is shown to be positive throughout Africa, and Angolan agriculture shoudl not be an exception. A recent experience in Angola illustrates this. Improved availability of goods in the countryside of the Huila Province has brought about significant increase in marketable supply. The total production of

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4/ CIMMYT - International Center for Wheat and Maize, Mexico
ICRISAT - International Center for Semi-arid Tropics, India
INTSORMILL - International Project for Sorghum and Millet, Nebraska
EMBRAPA - Brazilian Agricultural Research Company

maize moving through official channels reached 17.5 thousand toons in 1986, of which 1/3 was produced in Huila. Though this performance reflects better security conditions in this province, it is also an indication of peasant response to incentives. This production increase is modest when considering that in 1970 Huila marketed 50.0 thousand tons of maize.

53. Marketing Policy should focus on improving domestic and international marketing of agricultural products. The marketing structure for agriculture should follow the guidelines of S.E.F. for decentralization and reducing public sector dominance of the economy. Retail outlets should gradually be transferred to the private sector. The Ministry of Internal Commerce (MIC) should become a regulating and monitoring agency instead of being directly involved in the marketing function as at present. Public sector marketing, to the extent that it remains, should have to compete with the private sector with respect to imports and wholesale trade. Measures to improve marketing include: (a) legalization of the "Candongueiro" (private intermediary) and development of a system of support for marketing such as credit for transport; (b) transfer to the private sector of the retail outlets of the Ministry of Internal Commerce; (c) concession to private traders of a major share of foreign exchange earnings from exports; and (d) review of the operations of the more than one hundred public enterprises under the Ministry of Agriculture with a view to divesting or eliminating them, with exception of those providing technical assistance, training, and research services.

54. The projected supply response outlined in Appendix table F.7 is thought to be attainable with resources already available. Maize yields are presently about 500 kg/ha. At present average yields, 1.6 ha per family is needed to meet subsistence needs; without land productivity gains a family can increase cultivation to 2 ha. with their available labor and land. Even though short term production response can come from the available labor and land, the long term development of Angolan agriculture will require improved practices, inputs and trained people. Increasing the financial and human resources, and improving the institutional set-up and organization necessary for such development is a long-term process. Use of improved seeds, fertilizer, insecticides and animal traction will raise yields significantly. The project "Le Developpement des Cultures Vivrieres dans la Province de Huila" with support from Caisse Centrale de Cooperation Economique of France, expects yields of 1.5 tons for maize per ha by the participating 15,000 target farms. The average yield of maize reported by the pilot survey at Hogue was 1,216 kg/ha.

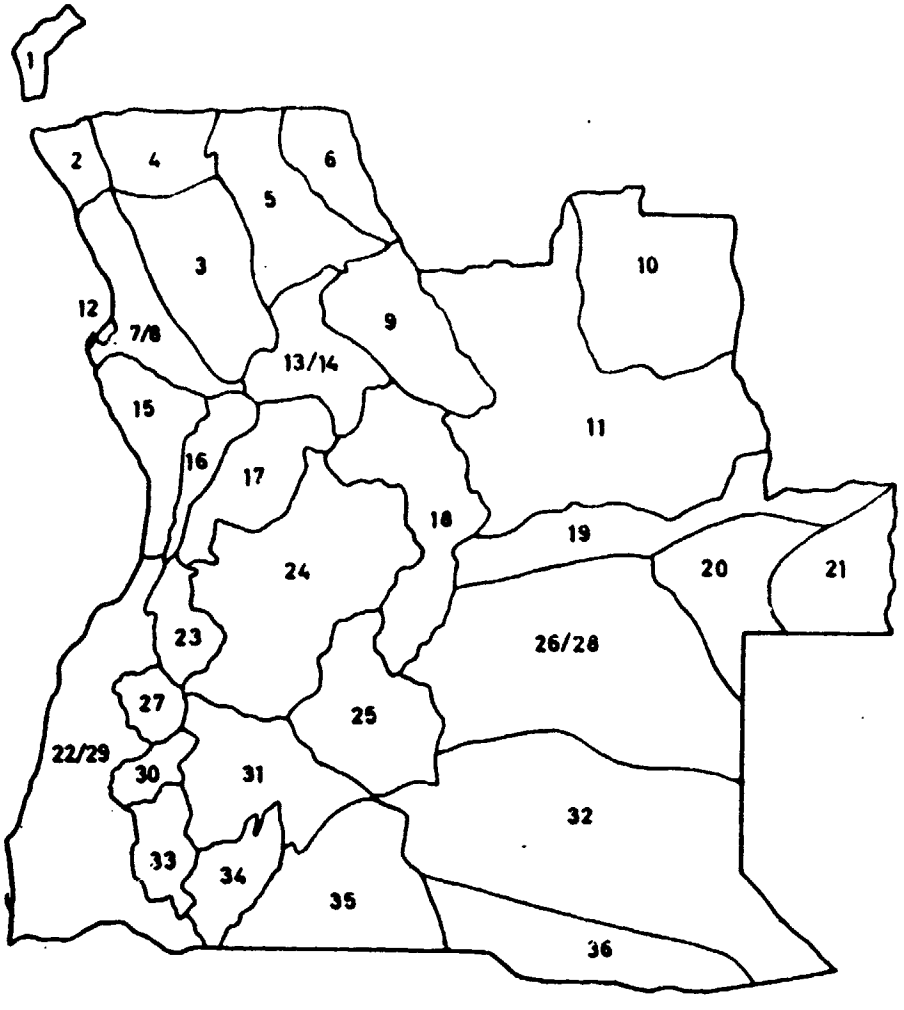
55. Increasing agricultral production will require <u>institutional reform</u> to reduce central state control and provide for more reliance on markets and the peasantr . Such a reform is not as radical as it might appear since, in practic production and distribution of the bulk of the agricultural output already takes place outside the formal institutions and controls. This is also the case with institutional policy, i.e., the gap between the official, controlled and planned actions and what actually happens, is considerable.

56. The political economy of adjustment. A broad liberalization of agricultural production, marketing and distribution for all agricultural and food products within the context of a liberal macroeconomic policy as expounded in the objectives of S.E.F., is a preriquisite to reversing the dangerously declining food situation in Angola and to start re-energizing the country's agricultural potential. The major part of the economy already operates in the parallel informal sector. As the contribution of agriculture to Government revenue is marginal, with the exception of coffee, the liberalization of agricultural policy will have no adverse effect on current public finance. Rather, with appropriate policies, the increase in agricultural production should improve agriculture's contribution to public revenue.

57. The short-term effect of price liberalization will be adverse for those who presently benefit from access to agricultural products through channels at controlled prices. But only a small share of the population has access to this limited supply and the percentage of income spent on price controlled goods is small. A senior level public servant family in Luanda, with two members working, consumes about five percent of its monthly incomeon "the circuito official" --Goverment stores at official prices. What the agricultural policy reforms will accomplish is to formalize/legitimize what is now the parallel economy. An indirect benefit of more reliance on the market, would be the reduction of corruption which the large discrepancies between official and parallel market prices is fomenting.

58. In conclusion, there are secure areas in Angola for an immediate agricultural production response to policy adjustment. The gap between present levels of production and potential is so great, that initial response should be significant. For this to happen the system of state control must move toward much more reliance on markets and private initiative than at present. The social costs of such adjustment are small as the bulk of the agricultural economy is already operating outside the formal channels. Policy incentives and institutional reforms should be followed by investments for long-term development of human resources, infrastructure and services to improve productivity.

AGRICULTURAL ZONES (AZs)



ZONAS AGRÍCOLAS / ZONAS GEO-ECONÓMICAS

1 - CABINDA
2 - LITORAL NORTE
3 - CAFEÍCOLA DEMBOS-UIGE
4 - SUBPLANALTO DO CONGO
5 - PLANALTO DO CONGO
6 - CUANGO
7/8 - LITORAL DE LUANDA
9 - BAIXA DE CASSANGE
10 - NORDESTE DA LUNDA
11 - LUNDA
12 - SUBURBANA DE LUANDA
13/14 - PLANALTO DE MALANGE
15 - LITORAL SUL DO CUANZA
16 - LIBOLO AMBOÍM
19 - INFLUÊNCIA DO C.F B-LESTE
20 - ANHARAS DO MOXICO
21 - ALTO ZAMBEZE
22/29 - LITORAL SUL
23 - TRANSIÇÃO CENTRO-OESTE
24 - PLANALTO CENTRAL
25 - GANGUELAS
26/28 - BUNDAS E LUCHAZES
27 - QUILENGUES
30 - TERRAS ALTAS DA HUILA
31 - TRANSIÇÃO CENTRO-SUL
32 - CUANDO-CUBANGO
33 - GAMBOS
34 - BAIXO CUNENE

TRANSPORT AND COMMUNICATIONS

A. Sector Overview and Organization

1. Sector Overview. In 1975, Angola had an enviable modal mix for a developing nation, comprising rail, highway, air, cabotage and shipping. It possessed a distinctive lateral three rail-port corridor symmetry (north, central and southern), supported by feeder road networks. Additional highways provided very basic north-south provincial links, as well as access to national borders. The air sector linked all key provincial cities and has subsequently grown to become the only dependable means of passenger and light freight transit over much of the country.

2. In general, Angola has a sparse provincial transport coverage which reflects the export corridor orientation inherited by the Government and the subsequent inability to modify this in the immediate post-colonial period. The air sector has grown significantly in terms of traffic, stock and revenues during this same period, though its infrastructure remains weak and suffers from under-investment. Ports are struggling to adjust to bi-directional traffic flows, new technologies and a cumbersome, inefficient labor system. Cabotage and international shipping services languish for lack of investment, poor organization and elderly, obsolete ships.

3. In 1988, Angola's transport infrastructure comprised 72,000 km of roads, 2,500 km of railways1/, 3 international and 3 cabotage ports, and a hierarchy of 31 airports. An estimated 30,000 non-military trucks and 400 buses, 40 locomotives, 11 long distance ships, 10 cabotage vessels, and 21 aircraft operated infrequent modal services at low levels of efficiency. Rail and port systems form specific corridors, which in 1975 ran eastward from Luanda to Malange (a distance of 430 km) in the north, Lobito to Luau (1,350 km) in the central heartland and Namibe to Menongue (750 km) in the south. Regions are linked to these corridors by 9,000 km of paved highway and 66,000 km of secondary and feeder roads, which together with the air services provide the main means of north-south travel. Cabotage currently accounts for 180,000 tons of freight between the four main ports and has potential for substantial growth. The Cabinda enclave is dominated by the oil industry and the non-petroleum infrastructure is small.

1/ The figure of 2,500 km for the rail network is "operational or quasi-operational". For example, it includes the whole Benguela corridor kilometrage, incorporating that portion not used due to the security difficulties. The figure of 3,069 km cited in Vol. 1, Chapter 1, page 2, probably represents the total registered network, including abandoned sections.

4. Output for 1985 through 1987 for the system under the Ministry of Transport and Communications (MINTEC) control is given in Table VIII.1. Total freight traffic for 1987, at around 3 million tons, is about a quarter less than for 1985, principally due to a large decline in port traffic. In 1987 the number of passengers carried fell to below 24 million, following a sharp fall in bus services, despite rail and air transit meeting a steady demand. This figure is only 60 % of the 1985 levels. The potential importance of the sector in terms of the national social product can be seen in Table VIII.2, where the performance of the transport sector under MINTEC control for selected years in the 1980's is compared with the final year of colonial rule. Data for the mid-1980's show the sector stagnating after recovering from poor performances in the early years of the decade. Between 1986 and 1987, rail and maritime showed a rise in output, while road, ports and communications registered declines. Air service remained constant while the total sector registered a 7 % reduction over 1986. It is sobering also to note that the value of total sector output in 1987 was about half that achieved in 1974.

Table VIII.1. OUTPUT OF MINTEC CONTROLLED TRANSPORT SERVICES, 1985-87.

	Freight [1]			Passengers [2]		
	1985	1986	1987	1985	1986	1987
Road	997	1,309	1,100	29,475	19,546	16,703
Rail	521	465	517	7,201	7,980	6,398
Maritime	512	598	530	-	-	-
Air	43	35	42	927	1,098	815
Ports	1,739	1,551	1,172	-	-	-
Total	3,812	3,959	2,884	37,602	28,624	23,516

Notes: 1. Thousands of tons.
2. Thousands of passengers.

Source: MINTEC, 1988.

Table VIII.2. OUTPUT OF TRANSPORT AND COMMUNICATIONS SECTOR 1

Sector	1974	1984	1985	1986	1987
Transport:					
Road	10,432	2,164	3,457	6,277	5,261
Rail	7,393	807	864	820	910
Maritime	1,041	1,617	1,828	2,084	2,613
Air	1,411	5,371	6,905	5,397	5,212
Ports	13,708	1,793	2,112	2,130	1,716
Communications	958	1,712	1,916	2,172	1,919
Total	34,945	13,464	17,082	18,880	17,631

Note: 1. Gross output, in nominal values.

Source: MINTEC, 1988

5. The sector has significant real potential as an earner of foreign exchange which should be recognized in future national planning decisions. Foreign exchange revenues from international air links, foreign shipping and potential mineral shipments by rail could be considerable. The dramatic decline of the rail, port and shipping sectors as foreign exchange earners, however, cannot be easily reversed, especially given the present security situation. The importance of transportation to the Angolan economy and its central role in national recovery should be explicitly recognized in assistance programs. Transport services should be organized to provide agriculture with essential inputs, as well as moving produce to marketing and export centers, and providing the population with personal mobility.

6. Role of the Ministry of Transport and Communications. Before 1975, most transport policy issues were the responsibility of the Ministry of Public Works, Highways and Transport. The new Angolan government, despite a general preference for centralized planning, did not continue this apex organization, possibly due to the chaotic nature of post-Independence provision of transport services and the need to separate those transport activities of a strategic nature from other transport activities. The well documented destruction and exportation of all types of vehicles, as a result of armed hostilities and the Portugese exodus respectively, devastated the Angolan stock and the supply of vehicular services abruptly ceased in many regions.

7. The Ministry of Transport and Communications - MINTEC - was formed during 1976-1977 with the objective of providing public freight and passenger transport services to major markets and users throughout the provinces. It was given powers to fix tariffs, routes and service frequencies, as well as regulating the inflow of spare parts for vehicles through

a material supply organization (ABAMAT) and through a series of special regional maintenance centers, each based on a specific manufacturer (MANAUTOS). MINTEC's responsibility extended to all major modes although its power was in practice limited to assisting the formulation of policy and monitoring annual performance data. In an operational sense, the entities providing air, maritime, cabotage and rail services under the MINTEC umbrella can be regarded as autonomous. Investment programs are probably the main collaborative area. It now seems to be accepted at ministerial levels that a serious mistake was made when forming parastatal entities in the transport sector. In general, they were made too large and problems of scale, combined with associated management and manpower problems have resulted in poor productivity and a need for subsidies. The Minister of Transport is advised by three specialist units, covering planning, technical evaluation and judicial affairs. These have been successful in developing new strategies and organizational changes for most modes, in an effort to meet Angola's changing economic conditions.

8. MINTEC data on transport service flows, levels and efficiencies, as well as output and financial information only relate to entities under its control. However, road transport is the only mode seriously affected by this constraint since highway traffic data exclude those trucks and buses operated by parastatal enterprises under other ministries, notably the Ministries of Construction, Agriculture, Fisheries, Interior, and Mines and Energy. Data collection for private sector vehicles, for example, is presently the responsibility of the Ministry of the Interior. In general, a number of government officials expressed a desire to return to an apex ministerial department with sole responsibility for all transport data collection and policy planning. The considerable fleet of Angolan military vehicles is excluded from this report though they do at times provide transport services in sensitive areas. It should be recognized that MINTEC data under-record the numbers of active vehicles in Angola and this should be taken into account when considering road transport data in this report.

9. Security. Any review of the Angolan transport and communications sector must be prefaced with some observations about the security problem. Angolan independence was born out of armed hostilities and these have persisted, with varying degrees of intensity, up to the present time. The security problem has disrupted all transport modes and severely constrained corridor dimensions. Services have been cut, capital investment programs cancelled and domestic transit efficiency lowered. Destruction of at least 45 bridges and key sections of track has virtually paralyzed regional rail movement and only 20 percent of the system can be operated normally. Mineral shipments have ceased and port activities, (1.6 million tons in 1987), are concentrated on handling import commodities for urban consumption, especially food, for which rail transit is not well suited. Road transport to autarchic regional centers is only possible with armed convoys, operating irregularly and at great cost. The road system has not been systematically maintained since Independence, in part due to guerilla attacks, and 5,400 km (60%) of paved surfaces need rehabilitation or reconstruction. In addition, over 200 bridges are in need of replacement. An unfortunate consequence of these severe constraints is to attribute many transport modal inefficiencies to the war and not to

sectoral constraints such as entity scale, managerial incompetence, lack of trained staff, inadequate spare parts, subsidies and state monopolies. MINTEC is now recognizing this in its technical evaluations, and attempting to distinguish a balance between many intractable problems caused by the lack of security, and those unrelated and independent issues where financial and organizational improvements would increase modal effectiveness.

B. The Highway System

10. Characteristics. The current road network classified by type and length is given in Table VIII.3. The paved part of the system - about 9,000 km or 12 percent of the total network, provides basic economic and strategic links between key provincial cities and towns. Little or no maintenance has been given to these highways and more than half the length now requires rehabilitation or reconstruction. Pavement wear over time in the absence of maintenance is exponential and unless this problem is rapidly addressed, most of the paved network will soon show severe deterioration. Although gravel material provides an excellent running surface at low cost for the traffic levels typically observed in most provinces, it represents only 5 percent of the Angolan network. Since such roads are sensitive to lack of routine and periodic maintenance, it can be assumed that such roads are now in a very poor condition. The high levels of roughness which prevail are due to the lack of gravel road maintenance.

Table VIII.3. ROAD NETWORK BY TYPE AND LENGTH, 1986.

	Paved	Gravel [1]	Earth	Penetration
Region				
North	2,640	1331	7,270	3,011
West	1,828	930	8,074	9,776
Central	2,561	491	9,385	6,159
South	1,997	1055	8,917	9,760
Total	9,026	3,807	33,646	28,706
Network Total [2]	75,185			

Notes: 1. Includes other local materials
2. Excludes 443 km. of unclassified types

Source: Ministry of Construction, 1987

11. Over 80 percent of the Angolan road network is classified as either earth or penetration. The former has some basic engineering design standards and the latter is purely judgmental in alignment, while both rely

on the qualities of local soils. Maintaining good drainage and appropriate grading frequencies are the key elements in ensuring reasonable vehicular passage over their surfaces. These road types, however, are very vulnerable to lack of maintenance since they are inherently weaker than the other categories. Operators indicated that some sections of these roads had deteriorated to the point where they were barely passable and travel speeds had fallen to under 20 percent of normal operations. The main result of such road conditions is to raise rates to compensate for high operating costs and low productivity in precisely those areas where economic development is most vulnerable to high transit costs. To summarize, the highway system is in poor condition and needs modest funding for improvements which can be expected to have high rates of return.

12. Highway Infrastructure. The Ministry of Construction (MC) is responsible for the design, construction and maintenance of the highway network and MC staff are fully aware of the attractive economic rates of return associated with possible highway investments and maintenance. However, they are presently operating with a severely restricted budget. This enhances the benefits from bi-lateral funded projects which have grown in importance as a consequence. By mixing funding sources, they have been able to maintain a small construction/rehabilitation program which could be easily expanded should more funding become available. In general, maintenance activities have been very neglected and remain so, with little prospect for an immediate improvement. The infrastructure budget for 1989 is 40 % higher than in 1988 (at Kz 3,5 billion) although maintenance represents just 15% of this figure. Currently, there are five rehabilitation projects which, with the exception of Malanje to Saurino (570 km funded with Italian assistance), are short sections located within the coastal belt. More projects are being evaluated for economic viability. In addition, 8 steel bridges are being replaced at a cost of US $ 1 million, though over 200 are unusable over the network.

13. Finally, there are several lateral highway sections linking the coastal network with the interior provinces which are considered good potential projects by MC staff, but as yet no prospect for their funding exists. Such projects are linked to distinct production centers for coffee, cotton and diamonds. MC planners indicated there was little chance of improving the overall network while the present administrative and financial structure was in operation. A solution was outlined which would create an autonomous highway organization. It would be funded directly from users and other beneficiaries, and charged with the planning, implementation and operation of the network. The colonial Junta Autonoma de Estradas de Angola could be one such model for this organization, especially since it is known to be effective in the Angolan highway context. In planning terms, highway investment is attractive because its inherent flexibility allows regional impacts to be finely tuned and it has appealing employment prospects, especially in the area of maintenance. Once economic recovery starts, production movements will create more truck demand, so it is important to determine a system of truck user charges to create the funding base for future investments.

14. The 1987 truck population is estimated at 30,000 units but many of these are not operational or are severely under-utilized. For example, in 1986, only 34% of the heavy vehicles controlled by MINTEC were operational and averaged around 11,500 km a year. The state trucking sector has been successful in channeling newly imported trucks into their operations which has resulted in a fleet profile younger in age than the private sector. The representative vehicle is the Volvo N 10, either in three axle rigid form or as the tractive unit of a 40 ton unit. The private sector, in comparison, operates vehicles generally at least 10 years old and of simple, robust design. Fortunately, they are well suited to current Angolan conditions where journeys are rarely longer then 50 km and vehicle trip speeds are low. ABAMAT has obtained some new trucks for the private sector, but these have gone to own-account operations and not to the professional operators. The representative truck for this category is a Scania 75 or Mercedes-Benz two axle 13 ton unit.

15. Road Passenger Transport. All transport modes in Angola are capable of providing passenger transit. At Independence, however, it was the road system which offered the best prospects for efficient movements within urban areas, between cities and for the majority of inter-provincial north-south flows. The basic highway network was sound, bus operations neither required high levels of technical assistance nor large investment plans. Tariffs, if properly structured, would have generated funds for maintenance, fleet growth and improvements in transit infrastructure, such as bases, terminals and collector stations. A study for Luanda mass transit had been commissioned, and the sub-sector looked to have a healthy future. The scale and ferocity of the struggle and disruption of the mid-1970s altered all these parameters. Most of the vehicular stock comprising over 250,000 units was destroyed, exported or abandoned without the prospect of adequate maintenance. This, together with the exodus of managerial staff resulted in a dramatic decline in the supply of passenger services. As noted earlier, one reason for the creation of MINTEC was to correct these deficiencies through the provision of public transport services, at both provincial and city levels. In spite of some early success, principally in the Luanda conurbation, public transport services have failed to match demand and are currently in a state of total collapse. The war situation has contributed significantly to the decline by diverting potential investment funds, restricting non-urban flows through destruction of infrastructure and vehicles, and creating an impetus for rapid, unplanned urbanization.

16. Table VIII.4 gives bus passenger and utilization data for the latest available years. The MINTEC-controlled bus fleet has fallen consistently through the 1980's to around 700 units in 1985, but more importantly, only 17% on average are actually operating. This is one of the lowest rates encountered among developing countries2/ and confirms the failure to meet even a small proportion of potential demand levels.

2/ In World Bank Technical Paper No. 68 entitled "Bus Services - Reducing Costs, Raising Standards", only Accra (24%) and Lagos (20%) have companies that come close to the Luanda figures.

Passenger traffic levels have fallen for all categories of trip - urban, provincial and inter-provincial-and Table VIII.4 shows that bus availability has virtually ceased throughout many provinces. Table VIII.5 takes 1981 as a base to give indices for selected performance criteria for the Luanda public transport bus fleet for 1985 to 1987, which shows the dramatic contraction of service levels during this period. It should be remembered that this persistent decline occurred at a time when Luanda experienced one of its highest growth rates with the influx of war refugees.

Table VIII.4. MINTEC BUS UTILIZATION DATA, AVERAGED BY PROVINCES, 1985

Category and Provinces	Fleet Size	Bus Availability [1]	Active Buses
1 Bie, Kuene, Kwanza N, Kuando Kubango, Moxico, Zaire.	1 - 20	3.3	1.4
2 Cabinda, Huambo, Luanda N, Luanda S, Namibe, Malanje, Uige.	21 - 50	6.5	4.6
3 Beguela, Huila, Kuanza Sul.	51 - 100	10.3	9.3
4 Luanda	236	62.0	53.0
TOTALS (units)	728	165 [2]	121 [2]

Notes: 1. Those available for service. Active units are those in use.
2. Availability is 23% and Active 17%, of Luanda's total fleet.

Source: MINTEC, ETP, 1986.

Table VIII.5. ETP URBAN BUS PERFORMANCE INDICES, 1985-1987 (1981=100).

	1985	1986	1987
Active Units	34	27	23
Trips	30	21	18
Passengers handled	29	19	13
Passengers per trip	96	89	74
Route Kilometers	30	21	19

Source: ETP, MINTEC; 1987

17. How then do people maintain mobility if public transport is not available? In Luanda there is some use of local trains. However, in most cases they simply walk, unless they are prepared to pay for private services. Pedestrian flows are particularly dense at rush hour periods, and it is reported that, on average, over an hour is spent walking on each trip. The average trip fare for public transit in Luanda was only changed in 1987 for the first time since independence to around 12 Kz. while sharing a private taxi or pick-up costs 500 Kz. This average private fare or "processo quinhentos" is universal and governs all destinations within Luanda city boundaries for passengers, excluding large baggage which is extra. Since the average monthly salary is on the order of 12,000 Kz., regular use of private services is not a valid option for most travellers, unless they are able to access the parallel market. Accordingly, private companies and parastatals have taken to providing buses to collect their workers, in an effort to compensate for lack of public transport and assure timely attendance at work. Such arrangements are not socially efficient, however, since these buses operate a limited schedule at less than capacity along routes where lines of prospective public passengers wait at stops. Inter-provincial traffic has all but ceased, and is unlikely to pick up until after the security situation improves, although MINTEC has plans for improving mobility in safe areas. Efforts are therefore being concentrated on urban operations in general, and the Luanda conurbation in particular, to effect short term corrective actions. These will be discussed in a later section of this Annex.

18. Road Transport and the Security Problem. Persistent lack of security throughout much of Angola has had a dramatic impact on road use, vehicle operating costs, tariffs and highway maintenance. The typical scenario over the past decade demonstrates the pernicious effect of regional instability on highway efficiency. First, attacks on farms and marketing centers interrupt the demand for road transport services while the supply of such services is affected by armed attacks on vehicles and personnel. Rates increase to compensate for reduced payloads and the risk of severe vehicular damage. Road maintenance activities become vulnerable to guerilla activities and cease in sensitive areas. Pavement damage, especially to the running surface, is not corrected and the resulting roughness causes additional vehicle damage and higher operating costs. Tariffs then become so high that many products cannot be taken to market and sold at prices that cover production and transport costs. If vehicle attacks become severe, regional authorities may institute a convoy system where 20 or more vehicles are escorted by armed military patrols. This further reduces vehicle productivity since it may take days to assemble all trucks, speed of travel is set by the slowest vehicle (typically under 20 kph) and the convoy must stop for any breakdowns. Ultimately, the level of service is characterized by high costs, low speed, infrequent schedules and inadequate capacity.

19. These effects can be measured in at least two ways, by surveying Angolan operators and by simulating the major cost impacts. Data collected from ETP suggests that annual vehicle utilization is now 20% of the level before Independence. Cross-checking with private operators brought a similar response. Trips that were accomplished in a week (e.g.

Luanda-Andrada-Luanda) prior to guerilla activities now take a month on average and have been as long as 53 days, principally because of convoy operations. Another group of constraints identified by operators are those resulting from a lack of any vehicle servicing infrastructure over most of Angola. Vehicles therefore travel with extra fuel, oil, water, spares and food for the crew which combine to raise costs and drive up rates. Tariffs in the public trucking sector rose from 1,7 to 6,7 Kz per ton.km over the period between independence to 1987, but generally such adjustments lagged rises in costs. This resulted in few vehicles being supplied at these prices and operated over a restricted route structure. Private sector vehicles are more numerous (though older in age) and owners base their prices on real resource costs.

20. Vehicle operating cost (VOC) impacts were simulated by using the VOCs sub-routine (Brazil equations) from the 1986 Highway Design and Maintenance model (HDM III), with input data supplied by ETP Luanda. Surface roughness is measured in terms of international roughness index (IRI) units which record meters of vehicle suspension displacement per kilometer of travel. Cost data were taken from operators records and are in financial terms, that is gross of tax. Where imported items were identified, they were taken at nominal value and converted at the exchange rate of 30 Kz to the US dollar. This should not affect the thrust of the arguments, however, since it is the cost differentials not the levels that are of interest. Some of the results selected to demonstrate the security impact on vehicle operations and road maintenance are presented in the statistical Appendix Table I.3. Two average operating conditions were calculated from Angolan vehicle records; normal: where annual vehicle utilization is 50,000 km and the vehicle travels fully loaded in each direction of travel; and current: where vehicle utilization has fallen to 15,000 km per year and no return loads are available. The drop in annual utilization affects lifetime usage. In the absence of road maintenance, the ton.km cost under normal operating conditions would be about a third of the cost under current conditions.

21. ETP staff confirmed that their vehicle utilization had fallen by at least these amounts, though they were unable to measure the effect on their rate structure, which had remained unchanged. Using HDM III to quantify the impact of current low levels of use, the ton/km cost is predicted to rise by over 300 percent compared to normal operations, assuming that road maintenance is carried out. However, it has already been noted that road maintenance has virtually ceased and if this is modeled by deteriorating the pavement to 12 IRI - as is the case over much of the country - the ton/km cost rises by over 420 percent from normal levels, and this excludes any war damage premiums. The cost differentials resulting from the security problem in Angola as modeled in Appendix Table I.3 would make most agricultural products impossible to market, thus affecting both regional development and urban food supplies.

22. Road Accidents and Safety. It is not surprising that the combination of rapid urbanization, poor highway maintenance, disregard for safety and speed restrictions, heavy pedestrian flows and the growing urban mix of light and heavy (including military types) vehicles has resulted in

high levels in vehicular accidents, personal injuries and property damage. In the first six months of 1987, 2,549 accidents were reported, resulting in 475 deaths and estimated damage exceeding Kz 30 million. Urban Luanda accounted for 75 percent of reported accidents involving over 3,800 vehicles. In comparison with the corresponding period in 1986, deaths have increased by 15 percent and accidents by more than 80 percent. Outside Luanda, Huila and Huambo provinces registered increased accident rates, although the deteriorating security situation has prevented many regional authorities from reporting any data. The figures are, therefore, incomplete and almost certainly under-reported. What is important for the planning process is to note that the suffering and costs associated with traffic accidents in Angola are on the increase and contribute to the decreased efficiency and increased costs of the road transport system.

23. Sub-Sector Policy Advisory Groups. MINTEC has recently established a series of specialized working advisory groups to consider policy and operational changes for a variety of modes. The road transport sector group was one of the first to be formed, and includes a wide selection of industry and sector representatives. The group has been very productive, and has prepared position papers on the reorganization of the road transport sector, the role of the private operator, a scheme to rehabilitate the national fleet, a new system of vehicle sales and service support, and a financial evaluation of three regional trucking entities recommended in the reorganization document. Though changes in law and current practices are likely to take some time, these documents represent constructive policies to improve modal effectiveness and provide the economy with much needed trucking services.

C. Rail Transport

24. Background. The rail system was principally designed to transport minerals and other goods across export corridors to key Angolan port complexes for maritime trans-shipment. Passengers were also carried but the relatively small number of carriages in the rolling stock shows it was not the main business activity. The security situation since 1975 has hit railways particularly hard and the figures in Table VIII.2 show that by 1987 the value of output of Angolan railway systems had fallen to 12 percent of the 1974 figures. Rail output has been relatively constant over the period 1985 through 1987, at around half a million tons of freight and between 6 to 8 million passengers. Improving the poor passenger figures should be a feature of a short term rail recovery program. The financial consequences of rail's continuing inability to supply those services for which it was designed is shown in Appendix Table I.4 which gives the simple income and expenditure accounts of the three main rail companies in 1985 and 1986. Only Mocamedes (CFM) was profitable and in both years it was only enough to offset the losses of Luanda (CFL), leaving the massive annual deficits of Benguela (CFB), sustainable only through government support.

25. In all three railway systems, a variety of serious problems plague operating efficiency. The rail infrastructure is in poor shape, guerrilla activity has damaged bridges on all three systems and in some

regions the track has been mined. Lack of maintenance has resulted in loss of rail ballast and the track consequently cannot support the weight or travel speed for which it was originally designed. Rails need to be made consistent in specification and renewed over selected sections. Locomotives have been under-utilized and frequently committed to premature scrapping through lack of skilled manpower and spare parts for their maintenance. The passenger and freight traffic data for the three systems over a selected period (including 1973 to show pre-Independence) are shown in Table VIII.6 and demonstrate the serious disruptions in service schedules. Locomotives and stock availability and activity for 1987 is given in Table VIII.7, together with a breakdown of active units by company. Despite the sharp reduction in rail output, the railway companies continue to employ the largest number of workers of any mode, nearly 8,000 individuals. The implications for each of the main rail companies, together with a description of current activities is discussed below.

Table VIII.6. RAIL TRANSPORT, PASSENGERS AND CARGO[1], 1973-85

	1973	1980	1984	1985	1986	1987
Luanda						
Passengers ('000)	946	4,058	1,585	1,291	1,697	938
Cargo 2	301	129	84	63	21	45
Benguela						
Passengers	1,591	2,470	3,617	3,871	4,119	3,546
Cargo	3,279	344	199	263	249	192
Namibe						
Passengers	394	1,108	1,848	2,040	2,154	1,868
Cargo	249	86	171	196	194	279

Notes: 1. Excluding traffic at Amboim
2. In thousands of tons

Source: Annuario Estatistico, MINTEC 1987.

Table VIII.7. RAILWAY LOCOMOTIVE AND ROLLING STOCK DATA, 1987

	1987	Company		
		Luanda	Benguela	Mocamedes
Locomotives [1]				
Existing	152			
Available	36	3	25	8
Carriages				
Existing	191			
Available	57	20	24	13
Wagons				
Existing	3,970			
Available	2,335	153	1,657	525

Note: 1. Excludes steam engines.

Source: MINTEC, 1987; Lobito Port Transport System, SATCC, 1987; Reconstruction Program for the Provinces of Huila, Namibe and Cunene, Dar Al-Handasah Consultants for UNDP and Ministry of Planning, 1986.

26. Luanda System. Luanda (CFL) is the neglected rail corridor of Angola. It may have the best potential for making a strong short-term impact in the transport sector, since it has both links to the port of Luanda and lines through the largest conurbation, possesses excellently located (if somewhat dilapidated) secure maintenance and marshalling yards, and is regionally linked to Dondo and Malange, both of strategic and economic importance. At the moment, however, it is in a very weak and neglected condition. In 1987 it employed around 1,400 and carried 940,000 passengers, about 35 percent of its 1978 figure, and 45,000 tons of cargo, down from the 1985 figure of 63,000 tons. Its port activities are virtually non-existent, it contributes to downtown vehicular congestion, the service to Dondo (210 km) is down to once a day and the line to Malange is cut, with 10 bridges destroyed. The potential for providing urban passenger transit to Luanda is under-exploited and there is no interaction with bus services. There is an urgent need to provide additional locomotives, renovated passenger carriages and other rolling stock to increase service schedules, first within Luanda province and subsequently in other regions. A proposal to improve this system is discussed in a later section.

27. Benguela System. The Benguela railway (CFB) is the best known Angolan transport facility. Running a total length of 1,350 km from the port of Lobito to Benguela, then eastward via Huambo where the engine sheds are located, to Luau on the Zambian border, it represents a social, economic and political link that both government and foreign nations have found a very attractive investment possibility. It is by far the largest rail company, employing over 4,500 staff although its operations are

severely constrained. Currently, CFB reports that 24 of its locomotives are out of service or sabotaged and despite five transferred from Mocamendes in 1984, the total of operational tractive units now numbers around 18. It has standardized on the General Electric type U-20-C, even though the 15.4 ton axle load when laden makes it heavy for the 60 lb/yd rails used over some sections of the track east of Huambo. Diesel locomotives are used on the Lobito-Benguela link, and from the coast up to Huambo but CFB have the intention of extending diesel use over all its network given track renewal and availability of locomotives. There are sufficient wagons available but passenger coaches are in short supply, and the 26 units are totally inadequate for current demand. The Huambo workshops, with the apprentice training school, are equipped for all types of repair and maintenance work, although the new diesel repair shop is unfinished. The security problem has closed down the lucrative international mineral business and national freight traffic is confined to the Benguela province (175,000 tons) and between Lobito and the provinces of Bie and Huambo (70,000 tons). Passenger traffic has steadily grown and should be a source of future growth and income.

28. A number of difficult problems would have to be resolved before the corridor could resume normal operations, including the most serious one of all, that of security and regional political stability. SATCC and some European countries (notably Belgium whose Societe Generale is the major stockholder) have attempted to prepare the way, both politically and financially, for the rehabilitation and reopening of the corridor. A ten year development plan has been prepared, and a donor conference held in early 1989. It is proposed that the project be divided into three phases; an emergency program for 1989; a short term phase from 1989-90; and a long term program from 1993-97. Estimated implementation costs, excluding local labor inputs, are given in Table VIII.8 where the different components and timing can be seen. The financial and technical issues are similar to the Beira corridor project, and Benguela should in theory benefit from the lessons learnt on that program. Should the political issues be removed and the corridor catchment area made secure, there is no doubt that international investment funding would be made available. The inherent risks associated with timing, cost over-runs, sequencing, project management, security, and demand forecasts (including an assessment of traffic diverted to other corridors) require that a full cost-benefit and operational evaluation be carried out, and this pushes the program into the medium to long term planning horizon.

Table VIII.8 BENGUELA CORRIDOR IMPLEMENTATION COSTS, (US $ Million)

Sector	Emergency	Short Term	Long Term	Total
Ports	15.3	56.5	10.7	82.5
Railway	53.2	154.1	138.9	346.2
Road	6.8	12.4	-	19.2
Communications	3.9	24.8	6.4	35.1
Aviation	0.1	10.0	-	10.1
General	34.3	47.6	-	81.9
Total	113.6	305.4	156.0	575.0

Source: SATCC, 1988.

29. In the short term, there are alternative investment options that can be considered for CFB. The Lobito to Huambo section of the system has been carrying increased passenger traffic in the 1980's and additional carriages and locomotives could significantly increase future flows. Freight traffic is very modest but if some regional agricultural development can be directed into the secure area of the central zone, demand for agricultural inputs and exports of produce should create higher levels of rail demand. Even with this program, however, significant problems remain. Like all other railway companies in Angola, CFB lacks trained operational and management staff and such shortages cannot easily be resolved. In the short run, therefore, the situation for CFB looks bleak. There is little prospect of increasing its business to the point where income and expenditures might broadly balance, and the accumulated deficit looks set to grow larger.

30. Mocamedes Railway. The Mocamedes railway (CFM) contains 756 km of track, most of it running between Namibe and Menongue in the Cuando-Cubango province. There are two branches; Lubango-Chibia-Chiange (120 km), now completely abandoned and Dongo-Cassinga (110 km), also closed since the iron ore mines ceased operations in 1975. Currently, traffic is operating normally between Namibe and Matala (430 km) and armed military convoys are necessary for travel beyond Matala to Dongo. The war situation makes it difficult to schedule any services beyond Matala, and the proximity to Namibia has made the system vulnerable to sabotage. Nevertheless, CFM has managed to achieve a steady growth in passenger traffic up to the mid-1980s, comprising urban services in Lubango (1.02 million in 1985) and long distance between Namibe and Lubango (1.07 million, 1985). However, service schedules have fallen back recently, and passengers carried had declined 10 percent by 1987. There is still considerable demand for the Namibe to Lubango trip which takes around seven hours (at about 30 kph) for both passenger and freight services. Costs for cargo are about one third the road ton/km rate, which indicates that any regional agricultural activity will use the rail corridor as a central transit link to the coast.

31. CFM employs around 1700 staff although there is a distinct lack of trained personnel in all professional categories. The railway needs more locomotives (arguably through a rehabilitation program) and additional rolling stock, particularly passenger coaches. Of the 10 engine units now operational, half are over 20 years old and are considered to be in poor condition. The long distance passenger schedule is modest and runs every other day. Passenger demand is high due to the cost and irregular service of alternative modes (principally road) which results in coaches being overcrowded and comfort levels minimal. CFM believes that there is sufficient demand to run a train a day, in both directions. Freight trains are full running eastwards and empty from Lubango to Namibe, although regional agricultural activities could bring more balance in the future.

32. To summarize, there are similar constraints within the three systems. First the security situation makes rail networks particularly vulnerable to attack and sabotage. Large sections of the network are now unusable due to damaged bridges and mined track. Secondly, technical assistance is urgently required to help maintain locomotives, upgrade rolling stock and check electrical equipment. Thirdly, there is a lack of spare parts and special supplies like lubricants which has resulted in low utilization patterns as equipment awaits repair, as well as the premature scrapping of locomotives and rolling stock. Finally, track infrastructure is weak and many stations and supply points have been abandoned. Short term investment programs can be devised for all systems, though they are challenging because they are multi-faceted. Even modest programs require engineering, management, technical and planning inputs which need careful coordination. These will be considered in later sections.

D. The Air Sector

33. Angolan Airlines - TAAG. The domestic air system was established in 1940, when 6-seater Rapides operated services between Luanda and the cities of Lobito, Huambo and Mocamedes. It grew steadily during the colonial period and has been the only mode to show continued growth since Independence. It was re-created in 1977 as Angolan Airlines (TAAG) which by 1980 had taken over the duties of other companies confiscated or made redundant after 1975. During the period 1980 to 1986, passenger traffic has increased at an annual rate of 15 percent, while freight and mail traffic has been closer to 20 percent. In 1987 and 1988, passenger traffic has fallen back by around 20 percent, mostly a consequence of the large adjustments in fares. Cargo demand has continued to hold steady and seems more price inelastic. Table VIII.1 shows that in 1987 over 800,000 passengers flew TAAG and 42,000 tons of cargo were carried on company planes. The value to the Angolan economy is considerable, and Table VIII.2 shows that 30 percent of the total value of output of the transport and communications sector in 1987 was attributable to TAAG operations. It is clearly an extremely important, though vulnerable, mode and improving its financial and operational efficiency is critical to economic growth.

34. TAAG has direct responsibility for carrying out a wide variety of activities, ranging from the usual marketing/ticketing through to cleaning and catering, the latter currently sub-contracted by the most efficient world airlines. This broad responsibility results in a cumbersome structure with a large and inefficient workforce which is difficult to manage. TAAG in early 1987 employed around 5,400 staff (which made it larger than any other African airline, with the exception of Nigeria). Most had little technical skills or managerial experience. In terms of marketing, TAAG divides its domestic operations into four regions of approximately equal importance, while international flights are grouped by continent - Europe, South America and Africa. Scheduling performance is not good and only 87 percent of TAAG's scheduled flights in 1986 were actually operated. Timing is also poor and only 32 percent of international flights and 56 percent of domestic flights were considered on time. Operations in 1986 grouped by geographic markets are given in Table VIII.9.

Table VIII.9. TAAG OPERATIONS BY MARKET, 1986

Domestic	Zone			
	North	East	Central-South	Litoral-South
Passenger (%)	25	25	21	29
Freight (%)	16	16	14	54
International				
		Europe	South America	Africa
Passenger (%)		64	7	29
Freight (%)		79	13	8

Source: TAAG, 1987.

35. Traffic in terms of domestic passengers and freight is relatively balanced, with the exception of the coastal routes south of Luanda (especially the key Luanda-Benguela route) where there is a strong demand for cargo services. Internationally, Europe continues to dominate the market and more especially the Luanda-Lisbon route, which accounted for 36 percent of total passenger movement and 42 percent of cargo flows. Luanda-Brazil is the only South American route and is growing fast as trade links develop and the Kapanda dam project is implemented.

36. Details of the 1986 TAAG civil aircraft fleet are given in Appendix Table I.5. The fleet comprises 6 Boeing 707's for international routes, 5 Boeing 737's for African and domestic flights, 5 Fokker F27-600's for domestic flights to the smaller airports and 2 Yak 40's to complement the Fokkers. TAAG also operates a fleet of 10 light aircraft. The age in flight hours and years of the long range Boeing's would indicate that they

will soon require replacement. The Boeing 737 is the workhorse of the fleet, and will continue this role despite the relatively high number of annual landings and losses due to accidents (3 aircraft in recent years). The Fokkers have provided excellent service and seem ideal for the smaller airports. The Russian Yak aircraft are used infrequently, with a number awaiting repair at Luanda.

37. Flight crews are highly regarded by TAAG management and the company is confident about the purely operational element of their business. Indeed, in late 1987 they began separate charter operations. It is the joint problems associated with general management and back-up services that create most problems. Scheduling, management, ticketing, spares and inventory control, support services and airport management are identified by TAAG as constituting constraints to growth and efficiency. Scheduling is a serious problem, particularly on domestic services where Luanda is the hub airport. Lack of basic services at regional airports - fueling, storage, simple maintenance, cleaning and safety features - make it a general rule that aircraft return to Luanda for overnight parking. Overnight bases in addition to Luanda would permit a more efficient route network to be operated leading to higher productivity. Management of the TAAG umbrella organization is complex and inefficient in Angola's present condition where staff with technical and middle management experience are difficult to hire. A simpler structure with the timely privatization of activities like cleaning and catering would be extremely beneficial, and has recently been proposed.

38. Ticketing is a particular problem given the existence of the informal market in goods and services, and the consequent variations between official and parallel prices. TAAG ticket tariffs were last changed in 1982 and remain priced at the official exchange rate. In early 1988, a case of beer (24 cans) sold on the informal market at Kz 1,500 per can would raise Kz 36,000 and this was sufficient to buy a US$1,200 airticket at a TAAG booking office. There are some safeguards against arbitrage - permission has to be sought before flying on international routes, for example - but there are no such hindrances on domestic flights. Accordingly, most domestic flights are heavily overbooked, creating unpleasant airport control problems, full flights and many disappointed travellers. In fact, TAAG records show capacity and load figures in excess of 100 percent on a number of internal routes. The company is conscious that it is not offering good services and attracting foreign customers who have a choice, and currently only 20 percent of TAAG's international passengers pay in foreign exchange. This could be an important growth segment of the market once TAAG becomes more competitive.

39. There is a clear need to drastically cut the TAAG inventory cycle, and address the spare parts problems. In addition, improvements to foreign exchange access at BNA would enable costly items to be purchased on demand, rather than kept in stock. Almost 90 percent of the parts and materials are purchased from the United States and these can now be supplied in hours given suitable credit arrangements. TAAG has installed computer programs to track the parts inventory so use patterns can be established for more effective forecasting. It may soon be appropriate to decentralize some

maintenance activities, leading to improved facilities at airports like Benguela and making domestic scheduling more efficient. Support services need drastic improvement, especially cabin cleaning and catering. The major problem is a managerial one, although lack of materials like food and cleaning items contributes to poor service performance. There is a need to strengthen the technical side of the maintenance work and this should be the main focus of concern for TAAG's management.

40. Airports and Air Navigation - ENANA. Angola's airports need to be improved for both passengers and aircraft, as most were built in the colonial era for light aircraft and small passenger demand. Airports and control of airspace is the responsibility of the National Airport and Air Navigation Development company (ENANA), formed in 1980. However, the entity has not effectively met the basic objective of improving airport efficiency for which it was formed and its reorganization is currently under review.

41. ENANA's basic responsibilities are to ensure an adequate network of airports and to provide and operate the basic facilities at each airport site. It is also responsible for the provision of airport safety services needed by TAAG, especially radio beacons and navigational assistance. Finally, it must maintain adequate good traffic control over Angolan airspace. The airports under its control are shown in Table VIII.10, grouped by available facilities.

Table VIII.10. ENANA AIRPORT NETWORK 1, 1987.

Category	Number	Location
I	1	Luanda
II	11	Benguela, Cabinda, Huambo, Kuito, Lubango, Luena, Malange, Menongue, Namibe, Sumbe, Uige.
III	4	Soyo, Amboim, Soyo, Wako Kungo
IV	8	Ambriz, Andulo, Damba, Jamba, Luau, Kamgamba, Nzeto, M'Banza Congo

Note: 1. Excluding numerous municipal landing strips, technically under ENANA control.

Source: ENANA-U.E.E., 1987

42. ENANA employs over 700 workers, of which 240 are associated with air traffic control, (around 170 at the Luanda international airport and over 200 at regional airports). Category II airports typically employ between 10 to 20 ENANA staff, while other categories frequently have less than five personnel. Over half the staff are engaged in various cleaning activities and turnover in this category is high. In common with other companies, ENANA has introduced food subsidies and the provision of

transport to work. A critical labor problem is the failure to hire technically trained personnel as well as the loss of staff who have become experienced through on-the-job training within the company. Air traffic control, safety and radio communication effectiveness is vulnerable to these persistent staff shortages and this partly explains the totally inadequate support services that affect TAAG's operating efficiency. The financial situation of ENANA is not particularly healthy, even though the company earns a significant amount of foreign exchange from international carriers. The receipts from these services are held at the BNA and in 1987 totaled about US$3 million, which the company apparently has not been allowed to access. This has clearly complicated the purchase, servicing and replacement of most ENANA equipment needs.

43. With the exception of Luanda, most airports were built in the 1960's to meet the modest aviation needs of that decade. Aircraft were slow and of medium size, the Douglas DC3 being a representative type. Since Independence, the rapid and persistent growth in demand for aviation has not been accompanied by matching investment in air infrastructure. Currently there is almost total disequilibrium between demand and supply of airport services. Inadequate runways constrain airport capacities; they are too short, have poor geometry for modern craft, possess rough surfaces and weak sub-bases. Accordingly, Boeing 737's cannot operate over the full network and cannot use high pressure tires for risk of runway damage through impact landings. The more expensive low pressure tires wear more rapidly on rough runway surfaces and consequently have shorter lives, leading to higher operating costs.

44. Facilities at airport sites are also generally weak and inadequate. Lack of refueling systems results in additional flight fuel loads, thus reducing payloads. In addition, few airports control cargo weight adequately due to lack of scales and trained personnel, resulting in overloaded, dangerous takeoffs and landings. Passenger facilities of every type are poor and levels of comfort and security minimal. In 1985, ENANA recommended a regional investment program for the renovation of 12 provincial airports where operating conditions had severely deteriorated, but as yet no decision has been reached on its funding.

45. The colonial radio navigation and communication system, with dual civil and military functions, was strengthened by improvements recommended by Boeing Aerosystems International and implemented by 1980. However, much needed support did not materialize due to sabotage and unforeseen air traffic additional growth rates. Currently, the Boeing system is virtually inoperative due to an inflexible system design, obsolete equipment, high cost of spares, lack of energy at many airports, armed attacks and lack of trained maintenance personnel. A consequence of these factors is an inability to navigate at night and the daily shut-down of most airports at 16.30 hours. These constraints also affect inter-airport communication and services like meteorology, aviation information and statistics, as well as links with neighboring countries.

46. The Luanda international airport complex now known as February 4th Airport was established in the 1950s, improved 20 years later and rapidly became congested after Independence. In 1985 a new extension for domestic and international flights was completed. However, for security and congestion reasons, domestic flights were transferred to a nearby (inferior) remodeled hanger. A number of features remain to be completed at the new terminal to enable it to function as designed, although it already appears to be operating at capacity. The domestic arrangements need a total overhaul and ENANA is presently waiting for a decision on funding proposals to improve facilities. Other airport buildings are deteriorating, the parking areas and taxiing paths need maintenance and rehabilitation work, and the mix of aircraft types (civil, military, passenger, cargo) and variations in size complicates ground control. French airport staff have helped develop improved facilities at the February 4 site and TAP airlines have provided technical assistance in improving air traffic control. The latter is the crucial obstacle to short term improvements in productivity. Airport facilities throughout Angola must be the object of rehabilitation investments to improve traffic control, navigation and safety if the sub-sector is to maintain growth and competitiveness.

47. MINTEC's specialized aviation working group recommended in 1988 that TAAG's structure be changed to permit divestiture of certain troublesome labor-intensive activities, and allow concentration on operations, schedules and service levels. Such changes would reduce staffing numbers, salary needs, and manpower planning problems, as well as allowing TAAG managers to concentrate on raising aircraft productivity and financial efficiency. The activities taken from TAAG would pass to mixed companies, in much the same way other companies have contracted out services. ENANA has also been evaluated for reorganization, but in many ways its problems appear more intractable than those of TAAG. A basic airport rehabilitation program has been costed at US $ 107 million, while the first phase of an air traffic control up-date will cost US $ 25 million and a second phase US $ 48 million. ENANA's weak financial base is inadequate to meet any investment needs, and its manpower planning problems are great, especially in technical positions. ENANA currently employs only 32% of its targeted technical staff, and only 15% of its air traffic control positions were filled in 1988. This combination of weak revenue generation, under-investment, and manpower problems, represent significant constraints to company efficiency and growth. As a start, it seems essential to establish cost recovery mechanisms to fund the infrastructural programs, and then improve technical staffing through TA programs, bilateral aid, and the strengthening of the aeronautical school.

E. Maritime and Port Sector

48. Background. At Independence, Angola's 1,650 km of coastline, good network of ports, excellent export corridors and potential for regional growth focussed government attention on port and shipping activities. State companies were formed from nationalized entities, and joint ventures emerged where Angolan experience and investment potential was found to be

weak. The sectors have been through several crises but now appear to be showing signs of recovery. Table VIII.1 shows that the 1987 Angolan maritime sector output fell about 11 percent from its 1986 level of 598,000 tons, while total output of all ports dropped 24 percent to 1,172,000 tons over the same period. In terms of value, Table VIII.2 shows that in the last available year, 1987, maritime value rose 20 percent from its 1986 level of Kz 2,084 million while ports fell 20 percent to Kz 1,716 million.

49. Interim figures confirm that port income decreased in 1988, reflecting the joint consequences of lower oil revenues and the escalating cost of the war. Ports and shipping represent about a quarter of the total MINTEC transport and communications sector value, and are also important for security reasons. These modes are not easily attacked and are the importing channel for defense supplies, primary goods, spare parts and food aid. They also represent a considerable opportunity for regional growth through the neglected cabotage sub-sector. Maritime and port activities are technically managed through the merchant marine and port national council (DNMMP), linked to MINTEC's technical programming and evaluation unit. DNMMP has three departments; merchant marine and ports, planning and finally marine security. The Angolan coast is divided into five sectors based on the main regional ports - Cabinda, Soyo, Luanda, Lobito and Namibe - for security purposes. The joint modes provide direct employment for over 10,000 staff, which exceeds all other entities in the transport and communications sector.

50. The entire maritime sector went through a major crisis in the early 1980s. Increases in oil revenues brought about a rapid growth in imports transported by sea. Angonave entered into charter contracts for much of this business but port and trans-shipment facilities proved inadequate to meet the demand. The combination of inefficient shipping operations, ineffective port management practices, weak infrastructure and an overloaded import license bureaucracy resulted in a total paralysis of Angolan ports in 1981. Most ships had to wait over 90 days, and some chartered ships anchored over 12 months outside Luanda port. It is calculated that demurrage and other associated costs totalled around US$48 million, mostly met by the state. This lead to the whole sector being financially restructured and the period 1983 to 1986 has been one of slow recovery, limited by a persistent failure to invest in new equipment, ships and physical distribution systems and to analyze total transportation system costs, rather than specific modal cost structures. This may change with the recent formation of a maritime specialist policy working group, chaired by a member of MINTEC's programming and evaluation unit, which has already made a number of substantial and far-reaching system-type recommendations.

51. Maritime Activities. Currently, long distance shipping services are principally provided by Angonave-UEE and Secil Maritima, the latter linked to Africa Service (AFSER) of Copenhagen, while cabotage is provided by Cabotang-UEE. Table VIII.11 gives details of their fleet sizes in 1986, and their output in 1986 and 1987. Angonave traffic held steady during this period, while Cabotang fell 26 percent and Secil Maritima rose 67 percent. Imported goods traffic fell significantly in 1986, and this is reflected in

the fall in chartered long distance vessels. The modest fleet size contains old, inefficient and fully depreciated units that need urgent replacement. Necessity dictated that when shipping operations were restructured in the 1970s, chartered vessels would be used until Angolan ships could be profitably operated. Unfortunately, all Angolan vessels were purchased second-hand when many units were already old. Currently the national fleet is unable to compete effectively for a larger share of the imported goods shipped to Angola. Export transit, where some comparative advantage should exist, remains weak and little opportunity for growth is offered. As a consequence, the fleet is underutilized.

Table VIII.11. SIZE AND OUTPUT [1] OF ANGONAVE, CABOTANG AND SECIL MARITIMA FLEETS,[2] 1986 and 1987

		1986 Fleet	1986 Output	1987 Output	
ANGONAVE:					
	Company	7			
	Hire/Lease	3			
	Totals	10	206,000	207,000	
CABOTANG:					
	Company	11			
	Hire/Lease	0			
	Totals	11	181,000	134,000	SECIL
MARITIMA:					
	Company	3			
	Hire/Lease	7			
	Totals	10	120,000	198,000	
TOTALS:					
	Company	21			
	Hire/Lease	10			
	Totals		507,000	539,000	

Note: 1. Traffic in tons.
2. Angonave data slightly larger than company report, due to reporting period.

Source: MINTEC, 1988.

52. Angonave, which is a member of the Central West Africa Conference line (CEWAL), was formed in 1978 to provide long distance marine cargo services through acquiring its own fleet, supplemented with chartered ships on short contracts. It was hoped that Angolan flagged vessels would take 40% of total traffic although in 1986 the company claimed just 20%.

Vessels were purchased second-hand and by 1983 fleet deadweight had increased from 7,000 to 95,000 tons, which fell in 1985 with the loss of a large ship. In the crisis of 1981, Angonave lost control of its operations and became financially insolvent, facing judicial actions, millions of dollars debt, fleet immobilized, and a ruined commercial reputation. The company has recovered slowly from that trauma but remains under-managed and under-invested. With its charter arrangements, the company currently claims a capacity of 102,000 tons. It has correctly concentrated on improving internal management controls and staff training, but still lacks the financial flexibility required to stay competitive in the transport services sector.

53. Table VIII.12 categorizes the main commodities carried by Angonave in 1986. Government food purchases make this category the most significant, about 55% of total traffic. The cargo was carried by ships in the national fleet making 26 voyages, and 51% of the traffic was in sacks, 40% general cargo (crates and bulk) and 9% in containers. The lack of silo storage of bulk commodities, especially at Luanda, is one reason for the high level of sack use. The inability to handle, store and process containers - which reached its zenith in 1981/82 when 12,000 clogged Luanda port - is shown in the low usage of this method of shipment. It also reflects a fall in the importation of equipment, machinery and spares which are almost always sent in containers. All shipping companies complain about port efficiency levels and smallest possible improvements that would increase marine productivity. These will be considered in a later part of this section.

Table VIII.12. ANGONAVE CARGO BY CATEGORY, 1986 (tons)

Category	Tonnage
Food	121,100
Alcoholic drinks	7,050
Equipment and vehicles	6,800
Chemicals	31,874
Other products	28,508
Containers (2,335 empty)	5,400
TOTAL	200,732

Source: Statistical Appendix Table I.6.

54. Secil Maritima offers both long distance and cabotage services, and is both smaller and more tightly organized than Angonave, despite carrying more traffic. The company played a crucial role after the 1981 crisis when Angonave contracts could not be honored and few foreign shippers would deal with the company. Secil Maritima substituted for

Angonave and chartered sufficient vessels to maintain traffic flows. With the recent return to relative financial health of Angonave this role has considerably diminished and the company has sought traffic through tramping operations coordinated through its Copenhagen offices. The company is not presently investing in replacement vessels, even though its fleet is between 16 and 23 years in age, and thus virtually obsolete.

55. Table VIII.13 showing Secil Maritima's fleet productivity in 1986 demonstrates two key problems facing Angolan ship operators. First, there is the general task of finding work for the ships and secondly, there is the difficulty of unloading at Angolan ports. The latter is highlighted by the cabotage figures in Table VIII.14 (to show that this is not a special case, some Angonave data for 1985 are presented). In that year, which is considered fairly typical of the 1980s, to unload 85,000 tons of general cargo and 114,400 tons of containers (7,629 units), the 14 ship fleet spent 1,068 days in port, 25 percent at anchor and 75 percent berthed, waiting to be unloaded. The consequences are higher shipping costs either through higher operating costs or demurrage charges.

Table VIII.13: SECIL MARITIMA FLEET; SELECTED DATA, 1986.

Ship	Type 1/	Trips	Days Spent: 2/			
			Port	Sailing	Cargo	Empty
Brasil	C	6	229	136		
Bengo	C	32	326	39		
Mar	C	18	315	26		
		Tonnage				
Japan	T	34,318	57	96	70	26
Angola	T	26,294	74	163	122	41
Denmark	T	43,067	130	162	98	64
France	T	19,385	38	87	59	28
Congo	T	31,162	61	118	48	70
Argentina	T	33,191	149	113	72	41

Notes: 1/ C is Cabotage, T is Tramping.
2/ Days spent in port, sailing, sailing with cargo and empty.

Source: Secil Maritima, 1987.

56. Cabotang was established as a state company in 1978 to provide cabotage services and is arguably the most neglected Angolan shipping enterprise. This is paradoxical, given the strategic importance of the coast and the ability to provide safe, reliable yet cheap passenger and freight movements between regional coastal sites. It employs 320 staff, including Yugoslavian, Cuban and Portuguese captains, and in 1986 reported

a small profit of Kz 61 million. Currently, it has between 11 or 13 ships (figures disagree) totalling about 8,000 tons deadweight. Ships are old - five exceed 20 years in age - and do not have the design features to compete with other modes for specialized, profitable traffic. The heterogeneous nature of cabotage traffic, weak marketing arrangements, poor operational management (exacerbated by control problems) and inferior transshipment facilities at port complexes combine to prevent cabotage from having a high impact on ameliorating transport problems in Angola's littoral regions. Tariffs have only been raised once, by 30 percent, since 1978 but a new scale of charges has been sent to the Ministry of Planning for approval. In 1987, Cabotang took delivery of a Dutch built, fast ferry boat capable of carrying 310 passengers and 440 cubic meters of cargo for use on the Luanada-Lobito route from January, 1988 onwards. A sister ship joined it in 1988. The intention was to build up a network of schedules, including links with Namibe, Cabinda and Soyo. However, the vessels have encountered considerable technical problems, and schedules have been only partly fulfilled. MINTEC's programming and evaluation unit now believe that an alternative design needs to be tested, which will delay the returns from improving cabotage passenger services. The potential benefits from efficient cabotage operations remain considerable, however, and therefore MINTEC should support complementary port improvements as important short term investment goals.

57. There are a number of maritime agencies handling shipping arrangements and problems associated with Angolan maritime jurisdiction. Agenang-UEE is based in Luanda, while Manubito is a mixed enterprize using capital from Agenang, Sonangol and Leopold Walford Holdings-UK. There are also smaller entities, entirely privately owned, notably Hull-Blyth (UK) and AMI (Belgium). These companies seem well organized although they all complained of poor telecommunications, bureaucratic difficulties and the appalling productivity of all Angolan ports. The business reflects the overall trade balance and after a stable period, seems to be on the decline. In 1985, Agenang handled 1,773 ships (951 Angolan, 822 foreign) while in 1986 the total stood at 1,773 vessels (935 Angolan, 849 foreign). The figure for the first six months of 1987 was 796 ships (338 Angolan, 458 foreign) indicating a lower final figure for the year. Also the number of Angolan voyages are declining, reflecting oil revenues. Maritime agencies should be recognized as providing important services to shippers, as earners of foreign exchange and an integral part of the maritime transport system, when improvements are considered.

58. Port Activities. As previously noted, efficiency in Angolan ports is crucial to the effectiveness of the national transport system. Practically all freight imports arrive by ship and the coastal routes have now become the safest links throughout the littoral region. Unfortunately, port facilities have changed little since Independence and were originally designed for the efficient export of commodities in general and minerals in particular. The current need is to accommodate the large import needs, particularly food products which must be stored after unloading to avoid spoiling. Only Lobito has good silo storage with a capacity of 20,000 tons. MINTEC would like to see more customers building silos, with a related increase in port silo turnover or throughput. This would avoid

demands to increase port silo capacity, which would add to port congestion and to its financing burdens. Port productivity is low, at around 50 tons per ship/day compared with 250 tons per ship/day for an efficient operation. Part of the reason is equipment, with crane and forklift productivity affected by a combined lack of spares, maintenance and technical assistance. In 1985, utilization rates of 35 percent for Luanda and 26 percent for Lobito were recorded for these equipment categories. The port sector employed 8,500 personnel in 1986, the majority being stevedores at low rates of pay. They are not well managed, with the possible exception of Lobito, and this leads to widespread corruption and absenteeism. Port officials admit their inability to control the situation, particularly at Luanda, and the "privatization" of some berths and facilities is being considered.

59. Table VIII.1 shows that Angolan port traffic fell from 1,739,000 tons in 1985 to 1,172,000 in 1987, (a 33% decline). Value, as shown in Table VIII.2, fell 19% to Kz 1,716 million over the same period. The impact of the closure of mineral shipments at both Lobito and Sacomar at Namibe can be seen by noting that the 1986 value is still only 15% of its 1974 figure. Table VIII.14 shows 1985-1987 main port throughput. In 1987 port throughput held steady at around 1986 levels, after sharp falls from 1985 productivity, consistent with the shipping and agency traffic data. Figures exclude war material and supplies, however, which were considerable during both years. Notable also is the small export volume (14% of 1987 total), which at ports other than Luanda includes cabotage data. In the period 1985/86, over 23,700 containers were shipped from Luanda compared to less than 6,000 arrivals. Low container arrival figures for 1986 (1,456) confirm both the fall in trade and shippers lack of confidence in the Luanda facility. This has somewhat recovered, as seen in the 1987 container tonnage data. The movement of cargo from port areas fluctuates strongly, reflecting both irregular arrival patterns of vessels (which in theory could be vastly improved) and poor transshipment facilities.

Table VIII.14. ANGOLA: MAIN PORT FREIGHT THROUGHPUT
1985 - 1987 (thousand tons)

	1985	1986	1987
Luanda			
All Freight:			
Import	834	690	666
Export	104	132	120
	938	822	786
Cabotage	85	108	109
Containers[1] (In)	4,398	1,456	NA
(Out)	11,392	12,387	NA
Container tonnage	195	117	179
Freight (Out)[2]	824	784	707
Freight (Warehouse)	109	45	42
Lobito			
Total Freight:	523	414	432
Import	462	366	338
Export	61	48	94
Cabotage	197	184	208
Namibe			
Total Freight:	180	156	152
Import	165	136	136
Export	15	20	16
Cabotage	NA	68	77
Cabinda			
Total Freight:	95	101	106
Import	81	85	81
Export	14	16	25
Cabotage	NA	73	78

Notes: 1. Units.
2. Freight tonnage leaving port facility

Source: Annuario Estatistico, MINTEC 1987

60. Cabotage traffic data are given in Table VIII.15 for the ports of Cabinda, Soyo, Luanda, Lobito and Namibe. There are a number of small fishing ports like Tombwa and Ambiom, but data from these are not included. Distinct patterns of trade can be noted, which are a result of imports being channeled to the three major ports, prior to further transit. There is little doubt that cabotage can be improved by planning and operating facilities designed specifically for its traffic and shipping needs. Historically, cabotage has been given a low priority which is reflected in lack of security for cargo, poor transshipment and passenger facilities, and bad citing within the port complexes. The acquisition of a new passenger boat has not been accompanied by related port infrastructure investment to complement the new service. As a consequence, its efficiency and commercial impact is weakened unnecessarily.

Table VIII.15. ANGOLA: CABOTAGE TRAFFIC,[1] 1985

	Cabinda	Soyo	Luanda	Lobito	Namibe	Totals
Cabinda	-	700	21,889	3,210	50	25,849
Soyo	260	-	6,791	-	-	7,051
Luanda	14,412	72	-	15,204	9,344	39,032
Amboim	-	-	-	3,406	-	3,406
Lobito	3,549	-	11,644	-	1,816	17,009
Namibe	2,030	-	24,305	6,850	-	33,185
Totals	20,251	772	64,629	28,670	11,210	125,532

Note: 1. MINTEC and private shipping, tons.

Source: Annuario Estatistico, MINTEC 1986

61. Delays in the ports have been a persistent characteristic of Angolan operations, reaching a crisis point in 1981 when at one time 90 vessels were waiting to be unloaded at Luanda. The sector had been expanded too quickly given its physical and management capacities; chartered ships were arriving with small quantities of cargo and shipowners content to wait and claim demurrage, given the slump in world shipping. A planned annual capacity of 7,000 containers bore little resemblance to the actual capacity based on equipment, storage facilities and, most importantly, the ability of the shippers to deal with the complicated, slow moving importation bureaucracy. The exercise was a total fiasco, goods remained in their containers for years and many importers simply abandoned them at the ports. Again, containers are rented and this resulted in large claims against Angolan shippers, agencies and ultimately the government. The 1985-86 range of between 1,600 to 2,500 containers probably represents the safe capacity of the port at the moment.

62. MINTEC data show recent improvements in turnaround times. In 1985, 327 long distance ships, carrying an average cargo of around 2,700 tons, were handled by Luanda. Each on average spent a total of 18 days, comprising 5 waiting and 13 berthed. Any recent improvement in delay times is more likely to be a consequence of a trade decline rather than improvements in productivity. In addition, Angonave data show that their average wait in 1985 was 37 days, twice the average. This seems to confirm an impression that foreign flagged ships were being treated preferentially. The central reasons for the 1981 collapse still remain; poor management, inadequate equipment, badly organized and motivated labor, lack of storage, lack of transport, poor communications and little planning. Examples of serious delays can still be found: in 1988, a ship left Luanda port having taken 73 days (39 at anchor and 34 days berthed) to unload a frozen meat

consignment of 2,000 tons. Lack of available storage space played a major role in this delay but the demurrage costs of over US$150,000 have to be met somewhere in the distribution chain, and ultimately the final price. The impact transport costs can have on commodity prices is non-trivial.

63. All ports require restructuring and Luanda has the most critical need both because of its strategic and political importance, and the growing urban market outside the city perimeter. Lobito is smaller, better organized and possesses improved facilities for long distance berths, including crainage and quayside rail services. Namibe, like Luanda, has received little investment while its neighbor Sacomar is paralyzed due to the cessation of mineral shipments from the Cassinga mines in Huila province. Unfortunately, traffic cannot presently be diverted from Namibe to this modern facility because of its proximity to a fuel shipment and storage complex. There is not much to choose between port efficiencies. In 1985, Luanda annual output per employee was 190 tons and Lobito's was 209 tons. Ships are turned around faster at Lobito; productivity in 1985 was 48 tons per ship/day (6.6 tons per ship/hour) at Luanda, compared with 73 tons per ship/day (9.1 tons per ship/hour) at Lobito. However, this may simply reflect the better equipment (cranes, silos, stores) and any comparisons need to be made with circumspection. Cabotage productivity appears to show little variation between ports. Cabotang stated that 1986 comparative daily output tonnage figures were Luanda 39, Cabinda 42, Lobito 40 and Soyo 65.

64. The current problems of the maritime sector stem from a lack of planning which affects financial, operational, manpower needs and management at all levels, and an inability to formulate a coherent strategy and policy. Low discharging rates need not drastically affect overall productivity if the other stages in the transit system work well. The total transport system cost, in financial or time terms, is crucial to efficiency levels. However, when all stages start to fail, become inefficient or are not synchronized the cost implications become critical. There is no evidence that an analysis of this type, capturing the full physical distribution costs, has been used in any of the government decisions concerning the shipping and maritime sectors. The sector urgently needs trained staff at all levels to motivate workers, identify and correct deficiencies (frequently of a simple nature) and to operate and maintain key equipment. It requires a radical operational re- structuring which includes both short and long term investments. A number of modes have been brought close to collapse in Angola during this decade but the maritime sector is vital to the economic recovery. Therefore, it should have a key role in any future investment program.

F. Mail and Telecommunications

65. In common with many other Angolan sectors, for Telecommunications the years following Independence were characterized by nationalization and reorganization, with the operating needs focussed on maintaining existing service levels in a difficult environment. In 1980, the performance had deteriorated to a point where further restructuring was necessary. The existing mail and telecommunications directorate (DSCT) was disbanded and a

tripartite organization was adopted which comprised: (a) a national telecommunications enterprise (ENATEL-UEE), responsible for domestic telecommunications, (b) the Angolan mail service (CDA-UEE), to provide national and international mail and telegraph services, and (c) an international and maritime telecommunications enterprise. (EPTEL- UEE), to complement ENATEL. These entities combine with a number of small private companies (Standard Electric, Tecnidata, Teletra etc.) to make up the current communications sector. The national council for mail and telecommunications (DNCT) is responsible for coordinating activities and has close links to MINTEC, particularly its programming and evaluation unit which has set up a specialist advisory working group to develop policy changes for the sector.

66. Mail Services. Mail services are clearly vulnerable to the provincial security problems in general, and the difficulties with transport in particular. Table VIII.16 shows Angolan mail service (CDA) throughput for 1986 and it can be seen that the mail system is still managing to offer a full range of services, at both domestic and international levels. Compared to 1985, packages are up by 153% while the rest are relatively constant, and telegrams are receiving competition from telex and direct dial telephone lines. Nevertheless, in 1987, total telegram transmissions increased around 10 percent to over half a million messages. Currently, the mail network is incomplete and irregular, due to the security problem. Roads cannot be used for most inter-provincial links and mail consequently depends on the air sector. Problems of limited cargo space on some planes and the inability of CDA to get designated transport priority on most modes contributes to delays in distribution. TAAG cannot meet over 13% of their domestic schedules and this adversely affects mail distribution. CDA lack a dedicated vehicle distribution fleet and the private truck sector cannot offer suitable services because of its structure and paucity of appropriate vehicle types. CDA also lacks simpler forms of delivery modes like bicycles, and this adds to their distribution problems.

Table VIII.16. THROUGHPUT[1] OF ANGOLAN MAIL OFFICE, CDA, 1986.
(thousands of units)

		In	Out
Registered Letters:			
	National	6,037	6,010
	International	3,177	3,057
Money orders:			
	National	3	3
	International	6	5
Packages:			
	National	4	4
	International	15	15
Telegrams:			
	National	125	125
	International	63	64
Sacks of Mail:			
	National	53	53
	International	30	27

Source: Annuario Estatistico, MINTEC 1986.

67. While it may be possible to augment the vehicle fleet through new investment and speed up delivery schedules by improving operational efficiencies, air travel will remain the key domestic mode as long as the present security situation exists. [illegible] tariffs could be increased, CDA might be able to pay for preferential treatment on air and other modes. The planned high speed coastal ferry network will offer a complementary form of mail transit which merits consideration in CDA's short-term planning. Management and motivation in CDA, like many other UEEs, is low, adding to the problems associated with improving overall efficiency levels. The average salary is low and there is little opportunity for making more on the job, so absenteeism is high. Government reforms aimed at raising mail service productivity are needed.

68. Telecommunications. At Independence, Angola was served by a short wave telegram network supplemented by automatic telephone systems in five cities, a nine-city telex link and an earth satellite station at Cacuaco. Domestic equipment comprised 52 telephone exchanges containing 49,000 lines and 9 telex centers with 470 machines, representing about 60% of capacity. The new state companies for mail and domestic telecommunications were formed from existing colonial monopolies, while EPTEL was

based on a nationalized private company - Marconi - which was contracted to provide additional technical training and to supply both spares and equipment. EPTEL was also given the responsibility for maritime communications, in addition to international telecommunication services.

69. The period 1975 to 1980 was characterized by guerilla attacks, poor management, lack of technically skilled personnel and the need to continually maintain a system that was partly obsolete and operating under heavy loads. Telegraph use dropped dramatically, many local city telephone networks encountered severe operating problems that lowered service quality and telex use encountered difficulties as the network faced high demand. By 1980, telex capacity had fallen from 810 lines to 720, although the number of users rose to 587. Telex data are useful indicators of transport activity, since businesses in a number of modes (particularly shipping) recognize telexes as legal documentation. Inter-urban telephone, telex and telegraph use fell as the network deteriorated, as shown in Table VIII.17 which compares the 1975 and 1980 network characteristics.

Table VIII.17. INTER-URBAN NETWORK, 1975 AND 1980.

	1975		1980	
System	Stations	Localities[1]	Stations	Localities
VHF- 48 channels	28	12	15	6
UHF- 24 channels	8	6	3	2
VHF- 6 channels	6	4	3	3
VHF- 1 channel	22	20	3	3
Other	2	2	-	-

Note: 1. Communications relayed between stations to exchanges and users in various localities.

Source: MINTEC, 1987.

70. A 1980 restructuring of the telecom sector was followed by five years of commercial problems characterized by increasing difficulties in maintaining inter-urban systems, a consequence of the security situation and heavy demand. However, planning and investment was at least being taken seriously at all levels and the African Development Bank provided investment funds in 1985 to improve international links and efficiency. A system of micro-wave and troposcatter stations now provide links over about 65 percent of the country, a result of the investments planned during this period. Security still affects service provision and in 1983 two troposcatter stations were damaged and the link between Malange and Saurimo destroyed. Luanda's central telephone exchange has been reconditioned and the cable network renovated. Some characteristics of the telephone system for the years 1980 and 1985 are given in Appendix Table I.7. The telex remains susceptible to lengthy breakdowns which has drawn complaints from transport agencies. In 1985, work began on developing an overall plan for

the sector, using funds given by the African Development Bank. Finally, a telecommunications institute was created which, though in its infancy, recognizes the urgent need for improved technical and managerial manpower capabilities.

71. In 1987, service levels in the sector were still variable and prone to breakdown. The inter-urban network is incomplete and likely to remain so while the severe security and transport problems remain across most provinces. New investment in automatic exchanges should result in better local and inter-urban services, and higher ENATEL revenue. Table VIII.18 gives some selected operating data for ENATEL and EPTEL covering 1985 and 1986. The impact of automatic dialing can be seen in the 1986 fall in manual services, combined with the huge rise in automatic use to more than double the demand projected by ENATEL. International telephone use in 1986 was affected by government restrictions and undervalues the actual demand levels. If the international systems can be improved, it is believed that a similar surge in demand to the domestic market will take place, especially as the current program to improve international links, funded by the African Development Bank, should improve both capacities and the number of foreign countries with which Angola has direct links. Much of this traffic will be automatic, thus improving speed and cost-effectiveness. Telex use continues to play an important role in Angolan telecommunications, and the growth of the industry in very difficult circumstances is shown in its 1986 output value rising by 11% over the previous year.

Table VIII.18. ENATEL AND EPTEL, SELECTED DATA (1985-86).

		1985	1986
Telephone Manual [1]			
Inter-urban		2,509	748
International	(In)	2,250	2,120
	(Out)	7,753	5,741
Automatic [2]		82,000	215,680
Telex[1]			
National		444	623
International	(In)	1,715	1,640
	(Out)	2,396	2,769
Value [3]		1,297,101	1,435,035

Notes: 1. Thousands of minutes.
2. Thousands of impulses.
3. Thousands of Kwanza.

Source: Annuario Estatistico, MINTEC 1987

72. ENATEL admits that the policy of concentrating investment in high technology areas, to the detriment of assets such as buildings and general infrastructure carries risks. Complementary investments for smaller exchanges, local cable networks and non-urgent maintenance have also generally been sacrificed in the sharp cut-back of government funding. Such a policy is only sustainable in the short to medium term, and must be corrected in any future planning for the sector. Financial cut-backs by the government have affected the largest project since Independence - Angosat - which would provide national telecommunication and television coverage using satellite links.

73. It may now be more appropriate for management in the telecommunications sector to concentrate on routine and preventative maintenance of all assets, and complete all current investment programs as rapidly as possible. Attention must now be paid to the persistent manpower resource problem. Telecommunications is capital-intensive and skilled technicians of all types are needed to maintain the various systems at their designed levels of productivity. Unfortunately, ENATEL and EPTEL cannot apparently either attract or retain sufficient numbers of trained personnel. Government actions to correct the salary imbalances should accompany an apprentice training program to address the manpower shortages. Since 1975, there are 30% more telephone subscribers, three times more inter-urban lines, four times the international lines and automatic dialing has produced higher use and profits in the domestic market. However, all this progress is constrained by the failure to recruit educated and trained technicians and managers.

G. Availability of Modal Spare Parts

74. Efficiency levels in all modals were seriously affected by chronic spare parts supply problems. In theory, public and parastatal organizations are required to put spare parts provision in their prospective budgets or "plafonds" which require ministerial approval. Spare parts for most modal equipment requires foreign exchange. Although some entities have authorization to spend up to a pre-determined level, such as US $9,000 for Angolan Airlines (TAAG), generally BNA approval is required. This may be given in part, in full or not at all. It makes no difference if the enterprise earns foreign exchange or that lack of the parts may damage utilization, revenues and profitability.

75. The rules governing the supply of spare parts are basically simple. Public or parastatal enterprises need to estimate their needs twelve months ahead and include the estimated spare parts needs and costs in their annual budget for approval. Mixed companies have greater flexibility since the private partner can generally provide the foreign exchange and companies have such agreements sanctioned in the legal establishment contract approved by the government. A good example of the different cost impact this can produce is given by considering that ETP truck operations at Base Bungo, Luanda have had items on order for over twelve months. Also TAAG carries a US$18 million spare part inventory to meet contingencies given their normal eight-month waiting period for parts. In comparison, Intertransportes, a joint venture trucking firm with a road

freight contract for the Kapanda dam project, receives a monthly ISO 40 foot container from Italy through which (telexed) spares requirements can be shipped. This allows all spares to be placed on a 28-day cycle. Good cost control makes an important contribution to efficiency and profitability.

76. If enterprises are very large and important they may be allowed to deal direct with suppliers but the majority of transport operations must deal through the government importing agencies like ABAMAT. The heterogeneous mix of transport types, makes and models in Angola, all obtained from a wide range of suppliers and nations, presents huge problems for any single importing agency. The problem of heterogeneity is particularly acute in road transport. MINTEC set up maintenance centers for specific vehicle makes - MANAUTO's - in the late 1970s to meet selected repair needs. Private vehicle owners are permitted to take their vehicles to these centers but generally choose not to do so. The inability of the official vehicle maintenance system to cope with demand in an efficient manner has predictably resulted in alternative private informal arrangements taking over. There is strong evidence that supplies destined for the public sector find their way into the informal markets and a new Volvo N10 fuel injection pump was noted on offer in the parallel market at Kz. 110,000 even though ETP were waiting delivery for such units. The problem has now become so serious that MINTEC have proposed an entirely new joint enterprise distribution system to ensure the regular supply of spares and materials for motor vehicles. TAAG has also made some recommendations to keep inventory costs down and both these schemes will be discussed in later sections.

77. Rail is critically affected by lack of trained personnel and spare parts for the maintenance of locomotives and rolling stock. A total of 165 locomotives, 198 passenger carriages and over 3,800 wagons (most over 15 years in age) need constant attention for a variety of skilled and semi-skilled maintenance tasks. The maintenance and repair facilities of the various railway companies are extremely underutilized and many machine tools have not worked since Independence. This accounts for the dramatic decline in registered fleet numbers and in these units and stock actually working, as described in the rail mode section of this report. All rail repair facilities are in secure areas of the country and could be used as centers for carrying out and training a whole variety of engineering tasks, not necessarily confined to rail transportation. The crucial need here is trained personnel and it may be more efficient to select potential personnel for training at other African rail centers, as well as bringing in foreign specialists to assist on technical programs at the main Angolan rail centers with assigned counterpart staff.

78. All transport and communications entities have problems organizing their spare parts requirements through the existing government arrangements. Maritime vessels seem to cope reasonably well within the current system, helped in part by the surplus capacity in the sector which means that lower utilization and efficiency levels due to lengthy waiting for parts are not critical to financial profitability. In addition, ships can get serviced in foreign shipyards should it be necessary on a voyage, and

this allows for particular categories of repair and maintenance to be treated effectively. Cabotage does not have these maintenance alternatives and is reliant on Angolan yards. Cabotage vessels are elderly and require frequent attention so a real problem exists if cabotage is to grow in the manner desired by MINTEC planners. However, this could be turned to national advantage by developing the well located shipyard of Estalnave to the point where it can quickly schedule and service all cabotage vessels. This would result in a southern Atlantic yard for small vessels which could be used by other African cabotage vessels and foreign fishing boats which are currently so numerous. This represents a very valuable potential source of foreign exchange.

H. MINTEC Analysis and Planning

79. Evaluation. The shortcomings and difficulties within the transport sector and their adverse effects on economic efficiency and growth lead the Second Congress of the MPLA-PT in 1986 to redefine basic objectives and to require MINTEC to develop new plans for their implementation. These objectives were to make road transport the basic national mode, complemented by rail and cabotage, and supplemented by the air sector. Internationally, air would remain the passenger mode and shipping the long distance freight mode, although both would be expected to improve service levels, competitive performance and profitability. It was hoped that a program of short term measures could be identified that would lead to rapid improvements in selected modal services. MINTEC set up a small programming and evaluation unit to diagnose the central issues and make recommendations for improvement. The unit decided to examine the key areas of infrastructure, running stock and equipment, personnel and training, finance and service levels for each main mode. Their findings were released late in 1987 for consideration by the Minister, prior to submission to higher ministries.

80. Analysis. The analysis of the period 1975 to date is reasonably accurate in terms of performance, output and modal data but the key role of central planning in this period and its total inability to forecast, organize and operate transport services is understandably ignored. Perversely, the failure in many sectors is blamed on insufficient regulation or the wrong type of planning. Their main findings, by mode, are:

(i) Good growth prospects exist for cabotage operations, both for freight and passenger, given port infrastructural improvements. Though it is considered to have little flexibility and requires modest investment, its low cost per kilometer of travel over similar congested air routes and security make it extremely attractive.

(ii) Rail corridors should be treated separately. CFL is operating in most secure corridors and merits evaluation for investment. CFB is most affected by the military-political struggles and its short term prospects are limited to the Lobito-Benguela-Huambo section of the corridor. CFM has good prospects on the link Namibe-Huila,

but no investments are presently worthwhile from Huila to Menongue. Rail's low cost per ton or passenger kilometer is more than offset by the vulnerability of the infrastructure, large investment needs and fixed corridor route systems.

(iii) Highway infrastructure and use have been affected by loss of security, while vehicle operations have been constrained by the weak commercial environment. SEF and MINTEC's own plans for the sector should go some way to correct the latter deficiency. Regarding infrastructure, roads require modest investment, have great flexibility, can easily be extended to new regions and allow goods and passenger movements at affordable prices. MINTEC claim that the cost of one ton of air cargo is equivalent to 5 tons by truck, 15 tons by train and 20 tons by sea.

It is proposed to reintroduce an effective road transport freight and passenger service, reactivate railways only in secure areas, invest in cabotage operations to take pressure off passenger demand for air services and to expand inter-provincial road trade links, thus allowing air to develop a strategy best suited to its operating characteristics.

81. Technology needs are addressed by focusing on the utility of rehabilitating the existing vehicle fleet and modernizing other modes like rail, coastal vessels, some aircraft and all modal infrastructure, using the latest technology where possible. This raises the need for trained staff to install and maintain such technology, and conflicts with the desire to reduce dependence on foreign assistance. Finally, the choice of technology, equipment suppliers, spare part needs, technical training and financing have also to be considered. In 1986, the sector employed about 36,000 personnel of which 91% were unskilled workers, 7.5% administrative personnel and only 1.5% technicians. It makes no sense to increase investment in high technology without matching it with funding for technical training, since all modes currently have difficulties finding staff at existing levels of technology.

82. Strategies. MINTEC's programming and evaluation unit considered three elements of the transportation problem; markets, modes and ownership. Markets were grouped into international, inter-provincial (national) and provincial for both freight and passenger traffic. The modes were treated as single entities (ignoring multi-modal systems) and ownership was defined as either state, mixed, private national and private foreign. Angolan planning is not prejudiced against any of these ownership patterns, and monopolies are now present only in the air and urban bus transport sub-sectors. Matrices were drawn up representing acceptable combinations of mode and ownership forms, and MINTEC action for each combination identified six categories; develop, reorganize, negotiate, regulate, reduce and not allowed. Broad types of action, appropriate for short-term impacts, were developed from this exercise and are summarized in Table VIII.20.

83. MINTEC's programming and evaluation unit has worked hard to develop some well argued proposals. Inter-provincial links that meet the criteria developed by the MINTEC unit, together with project flow rates,

are shown in Figure 1 for freight and Figure 2 for passengers. Table VIII.19 summarizes the flows by modal category. Annually, about 1 million tons and 26 million passengers movements are predicted to complement existing flows. It is difficult to give a comparison between predicted and current values, since cabotage passenger and inter-provincial road freight and passenger movements are not currently recorded. However, within the projected provincial passenger data, Luanda-Luanda accounts for 15 million passengers compared with 1.2 million current passengers. Generally, the figures represent modest projections and should well coordinated transport systems be implemented and operated efficiently, the actual demand data are likely to be much higher. MINTEC's programming and evaluation unit has also included proposals for telecommunication investments but most center on completing projects underway, particularly the micro-wave system (not yet 50% installed) and the seriously delayed cable network in Luanda.

Table VIII.19 PROJECTED FREIGHT AND PASSENGER MOVEMENTS[1]

Mode	Freight (tons)	Passengers
Road:		
Inter-provincial	155,000	4,240,000
Rail:		
Inter-provincial	450,000	3,280,000
Provincial	250,000	18,000,000
Cabotage	148,000	210,000
Total	1,003,000	25,730,000

Note: 1. Projected data, based on MINTEC 1987 proposals.

Source: Esquema Director, MINTEC 1987.

84. Short-term measures are given in Table VIII.20 although no costs were available at the time of the main mission. Timing is fortuitous, however, since assistance and guidance on cost-benefit and economic/financial evaluations can now be given to allow a more detailed analysis of the proposals developed from initial proposal screening. At that time, when choices have to be made with limited funds available, the arguments for less regulation and a reduction in state or quasi-state intervention can be considered.

Table VIII.20. MINTEC SHORT TERM STRATEGIES (1987)

Sector	Freight
International:	Improve Angonave and Secil Maritime productivity, profitability, aim for greater market share. Re-organize CFB in Lobito corridor. Re-organize docks. Set up container company.
National:	Diminish air cargo. Regulate road transport. Coordinate needs with National Council of Carriers. Improve cabotage facilities at ports for north-south links. Organize road transport into zones, consistent with rail corridors. Regulate road transport.
Provincial:	Reorganize road transport, set prices and control supply of services. Set up road transshipment terminals.
	Passengers
International:	TAAG; better service, improved competitive image, better negotiated commercial contracts. No foreign operations without joint agreements.
National :	Develop inter-provincial links, using rail corridors where possible. Provide a cabotage service to relieve overcrowding on littoral routes. Reorganize and regulate the private bus operators, no foreign companies.
Provincial:	Organize provincial transport sector. Allow regulated private operations. Regulation through licenses and user charges.

Source: Esquema Director do Sistema de Transportacao na RPA, MINTEC 1987.

85. MINTEC's programming and evaluation unit has focussed attention on the general problem of spare part provision, and have developed an entirely new road sector distribution system. Its basic objective is to provide a full range of after-sales services to vehicle owners. This would include supplying new vehicles, rebuilding units, providing spares and technical support, all under one organization which will be responsible only for one

manufacturer. A significant improvement in spares provision is essential if the stated MINTEC desire to develop bus and trucking operations has any hope of success. The cumbersome, inefficient central importing agencies would be replaced by individual manufacturer parts distribution systems reflecting the national vehicle fleet composition. It is proposed to have two levels, the first representing key manufacturers like Scania, Mercedes, Volvo and IFA where the supply of parts is absolutely crucial to national productivity and a second tier representing minor makes whose impact is less vital. The second tier would be simpler in structure but would not operate at any commercial disadvantage. Manufacturers have been contacted and seem willing to seriously consider investing in the proposed joint venture over which they would exercise management control as long as some method of remitting profits (or a portion of profits) can be agreed with the BNA. It is hoped that the new financial and economic changes now being considered will provide the impetus for such an agreement.

MINTEC PLANS FOR INTER-PROVINCIAL FREIGHT FLOWS

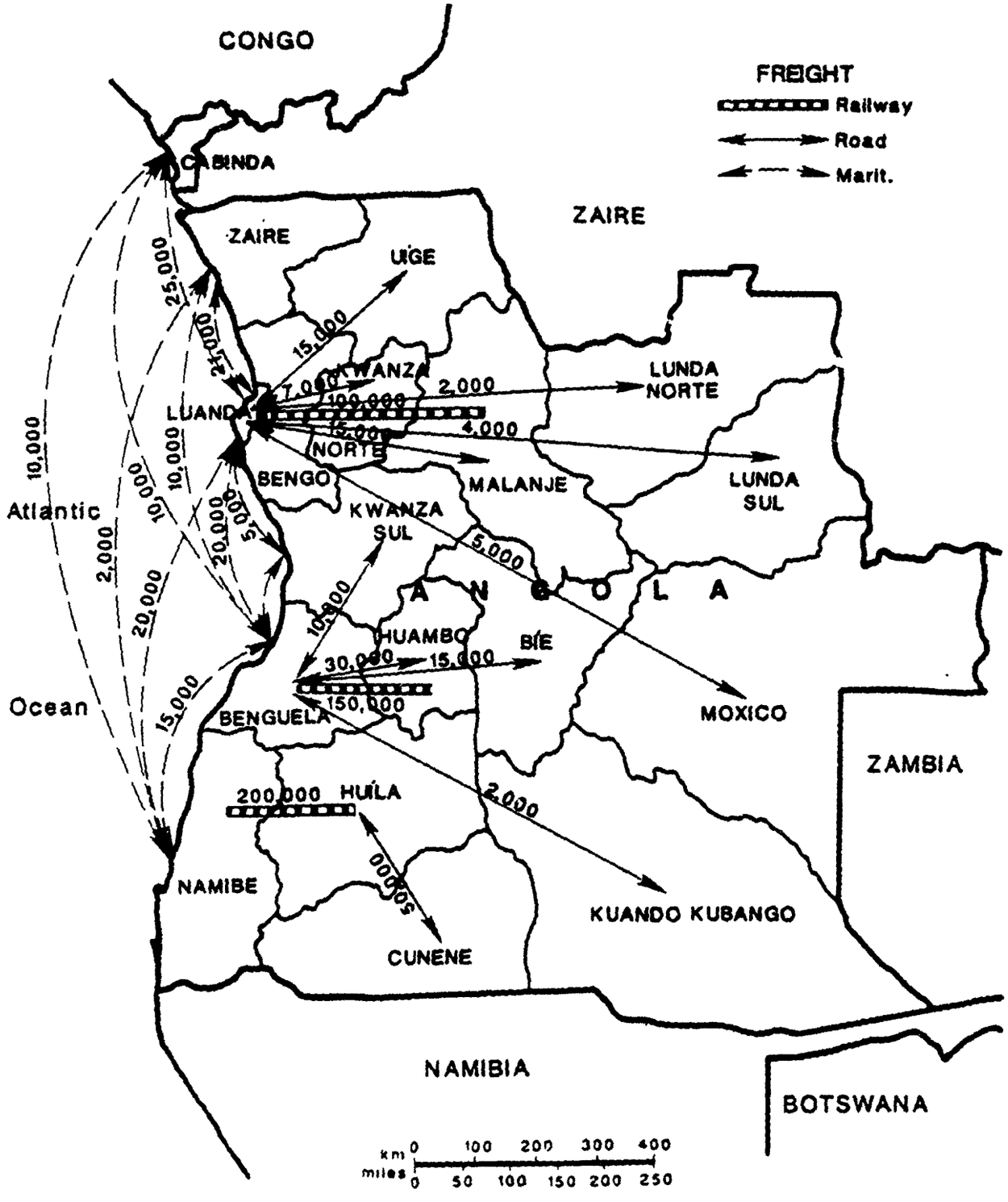


Figure 1

MINTEC PLANS FOR INTER-PROVINCIAL PASSENGER FLOWS

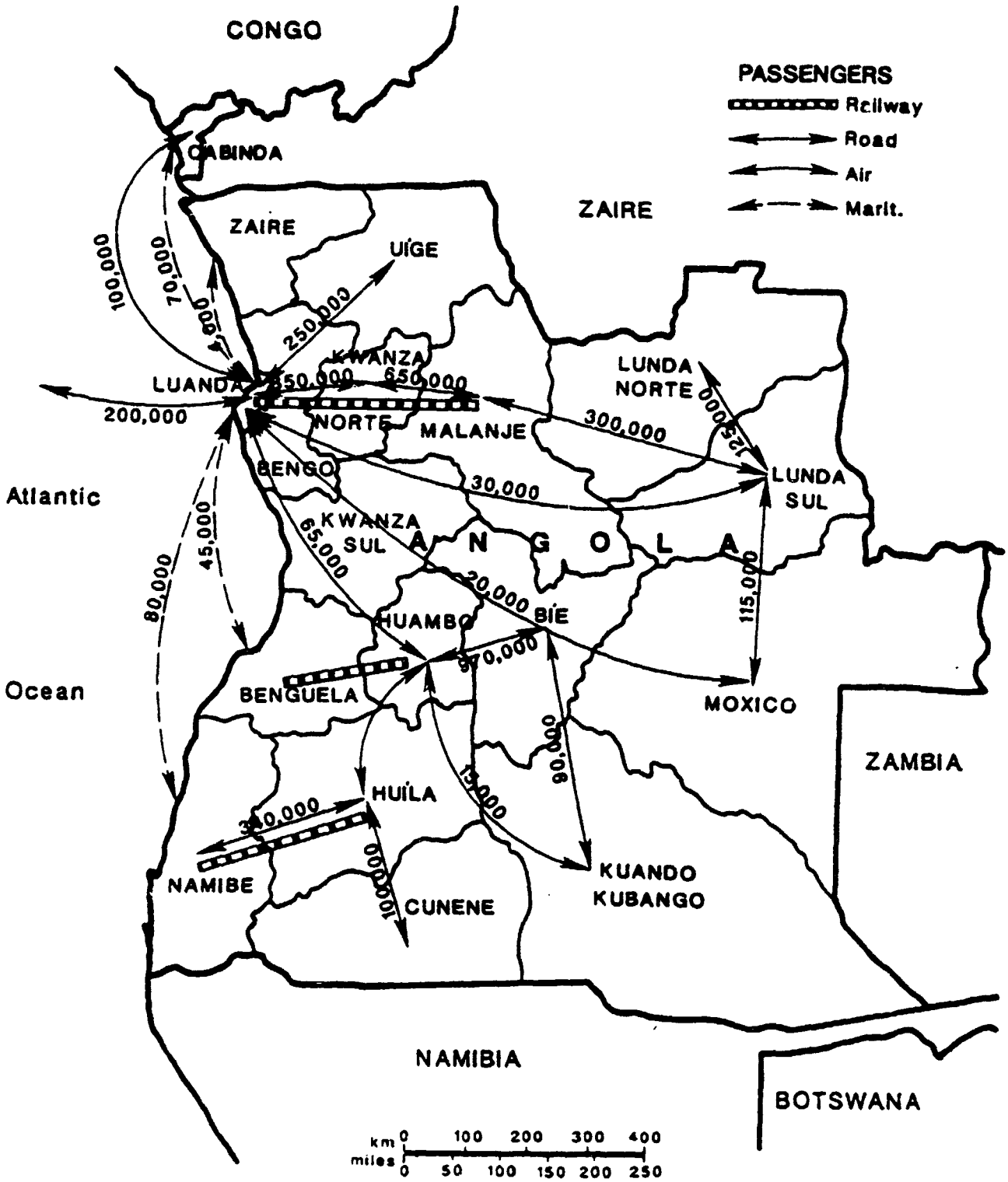


Figure 2

I. Issues, Prospects and Recommendations

86. Issues. The sector would benefit from general planning changes and specific restructuring at all levels of modal activity. It is characterized by the following constraints:

(a) Limited land-based modal operations due to the poor security situation, lack of infrastructure maintenance, reduced demand patterns and inadequate vehicular stock.

(b) Failure of centralized planning to recognize the importance of transportation and its needs, to adjust to market changes, modify tariffs, supply desired services and support existing operations. This results in costly passenger and cargo rates in real terms and an inefficient demand for modal services. In general, the supply of services is totally inadequate to meet the demand at official price levels. Parallel pricing of maintenance and services is present in the road sub-sector, together with queuing and time delays in other modes.

(c) Inability to cope with the rapid urbanization noted in many provinces, especially those that are considered more secure. Freight shipments (notably food) are affected but the most chronic failure is the lack of urban passenger transit systems to meet the needs of the growing city populations.

(d) Foreign exchange limitations that complicate or prevent the purchase of equipment and spare parts for all transport and communications modes. Much of this is due to planning rules and BNA procedures which combine to overrule the operational needs of managers and result in short service lives of road vehicles, railway engines and mechanical handling equipment of all types. These difficulties then contribute towards sustaining the present unreliable and inconvenient service schedules.

(e) Employment policies are inconsistent and ineffectual within the sector. Skilled staff are difficult to retain and state enterprises frequently required to maintain large numbers of untrained employees who are troublesome to motivate and manage. Training and educational schemes are not commonplace, and there is a dearth of technicians in all modes that affects productivity, service levels and preventive maintenance. Remuneration is poor and opportunities for auto-consumo limited so staff turnover, especially where skills are marketable, is high.

(f) Infrastructure maintenance is poor and costly in terms of its effect on modal output and profitability. It also has social opportunity costs given that labor intensive policies could be adopted to reduce operating costs while generating employment opportunities. Many land systems are in a quasi-abandoned state; airfields lack basic facilities, rail tracks and stations are

damaged and inoperative, and the highway network is in a deteriorated condition and lacks any service facilities like fuel stations and food stops for drivers over much of its length. Ports require both physical works, (quays) and equipment maintenance programs to improve efficiencies and preserve investments, especially for cabotage operations.

(g) The collapse of official price levels for many goods and services, and the attendant rise of the parallel market has caused distortions in the pricing of transport services. It is important that planning changes should avoid subsidies and allow modes to compete on equal terms. In this latter respect, the private sector needs to be stimulated and subsequently supported, and there is good potential for growth, particularly in highway and cabotage operations. MINTEC seems to be avoiding regulation and licensing as a means of controlling the sector and is aiming for a mixed competitive economy.

87. Prospects and Recommendations. In planning corrective action, the transport sector has limited capacity to absorb the related elements of large investment programs. Such limits are reflected, inter-alia, in inadequate local complementary services, lack of experience in managing large projects at Ministry and Provincial levels, and potential difficulties in meeting disbursement targets for locally-financed elements because of irregular supply of locally-manufactured materials. In these circumstances, a program focusing on short-term high impact projects and modest financing seems an appropriate form of investment, supported by policy changes at Government level. Large single projects should be evaluated separately once their consequences in terms of sectoral absorptive capacity are recognized.

88. MINTEC have proposed new transport plans reflecting Provincial, Regional and national/international needs and these should influence modal and inter-modal investments and project selection. The main components of the program are given in Table VIII.21. In the short term it is desirable to reduce the national demand for air services, both cargo and passengers, by raising service levels in other modes, particularly highways and cabotage. In addition, all tariffs are grossly distorted and require urgent review. The following specific actions are recommended for the various modes.

Table VIII.21. MINTEC PROPOSED PROGRAM, 1987

Mode	Action
Road:	
Urban	Reorganize Urban Bus Transit System
Inter-provincial	Rebuild links and provide freight and passenger services: Luanda - Malange, Luanda - Uige, Huambo - Huila, Huambo - Benguela, Huila - Malange.
Rail:	
Urban	Develop: Luanda - Luanda,
Inter-provincial	Re-open: Luanda - Malange, Huila - Namibe.
Cabotage	Create regular, efficient services between: Luanda - Cabinda Luanda - Lobito Luanda - Namibe
Air	Operate a reduced schedule profitably and air traffic control/navigation.

Source: Adapted from Esquema Director, MINTEC 1987.

89. Highways. Vehicle fleets should be increased and vehicle life extended through easier access to capital for new vehicles and spare parts, trained mechanics and improved maintenance facilities. In addition, stricter control of loads, and improved road conditions would contribute significantly to prolonging vehicle life. Highway infrastructure needs to be monitored on a regular basis to identify construction, rehabilitation and maintenance needs. This would require the creation of an effective highway maintenance organization in Angola, possibly in three-tier form to reflect a national-provincial-district structure. The Ministry of Construction should be encouraged to seek funding for an evaluation of a new autonomous highway authority, with an adequate, dedicated revenue base. There should be an efficient private sector to complement State and company transport enterprises. Regulation should be very carefully evaluated, as excessive control has rarely had the desired effect in other African countries and vehicle licenses should be freely available as long as applicants meet required operational standards. Tariffs should be determined by market forces and efficient operators should be allowed to run multi-vehicle fleets. In urban transport, bus fleets need expanding and their routes improving to reduce vehicle damage. The desirability of parastatal bus operations needs evaluation and the private sector compris-

ing taxis, pick-ups and mini-buses should be allowed to grow. In planning terms, road investment is appealing because its flexibility permits regional impacts to be finely tuned. A variety of vehicle types, giving different levels of service at different prices will decide the appropriate demand and price levels without undue regulation. It also has attractive employment prospects, particularly in the areas of road construction and maintenance. As part of the program, consideration may also be given to determining a system of vehicle user charges to cover infrastructural investment and maintenance.

90. Cabotage. Regional development requires that goods and produce are transported to major markets without delay and at low cost. Cabotage has an excellent potential for providing services over part of the regional transport link from the producer to consumer, though it present performance is dismal. MINTEC is proposing programs for both passenger and cargo cabotage investment, principally in the ship fleet which is presently old, unreliable and incapable of giving the desired level of service. Two new 320 passenger ships are operating between Luanda and Lobito but facilities at all ports need to be improved to allow coastal ships to be promptly berthed, unloaded and serviced. The new proposals from the maritime advisory group on port reorganization should complement cabotage operations, making them more productive and profitable.

91. Railways. Investment requirements for Angola railway systems are considerable. There is a need to rehabilitate the permanent way, replace damaged bridges, renew rolling stock, rebuild non-operational locomotive units, renovate signaling and communications, improve transshipment facilities, educate adequate numbers of technical staff and ensure a regular supply of spare parts for the entire operation. The analysis of the Lobito to Luau (Benguela) corridor should be treated separately under normal evaluation criteria to determine desirability and timing. Experience gained from the implementation of the Beira corridor in Mozambique should be very valuable in this exercise. Excluding the corridor issue, and looking at other railway investment opportunities, projects that promote short term sectoral impacts should be favored, such as improving rail transit in the port of Luanda, providing technical assistance to adequately maintain and rebuild existing engines and rolling stock in all three systems and finally to plan sequential investments within selected corridors. Such corridors should include urban passenger traffic where appropriate.

92. Air. The evaluation of TAAG's long distance aircraft should be a separate project and only measures to improve domestic services should be considered in the proposed program. TAAG presently carries a large and costly eight-month inventory of spare parts because of difficulties in obtaining foreign exchange. Changes in Government financial policy, requiring little capital investment, are the most appropriate actions to remedy this problem. If ENANA airport safety and communications could be improved within the domestic system, TAAG could operate its aircraft over a

longer daily period and so improve utilization. Due to tariff distortions and the fixed exchange rate, TAAG is subsidizing all its activities in real resource terms. A sequential adjustment to the tariff structure is urgently needed to allow TAAG to operate from a sound financial base.

93. Communications. The transport sector, in common with other commercial sectors, would benefit from improved public communications at all levels. Communications in general have failed to attract sufficient investment to match demand and to maintain standards of service, even though telephone subscribers have doubled to over 50,000 since 1975. Companies were nominally profitable in 1987 but tariffs do not reflect resource costs and the whole sub-sector needs reorganization in terms of tariffs, salaries, mail transport, maintenance, technical training and management control of staff and operating procedures. The mail system is essentially a low technology, personnel management operation while the telecommunications is characterized by high technology, substantial investments and good potential profitability. Reform of the mail service can be achieved by concerted Government action, with little help from external agencies. A number of projects in the area of telecommunications have been proposed by MINTEC and technical assistance and equipment could be provided where such investments contribute to the success of a transport project.

94. Human resources are a major issue in making all transport modes more efficient and productive. There is a lack of appropriate skills at virtually all levels of the modal employment hierarchy. A two-tier approach to the general problem is recommended in Annex IX, whereby basic educational programs in Angola provide the essential educational foundation for more skills-oriented training. The modes themselves would then be responsible for more specific training, possibly with the support of technical assistance. All modes would benefit from technical assistance to develop and train good managers, experienced technical staff and competent operators. Technical assistance should be targeted on critical areas. Equipment maintenance requires strengthening in all transport sectors and highway maintenance may require technical assistance with labor-intensive methods used to the fullest extent possible. This can be achieved by adopting a regional/provincial focus and a pavement management system approach. Finally, training programs from unskilled operators upwards are highly desirable and should result in higher equipment utilization and modal productivity, to the benefit of the Angolan economy.

EDUCATION

A. Structure and Organization of the Educational System

1. The present educational system was established by Decree 26 of January 1977 and changed by Decree 40, of May 1980 which divided it into three levels: basic or primary education, secondary education and higher education. While the first two levels offer regular courses for students in the normal age range, vocational training and adult education are available also to older students.

2. Regular Education. Primary education is also divided into three levels, in addition to one year of preschool. The first level lasts four years and is compulsory. The second and third levels each last two years. School attendance should start at six years in preschool classes; the first level should be completed at age 10, the second level at age 12 and the third level at age 14. However, acceptable ages are up to 14 years old in the first level, 16 and 18 years old in the second and third levels. The purpose of primary education is to provide the knowledge required to obtain skills through on-the-job training or secondary education. Secondary education is open for students who have completed the third level and offers two alternatives: the pre-university, a two-year course leading to entrance in the university and secondary technical education, offering different specializations and having a duration of four years. The system does not track as the completion of a level or its equivalents opens the same alternatives. Thus, secondary technical education also provides access to higher education.

3. The 2-year duration of the pre-university course has proven insufficient to provide the students with the knowledge required for university entrance. As a result, it has been extended, on an experimental basis, to three years. Access to secondary education and higher education is determined by a system called "encaminhamento", which considers previous grades, vocational aspirations and the number of places available, in the selection of students. There are 14 pre-university schools. Of these, only three have their own facilities, located in Luanda, Uige and Malanje. Eight schools use facilities provided by the National Educational Institutes and three schools share them with secondary technical institutions. This, in part, reflects the fact that the pre-university courses conceived in 1978 are in a transition phase. Both curriculum and duration need to be reviewed in order that they can adequately fulfil their role of providing the knowledge required for admission to the university.

4. Secondary technical education is a four-year course and has two programs. The first program is a teacher-training course for primary education teachers at the National Institutes of Education, located in 14 provinces. Besides these institutes, there are, in Luanda, the National Institute of Physical Education and the Pedagogical Industrial Institute. The former provides training for physical education teachers and the latter trains teachers in industrial disciplines for secondary technical education. The second program offers specializations for technicians in areas such as agriculture, electricity, health, mechanics, fishing, and finances in the

secondary technical institutes. Only 12 of the institutes are functioning as two were recently closed. During the last two years, students have to gain practical experience by working as apprentices in jobs related to their specializations. Most students of secondary technical education are "working-students", i.e., are employees who are daily relieved of their duties for a number of hours in order to attend classes. For example, many teachers are also students at the National Institutes of Education in order to become certified teachers. The existence of working-students negatively affects learning.

5. The Agostinho Neto University, established in November 1976, is the sole institution of higher education and has three sites: Luanda, Huambo and Lubango. In Luanda, there are the Faculties of Law, Economics, Sciences, Engineering and Medicine. In Huambo, there are the Faculties of Agronomy and Medicine, as well as Economics and Law. In Lubango, there are courses in Economics and Law as well as in the Institute for Education Sciences. The purpose of this Institute is to provide teacher training for teachers of the National Institutes of Education. The Institute for Educational Sciences offers its courses also in Huambo and Luanda, although in these cities it does not have resident professors. These courses are correspondence courses and have many inadequacies. The faculties of Economics and Law at Huambo and Lubango do not have a sufficient number of teachers. As a result, many disciplines are not offered on a regular basis. To remedy this situation, professors from Luanda are sent at regular intervals to teach short-term, intensive courses.

6. Some faculties offer several specializations. All courses have two levels. The first level lasts three years and the second level two years, except for Medicine, which lasts six years. The teacher-training correspondence courses also last six years. Only the completion of the second level provides a diploma. Most students are "working-students" who receive full salaries. Students living in other cities receive free board and lodging. In Luanda, the University houses the National Center for Research; its policies are designed by the National Council for Research, a unit of MED having the rector as its president.

7. Adult Education and Professional Training. Students too old to be accepted by regular primary education have other options. Adult education is offered corresponding to levels I, II and III of primary education. In level I, it is a two-year program divided into four semesters, the first one corresponding to literacy. Levels II and III each have a two-year duration also divided into four semesters. Those completing level III have access to secondary education. Adult classes are given at night using the facilities of regular schools.

8. Literacy programs equivalent to the first semester of Adult Education are carried out by the National Center for Literacy. The Center conducts one-year programs using volunteer teachers and the program and manuals used are specifically designed for the students' needs. The resources for these programs and their execution are managed by the Party (MPLA-PT).

9. Provisional schools (concentrated in rural areas) offer a four-year course to children older than ten years and to dropouts. The first two years are spent learning basic skills and the last two years are dedicated to vocational skills such as agriculture, carpentry, masonry, shoe-making, printing, etc. Provisional schools are boarding schools and, as such, also cater to children and teenagers who have been abandoned or orphaned. Many provisional schools have had to be closed due to the war. At the moment, there are 13 provisional schools located in Bie (3), Namibe (2), Luanda, Benguela, Huila, Luanda-Norte, Malanje, Huambo, Kuango-Sul and Uige.

10. The centers for vocational training are in a state of flux, pending the reorganization that will occur according to legislation still being discussed. Up to now, these centers provide regular courses under the direct control of MED or offer courses for a firm's employees, financed by the Ministry that controls these firms. In the latter case, the role of MED is to provide manuals and exert some supervision. There are 45 Centers operated by MED and 73 within firms. The Centers controlled by MED offer two cycles. The first cycle, corresponding to level II of primary education, takes two years and the major difference in relation to regular primary education is its objective: to provide the student with a marketable skill. In other words, the Centers provide a terminal education and thus offer an opportunity for their students to acquire a skill that is in demand. The second cycle apparently has few students and offers courses equivalent to level III of primary education providing equal access to secondary education.

11. There are three main problems regarding the Centers. The first is the lack of coordination, supervision and control, that should be exercised by MED. As a result, many existing facilities are underused and the same specializations are taught with different procedures. The second problem results from the lack of knowledge about the need of qualified workers. There is a government questionnaire about the occupational structure of the existing labor force in a firm and its future manpower needs. However, many firms do not answer the questionnaire or do not answer that part regarding their manpower needs. Finally, there is the problem of financing the Centers. Recently, the government has made an effort to deal with these problems. The reform of MED has placed the responsibility for coordination of vocational training with the Vice-Minister for Vocational Training. New legislation establishing the National System for Vocational Training under the responsibility of the same VIce-Minister is being proposed. Thus, this system maintains the utilization under MED, which does not have the human and financial resources required for the job and is not familiar with the teaching procedures and curricula of professional training.

12. Ministry of Education: Objectives, Organization and Resources. The main objectives of educational policy are formulated through the MPLA-PT Congresses and resolutions, and through Government legislation. Important among the former are the First Congress of MPLA held in 1977 and the Second Congress. The first Congress set the nature and goals to be followed by the educational system, including nationalization and secularization of schools, compulsory basic education, free education, and cooperation between community and school. The First Extraordinary Congress of the Party (1980)

reaffirmed these policies and showed concern with the quality of education. The Second Congress went further in its concern, with the issues of quality and efficiency, recommending a diagnosis of the educational system. Recently, in its 20th meeting held in November 1987, the Party's Central Committee approved two documents containing the diagnosis and expressed its concerns for more effective actions pursuing the existing priorities.

13. All government responsibilities and resources related to education, with some exceptions, are centered in MED. This ministry has four administrative levels: central administration, provincial delegations, municipal delegations and communal units. The central administration coordinates the educational policies, sets the guidelines, allocates the resources, determines curricula changes, buys school materials, sets teacher wages, supervises schools, organizes teacher-training programs, etc. It has two Vice-Ministers, each responsible for Departments or Directorates (see Chart -). In addition, there are the supporting units and the hierarchical relationship with the provincial delegations.

14. Under the reorganization of MED, through the Decree 9/87, the responsibilities of the Vice-Ministers were changed. Previously, one Vice-Minister was responsible for primary education and the other for secondary technical education (including the pre-university course) and for the University Agostinho Neto. Now, the University refers directly to the Minister. One Vice-Minister handles all matters related to secondary technical education and vocational training and the other is responsible for general education, consisting mainly of primary education. The changes increased the number of the supporting units from five to nine. Many units, such as the Planning Unit, International Affairs, Legal Affairs, Budget Administration and Human Resources, exist in all Ministries. International Affairs deals mainly with the administration of the "cooperantes" contracts.

15. The Vice-Minister for General Education has under his authority the National Directorate for General Education, which comprises four Departments: Physical Education, Adult Education, Special Education and Extra-curricular Activities. The former organization does not differ significantly from the new one as the responsibilities of the Vice-Minister were maintained with one exception. The Vice-Minister for Technical and Vocational Education has three directorates under his authority: secondary technical education, vocational training and teacher training. A comparison with the previous organization reveals the following changes: university affairs are now handled directly by the Minister and the pre-university course is the responsibility of a Vice-Minister. The added responsibilities include teacher training and the coordination of vocational training. The advantages of reallocating the responsibility for this level of teacher training are not clear. The main purpose of the organizational change was to place the responsibility for coordination of vocational training, which is facing a major crisis, in MED. At the moment, regular education taxes the planning abilities of MED, which are very weak, and burdens the administration with unsolved problems and large inefficiencies. It is hard to understand how MED can deal with the additional problems of vocational training, the nature of which is quite different from the ones of regular education, with the same administrative resources.

16. A more promising direction of change would be toward decentralization of decision-making in favor of provincial and municipal delegations. Decentralization would result in shorter delays and a greater involvement of lower authorities. The scope for decentralization involves actions with regard to maintenance of schools and school supplies. An important measure in this respect was the decentralization of budget elaboration and implementation. The organization of the provincial delegations is similar to that of the Ministry of Education, with support units and executive departments, although their number is smaller. For example, the provincial delegation in Huila has three supporting units (Planning Unit, School Supervision and "Cooperantes" Affairs) and eight departments (General Education, Adult Education, Vocational Formation, Budget Administration, Physical Education, Human Resources, Extra-Curricular Activities and Public Relations). In addition, there is a Consultation Council, formed by the department's directors. Contacts between the provincial delegation and the municipal delegations and communal coordinations are severely hampered by difficult communications, large distances and poor roads. There is no reliable information network between the hierarchical levels, and the autonomy given to the school's directors is minimal. As a result, delays in decision-making affect the schools, drastically reducing the number of school days and causing more adverse teaching conditions.

17. Not all government resources for education are included in the budget of the Ministry of Education. Separate budgets exist for the Agostinho Neto University, the National Center for Literacy and the National Institutes for Languages and for Scholarships, as shown in Table IX.1. The allocation for the National Institute for Languages is very small. While the National Institute for Scholarships, which started in 1982, receives about 3% of the educational budgets, the National Center for Literacy is far more important, receiving in most years more than 10% of the government educational budget. The Center is part of the Department of Education, Culture and Sports, a unit of the Secretariat of Ideological Matters of the MPLA-PT. The Center promotes one-year literacy courses for agricultural workers, cooperative workers and employees. Those courses are equivalent to the first semester of the Course for Adult Education.

18. During the period 1980-87, education received an average of 12% of the government budget, with 10% being allocated to the Ministry and 2% to the other institutions, including the university. Even in nominal terms there are large fluctuations in budgeted educational expenditures. For example, in 1985 these expenditures were 12% below the 1980 level. Because of the cost of the increase in goods and services, the decline in real terms since 1983 is larger than the decrease of nominal expenditures. Cuts in budgeted expenditures reduced actual real expenditures even further. In the period 1980/82 (Table IX.2) sizable cuts were made both in total government expenditures and in educational expenditures; the National Center for Literacy and the National Institute for Languages were most affected.

Table IX.1 - GOVERNMENT BUDGET FOR EDUCATION - 1980/87
(Kz millions)

	1980	1981	1982	1983	1984	1985	1987
Ministry of Education	10.029	9.030	9.507	8.407	9.021	7.9	11
University Agostinho Neto	26	239	491	33	474	500	851
National Center for Literacy	1.33	1.125	1.071	858	950	762	600
National Institute for Languages	16	18	28	20	*	19	9
National Institute for Scholarships	-	-	140	81	*	377	384
	11.644	10.413	11.23	9.702		9.559	12.855

*Missing information

Table IX.2 - GOVERNMENT EXPENDITURES ON EDUCATION - 1980/82
(Kz millions)

	1980		1981		1982	
	Expenditures	Reduction (%)	Expenditures	Reduction (%)	Expenditures	Reduction (%)
Ministry of Education	7.883	21	7.929	12	8.097	15
University Agostinho Neto	235	12	236	2	358	27
National Center of Literacy	618	53	580	48	683	36
National Institute for Languages	6	63	8	54	18	38
National Institute for Scholarships	-	-		135	4	
Total Government Expenditures	76.920	17	91.639	16	72.138	29

19. The distributional impact of educational expenditures can be seen in regional terms by comparing the per-capita expenditures for education by the 18 provinces. For 1983, the central unit of MED absorbed 8.2% of MED expenditures. Expenditures in the provinces were an average Kz 916 per capita, varying from Kz 469 in Bie and Kz 715 in Luanda Norte, to Kz 3364 in Kuando Kubango and Kz 1784 in Benguela. The bulk of planned expenditures by the Ministry of Education is of a recurrent nature. Capital expenditures are, for most years, less than 1% of total expenditures. Personnel expenditures account for more than 80% of total expenditures. Expenditure on food is significant, which calls attention to the need to reevaluate the free room-and-board policy. The budget for the National Center for Literacy reveals that personnel expenditure is the most important single item, representing more than 80% of total expenditures and about 10% of the Ministry of Education personnel expenditures. This large share of resources employed in literacy programs for adults raises serious questions about its cost-effectiveness.

B. Primary Education

20. Enrollment in regular primary education in the period 1970/86 shows a rapid growth up to 1979, and a sharp decline thereafter. The number of students increased from 484,000 in 1970 to 671,000 in 1976, and 1,932,000 in 1979, declining subsequently to 1,047,000 in 1986. Enrollment growth since Independence reflects the priority education received from the new Government. However, the attempt to enforce compulsory education has suffered severe setbacks, which deserve some explanation. While data on number of classrooms, number and qualification of teachers and number of daily shifts is not available for this period, it is reasonable to assume that the increase in enrollment between 1976 and 1979 has overtaxed the capacity of the system in physical terms by increasing student/teacher ratio as well as increasing the number of schools operating with three or four daily shifts. Also, there is no evidence of an increase in qualified teachers in this period that would partially compensate for the loss of qualified teachers after independence. Thus, the threefold increase in enrollment must have been accomplished with a smaller number of qualified teachers.

21. School maintenance has probably suffered from a combination of intensive use and insufficient repairs. Similarly, school materials hardly kept pace with enrollment. Thus, enrollment expansion must have increased inefficiencies and would hardly be sustainable, even if other factors were kept in check. But during the early eighties, war problems and economic problems intensified, with damaging consequences for the educational system. War consequences were felt in many ways. Firstly, impairment of the transportation network disrupted distribution of school supplies in many areas. Secondly, the dislocated population overburdened facilities in urban or secure areas. Thirdly, they contributed to the decline in the number of teachers through the draft of young soldiers. Fourthly, production losses and the cost of the war effort reduced the resources available for peaceful activities.

22. The distortions in the economy and the centralized allocation system reduced local production of school and construction materials as well as the distribution networks. As the import content of further education materials increased, their availability was affected by foreign exchange constraints, which also reduced the ability of the country to rely on foreigners ("cooperantes") to reduce the shortage of qualified teachers. Perhaps most damaging is the effect of distorted wages on teacher morale and supply. Since teachers do not receive payments in kind, many consider their income insufficient and leave their jobs.

23. The decrease in resources available for primary education is shown in Table IX.3. For three years there are figures for the number of schools, classrooms and teachers. The number of teachers declined 23.6% from 1981 to 1983, whereas the reduction in enrollment was less (12%). Those who left because of low wages were probably the most able and qualified. The decline in classrooms was larger (40%), forcing an increase in the number of shifts and in the ratio students/classroom.

Table IX.3 - PRIMARY EDUCATION - NUMBER OF TEACHERS, CLASSROOMS & SCHOOLS 1981/83

	1981	1982	1983	1983/81 %
Teachers	43.899	39.843	33.521	-23.6
Classrooms	17.921	16.742	10.670*	-40.4
Schools	7.097	6.612	6.120	-13.8

24. Gross enrollment rates for primary education and level I declined by 42%. The high figures for the gross enrollment rates for level I reflect the great number of over-aged students. For example, in 1981 almost half the students in level I were more than nine years old, as revealed by the comparison of gross and net enrollment rates. High dropout rates are also the main cause of net enrollment rates of less than 1% in levels II and III.

Table IX.4 - BASIC EDUCATION - ENROLLMENT RATES

	1980	1981	1982	1983	1984
Gross Enrollment Rate Basic Education (6-14 years)	75.7	69.2	62.8	55.1	43.7
Level I (6-9 years)	155.3	141.6	128.4	112.9	89.9
Net Enrollment Rate					
Level I (6-9 years)	-	72.4	69.4	-	-
Level II (10-11 years)	-	0.9	0.6	-	-
Level III (12-13 years)	-	0.1	0.1	-	-

Source: Etapa Diagnostica, MED, 1986.

25. The Censuses of 1983 and 1984 do not provide information on schooling level for those enrolled. However, they allow calculation of net enrollment rates for primary education and level I, on the assumption that students between 7 and 10 years old are in level I and that students between 7 and 14 years are in primary education. The results do not indicate major regional differences, as only Namibe has smaller enrollment rates, shown in the table below.

Table IX.5 - NET ENROLLMENT RATES - FOUR PROVINCES

	Luanda	Zaire	Cabinda	Namibe
Net Enrollment Rate				
Basic Education	94.4	83.5	80.5	70.8
Level I	83.3	81.2	77.3	68.1

Source: Censuses of 1983 and 1984.

26. There are indications that the deterioration in primary education has ceased. Enrollment figures show a small increase since 1984 and the number of teachers in 1985 increased to 35,221. Still, increasing access to primary education and improving its quality will require far more resources than those presently available. Adult education enrollment also shows a decline between 1980 and 1984 and a substantial increase in 1985 and 1986. This type of education will have to expand to accommodate the students who cannot attend regular primary education classes because of their age. The reduction in enrollment in regular primary education vastly increased the potential demand for adult education. The problems faced by primary education are illustrated by a study of demand for education in Luanda in 1986. Of the 221,400 students in the age group of 5-14 years old who tried to enroll, 31,200 did not find places in pre-school and first grade. Of the remainder 190,200, at least 71,200 were in the third shift or in classes with more than 40 students. If one considers that the third shift reduces the class hours/day of the other two shifts and that the high number of dropouts is partly a consequence of high repeat rates, the conclusion is that conditions for learning are extremely unfavorable. The study also mentions the need for an additional 780 teachers.

27. Internal Efficiency. Efficiency in primary education is low. One way to look at internal efficiency is to observe promotion, repeat and dropout rates (see Table IX.6). The promotion rates are higher for Level I than for Level II and III. Within Level I they are higher in 3rd and 4th grades; between Level II and III there is not a clear pattern, although on the average the promotion rates are higher in Level III. Taking the average value for 1980/84, promotion rates vary from 29.2% in grade 6 to 45.0% in grade 3 and retention rates (promotion plus repeat rates) vary from 63.4% in grade 8 to 74.4% in grade 3 class. In the period 1980/84, a clear trend is discernible. For Levels I and II, the promotion rate for each grade shows a steadfast decline. The reduction of promotion rates in the Level I is always larger than 1/5. This evidence points to a severe deterioration in primary education in the early 1980s.

Table IX.6: PRIMARY EDUCATION, AVERAGE PROMOTION, REPEAT AND DROPOUT RATES, 1980-84

	Grades							
	1	2	3	4	5	6	7	8
Promotion	39.4	39.5	45.0	42.8	30.5	29.2	32.3	31.7
Repeat	33.8	34.7	29.4	31.1	35.5	35.9	31.4	31.7
Dropout	26.9	25.8	25.6	26.1	34.0	34.0	36.3	36.6

Source: Statistical Appendix, Table J.5.

For the Level I, a cohort study shows that of a 1000 students starting the 1st grade 604 are promoted to 2nd grade, 360 reach the 3rd grade, 326 attain the 4th grade, and only 142 students start Level II. The others became dropouts or had more than three consecutive repetitions. The average number of years it took to be promoted was: 1st grade - 1.46; 2nd grade - 1.85; 3rd grade - 2.12; and 4th grade - 2.43.

28. For each student who completes the Level I, the average number of years spent in school either by himself because of repetition or by dropouts is 7.03. Thus, wastage resulting from repetition and evasion increases the cost by 75%. The results are even worse for levels I and II. Of the 142 students which start Level II, only 60 eventually reach 7th grade, 23 go to Level III, 9 are promoted to 8th grade, and 4 graduate. Among the students which are promoted to the next grade, the average number of years it takes to be promoted continues the upward trend observed Level I. Thus, for 5th grade it is 2.60; for 6th grade it is 2.78; for 7th grade it is 2.89; and for 8th grade it is 3.25. For each student who starts the Level II and graduates from the Level III, the average number of years spent in school either because of repetition or because of dropouts is 40. In this case, wastage increases the cost tenfold.

C. Secondary Education

29. Secondary education has three major branches: secondary technical education, a four-year course offering several specializations; the National Institutes of Education, a teacher training course designed for primary education teachers; and the pre-university course, a two-year course leading to entrance into university.

30. Secondary Technical Education. Secondary technical education offers courses in agriculture (Huambo, Huila, and Uige), economics (Luanda and Huila), industry (Benguela, Luanda, and Huambo), health (Bie, Huambo, and Luanda), and other subjects (Fishing-Namibe, Petroleum - Kwanza Sul and Journalism - Luanda). Economics offers the following specializations: administration, commerce, statistics, finance, and planning. Industry offers courses in construction, electricity, mechanics, chemistry, and politechnics. Enrollment in secondary technical education has grown every year since 1978, to 4646 in 1985, at an annual rate of growth of 23% (see

Statistical Appendix, Table J.6). This continuous expansion of enrollment was achieved despite serious problems which affected drastically the quality of education. Students are mainly working students, i.e., they have a regular job which allows them to go to classes. There are three categories of teachers: full-time teachers, teachers having a main job outside the Institute, and students encharged with responsibilities (monitors). Full-time teachers are usually "cooperantes"; among nationals, those having an outside job constitute a majority because of a lack of incentives to be a full-time teacher. Thus in 1986, of 513 teachers, 37% were "cooperantes", 25% were part-time teachers, 16% were full-time teachers, 13.5% were monitors, and the remainder 8.5% were classified as "other". Because of language problems and cultural differences, the work of "cooperantes" is not very effective. These circumstances are aggravated by their many nationalities and different institutional and technical backgrounds. The burden of teaching falls mainly on part-time teachers and monitors.

31. Two other aspects which constrain learning relate to reading materials and equipment used. Reading materials are generally adapted from foreign sources and do not adequately cover the subjects nor are they produced in sufficient number for all students. Also, there generally is no library. Equipment is inherited from colonial times, is well maintained but insufficient, and modern imported equipment frequently does not function because of maintenance problems and a lack of imported parts. Thus, it is not surprising to find a high evasion rate in the first year (9th grade) and an average promotion rate of 48%. Aside from a generally low internal efficiency, Table J-7 in the Statistical Appendix reveals two facts. First, promotion rates in most cases are higher for the last grade. Second, the comparison of efficiency in 1983 and 1985, reveals an increase in efficiency in 1985. Low promotion rates are reflected in the modest number of graduates (see Statistical Appendix Table J.8).1/In Agriculture, the number of graduates fluctuates, with a maximum of 84 graduates per year. The Economics course shows a declining number of graduates, aggravating a serious bottleneck, that of middle administration echelons in government and in firms. Industry graduates are increasing at modest rates, far below the economy's requirements.

32. One positive change towards the improvement of efficiency would be to give the Institutes the authority to allocate their budgetary resources and so reduce the delay in the purchase of materials for class-rooms and laboratories. Another proposal, to allow the Institutes to sell goods and services and in this way have their own source of revenues, has not yet been considered by the Government.

33. National Institutes of Education. There are 14 National Institutes of Education with the responsibility for training teachers for primary education in four-year courses. Enrollment in these Institutes increased from 778 in 1978 to 3970 in 1985, at an annual rate of growth of 26% (see Statistical Appendix Table J.6). However, when one compares the number of graduates with actual needs, a wide gap is observed. From 1981 to

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1/ Additional information on agricultural education is provided in Annex VII.

1985, the graduates were 1743 (1981-68; 1982-228; 1983-461; 1984-526; and 1985-460) or less than 5% of the stock of teachers. Thus the graduates of the Institutes are not enough even to compensate for normal attrition, let alone to replace those who left because of low wages. Since most students are teachers, the net addition of teachers is practically negligible. Efficiency, as measured by promotion rates, is not high. In 1985, the promotion rates were 9th grade- 56%; 10th grade- 72%; 11th grade- 66%; and 12th grade- 74%, with an average rate of 66%. A major learning problem is the low proportion of Angolan teachers. Thus, in 1986, 71 teachers (31%) were Angolans and 157 (69%) were "cooperantes". The predominance of foreigners poses serious problems already described with respect to technical secondary education. Moreover, this situation calls attention to the inability of the Institute for Educational Sciences to produce graduates to teach at the National Institutes of Education. The demand for these graduates is very high, not only to replace "cooperantes" but also to expand enrollment significantly in these Institutes.

34. Unless the institutional capacity to produce teachers both at undergraduate level and at secondary level is dramatically increased, primary education will have to continue to recruit unqualified teachers. These teachers have access to in-service training. In-service training is the responsibility of the National Department for In-service Training, which is part of the National Directorate for Teachers Training. It is divided into two stages. Stage one has the objective of giving education equivalent to Level II for those teachers who completed the 4th grade. Stage two is the equivalent of Level III and is given to those teachers who completed the 6th grade. Stage one was first applied in 1980 to teachers in 13 provinces. It is a correspondence course which uses radio, and its contents were developed within the National Department for In-service Training. The results were far from satisfactory, perhaps in part due to the large number of teachers enrolled (21,600). Also, the ability to send the materials in time and receive the homework was drastically affected by the war. Thus, a review carried out at the end of 1981 showed that of those starting (21,656), 6,614 became dropouts; of the remaining 15,042, 6,874 were advanced. Stage two suffered a 4-year delay because of lack of UNESCO support and is presently being implemented together with stage one. Although results are not known, one aspect deserving attention is the delay, caused by the mail service and the fact that teachers have little time to study after fulfilling their normal duties.

35. Pre-University Courses. Pre-university courses last two years and lead to entrance in the university. There is general agreement that two years are not adequate to provide the knowledge required in university courses. In a pilot experiment, the course was extended to three years in 1986, the options were limited to Social Sciences and "Exact Sciences", and the attendance was limited to regular students. Enrollment increased from 1,382 in 1977 to 3,721 in 1985, at an annual rate of 13%. At the present, there are 14 schools, of which three have their own buildings, six share facilities with the National Institutes of Education and three are located in secondary technical education schools. Promotion rates were 57% for the 1st year and 48% for the 2nd year in 1986. As in other secondary schools, the teachers are predominantly "cooperantes" (48%), and part-time teachers

(34%), followed by full-time teachers (15%) and other (3%). In this case, the relatively low number of teachers (134), makes it easier to substitute "cooperantes" and part-time teachers, provided that teacher wages became competitive.

D. Higher Education

36. Courses and Enrollment. The Agostinho Neto University, founded on November 26, 1976, offers undergraduate courses at three sites: Luanda, Huambo, and Lubango. Luanda has the largest campus with 70% of the students. The other students are in Huambo (10%), Lubango (7%), and in correspondence courses (13%). The facilities in Luanda are spread throughout the city and many buildings were adapted to serve as faculties. The problems of transportation aggravate the isolation among faculties and prevent better use of classrooms and other spaces.

37. Located in Luanda are the office of the President and its supporting units, the National Center for Research, and five faculties: Science, Law, Economics, Engineering, and Medicine. In Huambo, there are four faculties: Agriculture, Law, Economics, and Medicine. Located in Lubango are the Higher Institute of Educational Sciences, and the faculties of Law and Economics. The faculties of Law and Economics, both in Huambo and Lubango, function precariously because the number of resident teachers is far below the actual need. Because of this problem, teachers from Luanda are regularly sent to teach intensive courses. The Agostinho Neto University, part of the Ministry of Education, is under the direct supervision of its Minister.

38. One major problem is the great degree of divergence between the university and the needs of the society. Extension services, one of the main forms of interaction with society, are practically non-existent. The Center for National Research has not made any significant contribution to a better knowledge of the problems of the nation. The evidence is that the production of articles and books by teachers is minimal. Given these circumstances, the expected leadership is not provided by the university. The selection of the candidates for the university is done through a process called "encaminhamento". This process considers both grades in secondary education and the student aspirations. There is neither a clear description of how "encaminhamento" is carried out nor background information on the students who applied to the university and those who were selected.

39. Enrollment in the university has grown from 1,405 in 1975 to 5,732 in 1986, at an annual rate of 13.6%, even though it declined in 1976 and 1977 (see Table IX.8). Actually, only in 1982 did enrollment reach again the pre-independence level. Most of the students also work, and the job assures them the possibility of attending classes. Students whose families live elsewhere have room and board provided by the university free of charge.

Table IX.8 - ENROLLMENT IN HIGHER EDUCATION - 1970/86

	No. of Students
1970	2,125
1971	2,435
1972	3,094
1975	1,405
1976	1,093
1977	871
1978	1,254
1979	1,918
1980	2,333
1981	2,798
1982	2,991
1983	3,441
1984	4,493
1985	5,034
1986	5,732

40. The number of students in the various faculties can be seen in Appendix Table J.9. Between 1984 and 1986, the increase in students was largest in Economics and Education, which also have the larger faculties. The great number of specializations in some faculties raises the question of the cost per student. Possibly, the alternative of studying abroad should be favored in some cases. Thus, for example, the Faculty of Sciences offers courses in the following areas: biology, physics, geophysics, geology, mathematics, and chemistry. This faculty has about 700 students and, like all other faculties with the exception of Medicine, the courses last five years. It may be the case that, given the quality of the course, its unit cost and low efficiency, some specializations should not be offered. Another similar situation is that of the Faculty of Engineering, which offers architecture, civil engineering, electrotechnics, mechanical engineering, mining, and chemical engineering. Of the remainder, Agriculture offers courses in agronomy and veterinary science, and Economics offers two specializations: planning and accounting.

41. Efficiency and Resources. Information on internal efficiency is not satisfactory and suggests that promotion rates vary in different faculties between 40% and 80%. One way to get an indicator of productivity is to relate the number of graduates in a given year to the number of new students five years before, only Medicine and correspondence courses last six years (Appendix Table J.10). The number of new students was estimated by taking 20% of the enrollment in the previous year plus the increase in enrollment. The indices of productivity obtained were 26% in 1984, 10% in 1983, and 23% in 1982, suggesting large inefficiencies. If the stock of graduates until 1984 (740) is related to enrollment up to 1980 (8,874), the indicator of productivity is 8%. The learning process is affected by many factors. Concerning the students, it was seen that most are part-time students and their previous schooling was not satisfactory. Another crucial factor is the inadequate supply of reading materials. Libraries do not have even enough textbooks, partly because of import restrictions on the acquisition of books. There are few bookshops and they have a poor

selection of books. As a consequence, most of the readings consist of class notes distributed by professors or the translation of excerpts of foreign books.

42. Given the limited number of full-time Angolan professors, there is a widespread use of part-time teachers and of "monitores" or students with teaching responsibilities (Appendix Table J.11). In addition, as mentioned before, many courses do not have all the required teachers and hence the need to use teachers from Luanda to teach intensive courses. Finally, the most common used alternative--the "cooperantes"--have their efficiency impaired by language and cultural problems. Also, this solution is costly because their wages are partly paid in foreign exchange. In conclusion, the professors are inadequate in number and often in qualifications. There is a need of massive training abroad, coupled with attractive wages, to reduce significantly the proportion of part-time teachers and of "cooperantes". Most of the "cooperantes" are Cubans, Vietnamese, Italians, and Portuguese. The proportion of "cooperantes" was 42% in 1984, 47% in 1985, and 35% in 1986. Since part-time teachers have less contact hours with students and supposing these contact-hours are half of that of the full-time teachers, the proportion of the contact-hours by "cooperantes" is, respectively, 52%, 54%, and 43%. The decline in 1986 of the proportion of "cooperantes" reflects the foreign exchange crisis resulting from the decrease in oil prices.

43. Another question, related to the curricula, is the relevance of what is being learned. The curriculum for the economics course has been of particular concern to the Government. The Government's administration and the management of enterprises require, in the middle and higher echelons, people capable of utilizing the concepts and tools of economic analysis. However, the number of disciplines which offer such concepts is far from sufficient. Improving the curriculum, including a change in content to better reflect contemporary contributions, should improve decision-making and the prospects of successful economic reforms. Proposals now being discussed of changing the economics curricula at both secondary and university levels place more emphasis on disciplines such as statistics, economic theory and financial analysis and on better understanding the workings of a market economy, while reducing ideological training. These proposals have received considerable support from the government officials responsible for the implementation of SEF. Finally, laboratories and equipment in courses such as Agriculture, Engineering, and Medicine are in a poor state, pointing to the need for maintenance and the purchase of laboratory materials. In terms of research needs, the existing laboratories are greatly inadequate.

44. The Government's planned expenditures for the Agostinho Neto University have fluctuated in the past, even in nominal terms (Appendix Table J.12). Thus, these expenditures were smaller in 1983 and 1984 than in 1982. The most important component, personnel expenditures, is responsible for between 51% and 67% of total expenditures. Outlays on equipment and other durable goods are very small, varying between 3% and 7% of total expenditures. Expenditure on food represents more than half of that on durable goods. The payment of "cooperantes" as a proportion of personnel expenditures is, in most years, in excess of 10% of personnel expenditures.

The complete reliance on government sources of financing has two drawbacks: it restricts the funds available, which frequently suffer budget cuts, and it reduces the flexibility of spending. Since most students also work, part of their salaries could be used to pay for board and lodging, as well as for purchasing reading materials and, possibly, for a small tuition. Cost recovery could be extended to other areas, e.g., making the increase of extension services and the provision of consultant and research services to firms more viable. In this way, the degree of insulation of the university from society could be reduced.

45. Although the information on resources and enrollment is limited, it is possible to estimate recurrent unit costs for some courses. These costs were estimated using planned expenditures data. This overestimates actual costs because of budget cuts. The distribution of the general expenditures, i.e., those not appropriated to a course, were made proportionally to the number of students. The tentative results for 1984 are the following: the courses of Law and Economics in Huambo have a unit cost of 69,000 Kz, as compared to 73,400 Kz in Lubango. The unit cost for the Institute for Educational Sciences in Lubango is 88,300 Kz and for Medicine at Huambo is 95,100 Kz. Finally, the courses offered at Luanda (Engineering, Law, Economics, Sciences, and Medicine) have an average unit cost of 109,800 Kz, whereas the unit cost of the Agriculture course in Huambo is 300,700 Kz. The average unit cost for the university, considering all resources are spent only in teaching is 105,500 Kz.

E. Recommendations

46. A first recommendation deals with the issue of teacher training. It is evident that the negative effect of the massive exodus of the Portuguese continues in spite of the cooperation of foreign teachers and the efforts made to increase the number of qualified teachers. The first priority should be to train teachers, possibly abroad, to eliminate the need of correspondence courses and to replace most of the "cooperantes" at the Institute for Educational Sciences in Lubango. This measure, together with curriculum changes and provision of adequate reading materials should improve substantially the knowledge of the graduates of these institutions. At the secondary level, the National Institutes of Education would directly benefit from the availability of better teachers. Only when the existing Institutes have been strengthened through replacement of most "cooperantes" and improvement in facilities, should expansion be contemplated. The suggested approach places emphasis on quality and institution building and recognizes that there are no short-cuts to the time-consuming preparation of more qualified teachers. Measures with more immediate impact on primary education are changes in the curriculum to be set by the National Institute for Educational Research and improvement of in-service training funded by international agencies. Finally, the issue of teachers' wages should receive careful attention as the solutions proposed are contingent on the ability of the educational system to retain its best teachers.

47. Reorganization of MED should have four goals. First, the recognition that the responsibility for vocational training should not be with MED. The nature of its problems differs from those of regular education, since its content and teaching methods are specific, and the

demand of firms must be assessed to avoid external inefficiencies. Thus, the agency responsible for vocational training should not be part of MED, a tax on firms should finance its activities and the courses offered should reflect more closely manpower needs. A second goal is to place the responsibility of the National Center of Literacy with MED. The evidence is that the literacy programs are costly and ineffective. The resources of the Center should be used by regular education to help improve the very low efficiency. The third goal is to strengthen educational planning and management as well as improve the information system. At the moment, decision-making is hampered by poor information and a centralization of decisions. There is little awareness of the need for cost control and a large time-lag exists between decisions and implementation, which results in excessive delays. Thus, the fourth goal is to work further towards decentralizing decision-making, especially regarding the financial management of resources.

48. Reorganization will improve the use of available resources. However, there is a clear need for additional budget resources to increase the minimum level of capital expenditures to avoid further deterioration of school buildings, to replace needed equipment and teaching materials, and to improve teacher's wages. It is clear that school construction and maintenance should draw resources from the community, both local firms and parents, more intensively. This is the most viable way to expand enrollment in the near future. Cost recovery measures should start by imposing a fee for board and lodging. Food purchases are a large item in budget expenditure and it is not possible to justify, on equity grounds, their supply free of charge. Another potential source of revenues is permission for the schools, especially the secondary technical schools, to sell goods and services. The cash need of the schools could in this way be partially solved.

49. The lack of qualified management is a problem which negatively affects decision making and implementation both in the Government and in large firms. There is need for curricula reform in the economic courses, both in secondary technical schools and at the university. Also, the creation of administration courses should receive full support. For this purpose, better coordination of INORAD with the university is required. The best way to deal with the lack of Angolan teachers is to receive technical assistance from a reputable university for the training of teachers abroad, a program of visiting professors and the provision of text-books and other teaching materials. Of course, foreign aid to provide scholarships, books and equipment, and visiting professors is also crucial in other specializations.

50. Primary education can hardly keep pace with population growth. Until there is a substantial increase in efficiency, needed to restore the levels existing prior to the decline of the early 1980s, the priority should be on the quality of education. Improved maintenance of school buildings, better teachers and changes in the curriculum are the main steps to reduce the existing wastage to more acceptable levels. School construction should aim as much at the elimination of third and fourth shifts as at increasing the number of places. The cost of increasing quality can, to a large extent, be compensated by the reduction in the cost of inefficiency. The

shift in resources that is required to produce these results is the main task in primary education. In other words, increasing the number of those students who complete four years of education should be viewed as more important than improving the odds of access to the first grade.

51. Secondary education has so far received relatively few students. Enrollment should expand as a larger number of students finish primary education. Before this happens, it will be necessary to deal with two issues. First, it is probably desirable to reduce the number of years of basic education to seven or six years and to increase in the same way the number of years in secondary education. Second, the role of general education should be enlarged vis-a-vis technical education, which is more costly and the graduates which do not enter the university should have access to training courses before entering the labor market.

52. The Agostinho Neto University has to increase the proportion of full-time Angolan professors, reducing both the number of part-time teachers and of "cooperantes". For this purpose, it is necessary to increase the relative wages of university teachers and the opportunities to study abroad. Considering the number of courses and specializations, the lack of teachers in some courses and the inadequate existing libraries and research facilities, available resources are spread too thinly. One possibility is to send students abroad instead of having them enrolled at the university. Another possibility is to increase the common core of the curricula. The university's buildings in Luanda are located in different sectors of the city and were built for other purposes. The existence of a campus should improve the use of the physical facilities, as well as teacher time, libraries and other resources. The first steps in this direction, i.e., selecting the land, and developing construction plans should be taken in the near future.

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APPENDIX
Table A.1

ANGOLA

PRIVATE SECTOR AND NATIONAL ACCOUNTS MACROECONOMIC INDICATORS, 1982-87

	1982	1983	1984	1985	1986	1987
Per Capita GDP Real Growth	-0.070	-0.046	-0.003	-0.053	-0.120	0.028
Private Consumption Real Growth		-0.158	-0.008	-0.221	0.031	-0.143
Per Capita Private Consumption Real Growth		-0.178	-0.030	-0.240	0.006	-0.164
Private Consumption / GDP Ratio	0.650	0.560	0.545	0.437	0.500	0.406
Total Investment / GDP Ratio	0.171	0.161	0.170	0.193	0.226	0.174
Domestic Savings / GDP Ratio	0.088	0.169	0.156	0.249	0.163	0.292
National Savings / GDP Ratio	0.052	0.133	0.126	0.214	0.145	0.245
Foreign Savings / GDP Ratio	0.119	0.028	0.044	-0.021	0.081	-0.071
Total Consumption (Priv. + Gov.) / GDP Ratio	0.914	0.831	0.844	0.751	0.837	0.708

Source : Mission Estimates

APPENDIX
Table A.2

ANGOLA

GOVERNMENT SECTOR MACROECONOMIC INDICATORS, 1982-87

	1982	1983	1984	1985	1986	1987
Current Receipts / GDP Ratio	0.304	0.316	0.386	0.389	0.363	0.290
Direct Taxes / GDP Ratio	0.154	0.176	0.216	0.232	0.182	0.169
Indirect Taxes / GDP Ratio	0.096	0.093	0.109	0.099	0.083	0.078
Others Receipts / GDP Ratio	0.054	0.048	0.060	0.059	0.098	0.043
Current Expenditures / GDP Ratio	0.328	0.331	0.361	0.402	0.387	0.344
Current Transfers / GDP Ratio	0.010	0.011	0.012	0.018	0.019	0.016
Interest / Current Receipts Ratio	0.000	0.000	0.000	0.000	0.000	0.000
Subsidies / GDP Ratio	0.052	0.048	0.049	0.070	0.031	0.025
Budgetary Savings / GDP Ratio	-0.022	-0.014	0.025	-0.013	-0.023	-0.054
Government Investment / GDP Ratio	0.015	0.009	0.017	0.011	0.024	0.015
Capital Transfers / GDP Ratio	0.092	0.045	0.048	0.035	0.030	0.033
Government Consumption / GDP Ratio	0.264	0.271	0.299	0.314	0.337	0.302

Source : Mission Estimates

ANGOLA

FOREIGN AND MONETARY SECTORS MACROECONOMIC INDICATORS, 1982-87

	1982	1983	1984	1985	1986	1987
FOREIGN SECTOR						
Exports (Goods + NFS) / GDP Ratio	0.402	0.407	0.427	0.464	0.309	0.453
Exports Volume Growth Rate	-0.069	0.411	0.134	0.155	0.205	0.277
Nominal Exports Growth Rate	-0.122	0.119	0.116	0.101	-0.418	0.742
Imports (Goods + NFS) / GDP Ratio	0.487	0.399	0.441	0.409	0.371	0.335
Imports Volume Growth Rate		0.104	0.221	-0.087	-0.205	0.002
Nominal Imports Growth Rate	-0.133	-0.108	0.373	-0.101	-0.225	0.200
Resource Balance / GDP Ratio	-0.086	0.008	-0.014	0.056	-0.062	0.118
Net Factor Payments / GDP Ratio	-0.039	-0.041	-0.035	-0.039	-0.049	-0.057
Net Current Transfers / GDP Ratio	0.006	0.005	0.005	0.004	0.031	0.010
Current Account Balance / GDP Ratio	-0.119	-0.028	-0.044	0.021	-0.081	0.071
Stock of Foreign Reserves / Imports	0.067	0.098	0.109	0.125	0.106	0.139
Debt Service / Exports (Goods + NFS)	0.161	0.177	0.141	0.129	0.314	0.220
Debt Service / GDP Ratio	0.065	0.072	0.060	0.060	0.097	0.100
Stock of Long-Term Debt / Exports (G	1.146	1.113	1.072	1.045	1.747	1.255
Stock of Long-Term Debt / GDP Ratio	0.460	0.453	0.458	0.485	0.539	0.569
MONETARY SECTOR						
Stock of Private Credit / GDP Ratio	0.318	0.648	0.527	0.581	0.635	0.640
Stock of Loans to Government / GDP R	0.541	0.453	0.612	0.645	0.741	0.748
Stock of Money and Quasi-Money / GDP	0.714	0.830	0.890	1.010	1.124	1.136

Source : Mission Estimates

APPENDIX

Table B.1

ANGOLA

POPULATION, 1900-1986

YEAR	POPULATION (Thousand)
1900	2,716
1910	2,922
1920	3,131
1930	3,344
1940	3,738
1950	4,145
1960	4,840
1970	5,646
1975	6,520
1980	7,722
1981	7,918
1982	8,119
1983	8,326
1984	8,537
1985	8,754
1986	8,990

Source: Anuario Estatistico and Instituto Nactional de Estatistica.

APPENDIX

Table B.2

ANGOLA

URBAN AND RURAL POPULATION 1970-1986

(thousands)

YEAR	URBAN	RURAL	URBAN AS % OF TOTAL
1970	789	4,857	14
1975	1,182	5,338	18
1980	1,781	5,941	23
1982	2,067	6,052	25
1984	2,385	6,142	28
1986	2,773	6,217	31

Source: Instituto Nactional.

APPENDIX

Table B.3

ANGOLA

ECONOMICALLY ACTIVE POPULATION BY ECONOMIC SECTOR FOR 1985

SECTORS	Number of Employed Workers	Percentage of Total
TOTAL	2109083	100.0
Productive Sector	1552912	73.6
Industry	237516	11.3
Construction	155298	7.4
Agriculture and Livestock	748094	35.5
Silviculture	8720	0.4
Transport	177566	8.4
Communications	12219	0.6
Commerce	186457	8.8
Others	27042	1.3
Non-Productive Sector	484956	23.0
Communal Services	47034	2.2
Education and Science	139655	6.6
Culture and Arts	24528	1.2
Health, Social Assist., Physical Culture, Sports and Tourism	103160	4.9
Finance and Insurance	19466	0.9
Administration	118872	5.6
Others	32241	1.5
Unemployed	71215	3.4

Source : Instituto Nacional de Estatistica - INE

APPENDIX

Table B.4

ANGOLA

NUMBER OF SALARIED WORKERS AFFILIATED TO THE UNTA BY TYPE OF EMPLOYER AND SEX, 1981-85

Type of Employer	1981	1982	1983	1984	1985
Total	606789	609477	621762	628860	665581
Government and State Enterprises	517544	515277	523389	528705	553881
Men	408935	404050	409602	413209	432416
Women	108609	111227	113787	115496	121465
Mixed Enterprises	28771	31662	32812	32802	34191
Men	27819	30510	31566	31529	32770
Women	952	1152	1246	1273	1421
Private Enterprises	60474	62538	65561	67353	77509
Men	52122	54575	57119	58447	66003
Women	8352	7963	8442	8906	11506

Source : Instituto Nacional de Estatistica - INE
Uniao Nacional dos Trabalhadores de Angola - UNTA

APPENDIX

Table B.5

ANGOLA

MONTHLY AVERAGE SALARIES OF UNTA AFFILIATES BY TYPE OF OCCUPATION, 1981-85

Type of Occupation	1981	1982	1983	1984	1985
Managers	16060	16500	16500	16500	16500
Technicians	14500	15500	18000	18000	18000
Employees	6500	6500	8000	8250	8500
Industrial Workers	5800	7000	8850	9500	9500
Agricultural Workers	4466	4466	5612	5761	5761
Average	7094	7692	9299	9640	9758
Average Growth Rate (%)		8.4	20.9	3.7	1.2

Source: Instituto Nacional de Estatistica - INE

Table B.6

ANGOLA

NUMBER OF EMPLOYED WORKERS AND MONTHLY AVERAGE SALARY BY SECTOR UNDER BNA CONTROL IN 1986

Sector	Government		State Enterprises		Mixed Enterprises		Private Enterprises		Cooperatives		Others		Total	
	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary	Number of Workers	Monthly Average Salary
Agriculture	3153	13251	57609	5039	105	13200	4283	9999	273	6648	2	15633	65425	5780
Commerce	1826	12419	15655	11002	125	15292	12095	11864	147	3518			29848	11419
Hotel	174	16608	5658	11332	18	1041	1820	11313	51	3067			7121	11371
Construction	5738	15906	18074	9955	445	11431	9676	4872					33933	9531
Transport	1875	13062	17615	12180	39	12153	8624	4841					28153	9991
Food	642	17139	10707	10090	137	16896	5429	5371	3	1568	4	12563	16922	8897
Metallurgy	114	16494	6045	9132			1384	8602					7543	9146
Education	36150	18593	6631	11243			88	10000					42869	17438
Wood	31	181935	1658	10467			763	7251					2452	11634
Credit and Insurance	593	16403	1090	6885			21	26490					1704	9927
Textile	519	15423	4667	9061	1369	9551	562	11129	97	1964			7214	9677
Graphic	968	13896	2063	7533			481	21982					3512	11255
Health	19417	12925	2080	10099			88	12923					21585	12653
Services	72931	17133	7351	13850	81	12403	4680	17315	129	32248	2215	10825	87387	16657
Fishery	628	30489	10592	9091	205	13384	1946	6813	257	9097			13628	9816
Electricity	306	20586	2170	16479	115	22576	331	8895	4	6984			2926	16277
Extractive	637	13634	2022	12542	233	435965	1034	11072					3926	37461
Manufacturing	6	968718	2385	12834			2351	9964					4662	12617
Defense														
Chemical	17	20010	5021	12870	46	10150	642	10220	2	5320	4	11130	5732	12569
Others	13936	7062	5673	12018	18	14986	3030	12791	188	4468	792	26673	23629	9630
Total	159661	15935	184086	9075	2936	45271	59328	9088	1143	8770	3017	14991	410171	12049
Corrected Total (*)	159624	15863	184086	9075	2703	10673	59328	9088	1143	8770	3017	14991	409901	11774

(*) Excludes wood and manufacturing in the Government Sector and extractive industry in the Mixed Enterprise Sector.

Source : Banco Nacional de Angola - BNA
Mission estimates

ANGOLA

MONTHLY FAMILY BUDGET FOR 1980, 1985 and 1989

Product Items	Unit	Quantity (*)	Prices (Parallel Market) Luanda, 1989 (Kz)	Expenditures (Kz)	Prices (Official) 1980 (Kz)	Expenditures (Kz)	Prices (Official) 1985 (Kz)	Expenditures (Kz)
Rice	kg	15.0	1000.0	15000.0	21.0	315.0	35.0	525.0
Beans	kg	10.0	2000.0	20000.0	40.0	400.0	45.0	450.0
Pasta	kg	5.0	2000.0	10000.0	29.0	145.0	31.0	155.0
Cornmeal	kg	15.0	1200.0	18000.0	8.5	127.5	17.5	262.5
Fresh Fish	kg	20.0	1000.0	20000.0	28.0	560.0	30.0	600.0
Beef	kg	15.0	2000.0	30000.0	90.0	1350.0	90.0	1350.0
Chicken	kg	15.0	2500.0	37500.0	85.0	1275.0	110.0	1650.0
Sardines	kg	5.0	2400.0	12000.0	107.0	535.0	148.5	742.5
Soft Drink	l	20.0	4000.0	80000.0	27.0	540.0	40.0	800.0
Cigarettes	un	30.0	400.0	12000.0	20.0	600.0	40.0	1200.0
Soap	kg	5.0	2000.0	10000.0	28.0	140.0	37.0	185.0
Toilet Soap	kg	5.0	2000.0	10000.0	88.0	440.0	164.0	820.0
Beer	l	24.0	3030.0	72720.0	40.0	960.0	50.0	1200.0
Banana	kg	10.0	700.0	7000.0	7.0	70.0	13.5	135.0
Onion	kg	10.0	9000.0	90000.0	18.8	188.0	13.0	130.0
Edible Oil	l	20.0	1110.0	22200.0	42.0	840.0	65.0	1300.0
Margarine	kg	5.0	1000.0	5000.0	100.0	500.0	116.0	580.0
Instant Milk	kg	10.0	800.0	8000.0	90.0	900.0	90.0	900.0
Salt	kg	3.0	300.0	900.0	3.0	9.0	3.0	9.0
Garlic	kg	5.0	4000.0	20000.0	47.0	235.0	40.5	202.5
Wine	l	10.0	3500.0	35000.0	223.0	2230.0	355.5	3555.0
Coffee	kg	10.0	4000.0	40000.0	115.0	1150.0	295.0	2950.0
Bread	kg	30.0	2000.0	60000.0	17.0	510.0	17.0	510.0
Total Expenditures.....				635320.0	.....	14025.5	.....	28211.5
Memorandum Items:								
Annual Average Official Price Increase in the Period 1980-85 (%)					7.0			
Monthly Family Expenditures Ratio Between the Parallel and Official Markets in the Beginning of 1989.....					28.5			

Source: Planning Ministry and Mission Estimates
(*) For a typical family size of six persons

ANGOLA

GDP BY SECTOR (FACTOR INCOME APPROACH), 1982-86

(Kz millions at current offical prices)

	(%)	1985	(%)	1986	(%)	Average 1983-86
PRIMARY SECTOR	12.4	14310.6	10.4	16408.8	13.7	12.7
Agriculture and Livestock	10.4	11526.9	8.4	12679.6	10.6	10.5
Fisheries	2.0	2783.7	2.0	3729.2	3.1	2.3
SECUNDARY SECTOR (*)	44.2	64378.9	46.9	42597.9	35.5	41.5
Manufacturing and Mining	9.0	12616.4	9.2	13041.0	10.9	9.3
Petroleum	32.1	44801.1	32.5	23892.7	19.9	28.1
Construction	2.6	6131.4	4.5	4979.1	4.2	3.5
Electricity	0.6	1030.0	0.8	685.1	0.6	0.6
TERTIARY SECTOR	43.4	58519.8	42.7	60911.2	50.8	45.8
Commerce	10.8	14656.0	10.7	15022.4	12.5	11.8
Services	26.7	35949.4	26.2	37292.0	31.1	28.2
Transport and Communications	5.8	7914.4	5.8	8596.8	7.2	5.7
GDP at Factor Cost (*)	100.0	137209.3	100.0	119917.9	100.0	100.0
GDP at Market Price (*)		142993.3		130091.9		

Sources : Planning Ministry and Mission Estimates
(*) Mission Estimates : GDP at market price for the period 1983-86
GDP at factor cost for 1982
Value added by the secundary sector for 1982

Note : The estimates using the factor income approach are incomplete and therefore not comparable with the new estimates using the product approach. See Annex IV.

ANGOLA

GDP BY SECTOR (PRODUCT APPROACH), 1982-87

	(%)	1985	(%)	1986	(%)	1987	(%)	Average 1982-87
PRIMARY SECTOR	21.3	32876.0	20.3	33112.0	19.5	28105.0	15.2	20.4
Agriculture and Forestry	20.4	31237.0	19.3	31392.0	18.4	26630.0	14.4	19.5
Fishing	0.8	1639.0	1.0	1720.0	1.0	1475.0	0.8	1.0
SECUNDARY SECTOR	43.8	76170.0	47.1	87877.0	51.6	105407.0	57.0	46.3
Oil	30.9	54300.0	33.6	66064.0	38.8	84176.0	45.5	33.2
Other Industry	9.6	13780.0	8.5	11467.0	6.7	14742.0	8.0	9.0
Oil Construction	0.2	600.0	0.4	4628.0	2.7	637.0	0.3	0.7
Other Construction	3.2	7490.0	4.6	5718.0	3.4	5849.0	3.2	3.4
TERTIARY SECTOR	34.9	52527.0	32.5	49227.0	28.9	51523.0	27.8	33.3
Commerce	8.9	11873.0	7.3	10542.0	6.2	11069.0	6.0	8.1
Services	22.3	33990.0	21.0	32479.0	19.1	34103.0	18.4	21.3
Transport and Communications	3.7	6664.0	4.1	6206.0	3.6	6351.0	3.4	3.9
GDP at Factor Cost	100.0	161573.0	100.0	170216.0	100.0	185035.0	100.0	100.0
GDP at Market Price	105.6	165583.2	102.5	176771.7	103.9	192085.2	103.8	104.1

Sources : Planning Ministry and Mission Estimates

ANGOLA

PRODUCT ESTIMATES IN CURRENT AND REAL KWANZAS AND IN CURRENT DOLLARS, 1980-87

	1982	1983	1984	1985	1986	1987
			Millions of Kwanzas at 1980 Official Prices			
Industry	48122	58937	62859	68080	77531	98921
Oil	31745	41948	47937	54300	66064	84179
Other	16377	14989	14922	13780	11467	14742
Construction	4725	5158	5161	8090	10346	6486
Oil	606	353	270	600	4628	637
Self Construction	2806	2242	2443	1957	2843	3192
Other	1313	2563	2448	5533	2875	2657
Agriculture, Forestry and Fishing	34[illegible]5	33206	32972	32876	33112	28105
Fishing	1760	1375	1316	1639	1720	1475
Forestry	341	399	576	570	412	59
State Agriculture	6980	5834	5595	4743	4921	3896
Peasant Agriculture Commercialized	1816	1209	991	1336	1226	974
Subsistence Agriculture	24038	24389	24494	24588	24833	21701
Transport and Communications	6620	6043	5811	6664	6208	6351
Commerce	15387	13882	13775	11873	10542	11069
Services	34572	34007	34554	33990	32479	34103
GDP at Factor Cost	144361	149233	155132	161573	170218	185035
Indirect Taxes	13779	13065	15765	13808	10439	10422
Subsidies	-7484	-6769	-7080	-9797	-3884	-3371
GDP at Market Prices	150656	155529	163817	165584	176771	192086
			US Dollars at Current Prices			
GDP at Market Prices	4508.5	4650.1	4986.1	5048.4	4555.4	5197.0
Net Income From Abroad	-151.2	-168.3	-147.3	-174.0	-84.5	-244.1
GNP	4357.2	4481.8	4838.8	4874.4	4470.9	4953.0
Population (millions)	8.119	8.328	8.537	8.754	8.990	9.215
GDP per capita (US$)	555	559	584	577	507	564
GNP per capita (US$)	537	538	567	557	497	537
Growth per capita GNP	-1.8	0.3	5.3	-1.8	-10.7	8.1
			Millions of Kwanzas at Current Official Prices			
GDP at factor cost	159592	167790	181578	196019	185734	210483
GDP at market price	166880	175634	193219	201803	195908	222256
GNP	161282	169276	187511	194847	192274	211818

Source : Planning Ministry and Mission Estimates
Note : GDP at factor cost estimated by Government using the product approach. See Annex IV.

GDP STRUCTURE AND GROWTH AT 1980 OFFICIAL PRICES, 1980-87

	1982	1983	1984	1985	1986	1987	Average 1980-87	Average 1982-87
	Percentage of GDP at 1980 Official Prices							
Industry	33.3	38.2	40.5	42.1	45.5	53.5	40.4	42.2
Oil	22.0	28.1	30.9	33.6	38.8	45.5	30.5	33.2
Other	11.3	10.0	9.6	8.5	6.7	8.0	9.9	9.0
Construction	3.3	3.5	3.3	5.0	6.1	3.5	4.3	4.1
Oil	0.4	0.2	0.2	0.4	2.7	0.3	0.6	0.7
Self Construction	1.9	1.5	1.6	1.2	1.7	1.7	1.5	1.6
Other	0.9	1.7	1.6	3.4	1.7	1.4	2.1	1.8
Agriculture, Forestry and Fishing	24.2	22.3	21.3	20.3	19.5	15.2	21.0	20.4
Fishing	1.2	0.9	0.8	1.0	1.0	0.8	1.0	1.0
Forestry	0.2	0.3	0.4	0.4	0.2	0.0	0.2	0.3
State Agriculture	4.8	3.9	3.6	2.9	2.9	2.1	3.7	3.4
Peasant Agriculture Commercialized	1.3	0.8	0.8	0.8	0.7	0.5	0.9	0.8
Subsistence Agriculture	16.7	16.3	15.8	15.2	14.6	11.7	15.2	15.1
Transport and Communications	4.6	4.0	3.7	4.1	3.6	3.4	3.9	3.9
Commerce	10.7	9.3	8.9	7.3	6.2	6.0	8.7	8.1
Services	23.9	22.8	22.3	21.0	19.1	18.4	21.7	21.3
GDP at Factor Cost	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Indirect Taxes	9.5	8.8	10.2	8.5	6.1	5.6	8.5	8.1
Subsidies	-5.2	-4.5	-4.8	-6.1	-2.3	-1.8	-4.4	-4.1
GDP at Market Prices	104.4	104.2	105.8	102.5	103.9	103.8	104.0	104.1
	GDP Growth at 1980 Official Prices (%)						Average 1981-87	Average 1982-87
Growth Real GDP at Factor Cost (%)	-1.0	3.4	4.0	4.2	5.3	8.7	2.1	4.1
Growth Real GDP at Market Prices (%)	-1.0	3.2	5.3	1.1	6.8	8.7	2.1	4.0

Source: Planning Ministry and Mission Estimates

ANGOLA

GDP BY TYPE OF EXPENDITURE, 1982-87

	1986	1987	Percentage of GDP 1982	1983	1984	1985	1986	1987
Consumption	163878.4	157457.0	91.4	83.1	84.4	75.1	83.7	70.8
Private	97893.4	90288.0	65.0	58.0	54.5	43.7	50.0	40.6
Government	65985.0	67169.0	26.4	27.1	29.9	31.4	33.7	30.2
Gross Domestic Investment	44213.7	38841.2	17.1	16.1	17.0	19.3	22.6	17.4
Private	39530.7	35050.2	15.7	15.2	15.3	18.2	20.2	15.8
Government	4683.0	3591.0	1.3	0.9	1.7	1.1	2.4	1.6
Total Domestic Expenditures	208092.1	196298.2	108.6	99.2	101.4	94.4	106.2	88.2
GDP	195908.3	222255.5	100.0	100.0	100.0	100.0	100.0	100.0
Resource Gap	12183.8	-26157.3	8.6	-0.8	1.4	-5.6	6.2	-11.8
Exports of Goods and NFS	60467.6	100696.8	40.2	40.7	42.7	46.4	30.9	45.3
Imports of Goods and NFS	72651.4	74539.5	48.7	39.9	44.1	40.9	37.1	33.5
Net Income From Abroad	-3633.9	-10437.8	-3.4	-3.6	-3.0	-3.4	-1.9	-4.7
Net Factor Services Payments	-9629.5	-12639.1	-3.9	-4.1	-3.5	-3.9	-4.9	-5.7
Net Current Transfers	5995.6	2201.3	0.6	0.5	0.5	0.4	3.1	1.0
GNP	192274.4	211817.8	96.6	96.4	97.0	96.6	98.1	95.3

Source : Mission Estimates

APPENDIX
TABLE D.1

ANGOLA

GOVERNMENT REVENUE, 1980 - 89

(Kz. billion)

	1980	1981	1982	1983	1984	1985	1986	1987	1988 (budget)	1989 (budget)
TOTAL REVENUE	59 758	73 707	50 655	55 467	74 556	78 518	71 202	64 399	89 500	78 080
TAX REVENUE	51 580	2 704	41 583	47 148	62 930	66 143	51 750	54 658	63 100	64 686
Taxes on petroleum	33 917	45 185	21 046	26 672	42 267	41 667	30 070	35 803		41 500
Royalty	6 367	9 123	6 757	6 991	11 184	10 223	6 432	8 720		11 000
Tax on income			14 289	19 681	31 082	31 444	23 638			
- income tax	17 606	26 610	10 703	14 639	14 035	11 766	7 945	11 679		14 000
- transfers from Sonangol	1 630	1 052	101				9 010	2 869		3 500
- transaction tax	8 314	8 400	3 485	5 042	17 047	19 684	6 683	12 535		13 000
Non-Petroleum taxes	17 663	17 519	20 537	20 476	20 663	24 476	21 680	12 855		23 187
Taxes on income and property	10 090	10 672	11 440	11 188	10 758	14 897	11 969	10 314		9 020
- transfers from public enterprises (1)	7 864	8 331	9 199	8 481	8 032	9 750	7 247	4 916		
- corporate income tax (2)	1 406	1 949	2 028	2 283	2 023	4 076	3 331	3 681		6 957
- personal income tax	714	243	63	311	561	909	1 235	1 540		1 839
- other	106	149	150	113	152	162	156	176		224
Taxes on international trade	4 193	3 300	5 265	3 878	4 189	3 966	4 730	3 415		6 756
- import duties	2 337	1 915	3 210	2 528	2 700	2 533	3 150	2 225		4 951
- export duties	54	43	29	43	52	51	35	51		180
- other levies on imports	1 802	1 342	2 026	1 308	1 437	1 382	1 545	1 139		1 625
Taxes on domestic production and consumption	3 380	3 547	3 833	5 410	5 706	5 612	4 983	5 126		7 412
- beer	952	777	625	1 252	1 401	1 360	1 179	1 117		1 552
- petroleum products	473	264	214	1 216	559	871	1 021	808		1 000
- diamonds (royalty)			64	187	213	48	134	316		350
- other products	903	1 086	1 554	989	1 012	1 742	972	865		892
- stamp duty	964	1 353	1 316	1 696	2 439	1 503	1 528	1 924		3 500
- other taxes	88	67	60	70	82	88	149	96		118
NON-TAX REVENUE	8 178	11 003	9 072	8 318	11 626	12 375	19 452	9 741	26 400	13 393
of which : Rent from property	903	1 619	1 857	2 029	2 169	1 046	3 887	2 015		2 497
: Amortization of public enterprises	1 715	1 730	1 828	1 645	1 864	1 883	1 875	177	-	
: Dividends (3)	-	-	-	-	-	520	238	22	7 700	1 779

(1) Excluding Sonangol.
(2) Until 1989 not levied on profits of public enterprises.
(3) Includes transfers from public enterprises in 1989.

Source : Ministry of Finance.

APPENDIX

TABLE D. 2

ANGOLA

TRANSFER FROM PUBLIC ENTERPRISES, BY SECTOR, 1984 - 1986

(Kz million)

	1984	1985	1986
Industry (48) 1)	795	670	862
of which: Africa Textil	-	230	-
Vininorte	138	-	207
Agriculture (5)	145	1 319	980
of which: Frescangol	-	-	256
Cafangol	138	1 298	702
Fisheries (18)	837	1 501	1 227
of which: Edipesca (Luanda)	348	485	98
Edipesca (Namibe)	351	467	504
Expedicao Conjunta	-	229	349
Transport (46)	513	1 153	779
of which: EPTEL	61	161	213
Porto de Luanda	-	49	213
Construction (23)	101	250	49
Finance (4)	3 202	1 832	1 604
of which: BNA	2 098	955	850
National Lotteries	791	739	686
External Trade (7)	400	71	192
of which: Importang	327	-	-
Internal Trade (54)	1 073	2 105	1 347
of which: Egrosbal (Huambo)	-	28	214
Emprotel (Luanda)	-	546	-
TOTAL	7 067	8 902	7 042

1) The Figure in brackets indicates the number of enterprises that made transfers in 1986.

Source : Ministry of Finance.

ANGOLA

SUBSIDIES TO PUBLIC ENTERPRISES, BY MINISTRY, 1980 - 89

(Kz million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988 (budget)	1989 (budget)
Agriculture	3 922	4 379	3 368	3 430			1 816	1 951	1 250	1 280
Fisheries	309	433	326	168			196	76	-	-
Industry	1 122	907	1 185	1 638			1 429	1 374	1 450	1 500
Construction	-	2 052	2 052	1 848			905	685	400	1 000
Transport	718	565	640	310			232	263	-	250
Trade	390	236	106	84			143	-	-	-
Energy and Petroleum							262	208	300	400
Other	1 788	610	994	954			1 044	1 072	-	200
TOTAL	8 249	9 182	8 666	8 432	9 491	14 131	6 028	5 629	4 000	4 030

Source : Data provided by the Ministry of Finance.

APPENDIX
TABLE D.4

ANGOLA

ECONOMIC CLASSIFICATION OF GOVERNMENT EXPENDITURE, 1980 - 84

(Kz million)

	1980	1981	1982	1983	1984
Recurrent Expenditure	58 769	57 472	54 386	58 056	69 735
Defence	16 821	18 505	18 257	23 295	31 943
Non-defence	41 948	38 967	36 129	34 761	37 792
of which :					
personnel	16 037	16 634	18 282	18 352	17 487
goods and services	2 606	2 457	2 069	1 694	2 800
subsidies	8 246	9 182	8 665	8 432	9 491
transfers	2 959	3 209	1 590	2 192	2 379
other expenditure	12 200	7 485	5 523	4 091	5 635
Capital Expenditure	18 151		17 752	9 522	12 567
	76 920	91 640	72 138	67 578	82 302

Source : Data provided by the Ministry of Finance.

ANGOLA

FUNCTIONAL CLASSIFICATION OF GOVERNMENT EXPENDITURE, 1980 - 87

	1980	1981	1982	1983	1984	1985	1986	1987 (budget)
Economic Services	28 486	45 719	28 697	20 077	24 449			21 114
Agriculture	7 350	7 838	5 337	4 875				3 388
Fisheries	1 030	1 046	1 195	476				568
Industry	4 752	3 345	2 599	2 672				1 980
Construction	8 055	9 760	7 198	4 898				4 242
Energy and Petroleum	954	2 493	232	206				4 146
Transport & Communication	2 082	8 138	4 684	2 120				1 239
Trade	2 614	1 294	789	1 089				451
Other services (1)	3 650	11 805	6 663	4 015				5 100
Social Services	13 738	13 886	15 073	14 838	16 754	18 780	21 475	21 984
Education	9 142	9 279	9 849	9 822	9 998			13 734
Health	3 377	3 327	3 848	3 618	4 637	5 286		6 000
Social Security and Welfare	1 219	1 280	1 376	1 399	2 121(2)			2 229
General Government Services	21 632	24 108	26 326	30 284	38 243			41 122
Administration	4 811	5 603	8 069	6 989	6 300(3)			9 022
Defence and Internal Security	16 821	18 505	18 257	23 295	31 943	34 306	32 629	32 000
Other Expenditure	13 066	7 927	2 040	2 379	2 857	4 063	7 619	9 200
TOTAL	76 922	91 640	72 136	85 578	82 302	90 488	86 205	93 400

1) includes some expenditure on administration
2) includes KW455 m. of unclassified expenditure
3) includes KW244 m. part of which is on economic services.

Source : Data provided by the Ministry of Finance.

ANGOLA

GOVERNMENT-FINANCED INVESTMENT BY PUBLIC ENTERPRISES

(Kz million)

	1980	1981	1982	1983	1984	1985	1986	1987	1988 (budget)	1989 (budget)
Agriculture	2 790	2 760	1 164	714			877	501	1 000	1 000
Fisheries	615	510	718	174			245	100	300	500
Industry	3 521	2 337	1 283	918			519	365	300	-
Construction	5 270	6 738	4 581	2 557	N.A.	N.A.	1 947	1 950	2 500	2 700
Energy and Petroleum	902	2 401	62	8			619	1 228	3 300	3 300
Transport and Communication	1 130	7 382	3 789	1 573			264	206		
Trade	2 027	847	397	744			153	-	-	-
Other	1 862	11 195	5 669	2 787			3 061	3 057	5 100	5620
TOTAL	18 116	34 168	17 663	9 475			7 685	7 107	13 000	13 670

Source : Data provided by the Ministry of Fianance.

ANGOLA

SUMMARY OF GOVERNMENT FINANCE 1980-89

(Kz billion)

	1980	1981	1982	1983	1984	1985	1986	1987	1988 (budget)	1989 (budget)
Revenue	59.8	73.7	50.7	55.5	74.6	78.5	71.2	64.4	89.5	78.1
Taxes on petroleum	33.9	45.2	21.0	26.7	42.3	41.7	30.1	35.8		41.5
Other taxes	17.7	17.5	20.5	20.5	20.7	24.5	21.7	18.9		23.2
- on income & property	(10.1)	(10.7)	(11.4)	(11.2)	(10.8)	(14.9)	(12.0)	(10.3)		(9.0)
- on domestic goods and services	(3.4)	(3.5)	(3.8)	(5.4)	(5.7)	(5.6)	(5.0)	(5.1)		(7.4)
- on international trade	(4.2)	(3.3)	(5.3)	(3.9)	(4.2)	(4.0)	(4.7)	(3.4)		(6.8)
Non Tax Revenue	8.2	11.0	9.1	8.3	11.6	12.4	19.5	9.7	26.4	13.4
Total Expenditure	76.9	91.7	72.2	67.6	82.3	90.5	86.2	87.4	106.0	112.7
Recurrent expenditure	58.8	57.5	54.4	58.1	69.7	81.2	75.7	76.4	87.8	92.6
Capital expenditure	18.2	34.2	17.8	9.5	12.6	9.3	10.5	11.0	18.2	20.1
Overall budget deficit	17.2	17.9	21.5	12.1	7.7	12.0	15.0	23.0	16.5	34.6
Statistical discrepancy	-	-	-	-27.9	31.9	-9.2	7.3	-4.0	-	-
Financing	17.2	17.9	21.5	-15.6	39.7	2.8	22.3	19.0	16.5	34.6
Domestic : BNA (net)	16.8	17.9	21.5	-15.7	39.7	2.8	22.3	19.0	14.0	24.1
non-bank	-	-	-	-	-	-	-	-	-	5.0
External : loans	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3.0
grants	0.4	-	-	0.1	-	-	-	-	-	2.5

Source : Ministry of Finance : Report on the Execution of the Budget.

APPENDIX

Table E.1

ANGOLA

BALANCE SHEET OF BANCO NACTIONAL DE ANGOLA
(Kz million)

	1983	1984	1985	1986	1987
Assets:					
Foreign assets	8,317	9,539	16,174	8,322	14,284
Total domestic credit	188,624	215,444	242,973	265,179	305,128
Public sector credit	79,531	118,251	130,211	197,008	230,020
Other credits	109,093	97,193	112,762	78,171	75,108
Other assets (Net)	(15,501)	(14,333)	(2,929)	3,024	237
Total Assets	181,441	210,649	256,219	276,525	319,650
Liabilities:					
Notes in circulation	60,478	72,809	80,848	92,959	120,838
Total deposits	111,975	125,759	159,209	156,713	163,279
Government deposits	27,710	26,752	35,947	28,662	30,693
BPA deposits	15,305	22,570	30,021	38,291	45,907
Other deposits	68,952	76,423	93,234	89,752	86,668
Foreign currency liabilities	8,988	12,082	16,162	26,853	35,533
Total Liabilities	181,441	210,649	256,219	276,525	319,650

APPENDIX

Table E.2

ANGOLA

BALANCE SHEET OF BANCO POPULAR DE ANGOLA
(Kz million)
(.. = not available)

	1982	1983	1984	1985	1986	1987
Assets:						
Currency on hand	406	567	955	823	657	3,873
Deposits in BNA	10,040	15,305	22,571	30,021	38,291	45,907
Private Sector Credit	..	33	28	20	12	134
Net Other Assets	1,076	1,021	158	(209)	(762)	(1,043)
Total Assets	11,522	16,926	23,712	30,655	38,199	48,871
Liabilities:						
Demand Deposits	9,768	14,246	20,196	26,453	33,006	40,594
- Individual	9,560	13,561	18,762	24,691	29,927	35,934
- Business	..	385	852	1,002	1,998	2,992
- Organizations	208	301	582	760	1,081	1,659
Time Deposits	1,754	2,680	3,516	4,203	5,193	8,287
- more than 180 days	612	841	780	813	806	667
- more than 1 year	1,142	1,839	2,736	3,390	4,387	7,619
Total Liabilities	11,522	16,926	23,712	30,655	38,199	48,871

Source: Banco Nacional de Angola

APPENDIX

Table E.3

ANGOLA

MONEY SUPPLY DATA
(millions of kwanzas, end of period)

	1977	1983	1984	1985	1986	1987
Currency outside banks	14,265	59,911	71,854	80,025	92,302	116,966
Demand deposits						
B.P.A.	NA	14,246	20,196	26,453	33,006	40,584
BNA less BPA and government deposits	NA	68,952	76,423	93,234	89,752	86,668
Time deposits						
BPA	NA	2,680	3,516	4,203	5,193	8,287
BNA	NA	8	14	8	8	11
Annual currency growth rate	NA	23.6%	19.9%	11.4%	15.3%	26.7%
Money Stock (M1)	NA	143,109	168,473	199,711	215,060	244,218
Annual growth rate M1	NA	NA	17.7%	18.5%	7.7%	13.6%
Quasi-Money (M2)	NA	145,796	172,003	203,922	220,261	252,516
Annual growth rate M2	NA	NA	18.0%	18.6%	8.0%	14.6%

Source: BNA and mission estimates

APPENDIX
Table E.4

ANGOLA

BALANCE OF PAYMENTS, 1980 - 1987
(millions of US $)

	1980	1981	1982	1983	1984	1985	1986	1987
Merchandise exports	1,883	1,856	1,629	1,822	2,033	2,238	1,303	2,269
Merchandise imports	1,368	1,484	1,286	1,147	1,575	1,415	1,097	1,316
Trade balance	514	372	342	675	458	823	206	953
Service & income exports	179	278	209	89	111	128	115	92
Interest & dividends	47	55	28	19	15	22	12	7
Transport	66	56	61	42	38	35	32	32
Insurance	43	142	106	18	18	67	41	33
Other	23	25	14	10	40	4	30	21
Service & income imports	684	893	1,115	920	811	864	828	729
Interest	23	96	66	41	23	44	81	91
Dividends	44	57	74	94	114	109	83	136
Transport	157	205	241	240	204	215	232	158
Insurance	39	61	102	49	64	62	33	20
Technical assistance	161	194	323	217	141	135	146	86
Foreign workers' salaries	26	58	65	75	50	63	72	75
Administr & exploration charges	45	121	125	126	108	144	133	107
Travel	11	20	38	21	33	34	13	15
Other	99	81	80	58	73	58	35	41
Balance on invisibles	(425)	(615)	(906)	(830)	(701)	(736)	(713)	(637)
Net unrequited transfers	21	14	27	23	26	20	139	51
Current account balance	110	(230)	(537)	(132)	(217)	107	(368)	368
Med & long-term capital balance	286	328	511	372	398	441	236	41
Inflows	475	591	806	781	765	845	785	716
Loans	432	448	404	349	450	431	368	354
Foreign investment	43	143	402	429	308	411	417	360
(In nonpetroleum sectors)	0	0	0	0	1	1	1	0
Other	0	0	0	3	7	4	0	1
Outflows	189	263	295	408	367	404	549	674
Principal repayments	183	231	226	293	277	260	360	427
Amort of petroleum investments	3	9	60	72	81	139	189	247
Other	3	23	9	43	9	6	0	0
Basic balance	396	98	(26)	240	181	549	(132)	409
Short-term capital flows & errors and omissions	(309)	(252)	18	(204)	(124)	(558)	(187)	(676)
Global balance	87	(154)	(8)	35	57	(10)	(319)	(267)
Financing:	(87)	154	8	(35)	(57)	10	319	267
Reserve variation (- increase)	(87)	154	8	(35)	(57)	(18)	78	(63)
Arrears variation (includ. resched)	0	0	0	0	0	27	218	(51)
Debt rescheduling	0	0	0	0	0	0	23	382
Memorandum:								
End Year Gross Reserves	309	155	147	182	240	257	179	242

Source: Angolan authorities and mission estimates

APPENDIX

Table E.5

ANGOLA

MAJOR MERCHANDISE IMPORT EXPENDITURES
(millions U.S.$ and as percentage of total)

	1982	1983	1984	1985	1985
Total merchandise imports	1,286	1,147	1,575	1,415	1,097
	100.0%	100.0%	100.0%	100.0%	100.0%
Foods & beverages	306	334	460	387	246
	23.8%	29.1%	29.2%	27.3%	22.4%
Clothing & textiles	115	90	132	110	70
	8.9%	7.8%	8.4%	7.8%	6.4%
Instruments & optical goods	13	12	11	10	7
	1.0%	1.0%	0.7%	0.7%	0.6%
Paper, minerals, chemicals, & plastics	167	150	171	139	88
	13.0%	13.0%	10.8%	9.8%	8.1%
Cement, stone, & metals	151	105	253	205	131
	11.7%	9.1%	16.0%	14.5%	11.9%
Electrical & transport equipment	511	448	535	552	547
	39.7%	39.0%	33.9%	39.0%	49.9%
Other	25	9	14	11	7
	1.9%	0.8%	0.9%	0.8%	0.6%

Source: Ministry of Finance

APPENDIX

Table E.6

ANGOLA

MAJOR EXPORT EARNINGS, 1980 - 1987
(.. = not available)

	1980	1981	1982	1983	1984	1985	1986	1987
Crude Oil								
(Total - millions US $)	1,391	1,345	1,246	1,525	1,748	1,906	1,164	2,036
(thousand barrels)	40,705	37,792	39,265	54,852	64,165	73,419	92,151	116,350
(ave. price per bbl)	34.2	35.6	31.7	27.8	27.3	26.0	12.6	17.5
(percent of total)	73.9%	72.5%	76.5%	83.7%	86.0%	85.2%	89.4%	89.8%
Refined Oil								
(Total - millions US$)	99	104	60	89	92	94	40	76
(thousand tons)	510	511	361	525	533	631	549	701
(ave. price per ton)	194.3	204.1	167.1	170.2	172.7	149.0	72.7	108.7
(percent of total)	5.3%	5.6%	3.7%	4.9%	4.5%	4.2%	3.1%	3.4%
LPG								
(Total - millions US $)	..	..	..	32	32	34	22	24
(thousand barrels)	..	..	..	1,489	1,956	2,096	2,011	2,243
(ave. price per barrel)	..	..	..	21.5	16.3	16.4	10.7	10.6
(percent of total)	..	..	..	1.8%	1.6%	1.5%	1.7%	1.0%
Diamonds								
(Total - millions US $)	228	181	190	101	65	74	8	98
(thousands carats)	1,459	1,408	1,259	1,002	953	744	175	846
(ave. price per carat)	156.6	128.3	150.6	100.5	68.1	100.0	46.7	116.2
(percent of total)	12.1%	9.7%	11.6%	5.5%	3.2%	3.3%	0.6%	4.3%
Coffee								
(Total - millions US $)	164	97	95	71	81	55	53	35
(thousand tons)	47.2	44.6	41.0	26.6	22.8	18.7	18.6	16.0
(ave. price - US $ per ton)	3,468	2,183	2,309	2,667	3,572	2,936	2,851	2,151
(percent of total)	8.7%	5.3%	5.8%	3.9%	4.0%	2.4%	4.1%	1.5%
Other	0	129	38	4	14	75	16	(0)
Total merchandise exports (millions US $)	1,883	1,856	1,629	1,822	2,033	2,238	1,303	2,269

Source: Ministry of Finance and mission estimates

APPENDIX
Table E.6.1

ANGOLA

MAJOR EXPORT EARNINGS PROJECTIONS

	Projections---> 1987	1988	1989	1990	1991	1992	1993
Crude Oil							
(Total - millions US $)	2,038	2,631	2,727	2,899	2,918	3,072	3,236
(thousand barrels)	116,350	146,167	151,500	152,580	153,300	154,000	154,500
(ave. price per bbl)	17.5	18.0	18.0	19.0	19.0	20.0	20.9
(percent of total)	89.7%	91.7%	89.2%	88.6%	88.0%	87.8%	87.5%
Refined Oil							
(Total - millions US $)	76	79	85	92	93	98	104
(thousand tons)	701	722	743	766	773	781	789
(ave. price per ton)	108.7	109.9	114.1	120.0	120.0	126.0	132.3
(percent of total)	3.4%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
LPG							
(Total - millions US $)	24	24	27	31	33	35	37
(thousand barrels)	2,243	2,355	2,473	2,597	2,726	2,754	2,781
(ave. price per barrel)	10.6	10.0	11.0	12.0	12.0	12.6	13.2
(percent of total)	1.0%	0.8%	0.9%	1.0%	1.0%	1.0%	1.0%
Diamonds							
(Total - millions US $)	98	100	180	210	230	253	278
(thousands carats)	846	910	1,500	1,680	1,769	1,853	1,942
(ave. price per carat)	116.2	110.0	120.0	125.0	130.0	136.5	143.3
(percent of total)	4.3%	3.5%	5.9%	6.4%	7.0%	7.2%	7.5%
Coffee							
(Total - millions US $)	34	36	37	39	40	42	44
(thousand tons)	16	16	16	16	16	16	16
(ave. price - US $ per ton)	2,151	2,237	2,326	2,419	2,516	2,617	2,721
(percent of total)	1.5%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
Total of above (millions US $)	2,269	2,870	3,056	3,271	3,308	3,500	3,699

Source: mission estimates

APPENDIX
Table E.7.1

ANGOLA

BALANCE OF PAYMENTS PROJECTIONS, 1988 - 93 (BASELINE CASE)
(millions of US $)

	1987	Projections---> 1988	1989	1990	1991	1992	1993
Trade balance	953	861	917	981	992	1,050	1,110
Exports of goods	2,269	2,870	3,056	3,271	3,308	3,500	3,699
Imports of goods	1,316	2,009	2,140	2,290	2,316	2,450	2,590
Non-factor services (net)	(341)	(709)	(755)	(808)	(817)	(865)	(914)
Resource balance	612	152	162	173	175	185	196
Net factor income	(296)	(454)	(498)	(522)	(532)	(555)	(579)
Receipts	7	20	22	23	23	25	26
Payments	302	474	519	546	555	580	605
Balance on invisibles	(637)	(1,163)	(1,253)	(1,331)	(1,349)	(1,420)	(1,493)
Net unrequited transfers	51	54	57	60	63	66	69
Current account balance	368	(248)	(279)	(290)	(294)	(304)	(314)
Capital Account Balance	(635)	(207)	235	301	45	157	286
Med & L-t Loans (net)	(73)	20	74	117	(128)	(28)	88
Other	(562)	(227)	161	184	173	185	198
Overall Balance	(267)	(454)	(44)	11	(250)	(148)	(28)
Financing:	267	454	44	(11)	250	148	28
Reserve variation (- increase)	(63)	0	0	0	0	0	0
Arrears variation (includ. resched)	(51)	454	44	(11)	250	148	28
Debt rescheduling	382	0	0	0	0	0	0
Memorandum:							
End Year Gross Reserves	242	242	242	242	242	242	242

Source: Angolan authorities and mission estimates.

APPENDIX
Table E.7.2

ANGOLA

BALANCE OF PAYMENTS PROJECTIONS, 1988 - 93 (OPTIMISTIC CASE)
(millions of US $)

	1987	Projections---> 1988	1989	1990	1991	1992	1993
Trade balance	953	861	917	1,360	1,376	1,456	1,539
Exports of goods	2,269	2,870	3,056	3,925	3,970	4,200	4,439
Imports of goods	1,316	2,009	2,140	2,565	2,594	2,745	2,901
Non-factor services (net)	(341)	(709)	(755)	(892)	(902)	(955)	(1,009)
Resource balance	612	152	162	468	474	501	530
Net factor income	(296)	(454)	(498)	(568)	(558)	(564)	(578)
Receipts	7	20	22	28	28	30	31
Payments	302	474	519	596	586	594	609
Balance on invisibles	(637)	(1,163)	(1,253)	(1,460)	(1,461)	(1,519)	(1,587)
Net unrequited transfers	51	54	57	60	63	66	69
Current account balance	368	(248)	(279)	(40)	(22)	3	21
Capital Account Balance	(635)	(207)	235	454	173	269	382
Med & L-t Loans (net)	(73)	20	74	193	(62)	32	145
Other	(562)	(227)	161	260	235	236	238
Overall Balance	(267)	(454)	(44)	414	150	271	403
Financing:	267	454	44	(414)	(150)	(271)	(403)
Reserve variation (- increase)	(63)	0	0	0	0	(143)	(403)
Arrears variation (includ. resched)	(51)	454	44	(414)	(150)	(128)	0
Debt rescheduling	382	0	0	0	0	0	0
Memorandum:							
End Year Gross Reserves	242	242	242	242	242	385	788

Source: Angolan authorities and mission estimates.

APPENDIX
Table E.7.8

ANGOLA

BALANCE OF PAYMENTS PROJECTIONS, 1988 - 93 (PESSIMISTIC CASE)
(millions of US $)

	1987	Projections---> 1988	1989	1990	1991	1992	1993
Trade balance	953	861	917	702	809	844	880
Exports of goods	2,269	2,870	3,056	2,617	2,647	2,800	2,960
Imports of goods	1,316	2,009	2,140	2,015	2,038	2,156	2,279
Non-factor services (net)	(341)	(709)	(755)	(724)	(732)	(775)	(819)
Resource balance	612	152	162	(123)	(124)	(131)	(139)
Net factor income	(296)	(454)	(498)	(477)	(505)	(546)	(589)
Receipts	7	20	22	18	19	20	21
Payments	302	474	519	495	524	566	609
Balance on invisibles	(637)	(1,163)	(1,253)	(1,201)	(1,238)	(1,321)	(1,408)
Net unrequited transfers	51	54	57	60	63	66	69
Current account balance	368	(248)	(279)	(540)	(567)	(612)	(658)
Capital Account Balance	(635)	(207)	235	148	(83)	45	191
Med & L-t Loans (net)	(73)	20	74	40	(194)	(89)	32
Other	(562)	(227)	161	108	111	134	158
Overall Balance	(267)	(454)	(44)	(392)	(650)	(566)	(468)
Financing:	267	454	44	392	650	566	468
Reserve variation (- increase)	(63)	0	0	0	0	0	0
Arrears variation (includ. resched)	(51)	454	44	392	650	566	468
Debt rescheduling	382	0	0	0	0	0	0
Memorandum:							
End Year Gross Reserves	242	242	242	242	242	242	242

Source: Angolan authorities and mission estimates.

APPENDIX
Table E.8

ANGOLA

STOCK OF EXTERNAL DEBT, 1982 - 87
(millions of US $)
(Source: BNA)

	1982	1983	1984	1985	1986	1987	June 1988
Medium & L-T debt	2,075.3	2,106.4	2,282.7	2,449.4	2,456.5	2,956.1	3,210.2
Short-term debt	271.3	251.7	162.9	250.8	614.5	625.6	691.2
Total external debt	2,346.6	2,358.1	2,445.7	2,700.2	3,071.0	3,581.7	3,901.4
Debt/GDP	52.2%	50.9%	49.4%	53.7%	68.5%	70.1%	NA
Debt/exports of G & S	127.7%	123.4%	114.1%	114.1%	216.6%	151.7%	NA
Debt service/exports of G & S (1)	15.9%	17.5%	14.0%	12.8%	31.1%	21.9%	NA

Source: BNA and mission estimates

(1) Debt service includes only interest and principal payments actually made.

ANGOLA
PROJECTED DEBT SERVICE OBLIGATIONS ON MEDIUM AND LONG TERM DEBT
(as of June 1988)
(Millions of US$)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Other	Total
Western countries	20.5	60.0	297.1	334.2	280.5	316.6	318.5	205.1	118.6	95.3	83.3	58.4	144.4	2,252.1
Capital	16.0	46.8	191.4	232.1	197.2	250.8	264.6	175.6	94.8	78.1	71.7	52.0	129.1	1,737.3
Interest	4.4	13.2	105.7	102.2	83.3	65.9	53.9	29.5	23.8	17.2	11.6	6.4	15.2	514.8
Socialist countries	4.6	59.3	133.1	51.3	56.9	264.8	176.6	171.8	167.1	162.4	0.0	0.0	235.4	1,419.3
Capital	4.6	51.3	123.5	45.6	52.0	229.0	157.6	157.6	157.6	157.6	0.0	0.0	230.1	1,311.7
Interest	0.0	8.0	9.6	5.6	4.9	34.9	18.9	14.2	9.5	4.7	0.0	0.0	5.3	107.6
Official organizations	0.0	0.0	2.4	5.3	5.1	5.1	5.0	4.9	4.7	4.0	0.0	0.0	15.3	51.9
Capital	0.0	0.0	1.4	3.6	3.6	3.8	3.9	4.0	4.0	3.5	0.0	0.0	14.7	42.5
Interest	0.0	0.0	1.0	1.7	1.5	1.3	1.1	0.9	0.7	0.5	0.0	0.0	0.6	9.3
Combined total	25.1	119.3	432.6	390.8	342.5	586.6	500.1	381.8	290.4	261.8	83.3	58.4	395.1	3,723.3
Capital	20.6	98.1	316.3	281.3	252.8	484.5	426.2	337.2	256.4	239.3	71.7	52.0	373.9	3,091.5
Interest	4.4	21.2	116.3	109.5	89.7	102.1	74.0	44.6	34.0	22.4	11.6	6.4	21.1	631.8

Source: BNA

APPENDIX
Table F.1

ANGOLA

AGRICULTURAL PRODUCTION:
PRESENT ESTIMATES
AND EARLY 1970'S LEVELS

Products (tons, or as indicated)	71/72/73 Max. Production		86/87 Act.Production	
Cotton (Algodao)	86,015	(71)	307	(86)
Sugar Cane (Acucar)	80,000	(74)	14,000	(87)
Groundnuts (Amendoim)	26,936	(71)	1,688	(86)
Paddy Rice (Arroz)	57,604	(71)	772	(86)
Banana	75,000	(73)	24,000	(86)
Potatoes (Batata)	138,757	(71)	8,000	(87)
Sweet Potatoes (Batata-doce)	250,000	(73)	100,000	(87)
Cafe	240,000	(74)	13,500	(87)
Beans (Feijao)	65,500	(71)	2,452	(86)
Sunflower (Girassol)	21,008	(72)	120	(86)
Wood (Madeira)	553,664	(73)	64,000	(86)
Cassava (Mandioca)	1,134,262	(71)	250,000	(87)
Sorghum/Millet (Massambala/Massango)	74,000	(71)	20,000	(87)
Maize (Milho)	710,000	(71)	250,000	(87)
Palm Oil (Oleo de palma)	20,000	(73)	560	(86)
Sisal	47,920	(71)	238	(86)
Tobacco (Tabaco)	4,800	(73)	114	(86)
Wheat (Trigo)	22,500	(71)	210	(86)
Beet (Carne de bovino)	24,500	(73)	3,536	(86)
Cattle (Bois) (heads)	4,300,000	(73)	3,420,000	(87)
Goats (heads)	872,000	(71)	1,300,000	(87)
Swine (Suinos) (heads)	500,000	(73)	150,000	(87)

Source: As for Table 1. Refer to Chapters I and II and relevant Annexes

ANGOLA

APPENDIX

Table F. 2

AGRICULTURAL PRODUCTION TRENDS, 1955 - 73
(000 tons)

Product	55/59	66/68	71/73
Crops:			
Cotton (raw)	22.1	30.0	82.6
Bananas	N/A	N/A	98.7
Potatoes	N/A	N/A	100.5
Coffee	91.9	186.3	226.5
Beans	7.5	14.0	59.6
Sunflower	N/A	N/A	21.0
Groundnuts	15.0	N/A	26.0
Cassava	560.0	N/A	928.0
Corn	106.6	136.7	202.1
Sisal	47.1	59.0	53.6
Leaf Tobacco	2.9	5.0	4.0
Wheat	2.7	22.6	12.1
Rice	18.5	18.6	28.4

Source: Various Relatorios e Contas do Banco de Angola

Data is unreliable and refers mainly to marketed production.
Useful for general trends in production.

APPENDIX
Table F.3

ANGOLA

FARM LEVEL OFFICIAL PRICES
(Kwanzas per ton)

Product (tons)	1978	1980	1985
Cotton	7,901.3	40,000.0	
Groundnuts	4,674.4	27,500.0	50,000.0
Rice	2,297.4	13,500.0	
Sweet Potato	968.6	7,500.0	17,500.0
Potato	2,644.3	14,000.0	
Coffee Bean	11,741.6	67,000.0	
Onion	8,142.9	16,000.0	50,000.0
Coconut	1,710.2	17,000.0	
Cassava Flour	1,900.6	17,000.0	
Beans	3,632.1	23,500.0	35,000.0
Cassava dry	1,187.9	8,000.0	20,000.0
Sorghum and millet	1,000.0	10,000.0	
Maize	1,308.5	10,000.0	15,000.0
Palm Oil	5,563.3	38,500.0	100,000.0
Sunflower seeds	4,011.3	25,000.0	
Tobacco	6,008.6	76,000.0	
Livestock:			
Cattle	5,517.6	16,000.0	
Goats	5,897.0	15,000.0	150,000.0
Pork	8,025.4	19,000.0	150,000.0

Source: Ministry of Planning

Average prices of "campanhas de comercializacao no campo"

APPENDIX
Table F.4

ANGOLA

SUPPLY OF AGRICULTURAL INPUTS

INPUT	Unit	1984 Imports	1984 Domestic	1985 Imports	1985 Domestic	1986 Imports	1986 Domestic
Tools							
Hoes	1	921,000	-	460,000	94,202	959,921	149,648
Knives	1	-	247,000	-	164,000	-	133,680
Other	1	469,004	482,000	25,616	954,239	100,000	
Fertilizers							
Simple	ton	-	-	10,800	-	10,550	-
Mixed	ton	8,250	-	12,000	-	20,000	-
Seeds							
Maize	ton	-	700	990	723	1,238	1,277
Beans	ton	-	899	905	554	203	302
Groundnuts	ton	-	33	500	55	100	17
Potato	ton	1,736	33	2,990	76	2,051	376
Vegetable	ton	42	-	2	-	59	1
Others	ton	-	503	214	300	3	253
Implements							
Plows	1	-	8200	-	-	-	3822
Sprayers	1	-	-	-	-	-	-
Motor Pumps	1	-	-	1997	-	1040	-
Grinders	1	-	-	-	-	116	-

Source: Relatorio Sobre a Actividade do Sector Agrario e 1986

APPENDIX
Table F.5

ANGOLA

AGRICULTURAL EXPORTS (IMPORTS)
('000 Tons)

Product	1962	1968	1979	1973	1980	1985	1986
Coffee	156.9	188.6	180.5	218.7	47.2	19.7	15.8 (a)
Cotton	5.7	11.0	23.6	23.3	-	-	-
Sisal	68.8	52.4	65.9	53.0	-	-	-
Bananas	2.0	14.8	36.0	77.0	-	-	-
Wood	51.2	135.7	129.4	182.0	1.2	24.9	-
Maize (b)	116.7	153.3	171.7	112.0	(142.7)	(79.6)	-
Tobacco	0.8	3.2	1.6	6.8	-	-	-
Beans	10.1	14.2	12.0	28.6	(31.6)	(59.2)	-
Sugar	36.5	13.7	11.3	9.7	(73.4)	(59.2)	-
Palm Oil	12.6	10.5	11.3	2.6	(1.2)	(0.7)	
Rice	2.5	2.0	1.2	4.5	(55.1)	(35.8)	

Source: Relatorio e Contas do Banco de Angola and Customs Data
(a) Does not include exports via VIGIMEX
(b) Total imports of cereals in 1988/87 were 152.5 thousand tons (Commercial imports plus food aid). See Table I.1

APPENDIX
Table F.6

ANGOLA
FOOD IMPORTS

Products	1982	1983	1984	1985
Animal Products	37.2	43.8	40.9	36.1
Vegetable Products	90.9	72.0	103.3	76.1
Fats, Oils	27.6	31.5	33.5	39.9
Other (beverages)	63	80.0	65	63.1
Total	218.7	227.3	242.7	215.2

Source: Customs data - Incomplete and below actual levels

ANGOLA

APPENDIX
Table F.7

PROJECTED AGRICULTURAL PRODUCTION
RESPONSE TO POLICY REFORMS (*)

Production	71/72/73	Present	Projected Output Year 01	Year 02	Year 03
(tons)					
Maize (**)	300,000	40,000	50,000	60,000	100,000
Cassava (**)	928,000	200,000	250,000	300,000	400,000
Beans	68,000	2,000	2,000	35,000	5,000
Sorghum/Millet (**)	N/A	2,000	5,000	10,000	10,000
Potatoes	100,500	5,000	10,000	15,000	25,000
Coffee	225,000	15,000	20,000	20,000	35,000
Cotton	80,200	2,000	4,000	6,000	8,000
Sugar	75,000	14,000	10,000	15,000	15,000
Tobacco	4,800	nil	50	400	800
Bananas (***)	10,000	25,000	25,000	30,000	35,000
Wood (***)	533,664	60,000	100,000	150,000	200,000
Cattle ('000)	5,408	3,420	3,600	3,800	4,000
Beef (tons)	24,500	3,500	3,700	4,500	6,000
Poultry ('000)	4,200	nil	4,200	4,500	5,000
Swine	361,000	540,000	570,000	600,000	630,000
Goats ('000)	872	1,300	1,400	1,500	1,600
Fisheries (****)(tons)	467,000	195,000	200,000	200,000	250,000

(*) Source: Mission Estimates; Relatorio e Contas do Banco de Angola; Relatorio Sobre Actividates do Sector Agrario em 1986
(**) Mainly for home consumption
(***) Export quantities
(****) Angolan share

APPENDIX

Table G.1

ANGOLA

OIL PRODUCTION AND RESERVES, 1986-90

(in 1,000 b/d)

Production by Area	Actual 1986	Actual %	Actual 1987	Projected 1988	Projected 1989	Projected 1990	Projected %
Cabinda	190	67.4	220	256	246	246	54.9
Block 3	50	17.7	85	113	128	136	30.4
Block 2	6	2.1	10	29	39	38	8.5
Onshore	36	12.8	36	36	32	28	6.3
Total	282	100	351	434	445	448	100.1
Reserves (in million bbl)	1,418	-	1,622	1,525	1,438	1,286	-
Reserves to Production Ratio (years)	13.7	-	12.6	9.6	8.8	7.8	-

Source: Sonangol, Ministry of Energy and Petroleum.

Table G.2

ANGOLA

PROJECTED CRUDE OIL EXPORTS, 1987-1991

	1987	1988	1989	1990	1991
Oil Production (million tons)	17.55	21.70	22.25	22.40	22.50
Exports (million tons)	16.05	20.02	20.75	20.90	21.00
International Price of Oil (US$/bbl)	17	18	18	19	19
Export Revenues (million US$)	1,992	2,631	2,727	2,899	2,913

Source: Sonangol and mission estimates.

APPENDIX
Table G.3

ANGOLA

INVESTMENTS IN CRUDE OIL EXPLORATION AND DEVELOPMENT

(in US$ million)

	1980-1986			1987-1990 1/		
	Annual Total	Average	in %	Annual Total	Average	in %
Cabinda	816	117	30.0	815	203.7	39.7
Block 2	493	70	18.1	180	45.0	8.8
Block 3	879	126	32.2	770	192.5	37.6
Congo/Kwanza	242	34	8.9	80	20.0	3.9
Others	294	42	10.8	205	51.3	10.0
Total	2,724	389	100.0	2,050	512.5	100.0

1/ Projected
Source: Sonangol and mission estimates.

Table G.4

ANGOLA

PROJECTED PETROLEUM PRODUCTS CONSUMPTION

	1986	1987	1988	1990	1992	Average Annual Change 1/ 1980-86	1986-92
LPG	30,200	31,408	32,664	35,330	38,213	9.22%	4.01%
Gasoline	104,110	108,257	112,570	121,727	131,616	4.06%	3.99%
Kerosene	46,310	49,090	52,034	58,465	65,692	7.50%	6.03%
Jet Fuel	260,500	266,193	272,005	284,158	297,051	17.97%	2.21%
Gas Oil	344,770	357,874	371,481	400,284	431,346	4.58%	3.81%
Fuel Oil	119,200	122,984	126,896	135,120	143,912	-1.95%	3.19%
Asphalt	4,200	4,284	4,370	4,546	4,730	2.87%	2.00%
Total	909,340	940,090	972,020	1,039,630	1,112,560	6.63%	3.42%

1/ Least square estimates
Source: Sonangol

APPENDIX
Table G.5

ANGOLA

ELECTRICITY DEMAND FORECAST

	Energy GWh			Peak Demand (MW) 1/		
	Low	Medium	High	Low	Medium	High
1986	756	756	756	139	139	139
1987	771	771	771	142	142	142
1980	829	862	896	152	158	164
1995	1,140	1,351	1,602	208	247	293
2000	1,914	2,211	2,400	350	404	439

1/ Installed capacity in 1986: 431 MW; firm capacity in 1986: 324 MW
Source: Energy Sector Assessment Report

ANGOLA

STRUCTURE OF INDUSTRY - 1984

Tutelage Ministry [or other institution]	# of Enterprises					# of Likely Manufacturing Enterprises					Likely Manufacturers as a % of all Enterprises
	EEU	Priv	Mix	Coop	Tot	EEU	Priv	Mix	Coop	Tot	
Industry	139	91	11	0	241	126	83	10	0	219	91%
Petroleum	2	10	0	0	12	0	3	0	0	3	25%
Energy	5	3	1	0	9	0	1	0	0	1	11%
Fisheries	21	15	1	0	37	9	7	1	0	17	46%
Construction	24	12	4	0	40	8	4	2	0	14	35%
Agriculture	65	14	0	0	79	15	2	0	0	17	22%
Transportation	64	21	1	0	86	0	0	0	0	0	0%
Internal Commerce	48	50	0	1	99	0	0	0	0	0	0%
External Commerce	9	18	0	0	27	0	0	0	0	0	0%
Education	3	1	0	0	4	2	1	0	0	3	75%
Culture	3	6	0	0	9	0	0	0	0	0	0%
Health	2	23	0	0	25	0	0	0	0	0	0%
Housing	1	1	0	0	2	1	0	0	0	1	50%
Coordination	1	0	0	0	1	0	0	0	0	0	0%
Finance	3	0	0	0	3	0	0	0	0	0	0%
Planning	0	1	0	0	1	0	0	0	0	0	0%
Labor	0	1	0	0	1	0	0	0	0	0	0%
Defense	1	0	0	0	1	0	0	0	0	0	0%
[Presidency]	1	0	0	0	1	1	0	0	0	1	100%
[MPLA]	9	0	0	0	9	1	1	1	1	4	44%
Totals	401	267	18	1	687	163	102	14	1	280	41%

Source: Mission Estimates based on data in:
Ministero da Industria
Registo Geral de Empresas
Luanda, Abril 1984

APPENDIX
Table H.2

ANGOLA

STRUCTURE OF EMPLOYMENT IN ENTERPRISES - 1984

Tutelage Ministry [or other institution]	Employment					Likely Manufacturing Employment					Likely Manuf. Employm. as a % of all Employment
	EEU	Private	Mixed	Coop.	Total	EEU	Private	Mixed	Coop.	Total	
Industry	52,184	9,719	23,050	0	84,953	48,911	9,470	3,496	0	61,877	73%
Petroleum	3,233	3,193	0	0	6,426	0	1,746	0	0	1,746	27%
Energy	2,473	201	602	0	3,276	0	96	0	0	96	3%
Fisheries	6,853	1,245	168	0	8,266	3,286	618	168	0	4,072	49%
Construction	12,053	2,070	2,001	0	16,094	2,999	1,449	1,636	0	6,114	38%
Agriculture	63,610	3,319	0	0	66,929	8,727	300	0	0	9,027	13%
Transportation	28,173	2,299	6,014	0	34,486	0	0	0	0	0	0%
Internal Commerce	19,990	3,827	0	350	24,167	0	0	0	0	0	0%
External Commerce	456	1,117	0	0	1,573	0	0	0	0	0	0%
Education	310	85	0	0	395	310	85	0	0	395	100%
Culture	228	259	0	0	487	0	0	0	0	0	0%
Health	157	258	0	0	415	0	0	0	0	0	0%
Housing	710	22	0	0	732	710	0	0	0	710	97%
Coordination	750	0	0	0	750	0	0	0	0	0	0%
Finance	712	0	0	0	712	0	0	0	0	0	0%
Planning	0	8	0	0	8	0	0	0	0	0	0%
Labor	0	75	0	0	75	0	0	0	0	0	0%
Defense	0	0	0	0	0	0	0	0	0	0	0%
[Presidency]	331	0	0	0	331	331	0	0	0	331	100%
[MPLA]	2,614	0	0	0	2,614	634	0	0	0	634	24%
Totals	192,807	27,697	31,835	350	252,689	65,908	13,764	5,330	0	85,002	34%
Max. for any one enterpr.:	9,060	1,571	19,554	350	19,554	9,060	1,571	1,025	0	9,060	
Min. for any one enterpr.:	4	1	35	350	1	14	11	60	0	11	
Standard Deviation	851	157	4,510	0	1,054	893	193	319	0	712	
Average	481	104	1,769	350	384	404	139	410	0	369	

Source: Mission estimates based on data in:
Registo Geral de Empresas; op.cit.

APPENDIX
Table H.3

ANGOLA

AVERAGE NUMBER OF EMPLOYEES
IN COMPANIES W/OVER 500 EMPLOYEES
DIFFERENTIATED BY PUBLIC AND PRIVATE

Ministry	UEEs	Private
Agriculture	1,537	550
Industry	1,627	659
Transportation	1,810	659
Internal Commerce	777	--
Average of all 87 1/	1,515	628

1/ There are 87 enterprises with more than 500 employees each under the combined tutelage of the Ministries of Agriculture, Industry, Transportation, and Internal Commerce.

Source: Mission estimates based on:
Registo Geral, op.cit.

ANGOLA

PRODUCTION OF THE MANUFACTURING INDUSTRY; COMPARISONS BETWEEN 1973 AND 1987 1/

Food Processing		Light Industry		Heavy Industry	
Products	87/73	Products	87/73	Products	87/73
	%		%		%
Beer	38.98	Cloth	32.93	Tires F/Vehicles	6.53
Soft Drinks	14.56	Covers	10.91	Inner Tubes F/Vehicles	0
Fermented Drinks	42.02	Cotton Threads	3.86	Buses	0
Liquors and other Spirits	18.61	Leather Shoes	43.42	Passenger Vehicles	0
Vinegar	36.01	Canvas Shoes	5.65	Bicycles	37.65
Sugar	18.96	Plastic Shoes	28.87	Motorcycles	89.75
Molasses	18.53	Processed Tobacco	57.10	Cisterns	0
Alcohol	19.67	Matches	9.52	Dry Batteries	5.78
Corn Meal	41.07	Plywood	54.55	Batteries	27.10
Wheat Flour	38.26	Vinyl	132.58	Acetilene	62.66
Fresh Yeast	0	Tarpaulins	1272.73	Oxygen	85.13
Spaghetti/Pasta	41.52	Soap	12.59	Electrodes	13.36
Biscuits and Cakes	29.37	Liquid Detergents	46.13	Steel Rods	9.41
Cooking Oil	31.04	Paints	16.45	Black Tube	0
Margarine	8.44	Glues	22.86	Zinc Sheets	0
Instant Coffee	0	Plastic Bottles	8.28	Machetes	65.65
Canned Meats	0	Sisal Bags/Burlap	41.51	Cardboard Boxes	0.45
Salt	3.87	Plastic bags	10.47	Conductor Cable Lines	11.01
Refined Salt	0	Sponge Cushions	23.06	Radio Recepters	129.62
				Paper	0
				Paper Paste	0
				Cutlery	23.91
				Metallic Capsules	0

1/ Comparison of physical output.

Note: 0% indicates that production had stopped by 1987. Products whose manufacture was started after 1973 are not included.

Source: Tables A2-1, A2-3 and A2-4 in Appendix 2.

ANGOLA

PRODUCTION OF MANUFACTURING INDUSTRY - FOOD SECTOR; 1973 - 1987

PRODUCT	Unit	1973 --	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	Average annual growthrate 77-87	87/77
Beer	hl	1,196,030	639,541	668,610	778,300	713,761	670,908	562,893	690,249	655,681	652,936	583,430	466,170	-2.50%	73%
Soft Drinks	hl	492,520	284,720	248,550	234,220	263,125	276,491	181,818	124,383	99,382	110,200	71,310	71,720	-12.94%	35%
Juices and Concentrates 1/	tn						104	60							
Table Wine	hl						57,057	68,212	104,324	60,978	60,080	43,580	33,900		
Fermented Drinks	hl	136,200	31,770	28,638	61,163	94,533,	56,187	53,426	37,361	29,994	43,170	39,330	57,230	-0.39%	180%
Liquors and other Spirits	hl	75,220	21,050	37,687	23,465	11,202	28,838	23,787	20,825	20,763	14,444	16,440	14,000	-5.23%	67%
Whisky 2/	hl					861	1,619	1,474	73	171	410	70	30		
Vinegar	kl		224	178	26	352	134	58	350	419	489	490	350	15.03%	156%
Sugar	tn	972	38,071	36,089	31,843	25,271	19,905	27,768	22,405	20,236	17,416	20,287	15,342	-7.84%	40%
Molasses	tn	80,909	19,553	15,428	12,171	10,874	8,734	13,725	9,540	9,607	9,260	11,212	6,904	-6.56%	35%
Alcohol	kl	37,252	1,286	1,868	1,496	600	1,806	1,424	1,648	1,042	794	1,235	759	-4.86%	63%
Corn Meal	tn	3,859	24,969	32,489	60,085			33,627	35,868	29,524	49,471	42,025	24,252		97%
Wheat Flour	tn	59,050	39,107	52,607	47,581	51,212		41,502	35,919	27,628	47,167	25,085	31,730		81%
Fresh Yeast	tn	82,925	1,453	1,459	509	667	983	1,045	370	171		0	0		0%
Spaghetti/Pasta	tn	2,282	4,849	6,349	4,704	5,760	6,628	6,384	7,602	8,042	8,261	6,070	3,603	0.78%	74%
Biscuits and Cakes	tn	8,678	1,484	2,386	2,579	2,435	1,969	1,273	936	686	891	400	920	-13.54%	62%
Cooking Oil	kl	3,132	4,482	7,068	4,074	4,847	3,327	4,353	3,275	4,132	4,851	1,673	4,490	-2.18%	100%
Margarine	tn	14,464	984	2,443	2,351	1,519	898	1,122	535	563	260	245	237	-20.64%	24%
Instant Coffee	tn	2,809	0	16	6	4	15	28	12						
Canned Meats	tn	3,263	940	933	426	331	305	403							0%
Coffee	tn				1,424	1,305	1,268	1,189	976	439	386	105	170		
Canned Fruits and Vegetables	tn					2,599	1,575	1,212							
Pulps	tn					297	191								
Salt	tn	96,757			28,008	23,844	20,040	21,913			6,000	3,800	3,746		
Refined Salt	tn	8,126	3,723	4,014	4,477	3,953	3,135	2,369							0%

1/ Through 1980 included in canned fruits and vegetables; production halted since 1983.
2/ Whisky included in liquors and spirits through 1979.
Source: Ministry of Industry.

ANGOLA

PRODUCTION OF MANUFACTURING INDUSTRY - LIGHT INDUSTRY SECTOR; 1973 - 1987

PRODUCT	Unit	1973	--	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	Average annual growthrate 77-87	87/77
Cloth	M2	17,975		3,890	8,408	11,532	18,546	18,619	17,081	15,739	7,530	11,814	13,894	5,919	2.03%	152%
Covers	000'	972		167	234	256	239	149	253	259	91	163	180	106	-5.36%	63%
Cotton Threads	tn	3,085		135	138	126	190	214	165	85	25	76	121	119	-6.72%	88%
Trousers	000'					810	877	739	811	517	642	784	606	372		
Skirts	000'					133	800	1,087	712	755	872	1,369	709	533		
Shirts	000'					1,926	1,873	2,726	2,506	2,175	2,132	1,782	1,369	588		
Linens/Sheets	M.J.								606	412	1,129	600	353	351		
Socks	M.P.									116	218	168	159	183		
Leather Shoes	M.P.	324			230	360	310	390	228	48.	634	332	295	141		
Canvas Shoes	M.P.	1,008		268	369	286	206	159	215	135	91	131	84	57	-14.94%	21%
Plastic Shoes	M.P.	1,912		238	267	351	226	107	321	305	481	516	887	552	12.96%	232%
Processed Tobacco	tn	3,100		1,485	1,500	1,739	1,821	2,311	2,007	1,950	1,911	2,203	1,789	1,770	1.74%	112%
Matches	M.box	93,053		7,483	19,515	19,147	22,938	44,876	44,697	41,573	35,180	24,694	27,612	8,855	3.49%	118%
Plywood	M3	8,399		2,401	2,275	2,163	2,861	2,429	3,122	4,240	4,448	4,911	3,641	4,582	3.54%	191%
Vinyl	M2	264		173	429	493	345	186	655	324	46	294	124	350	-5 71%	202%
Tarpaulins	M2	11		97	173	225	203	191	172	119	50	116	52	140	-7.21%	144%
Soap	tn	17,582			10,500	8,454	8,752	7,556	8,837	4,155	7,799	11,491	11,012	2,204		
Liquid Detergents	kl	310			702	592	1,309		125	745	536	532	801	143		
Paints	tn	8,449			2,636	3,904	4,072	4,483	3,563	2,239	3,302	2,814	1,969	1,390		
Glues	tn	455		259	341	513	498	476	395	557	743	276	274	104	-5.60%	40%
Painted Glass	tn						1,296	6,359	6,521	5,847	7,536	8,035	6,229	0		
Plastic Bottles	000'	13,326		827	1,585	1,426	1,054	1,201	460	869	1,375	884	1,358	1,103	-0.37%	133%
Plastic Crates	000'							282	82	89	35	29	23	0		
Sisal Bags/Burlap	000'	8,000		1,120	1,485	2,053	1,785	1,483	1,384	1,708	2,344	1,780	2,777	3,321	-7.79%	297%
Plastic Bags	tn	2,672		1,286	2,854	2,795	3,188	3,224	2,733	1,461	1,834	929	2,275	287	-11.64%	22%
Sponge Cushions	Yn	58,194			54,597	80,556	65,977	51,075	35,126	34,837	43,854	41,148	43,000	13,421		

Source: Ministry of Industry.

ANGOLA

PRODUCTION OF MANUFACTURING INDUSTRY - HEAVY INDUSTRY SECTOR; 1973 - 1987

PRODUCT	Unit	1973	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	Average annual growthrate 77-87	87/77
Tires F/Vehicles	Un	191,000	50,543	73,042	108,651	87,086	72,750	55,250	54,882	34,815	47,707	31,714	12,480	-12.68%	25%
Inner Tubes F/Vehicles	Un	212,000	57,821	51,849	53,577	45,512	13,224	2,045	4,583	4,333	9,124	4,047			0%
Buses	Un	150	0	10	15	116	173	220	77	63	18	101	0		
Passenger Vehicles	Un	621	0	197	80	384	351	455	437	358	167	3	0		
Bicycles	Un	36,518	5,283	9,285	8,750	6,919	4,840	3,998	4,584	1,521	1,824	8,303	13,750	-3.09%	260%
Motorcycles	Un	6,128	1,232	2,007	3,960	6,306	7,605	2,718	1,297	1,697	1,391	5,975	5,500	4.00%	446%
Dumping Boxes	Un								54	69	38	13	70		
Street Towers	Un								32	9	138	0	0		
Semi-Towers	Un									0	10	11	0		
Agricultural Links	Un				18										
Cisterns	MS	100			8,991					53	77				
Disk Crates	Un						9	771	30	11	4	7	23		
Animal Ploughs	Un				1,616	1,915	1,847		273	0	0				
Dry Batteries	000'	4,329		3,522	4,741	3,153	2,931	2,808	155	1,214	1,076	657	250	-23.77%	6%
Batteries	Un	62,292	3,984	55,467	52,304	50,127	33,778	38,337	15,778	19,750	21,345	19,017	16,880	-10.23%	53%
Freezers	Un		26,596				5,744		3,746	3,092	2,804	4,946	6,348		
Acetilene	MS	238,000	82,456	102,346	116,080	126,560	125,408	116,713	127,130	121,362	126,122	154,605	149,133	4.46%	181%
Oxygen	MS	852,000	311,204	268,319	406,432	430,223	484,121	380,770	414,253	389,386	554,930	1,077,674	725,339	9.89	233%
Electrodes	tn	1,579		220	395	513	358	210	283	246	298	366	211		
Steel Rods	tn	26,572	3,560	2,465	4,134	3,595	2,654	1,670	2,328	1,832	4,099	8,600	2,500	0.61%	70%
Black Tube	tn	14,309	1,329	2,450	5,011	4,064	988	3,562	3,731	2,997	3,112	200			0%
Zinc Sheets	tn	12,009	1,924	2,626	5,258	3,970	3,817	3,137	2,584	3,596	3,882				0%
Machetes	000'	457	139	62	68	288	333	344		309	285	135	300		216%
Metal Containers	tn								1,424	361	1,205	866	390		
Cardboard Boxes	tn	22,882	2,319	4,124	3,360	2,655	3,341	2,896	1,406	1,000	1,455	1,615	102	-20.11%	4%
Conductor Cable Lines	tn	1,380	702	405	621	447	546	293	498	512	511	411	152	-7.01%	22%
Naval Const. and Rep.	H/h							710,878	550,000	663,164	942,657	1,095,000	1,240,000		
Radio Receptors	Un	25,821	3,338	50,661	70,945	72,774	90,055	88,598	38,828	36,989	33,831	21,427	33,468	3.39%	1003%
Televisions	Un	0	0	846	1,657	8,882	15,219	10,658	5,600	2,146	8,329	4,946	6,348		
Paper	tn	9,308		3,408	3,182	4,016	4,067								
Paper Paste	tn	32,438	0	0	141	1,757	1,793								
Barrels	Un.						34,213								
Metal Buckets	Un						23,260								
Aluminum Dishes	tn								492	429	577	506	44		
Cutlery	000'	2,610	1,178	748	1,030	1,304	990		1,250	214	388	1,940	624		53%
Metallic Capsules	000'	574,000	218,298	221,488	214,276	261,320	102,164					0	0		0%
Rubber Products	tn								35	20	41	55	30		
Metallic Furniture	tn								510	720		215	160		

Source: Ministry of Industry

APPENDIX
Table H.6

ANGOLA

MAIN CHARACTERISTICS OF THE MANUFACTURING INDUSTRY IN 1974
(Values in US$ 000') 1/

	Numbers of Enterpr.	Employm.	Investm.	Value of Prod.
Food Processing	238	51,037	173,701	188,543
Beverages	65	4,141	54,449	73,819
Tobacco Industry	6	1,284	7,992	35,157
Textile Industry	316	43,327	152,874	97,402
Shoe Manufacture	466	21,862	21,575	4,449
Wood Industry (furniture)	528	13,171	186,690	4,331
Furnit. Manuf. (wo/metal)	88	2,439	3,898	n.a.
Paper Ind.	25	4,743	28,268	22,165
Typography	74	1,713	7,874	n.a.
Tannery	40	883	2,677	5,748
Rubber Ind.	58	2,307	13,976	14,961
Chemicals	125	4,898	37,913	58,307
Petroleum Derivatives Ind.	6	823	32,283	36,024
Non-metal Mineral Prod.	307	10,447	82,205	30,472
Basic Metallurgy Ind.	39	3,058	22,992	17,047
Metallic Prod. Manufact.	751	15,660	39,331	21,378
Non-elect. Constr. Mac.	116	2,543	8,031	6,339
Electric Constr. Mac.	172	3,510	12,795	16,024
Transport Constr. Mat.	336	9,355	29,331	17,717
Sundry Industry	90	3,049	20,827	2,598
Totals	3,846	200,250	939,882	652,480
Averages: (US$ for values)				
Per Company:		52	244,379	169,652
Per Worker:			4,694	3,258

1/ At an exchange rate of 25.4 Escudos per dollar.
Source: Ministry of Industry.

ANGOLA

PUBLIC SECTOR INVESTMENTS IN THE MANUFACTURING INDUSTRY; 1980 - 1987

(Millions of Kwanzas)

Investment Category	1980 Food Proc.	1980 Light Ind.	1980 Heavy Ind.	1980 Mining	1981 Food Proc.	1981 Light Ind.	1981 Heavy Ind.	1981 Mining	1982 Food Proc.	1982 Light Ind.	1982 Heavy Ind.	1982 Mining
Civil Works	10	25	79			300	1,365	205	84	519	31	
Equipment	80	25	107		355	710	275	179	577	335	316	116
Technical Assistance	77	54	120		342	230	64	72			53	
Other 1/		54	23		4	80	17	12	39	184	9	
Totals by Sector	167	158	330	0	700	1,320	1,721	468	700	1,038	408	116
Yearly Totals				854				4,217				2,260

1/ Mainly for studies, financing costs and interest.
Source: Ministry of Industry.

ANGOLA

PUBLIC SECTOR INVESTMENTS IN THE MANUFACTURING INDUSTRY; 1980 - 1987 (Cont'd.)

(Millions of Kwanzas)

Investment Category	1983 Total	1984 Total	1985 Total	1981 Food Proc.	1981 Light Ind.	1981 Heavy Ind.	1981 Mining	1982 Food Proc.	1982 Light Ind.	1982 Heavy Ind.	1982 Mining
Civil Works		425,182	186,037	100	66	122		4	2		
Equipment	259,891	239,566	256,669	78	20	38	302				
Technical Assistance	431,908	7,000	20,583	31	110	26	16				
Other 1/				21	109	97	6				
Totals by Sector				129	304	283	324	4	2	0	0
Yearly Totals	1,064,295	671,748	463,289				1,140				6

1/ Mainly for studies, financing costs and interest.
Source: Ministry of Industry.

APPENDIX
Table I.1

ANGOLA

BUS PASSENGER DATA FOR MINTEC ENTERPRISES, 1984-1985

	1984	1985
Urban Fleet 1/	275	265
Non-urban Fleet 1/	367	359
Inter-provincial Fleet 1/	104	90
Total Existing Fleet	746	714
Passenger Traffic 2/:		
Urban	28,101	24,457
Provincial	6,161	4,863
Inter-provincial	902	479
Total Passengers	35,164	29,799

1/ Termed vehicles in existence, although most are non-operational.
2/ Units in thousands of passengers.
Source: Annuario Estatistico, MINTEC 1986.

APPENDIX
Table I.2

ANGOLA

ETP URBAN PASSENGER TRANSPORT IN LUANDA, 1985-1987

	1985	1986	1987
Bus Fleet (units)	155	155	118
Available Units	30	26	36
Active Units	22	17	15
Trips (number)	71,717	50,216	42,255
Route Kilometerage (thousand)	17,645	12,267	11,177
Passengers handled (thousand)	22,975	14,894	10,500
Receipts (thousand Kwz)	124,834	91,709	103,569

Source: ETP, MINTEC; 1987

APPENDIX
Table I.3

ANGOLA

VEHICLE OPERATING COSTS 1/, 1987
(Kz per 1000 vehicle-Km)

Component	Normal Operations 2/ Cost	(%)	MCurrent Operations 3/ Cost	(%)
Fuel and Lubricants	4,277	18	3,272	8
Tires	3,963	16	3,612	9
Maintenance:				
Parts	8,043	32	5,146	13
Labor	1,255	5	996	3
Depreciation	4,249	17	20,425	51
Interest	1,529	6	4,596	12
Crew	1,586	6	1,379	4
Total Costs, normal road maintenance 2/	24,902	100	39,425	100
Tonne/km cost 4/	0,778		2,464	
Total Costs, no road maintenance 5/	37,918		52,793	
Tonne/km cost 5/	1,185		3,300	

Notes:
1/ Financial costs (gross of tax), predicted for Volvo N10 6*4 22/24 tonne GVM vehicle from HDM III VOCs model. Cost inputs supplied by ETP Base Bungo depot, Luanda.
2/ Road; paved, 4 IRI, 1,5 positive grade, 1,5 negative grade, 50% uphill travel, 200 degrees/km curvature, default superelevation, zero altitude, one lane per travel direction.
3/ Road as 2 above.
Vehicle; 15,000 km per year, 120,000 km lifetime utilization, 5 years of life, 16 tonnes out but no return load.
4/ Normal operations: 32 tonnes per return trip, current operations; 16 tonnes per return trip.
5/ Predicted at 12 IRI roughness, with zero curvature.
Source: 1986 HDM III VOCs sub-model, ETP 1987 operating and cost data, Consultant's estimates of highway variables.

APPENDIX
Table I.4

ANGOLA

RAILWAY INCOME AND EXPENDITURE STATEMENTS FOR 1985 - 1986

	1985	1986
Luanda (CFL)		
Income	61,792	74,802
Expenditures	333,563	290,620
Balance	(272,770)	(215,818)
Benguela (CFB)		
Income	288,314	312,573
Expenditures	1,474,113	1,513,019
Balance	(1,185,799)	(1,200,446)
Mocamedes (CFM)		
Income	551,650	478,184
Expenditures	278,328	287,537
Balance	273,322	190,647
Total Deficit	(1,185,247)	(1,606,911)

Source: MINTEC, 1987.

APPENDIX
Table I.5

ANGOLA

TAAG CIVIL AIRCRAFT FLEET 1/ UTILIZATION DATA AT DEC. 1986

	Model	Year	Utilization		Landings	
			1986	Total	1986	Total
Boeing	707-373C	63	1,743	64,623	880	16,203
	707-349C	65	2,117	65,988	760	15,863
	707-349C	67	1,971	64,110	468	14,384
	707-347C	68	1,770	54,932	425	16,066
	707-347C	68	2,139	51,748	330	18,074
	707-382C	69	2,459	56,672	559	16,778
	737-2M2C	76	1,663	14,141	1,528	15,888
	737-2M2	79	1,727	11,160	1,768	11,687
	737-2M2	82	1,765	7,811	1,884	8,430
	737-2M2	85	1,954	3,141	2,043	3,378
	737-2M2	85	1,931	2,889	1,811	2,799
Fokker	F27-600	69	1,709	23,043	1,526	21,015
	F27-600	69	1,285	22,457	1,158	22,776
	F27-600	71	1,601	18,847	1,205	17,996
	F27-600	77	851	4,050	689	2,961
	F27-600	82	1,399	5,737	1,238	4,924
Yak	Yak-40	77	934	5,700	906	6,640
	Yak-40	77	725	5,449	703	6,320

Notes:
1/ Excluding 10 light aircraft; Piper Aztec (3), Piper Navajo (2), Piper Cherokee (1), Piper Twin Comance (1), Islander (1), and Cessna Skyline (1). Also excludes 1 Lockheed L-100 and 1 Yak-40 not operational in 1986.
2/ Units in Hours.
Source: TAAG - Situacao Actual e Perspectivas, 1986.

APPENDIX
Table I.6

ANGOLA

ANGONAVE 1986 CARGO BY CATEGORY
(Tonnes 000')

Category		Tonnage	
Food:			
	Wheat Flour	35,400	
	Corn	29,300	
	Soya Oil	13,600	
	Malt	10,600	
	Powered Milk	7,200	
	Others	25,000	
	Sub-total		121,100
Alcoholic Drinks			7,050
Equipment and Vehicles 1/			6,800
Chemicals:			
	Fertilizer	23,100	
	Soap	5,260	
	Amonium Sulphate	3,514	
	Sub-total		31,874
Other Products			
	Wagons	3,973	
	Cement	2,910	
	Iron Plates	1,472	
	Others	20,153	
	Sub-total		28,508
Containers (2335 empty)			5,400
Overall Total			200,732

1/ Excluding military items.
Source: Angonave, 1987.

APPENDIX
Table I.7

ANGOLA

ENATEL TELEPHONE SYSTEMS, 1980 AND 1985

Exchanges	1980 Number	1980 Capacity	1980 Lines	1985 Number	1985 Capacity	1985 Lines
Automatic:						
Luanda	7	37,000	32,370	9	38,500	36,000
Interior	8	15,368	10,800	9	18,368	11,520
Manual	27	4,090	3,180	29	4,390	3,480
Automatic Index: 1/						
Local		93			93	
Inter-urban		5			25	

1/ Index based on number of automatic to manual calls.
Source: MINTEC, 1987

APPENDIX

Table J.1

ANGOLA

PER CAPITA EDUCATIONAL EXPENDITURES BY PROVINCES - 1983

(kwanza)

Angola	916	Kunene	974
Bengo	1,784	Luanda	717 *
Benguela	1,381	Lunda Norte	1,335
Bie	469	Lunda Sul	1,335
Cabinda	1,599	Melange	870
Huambo	752	Namibe	1,467
Huile	734	Moxico	764
Kuanda-Kubango	3,364	Vige	1,152
Kuanza Norte	1,326	Zaire	1,320
Kunaza Sul	844		

* Exclusive central administration expenditures.

ANGOLA

MINISTRY OF EDUCATION - EXPENDITURE BY CATEGORIES - 1988/87

(Kw million)

	1979	1980	1981	1982	1983	1984	1985	1986	1987
Personnel Expenditures	9,325.1	7,211.9	7,265.8	8,232.7	7,628.2	7,848.7	7,651.9	8,764.4	10,055.5
Purchase of Goods	1,388.3	199.7	184.1	234.2	99.9	153.2	318.3	1,388.5	352.4
Durable Goods	1,192.2	38.0	21.4	113.6	39.0	56.2	168.8	1,227.4	203.8
Payment of Services	63.9	51.2	56.0	55.3	58.7	73.4	133.3	51.1	44.9
Other Payments	890.5	2,574.5	1,531.3	984.1	617.9	945.9	341.4	884.0	568.0
Food Purchases	254.1	700.0	600.0	597.0	400.0	600.0	162.0	296.5	261.3
Cooperantes Expenditure	510.9	0.0	0.0	46.2	50.0	74.4	92.7	379.7	152.5
Total	13,605.0	10,767.3	9,658.6	10,263.1	8,893.7	9,751.8	8,868.4	12,903.6	11,638.4

Source: Orcamento Geral do Estado

APPENDIX

Table J.8

ANGOLA

ENROLLMENT IN REGULAR PRIMARY EDUCATION, 1970-87

Years	Pre-School	I Level	II Level	III Level	I, II, III Levels
1970	2,567	440,985	29,268	13,911	484,159
1971	3,029	494,800	34,750	16,075	545,625
1972	3,464	517,421	40,024	18,324	575,769
1973	1,339	567,420	29,599	16,030	613,049
1976	361,446	592,450	70,933	8,025	671,408
1977	416,937	958,676	94,317	19,010	1,072,003
1978	746,328	142,839	113,884	24,663	281,386
1979	664500	1714817	176687	40272	1,931,776
1980	404,255	1,332,297	150,204	36,433	1,518,934
1981	342,316	1,258,858	111,191	21,025	1,391,074
1982	292,429	1,178,430	105,673	15,640	1,299,743
1983	254,736	1,065,025	132,284	27,971	1,225,280
1984	208,459	870,410	112,054	29,287	1,011,751
1985	227,654	970,698	130,749	34,745	1,136,192
1986	222,161	1,012,303	127,486	38,302	1,178,091
1987	208,352	1,033,502	108,878	31,707	1,174,087

Source: MED

APPENDIX

Table J.4

ANGOLA

ENROLLMENT IN ADULT EDUCATION, 1970-85

Years	I Level	II Level	III Level	Total
1980	165,497	56,680	12,757	234,934
1981	74,345	35,856	23,861	134,062
1982	62,420	50,055	32,077	134,552
1983	46,086	31,815	36,630	114,531
1984	40,968	30,303	36,587	107,858
1985	40,106	37,295	56,089	133,490
1986	107,426	51,766	27,811	187,003
1987	125,598	60,754	30,480	216,832

Source: MED

APPENDIX
Table J.5

ANGOLA

PRIMARY EDUCATION: PROMOTION, REPEAT AND DROPOUT RATES - 1980-84

Years	Rates	Grades							
		10	20	30	40	50	60	70	80
1980	Promotion	45.4	46.7	53.2	51.0	32.4	35.6	32.1	30.5
	Repeat	30.9	30.6	24.9	25.7	24.1	24.0	23.7	25.7
	Dropout	23.7	23.7	21.9	23.3	43.5	40.4	44.2	43.8
1981	Promotion	41.9	42.1	49.0	42.1	31.2	28 9	34.4	36.4
	Repeat	31.7	33.0	29.5	34.4	28.7	32.0	28.3	23.2
	Dropout	26.4	24.4	21.5	23.5	40.1	39.1	37.3	40.4
1982	Promotion	37.8	37.3	44.2	42.2	30.0	29.2	36.5	31.8
	Repeat	23.6	35.1	29.8	32.0	28.2	31.5	28.8	36.7
	Dropout	28.6	27.5	26.0	25.8	41.8	39.3	34.7	37.5
1983	Promotion	36.6	36.2	39.5	41.0	30.0	27.1	34.3	34.9
	Repeat	39.9	39.6	32.8	35.8	55.5	54.5	49.6	52.0
	Dropout	23.5	24.2	27.6	25.2	14.5	18.4	16.1	13.1
1984	Promotion	35.1	35.1	39.0	37.6	28.9	25.2	24.4	24.9
	Repeat	32.7	35.1	29.8	29.6	40.8	37.5	26.4	21.0
	Dropout	32.2	29.8	31.2	32.8	30.3	37.3	49.2	59.0
1980/87	Average Promotion	39.4	39.5	45.0	42.8	30.5	29.2	32.3	31.7
	Repeat	33.8	34.7	29.4	31.1	35.5	35.9	31.4	31.7
	Average Dropout	26.9	25.8	25.6	26.1	34.0	34.0	36.3	36.6
1986	Promotion	42.4	39.9	40.4	45.1	22.7	18.6	22.9	20.3
	Repeat	30.3	33.1	27.6	26.5	24.6	21.9	16.5	15.2
	Dropout	72.8	73.0	68.0	73.6	47.3	40.5	39.4	35.5

Source: MED

APPENDIX
Table J.6

ANGOLA

ENROLLMENT IN SECONDARY SCHOOL COURSES - 1970-85

Years	Secondary Schools			Pre-University
	Technical	Teachers	Total	
1970	1,697	242	1,939	
1971	1,567	1,906		
1972	1,975	386	2,361	
1973	2,135	405	2,540	
1977				1382
1978	1,075	778	1,853	1912
1979	2,133	1,284	3,417	2043
1980	2,882	1,916	4,798	2299
1981	3,018	2,393	5,411	2722
1982	3,397	2,930	6,327	3713
1983	3,637	3,263	6,900	3424
1984	3,871	3,479	7,350	3195
1985	4,599	4,070	8,669	3721
1986	5,027	4,747	9,774	3776
1987	0	4,790	0	0

Source: MED

ANGOLA

SECONDARY TECHNICAL SCHOOLS - PROMOTION AND EVASION RATES, 1983 AND 1985

		9th Class		10th Class		11th Class		12th Class		Total	
		Promotion Rates	Evasion Rates	Promotion Rates	Evasion Rates	Promotion Rates	Evasion Rates	Promotion Rates	Evasion Rates	Promotion Rates	Evasion Rates
Agriculture	1983	66.6	27.7	79.1	6.9	83.1	4.8	90.4	6.3	79.6	10.4
	1985	(71.3)	(14.4)	(78.0)	(10.2)	(70.2)	(17.5)	(84.7)	3.1	(76.7)	(10.6)
Economics	1983	47.6	2.4	45.7	14.5	28.9	9.9	90.0	10.0	41.7	17.9
	1985	(52.0)	(14.8)	(47.1)	(13.5)	(57.7)	(7.0)	(60.7)	(1.2)	(52.0)	(12.4)
Industrial	1983	35.7	30.5	36.8	24.5	42.6	15.2	48.4	11.3	38.2	24.5
	1985	(40.4)	(24.9)	(43.5)	(13.8)	(51.0)	(8.4)	(58.8)	(9.4)	(44.9)	(17.5)
Health	1983	67.6	16.2	89.7	2.1	67.8	0.0	95.0	0.0	75.4	7.2
	1985	(76.9)	(10.5)	(86.1)	(9.4)	(95.5)	(1.1)	(90.9)	(3.4)	(83.8)	(9.5)
Other	1983	46.1	14.2	40.3	2.2	75.7	8.1	60.0	0.0	51.6	6.7
	1985	(23.7)	(20.0)	(74.3)	(18.8)	(75.0)	(21.9)	(100.0)	0.0	(*)	(*)
Total	1983	44.6	25.6	49.4	15.0	47.9	9.4	66.0	7.7	48.3	17.6
	1985	(48.3)	(18.7)	(57.8)	(13.7)	(62.6)	(30.9)	(74.8)	(4.5)	(55.9)	(14.4)

Source: MED
(*) Missing Information

APPENDIX
Table J.8

ANGOLA

GRADUATES FROM TECHNICAL SECONDARY SCHOOLS - 1980/86

Type of Course	1980	1981	1982	1983	1984	1985	1986
Agriculture	0	10	84	57	61	83	29
Economics	139	119	83	89	13	51	64
Administration	23	29	14	15	0	0	0
Commerce	0	8	10	9	0	0	0
Statistics	0	0	7	9	13	0	0
Finance	55	44	30	38	0	0	0
Planning	61	38	22	14	0	0	0
Industry	0	53	69	60	81	94	104
Construction	0	7	4	11	13	0	0
Electricity	0	7	17	17	7	0	0
Mechanics	0	5	5	8	8	0	0
Chemistry	0	9	7	24	15	0	0
Politechnics	0	25	36	0	20	0	0
Other							
Health	0	0	42	20	75	80	88
Fishing	0	0	3	0	23	55	9
Petroleum	0	0	0	23	33	0	30
Journalism	0	0	0	0	8	0	
Total	139	182	281	249	294	368	324

Source: MED

APPENDIX
Table J.9

ANGOLA

ENROLLMENT IN HIGHER EDUCATION - 1984/87

	1984	1985	1986	1987
Faculty of Sciences	528	596	745	910
Agriculture	217	231	271	317
Law	636	662	741	546
Luanda	0	0	448	448
Lubango	0	0	22	21
Huambo	10	0	271	77
Economics	749	819	1047	1284
Luanda	622	662	784	855
Lubango	0	0	151	145
Huambo	127	157	112	284
Engineerings	760	795	874	999
Inst. of Educ. Sciences	921	1194	1276	984
Lubango	353	381	375	399
Correspondence Courses	585	813	901	585
Medic[illegible]	574	737	828	914
Luan[illegible]	553	617	673	676
	121	120	155	238
Total	4485	5034	5782	5874

Source: Universidade Agostinho Neto

ANGOLA

HIGHER EDUCATION GRADUATES - 1976/84

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Total
Faculty of Sciences	0	0	0	0	0	0	3	6	6	27	42
Agriculture	0	3	8	0	0	0	0	5	7	14	37
Law	0	0	0	8	0	0	0	0	30	22	60
Economics	0	0	0	8	0	2	100	75	31	20	236
Engineerings	12	4	5	3	13	9	15	24	14	6	105
Inst. of Educ. Sciences	0	0	0	0	0	0	0	0	0	44	44
Medicine	7	30	14	10	6	36	21	21	40	45	230
Total	19	37	27	29	19	47	139	131	128	178	754

Source: Universidade Agostinho Neto

APPENDIX

Table J.11

ANGOLA

UNIVERSITY PROFESSORS BY TYPE AND NATIONALITY - 1984/87

	ANGOLANS			
	Full-time	Part-time	Monitors	COOPERANTES *
Faculty of Sciences				
1984	20	0	10	32
1985	19	1	17	36
1986	21	3	14	29
1987	22	4	19	40
Agriculture				
1984	6	11	18	22
1985	13	8	17	23
1986	20	10	17	13
1987	19	8	17	18
Economics				
1984	5	27	3	17
1985	5	32	0	20
1986	30	37	31	79
1987	7	38	29	50
Engineerings				
1984	26	25	13	70
1985	30	0	2	72
1986	30	37	31	79
1987	24	21	17	41
Inst. of Ed. Sciences				
1984	3	0	35	65
1985	17	0	16	59
1986	25	8	17	67
1987	39	9	28	5
Medicine				
1984	34	16	35	11
1985	43	0	26	34
1986	67	16	36	17
1987	55	101	64	4
Total				
1984	94	79	114	217
1985	127	41	78	244
1986	193	111	146	284
1987	166	181	174	158

Source: Universidade Agostinho Neto
(*) The proportion of part-time cooperantes was 1984 - 14% and 1986 - 6%.

APPENDIX

Table J.12

ANGOLA

UNIVERSITY - EXPENDITURES BY CATEGORIES, 1980/89

	1980	1980	1981	1982	1983	1984	1985	1986	1987
Personnel Expenditures	629.8	175.6	155.8	292.3	182.3	307.6	312.4	447.3	549.4
Purchases of Goods	128.5	54.7	41.9	89.0	72.0	72.4	92.5	110.7	125.0
Durable Goods	66.5	15.0	7.3	30.0	22.0	20.4	40.9	46.5	59.3
Payment of Services	19.1	11.1	11.3	16.5	14.0	14.5	16.8	15.5	16.1
Other Payments	173.0	26.4	30.5	93.4	67.5	79.9	94.5	133.3	161.0
Food Purchases	0.0	0.0	0.0	10.0	10.0	13.2	12.8	24.4	41.9
Cooperantes Expend.	84.6	0.0	10.0	49.7	30.8	33.3	52.2	74.0	74.0
Total	950.4	267.8	239.5	491.2	335.8	473.8	516.2	706.8	851.5

Source: Orcamento Geral do Estado

APPENDIX
Table J.18

ANGOLA

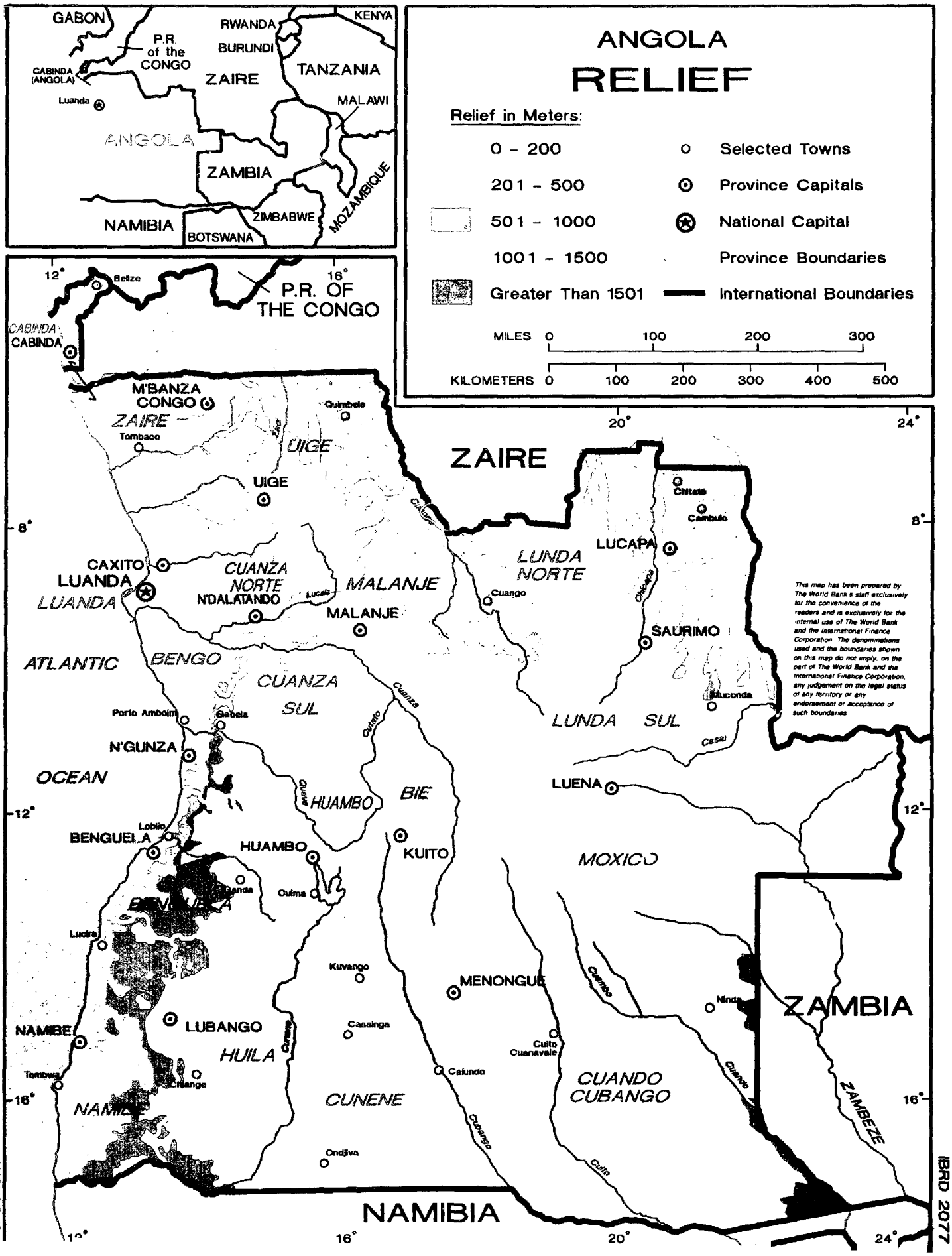
NATIONAL CENTER FOR LITERACY - EXPENDITURES BY CATEGORIES, 1982/89

	1981	1982	1983	1984	1985	1986	1987	1989
Personnel Expenditures	658.5	727.3	729.0	821.7		676.8	526.6	595.0
Purchases of Goods	151.8	120.4	56.9	57.8	41.1	46.0	49.2	48.5
Durable Goods	39.0	26.5	15.2	15.2	18.6	18.8	26.7	21.1
Payment of Services	19.3	5.9	4.4	4.5	10.3	8.6	8.1	8.7
Other Payments	295.8	217.6	68.2	66.0	27.9	22.9	22.1	51.7
Total	1,125.3	1,071.2	858.5	950.0	762.8	754.3	606.0	703.8

Source: Orcamento Geral do Estado

NOTES

MAP SECTION


GABON
P.R. of the CONGO
CABINDA (ANGOLA)
Luanda
RWANDA
BURUNDI
KENYA
TANZANIA
ZAIRE
MALAWI
ANGOLA
ZAMBIA
ZIMBABWE
MOZAMBIQUE
NAMIBIA
BOTSWANA
ANGOLA
RELIEF
Relief in Meters:
0 - 200
201 - 500
501 - 1000
1001 - 1500
Greater Than 1501
Selected Towns
Province Capitals
National Capital
Province Boundaries
International Boundaries
MILES 0 100 200 300
KILOMETERS 0 100 200 300 400 500
P.R. OF THE CONGO
Belize
CABINDA
M'BANZA CONGO
Tombaco
Quimbele
UIGE
ZAIRE
Chitato
Cambulo
LUCAPA
LUNDA NORTE
Cuango
Chicapa
SAURIMO
Muconda
LUNDA SUL
Casai
LUENA
MOXICO
CAXITO
LUANDA
LUANDA
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Lucala
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KUITO
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HUAMBO
Caconda
Culma
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Kuvango
MENONGUE
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NAMIBE
LUBANGO
HUILA
Casinga
Cuito Cuanavale
Cutato
Cuanza
Tombwa
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CUANDO CUBANGO
CUNENE
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ZAMBEZE
Ondjiva
NAMIBIA
Cuito
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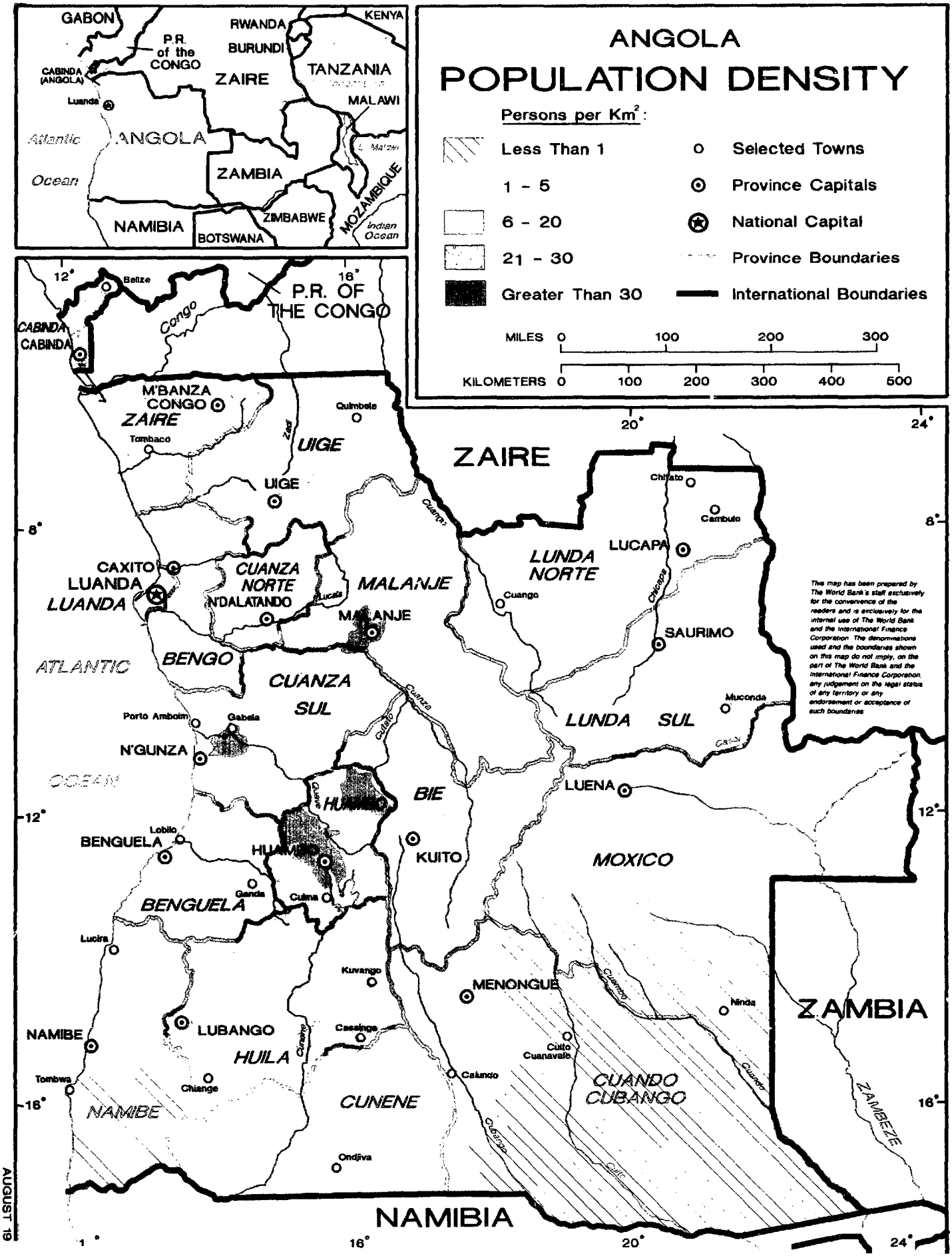
GABON
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MALAWI
CABINDA (ANGOLA)
Luanda
Atlantic Ocean
ANGOLA
L. Malawi
ZAMBIA
MOZAMBIQUE
NAMIBIA
BOTSWANA
ZIMBABWE
Indian Ocean
ANGOLA
POPULATION DENSITY
Persons per Km²:
Less Than 1
1 - 5
6 - 20
21 - 30
Greater Than 30
Selected Towns
Province Capitals
National Capital
Province Boundaries
International Boundaries
MILES 0 100 200 300
KILOMETERS 0 100 200 300 400 500
Belize
P.R. OF THE CONGO
Congo
CABINDA
M'BANZA CONGO
ZAIRE
Tombaco
Quimbele
Zaire
UIGE
ZAIRE
Chitato
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Cuango
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12°
16°
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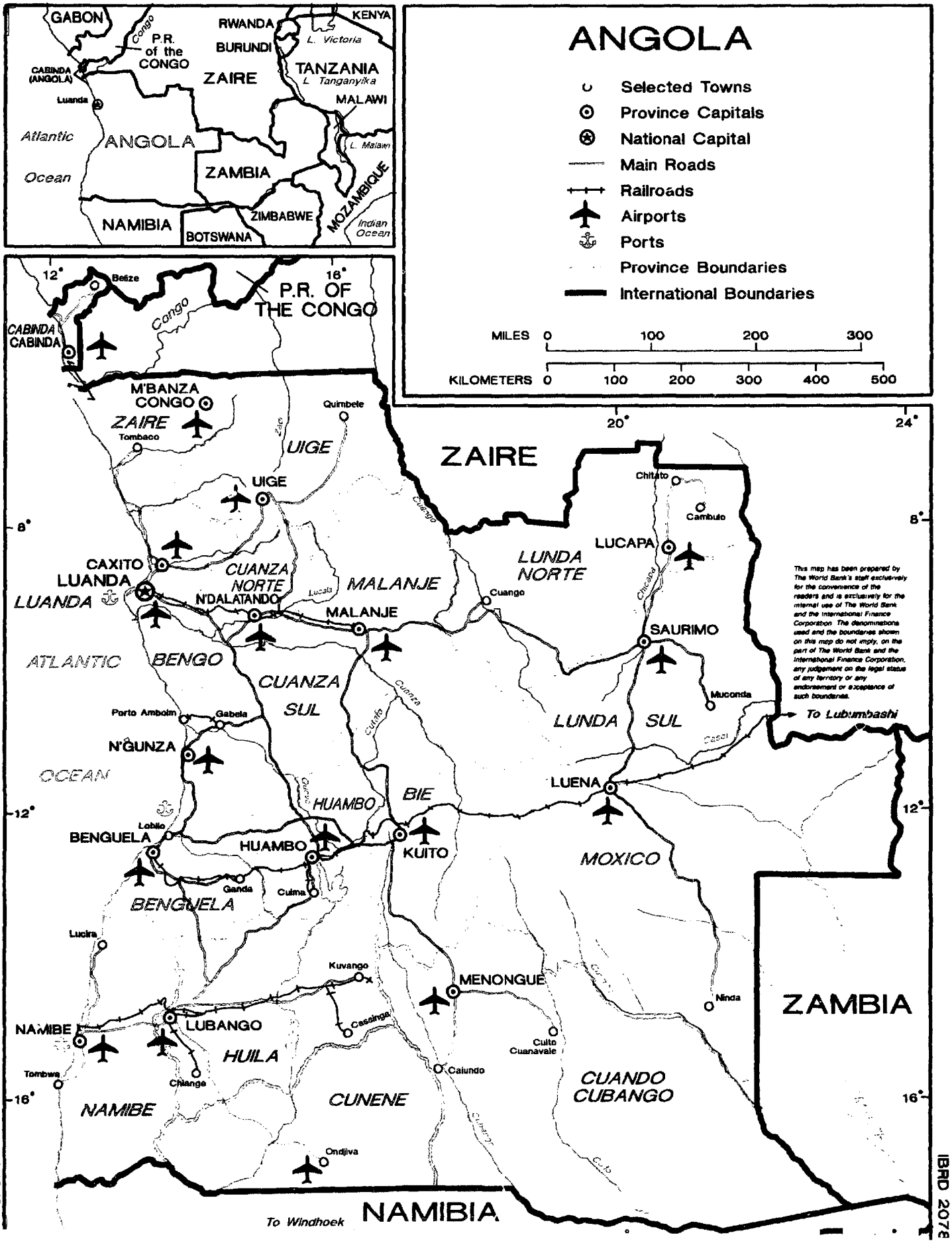
AUGUST 19


ANGOLA
Selected Towns
Province Capitals
National Capital
Main Roads
Railroads
Airports
Ports
Province Boundaries
International Boundaries
MILES 0 100 200 300
KILOMETERS 0 100 200 300 400 500
GABON
Congo
P.R. of the CONGO
RWANDA
BURUNDI
KENYA
L. Victoria
TANZANIA
L. Tanganyika
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CABINDA (ANGOLA)
Luanda
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ANGOLA
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MOZAMBIQUE
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Zaire
UIGE
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20°
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Cambulo
8°
LUCAPA
LUNDA NORTE
Chicapa
CAXITO
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CUANZA NORTE
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Gabela
Cuito
LUNDA SUL
Cassi
N'GUNZA
OCEAN
Cubal
HUAMBO
BIE
LUENA
12°
Lobito
BENGUELA
HUAMBO
KUITO
MOXICO
Ganda
Culma
BENGUELA
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MENONGUE
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Cassinga
HUILA
Culto Cuanavale
Tombwa
Chiange
Caiundo
CUANDO CUBANGO
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Ondjiva
Cubo
To Windhoek
NAMIBIA
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