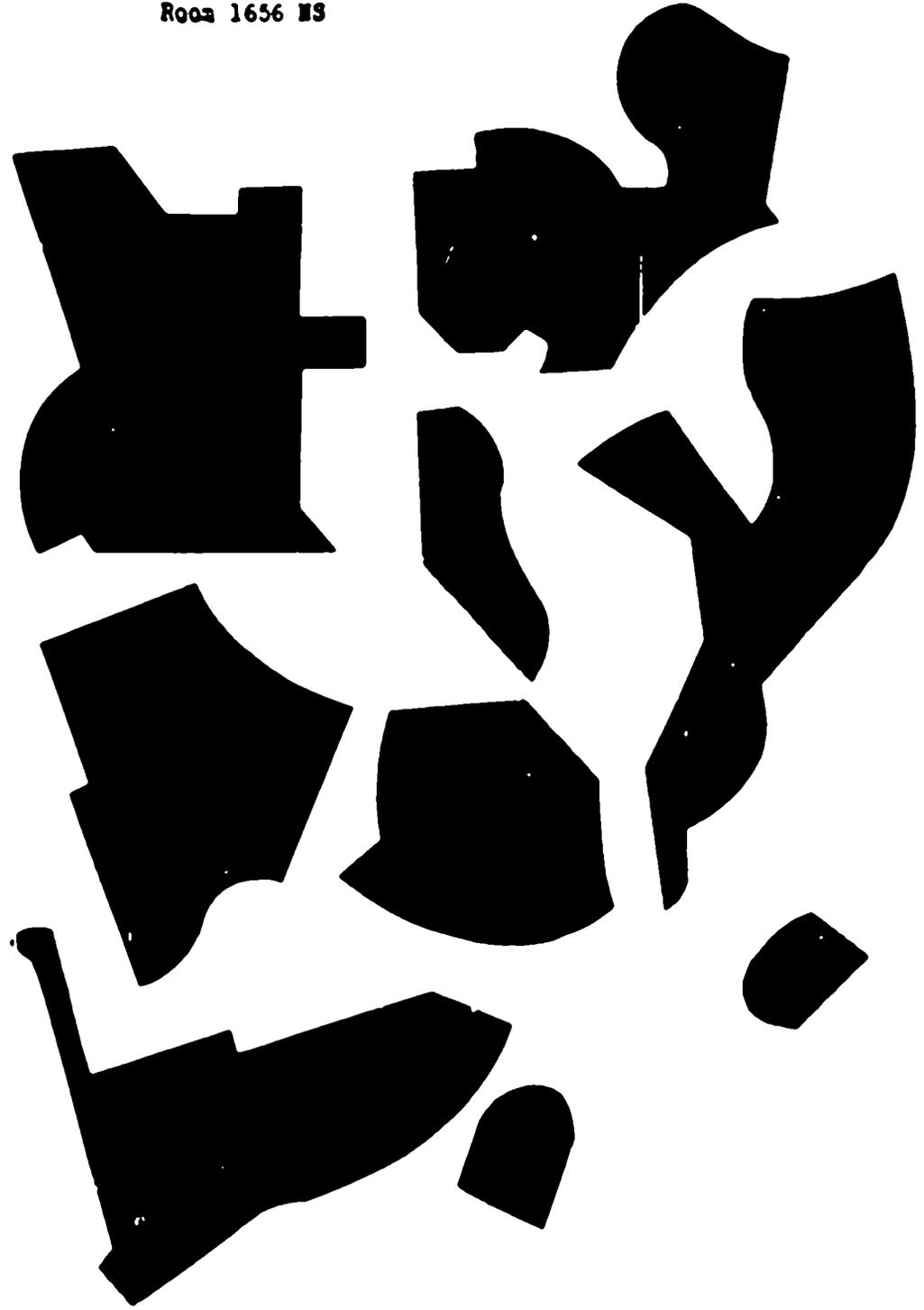




AO  
330,9673  
M648

I.Y.D.  
Reference Center  
Room 1656 NS

AID/afrc-1142 GTS  
ATAAC  
PN-AAF-090



*This paper was prepared to provide background information on the issues and opportunities for economic assistance to the countries of Southern Africa thru and following the periods of transition in Zimbabwe and Namibia. It includes Social, Geographic, Economic, and Political information.*

February 1977

Prepared by:

Southern Africa Task Force

Office of Southern and East African Affairs

## Transition in Southern Africa-----

# ANGOLA

**A FRAMEWORK FOR U.S. ASSISTANCE  
IN SOUTHERN AFRICA**

**COUNTRY RESOURCE PAPER**

**A N G O L A**

**THE OFFICE OF EASTERN AND SOUTHERN AFRICA AFFAIRS**

**BUREAU FOR AFRICA  
AGENCY FOR INTERNATIONAL DEVELOPMENT**

**February 1977**

**Prepared under Contract AID/afr-C-1142,  
Work Order 34**

**By: Joseph Miller, Ph.D.  
American Technical Assistance Corporation  
McLean, Virginia**

2229

TABLE OF CONTENTS

	<u>Page</u>
<b>I. GENERAL BACKGROUND</b>	
A. Physical Features	I- 1
B. Demography	I- 3
C. Culture	I-14
D. Education and Religion	I-19
E. Politics	I-26
<b>II. ECONOMIC OVERVIEW</b>	
A. Gross National Product	II- 1
1. Employment	II- 4
2. Price Data	II- 6
B. Balance of Payments	II- 6
C. Government Budget	II-10
D. Government Economic Plan	II-10
E. Development Problems and Opportunities	II-13
<b>III. FOREIGN DONOR ASSISTANCE</b>	III- 1
<b>IV. SECTORAL ANALYSES</b>	
<b>AGRICULTURE</b>	IV- 1
A. Livestock Raising	IV-12
B. Timber	IV-16
C. Fishing	IV-16
Summary	IV-17
<b>MINERALS AND MINING</b>	IV-18
A. Petroleum	IV-20
B. Iron	IV-23
C. Diamonds	IV-24
D. Other Minerals	IV-27
<b>TRANSPORTATION</b>	IV-27
A. Railroads	IV-28
B. Harbors	IV-34
C. Aviation	IV-36
D. Roads	IV-37
<b>ENERGY, POWER AND COMMUNICATIONS</b>	IV-38
A. Communications	IV-43
<b>HEALTH</b>	IV-43

	<u>Page</u>
EDUCATION	IV-45
POPULATION	IV-45
INDUSTRY	IV-46
SPECIAL PROBLEMS	IV-53
A. War Reconstruction	IV-53
B. Housing	IV-53
C. Municipal Utilities	IV-53
 BIBLIOGRAPHY	

## LIST OF TABLES AND FIGURES

			<u>Page</u>
FIGURE	I- 1	Rainfall Distribution in Angola	I- 4
TABLE	I- 1	Population Estimates in Angola	I- 6
TABLE	I- 2	Population Densities by District	I- 7
FIGURE	I- 2	Angola Concentration of Population According to the 1970 Census	I- 8
FIGURE	I- 3	Population Density of Angola (1960s)	I- 9
TABLE	I- 3	White Population in Angola	I-11
TABLE	I- 4	Urban Populations in Angola	I-12
TABLE	I- 5	Age and Sex Structure of the Angolan Population	I-15
FIGURE	I- 4	Angola's Peoples	I-17
TABLE	I- 6	Education in Angola	I-22
TABLE	I- 7	Education in Angola	I-23
TABLE	I- 8	Estimated Breakdown of European and African Enrollments in Angolan Schools	I-24
FIGURE	I- 5	Administrative Subdivisions of Angola	I-31
TABLE	II- 1	Estimates of Angola GNP 1958-74	II- 2
TABLE	II- 2	GNP/Capita - Angola, 1958-74	II- 3
TABLE	II- 3	Angola Balance of Payments, 1964-1974	II- 7
TABLE	II- 4	Angolan Exports/Imports, 1971-74	II- 9
TABLE	II- 5	Angola Direction of Trade, 1968-74	II-11
TABLE	II- 6	Angola Central Government Finances, 1971-75	II-12
TABLE	III- 1	Angola Development Plan Expenditures, 1966-72	III- 3
TABLE	IV- 1	Contribution of Major Agricultural Commodities to Angolan Exports, 1971-74	IV- 2
TABLE	IV- 2	Number of Plots Worked by "Traditional" Cultivators - Angola (1971-72)	IV- 4
TABLE	IV- 3	Percentages of "Traditional" Cultivators Producing Different Crops - Angola (1971-72)	IV- 4
TABLE	IV- 4	Agricultural Production in Angola Crops by Area Harvested (thousand hectares)	IV- 5
TABLE	IV- 5	Agricultural Production in Angola Crops by Weight	IV- 6
TABLE	IV- 6	MIAA Statistics on Angola's "Traditional Sector" - 1971-72	IV- 7
TABLE	IV- 7	MIAA Statistics on Angola's "Commercial Sector" - 1971-72	IV- 8
TABLE	IV- 8	Angola Coffee Production, 1973-74	IV-11

			<u>Page</u>
TABLE	IV- 9	Angola Production of Cotton and Sisal	IV-12
TABLE	IV-10	Stockbreeding and Animal Products, 1960-73	IV-14
TABLE	IV-11	Livestock Populations	IV-15
TABLE	IV-12	Angola Exports of Fish Products by Value	IV-17
TABLE	IV-13	Angola Exports of Minerals by Value	IV-19
FIGURE	IV- 1	Potential Gas and Oil Fields	IV-21
TABLE	IV-14	Angola Petroleum Production	IV-22
TABLE	IV-15	Angola Iron Ore Exports	IV-24
TABLE	IV-16	Angola Diamond Production	IV-25
TABLE	IV-17	Contribution of Transportation to Angola's Balance of Payments	IV-28
TABLE	IV-18	Angola Rail Transportation	IV-29
TABLE	IV-19	Zambia and Zaire Use of the Benguela Railway	IV-29
TABLE	IV-20	Zambian and Zairean Traffic through Lobito	IV-31
TABLE	IV-21	Sea-Borne Shipping at Angolan Ports	IV-35
TABLE	IV-22	Angola Port Turnover	IV-36
TABLE	IV-23	Angola Air Freight	IV-37
TABLE	IV-24	Angola Electric Power	IV-39
FIGURE	IV- 2	Proposed Water Development in the Cunene River Catchment Area	IV-41
FIGURE	IV- 3	Kunene River Development Project	IV-41(a)
TABLE	IV-25	Medical Facilities in Angola	IV-44
TABLE	IV-26	Building in Main Urban Centers	IV-47
TABLE	IV-27	Gross Value of Production in the Manufacturing Sector, 1960-73	IV-48
TABLE	IV-28	Manufacturing Industries, 1960-73	IV-49
TABLE	IV-29	Manufacturing Industries, 1960-73	IV-50
TABLE	IV-30	Manufacturing Industries, 1960-73	IV-51



# **I**

## **GENERAL BACKGROUND**

- **Physical Features**
- **Demography**
- **Culture**
- **Education**
- **Politics**

## I. GENERAL BACKGROUND

### A. Physical Features

The land area of Angola, a country about the size of Egypt or the Republic of South Africa, comprises 481,351 square miles (approximately 1.3 million square kilometers). The terrain varies from heavily-wooded hills and patches of montane forest in the north to flat, dry brushland and barren desert in the south. No significant geographical divisions mark Angola's boundaries with neighboring Zaire to the north, Zambia in the southeast, and Namibia to the south. Only the portion of Angola's eastern border with Zaire along the large Kasai River and the small arid section of the Namibian frontier formed by the lower Kunene River follow marked physical features. The present boundaries, entirely products of complex European diplomacy in the 1880s and 1890s, therefore correspond only roughly to the geography of the country. Angola includes the non-contiguous enclave of Cabinda north of the Zaire River, which is geographically part of adjacent regions of Gabon, Congo-Brazzaville, and Zaire.

A south-north escarpment running parallel to the Atlantic coastline of Angola some hundred miles inland forms the country's major topographical feature, shaping its demography, economy, and ethnic patterns. This mountainous crest attains its greatest heights in the west-central portion of Angola just east of the coastal cities of Lobito and Benguela, where peaks attain altitudes of more than 2,500 meters above sea level. The mountains rise out of a coastal lowland and form the western edge of a rolling high plateau (the planalto as the Portuguese termed it) varying between 1,000 and 1,500 meters in elevation that covers most of the rest of the country. Two spurs run east and southwest from this crest. One, a nearly imperceptible rise extending along the line of the Benguela railroad, forms the watershed between affluents of the Kasai and Congo/Zaire River system in northeastern Angola and the Kwando\* and Kubango (or Okavango) Rivers in the southeast. The southwesterly spur reaches towering heights above the coastal plain near its southern extremity, the Humpata plateau near the city of Lubango (formerly Sã da Bandeira). The more gradual eastern slopes of this ridge fall away toward the valley of the Kunene River, which flows south before swinging westward toward the Atlantic. The northwestern slopes of the planalto are drained by western Angola's other major river, the Kwanza, which starts flowing toward the north before turning west and dropping to near sea level through a gorge at Cambambe.

\* Portuguese spellings of geographical terms may vary from the standard orthography used here (e.g., Cuando, Cubango, Cassai, etc.).

Mountainous highlands rise again to the north of the Kwanza River, though they reach only modest elevations of 1,000 to 1,500 meters in such broken terrain as the "Dembos" region north of the Bengo River. The high plateau here runs east toward Malanje before dropping sharply into a broad low depression through which flows the middle Kwango River. Hilly uplands also extend north toward the lower Zaire River. The Zaire passes through a gap in these elevations, which resume north of the river and there form the rugged Mayombe hills of the Cabinda enclave.

The lands east of the headwaters of the Kwango, Kwanza, Kunene, Kasai, and Kwando/Kubango Rivers, all of which take their sources within a few miles of each other on the eastern slopes of the central planalto, are relatively flat, sandy, and open. The northeastern section of the country declines gently northward and is cut by more than a dozen major rivers, all flowing through parallel valleys toward eventual junctures with the lower Kasai. The rivers in the dry southeastern quadrant of Angola converge on one another like the ribs of a giant fan, whose handle lies indistinctly hidden in Botswana's Okavango marshes. A few are the western tributaries of the upper Zambezi in Zambia.

Angola's low coastal fringe forms a geographical province quite distinct from the country's highland mass. The coastal plain varies in width from nearly 100 miles in the Kwanza valley east of Luanda to hardly more than 15 miles behind Benguela. Petroleum-bearing structures lie beneath its sedimentary sandstones and limestones, with the richest so far known in the north under the silts spreading from the mouth of the Zaire. The coastline is generally low and open, but the cold northward-flowing Benguela Current has created a number of harbors by drawing the river sands into bars which protect the shores north of the Kunene (Bahia dos Tigres) and the Kwanza (Luanda). The same effect shelters the bays on the north side of protruding headlands (e.g., Porto Alexandre, Mocamedes, Benguela/Lobito, Porto Amboim, and Santo Antonio do Zaire) but also closes most of Angola's rivers to ocean-going shipping by pulling sandbars across their mouths. Only the Kwanza (for vessels of shallow draft) and the Zaire are navigable for any distance inland. Some ports, notably Cabinda, Novo Redondo, Ambriz, and Ambrizette, lie exposed to the open sea.

Angola's moisture arrives from the east in a single rainy season each year, with a single peak in the intensity of precipitation toward the north but two peaks in the southern latitudes. Northern Angola's precipitation begins in September or October each year and lasts around seven months until the following April or May; a brief slackening may occur in January or February. Substantially more moisture is available in the north than in the south, with the heaviest precipitation occurring in the Mayombe

hills of Cabinda, where upwards of 98 inches may fall in a year, and in northwestern and northeastern Angola. Totals gradually diminish toward the south and west, and parts of the middle Kunene basin receive only four to twenty inches annually in highly irregular and undependable patterns. Rainfall occurs in somewhat heavier amounts and with greater regularity toward the east, but the decrease from north to south is evident there as well (Map I).

Less rain falls everywhere along the coast than in adjacent parts of the interior. Luanda receives less than twenty inches per year and is subject to near-total failure of the rains; Benguela and Lobito average less than fourteen inches, and Mocimedes rarely has as much as four inches in a season. The reason for the coastal dryness lies in the cool onshore winds that blow off the cold Benguela Current everywhere south of Luanda. The coastal plain south of Benguela becomes the arid and barren Namib Desert, one of the driest regions in the world. The entire southern and southwestern part of the country is prone to failure of the rains at frequent intervals.

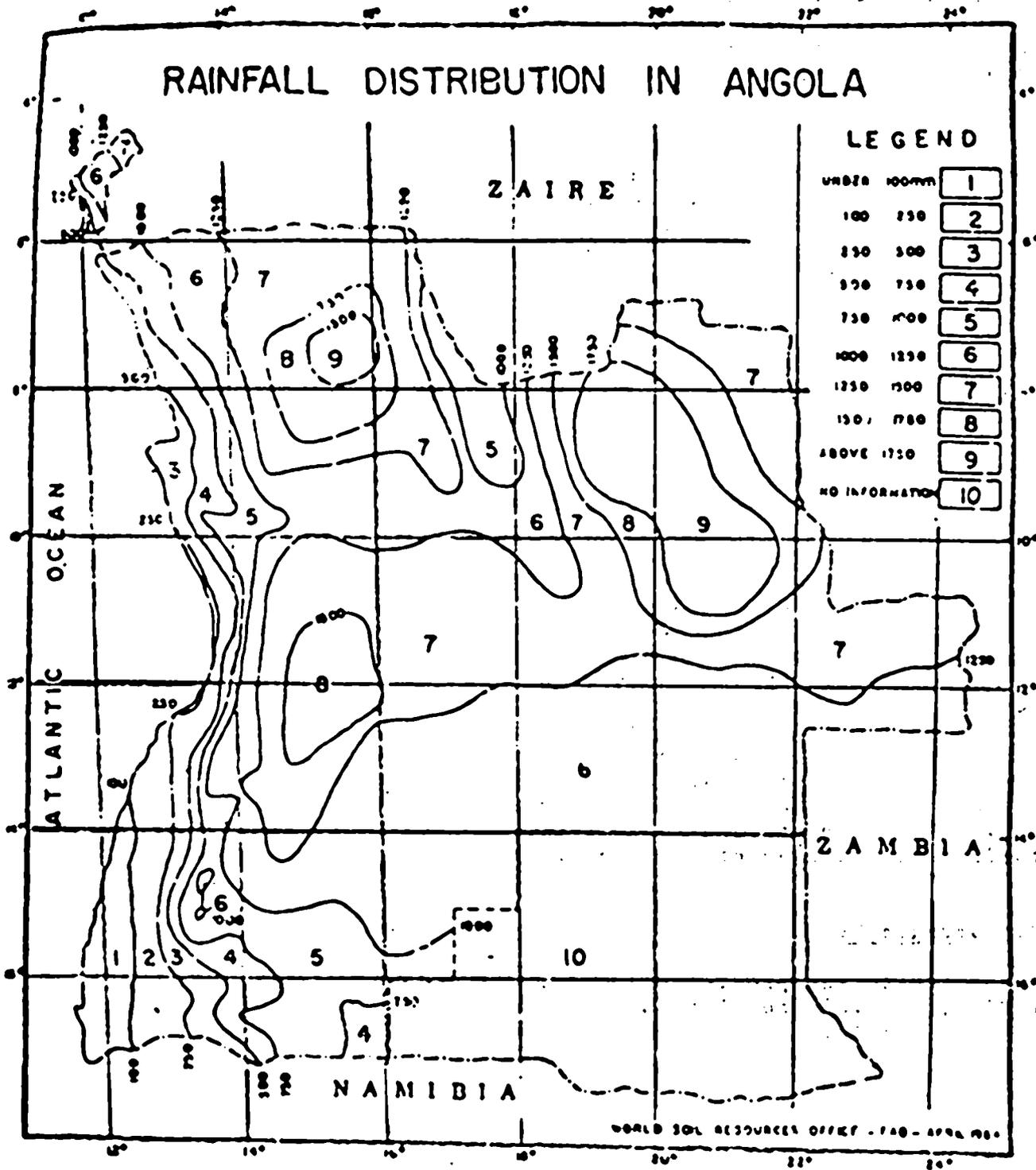
Vegetation varies according to rainfall and altitude, with the heaviest forest cover occurring toward the northwest and diminishing in the southeast to dry brushland. Hardwood forests cover the main escarpment north of the highland crest and were once the dominant vegetation regime in the Mayombe hills of Cabinda before timbering and defoliation destroyed the forest cover. Patches of mountain forest occur as well along the escarpment east of the valley of the middle Kwango River. The rivers in the northern half of the country run through valleys filled with thick gallery forest, while those in the south support only thinner vegetation along their banks. Except for the coastal plain, the interfluvies and plateaus are grassy savanna or wooded grass savanna, depending on the amount of rainfall and altitude. The more heavily wooded regions occur toward the north and east. Thick and thorny brush prevails in some northern parts of the coastal plain, giving way to dry scrub and eventually to sand dunes in the south.

## B. Demography

According to the provisional totals of the most recent census (1970), Angola's population was 5,673,046 persons -- 4.5 persons per Km<sup>2</sup> (or 11.8 per square mile) for the entire country. These figures are of uncertain reliability owing to the conditions of warfare prevailing in the northern, eastern, and southern districts of Angola in 1970. However, they represent an increase of 843,000 over the 4,830,000 total count in 1960 -- a growth of 17.4 percent over the decade.\* This approximates a crude annual

\* 1940 population -- 3,738,000; 1950 population -- 4,146,000 (11% increase). 1960 population was 16.5% larger than that of 1950.

FIGURE I-1



rate of growth of 1.6 percent when averaged over the ten years between censuses. This growth rate, when projected forward from the base of the 1970 census yields the projections given in column I of Table I-1. Alternative assumptions and resulting projections are listed in columns II, III, and IV. Under the various assumptions, a continued annual population increase of 1.5 percent would produce an average population density of 5.8 persons per Km<sup>2</sup> by 1985, while a decline to an average annual increase of 1 percent would produce population densities averaging 5.3 persons per Km<sup>2</sup>. An increase of the annual rate of growth to 2 percent would give a mean national population density of 6.1 persons per Km<sup>2</sup> by 1985. U.S. Bureau of Census figures (2.2%) project a population density of 6.3 person/Km<sup>2</sup>.

The national averages mean relatively little in Angola, however, since the population is extremely unevenly distributed over the nation's land area. Most people have historically concentrated in the most fertile and moister regions, and a flow of persons from the rural areas to the towns between about 1950 and 1974 led to secondary clusterings in the urban zones. The breakdown of population by districts (Table I-2) shows that the central planalto (corresponding approximately to the district of Huambo) has been by far the most densely populated of Angola's sixteen districts. It was followed in 1960 by the heavily-urbanized Luanda and Benguela Districts, which changed places between 1960 and 1970. Luanda District is comprised almost entirely of Luanda and its suburbs. Benguela includes the towns of Benguela and Lobito.

The enclave of Cabinda and the Cuanza-Norte district, the latter comprehending the mountainous regions and the plantation district east of Luanda, also had relatively high densities. The average population density of these five most heavily peopled districts (12.8 persons per Km<sup>2</sup> in 1960, 16.5 in 1970) was ten to fifteen times greater than the five least densely inhabited districts (1.2 persons per Km<sup>2</sup> in 1960, 1.1 in 1970). The districts of low population density all lie in the far eastern portions of the nation with the exception of Zaire District in the far north-western corner. (See Figures I-2 and I-3).

The aggregate district figures for 1950-74 were strongly affected by three factors that may no longer apply to the distribution of Angola's population in 1977: white colonization and settlement, African movement from the rural areas to the towns, and war. Angola's population of European origin had historically been miniscule until the Salazar regime in Portugal began to encourage white settlement during the 1930s and 1940s. The white population

TABLE I-1

Population Estimates, 1971-1985 (in millions)  
 Basis: 1970 Census, preliminary analysis

<u>Year</u>	<u>Assumptions I</u> 1.6%	<u>II</u> 1.0%	<u>III</u> 2.0%	<u>IV</u> 2.2% <sup>a</sup>
1970	5.7			
1971	5.8	5.7	5.8	5.8
1972	5.9	5.8	5.9	5.9
1973	5.9	5.8	6.0	6.1
1974	6.0	5.9	6.1	6.2
1975	6.1	6.0	6.3	6.3
1976	6.2	6.0	6.4	6.5
1977	6.3	6.1	6.5	6.6
1978	6.4	6.1	6.6	6.8
1979	6.5	6.2	6.8	6.9
1980	6.6	6.3	6.9	7.1
1981	6.8	6.3	7.1	7.2
1982	6.9	6.4	7.2	7.4
1983	7.0	6.5	7.3	7.5
1984	7.1	6.5	7.5	7.7
1985	7.2	6.6	7.6	7.9

<sup>a</sup> Working figures used by U.S. Census estimates in  
World Population: 1975

1960-62	-- 1.7%
1963-64	-- 1.8%
1965-66	-- 1.9%
1967	-- 2.0%
1968-69	-- 2.1%
1970	-- 2.2%

TABLE I-2

Population Densities by District

<u>District</u>	<u>Area (Square Kilometers)</u>	<u>1960 Census</u>	<u>1960 Population Density</u>	<u>1970 Census</u>	<u>1970 Population Density</u>	<u>%Change</u>
Cabinda	7,270	58,547	8.05	80,857	11.12	
Zaire	40,130	103,906	2.59	41,766	1.04	+38.1
Uige	55,818	399,412	7.15	386,037	6.91	-59.8
Luanda	33,789	346,763	10.26	560,589	16.59	- 3.4
Cuanza-Norte	27,106	263,051	9.70	298,062	10.99	+61.7
Cuanza-Sul	59,269	404,650	6.83	458,592	7.73	+13.3
Malanje	101,028	451,849	4.47	558,630	5.52	+23.5
Lunda	167,786	247,273	1.47	302,538	1.80	+22.4
Benguela	37,808	487,873	12.90	474,897	12.56	- 2.6
Huambo	30,667	597,332	19.48	837,627	27.31	+40.2
Bie	71,870	452,697	6.30	650,337	9.04	+43.4
Moxico	195,786	266,449	1.33	213,119	1.06	-20.3
Cuando-Cubango	192,079	113,034	0.59	112,073	0.58	- 1.7
Mocimedes	55,946	43,004	0.77	53,058	0.94	+22.1
Huila	166,348	594,609	3.57	644,864	3.87	+ 8.4
Total	1,246,700	4,830,449	3.87	5,673,046	4.55	

Sources: 1960 - Angola, III Recenseamento Geral da Populacao, First Volume.  
 1970 - Provisional figures published in the press.

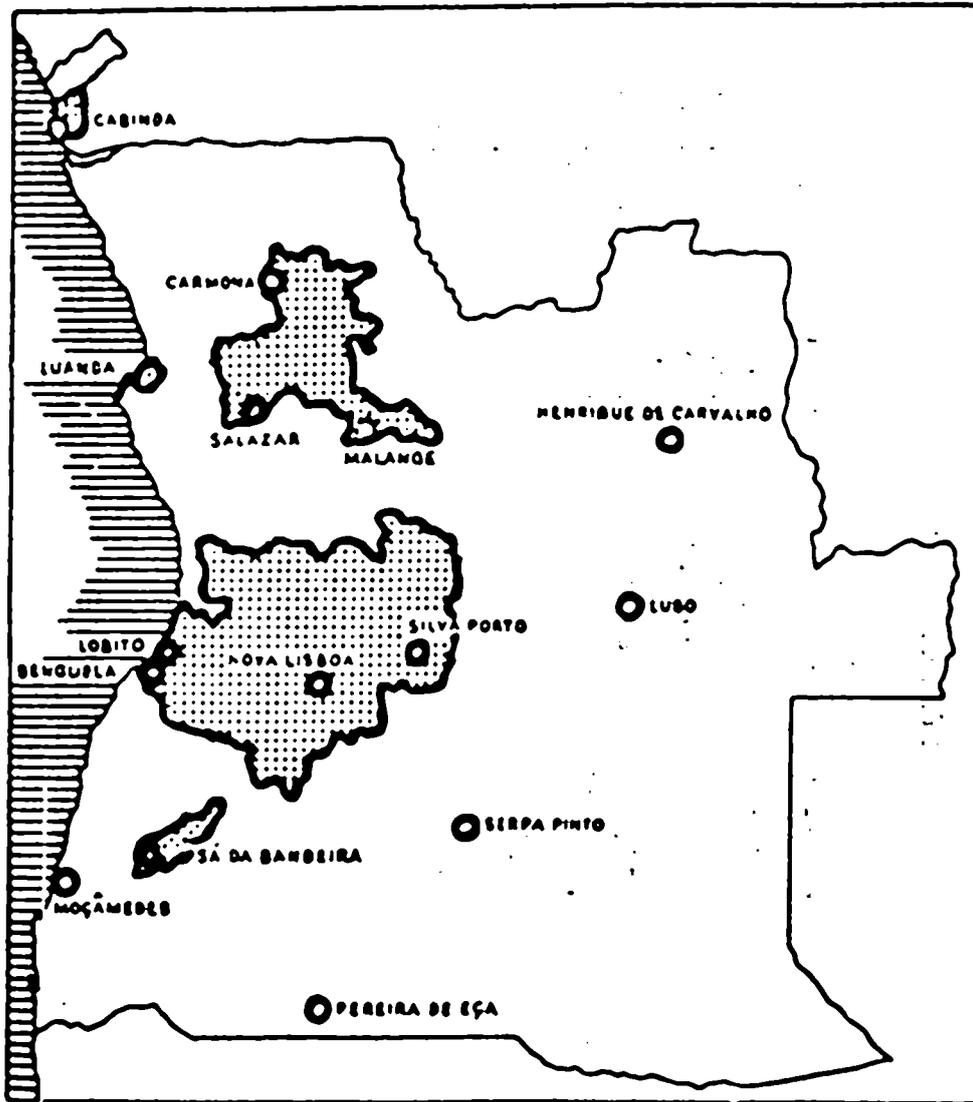
FIGURE I-2

# ANGOLA

## CONCENTRATION OF POPULATION

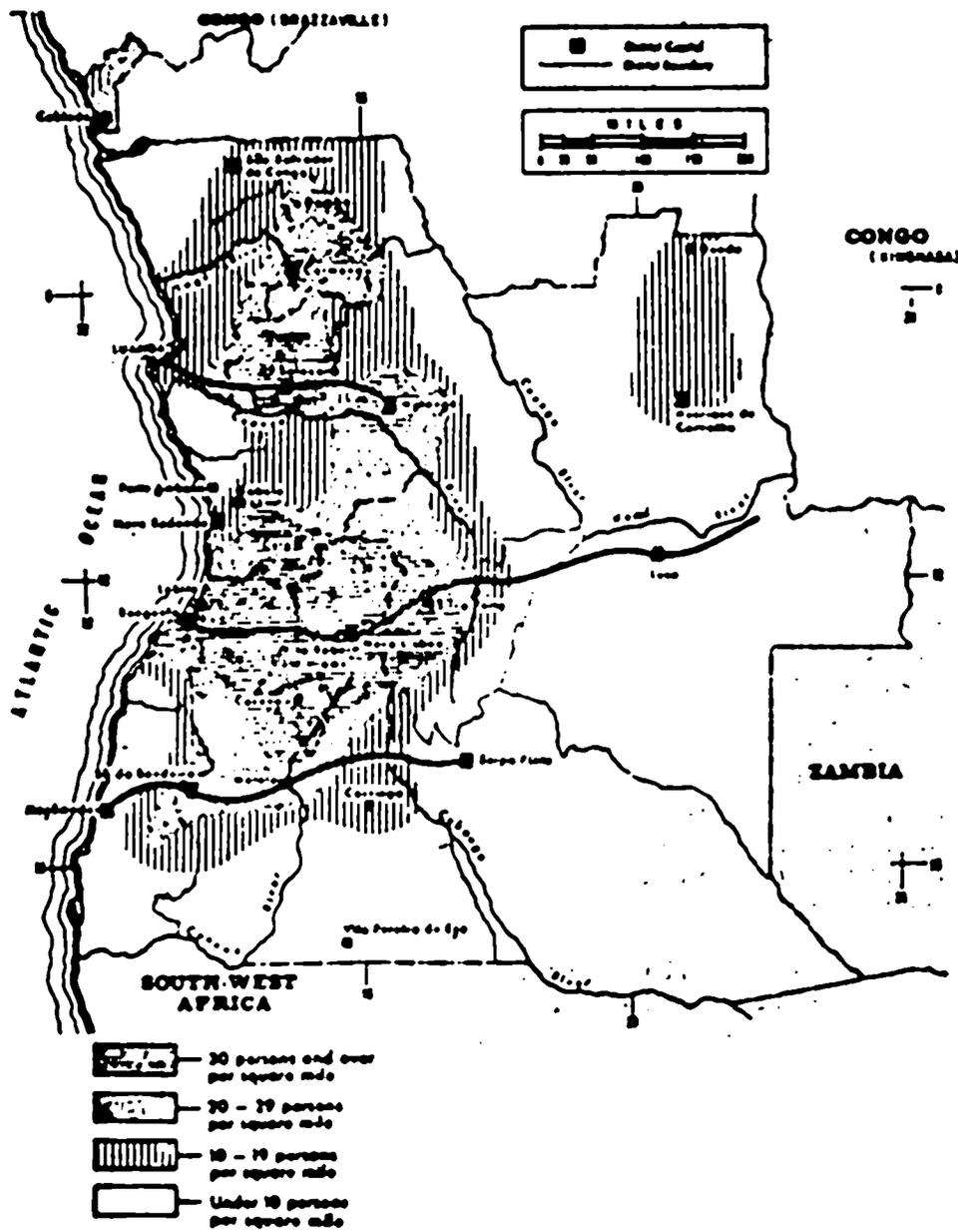
according to the 1970 Census

The bordered areas represent 12.2% of the territory  
and contain 60.2% of the population



adaptation of a map established by Serviços Provinciais de Planeamento e Integração Económica, Luanda 1972

FIGURE I-3  
 POPULATION DENSITY OF ANGOLA (1960s)



then grew rapidly until it peaked in 1974 around 350,000 or less\* (see Table I-3). European immigration contributed to the buildup of population in Luanda (believed to have had 150,000 whites in 1970) and Huambo districts between 1960 and 1970, although some Portuguese went as well to Malanje and Huila districts. Nearly all European Portuguese left Angola in a massive airlift conducted during the latter half of 1975, and few European Portuguese are believed to remain there now. Angola in July 1976 prohibited the return of most of these emigres from Portugal, Brazil, Rhodesia, and other countries to which they had fled.

The movement of Africans from Angola's rural areas to its towns first gained momentum during the 1950s and increased during the 1960s and early 1970s, as Table I-4 indicates. The census figures do not distinguish urban growth owing to white immigration from increases stemming from the movement of Africans from the rural areas of the colony, but if two-thirds of the increase in Europeans living in Angola (210,000 -- 1960-1970) are assumed to have remained in the cities, then the movement of the African population would have been on the order of 291,000 persons or 59.9 percent of the total urban growth over the decade. The African movement into the towns would primarily have affected the figures for Luanda and Benguela districts, the only two densely-populated regions in the arid coastal plain. The other towns are situated in districts of intermediate-to-heavy density of rural population, and the urban population of Huambo District, for example, was only 7.3 percent in 1970. The high densities of the districts of Cuanza-Norte, Huambo, Bie, and Cabinda result from generally thickly-settled rural areas, which corresponds well to the tendency of most rural agriculturalists to reside in the best watered and most fertile parts of the country.

The table of urban population in Angola (Table I-4) also indicates that however dramatic growth in the towns may have been between 1950 and 1970, the net effect on the rural areas was less intense.

\* The estimate of 350,000 is based on adding yearly immigration figures to the 1960 census estimate of whites in Angola. The results of the 1970 census did not distinguish Angolans by race and preliminary published figures did not include data on place of birth. The Portuguese government publically proclaimed inflated figures for Europeans in Angola (in the 400,000 to 500,000 range) as part of their effort to justify continued colonial rule. The lower estimates of refugees from Angola seems more accurate, especially since recent Portuguese estimates of refugees from Angola imply a former settler population of around 280,000. The white population remaining in 1976 was estimated on the basis of press reports.

f

TABLE I-3

White Population in Angola

<u>Year</u>	<u>Number</u>	<u>%</u>	<u>Change (% decade)</u>	<u>(No/Year)</u>
1900	9,198	0.2 *		
1920	20,700	0.5 *	+ 62.5	+ ,575
1940	44,083	1.2	+ 56.5	+ 1,169
1950	78,826	1.9	+ 78.8	+ 3,474
1960	172,529	3.6	+118.9	+ 9,370
1970	290,000 *	5.1 *	+ 68.1 *	+ 11,747
1974	350,000	5.8 *	+ 51.7 *	+ 15,000 *
1976	20,000	0.3 *	-471.4 **	-165,000 *

\* estimated

\*\* Projected rate of decrease over a decade; the loss for 1974-76 was 94%

A rough guess at the number of rural Angolans migrating to the towns over those decades (see assumptions stated in the table) suggests that about 4 percent to 5 percent of the total population may have left the rural areas. The apparently minor aggregate consequences of urbanization for rural Angola would have been magnified to the extent that urban migrants came primarily from the category of economically productive young males (i.e., 15-40 years in age) as some rough data seem to indicate. All of these trends halted during the war of 1975-76, and many cities were left partially abandoned as many recent immigrants returned to their home villages.

War in the northern and southeastern districts of Angola after 1965 is the most likely explanation for population declines observed in Zaire and Uige Districts (in the north) as well as in Moxico and Cuando-Cubango Districts in the remote southeast. As of 1971, the United Nations recognized 413,810 Angolan refugees in Zaire (virtually all from the northern districts of Zaire and Uige), 10,000 refugees in Zambia (from the Moxico and Cuando-Cubango Districts), 3,800 in Botswana (from the same southeastern districts), and ten in Kenya. There were undoubtedly others in Congo-Brazzaville, mostly from the enclave of Cabinda, and the real figures for Zaire may have been 50 percent higher than those reported.

TABLE I-4

Urban Populations in Angola

<u>Town</u>	<u>1970</u> <u>Census</u>	<u>X</u> <u>Change</u>	<u>1960</u> <u>Census</u>	<u>X</u> <u>Change</u>	<u>1950</u> <u>Census</u>	<u>X</u> <u>Change</u>
Total urban (approx.)	856,000	+ 76	486,000	+111	230,000	
Percentage urban	15.1%		10.3%		5.5%	
Percentage movement to cities from rural regions *	5.4%		4.3%		---	
Luanda	475,328	+211	225,000	+ 58	142,000	
Lobito	60,000	+ 20	50,000	+108	24,000	
Nova Lisboa	61,885	+ 59	39,000	+ 39	28,000	
Benguela	41,000	+ 78	23,000	+ 53	15,000	
Sa da Bandeira	31,674	+211	15,000	+ 25	12,000	
Malanje	31,600	+ 66	19,000	+211	9,000	
Silva Porto	19,000	+317	6,000	- 33	9,000	
Mocamedes	12,000	+ 50	8,000	- 11	9,000	

\* Calculated on following assumptions: urban net rate of population increase equal to that of rural areas, percentage based on a median population for decade, and assumed 2/3 immigrant Europeans counted in urban population.

War may also have produced some inaccurately low figures in the 1970 census, since the Movimento Popular Para a Libertacao de Angola (MPLA) claimed to control large segments of the southeastern districts and may, in fact, have been able to limit census enumerators' access to some areas. The MPLA also hindered the census in the Dembos Region of Cuanza-Norte. The Frente Nacional da Libertacao de Angola (FNLA) issued similar claims to control populated areas of Uige and Zaire Districts but is generally believed to have had less capacity to disrupt Portuguese administrative activities there than the MPLA in the southeast. Population losses recorded in the north therefore seem mainly to represent emigration to Zaire. The Uniao Nacional Para a Independencia Total de Angola (UNITA) made similar claims to authority in parts of Bie and Huambo but is not regarded as capable of having significantly reduced the totals reported in the 1970 census there.

These recent trends have shifted since 1974 in ways that cannot yet be fully assessed. The white exodus has already been noted. Ethnic overtones in the conflict between the MPLA, FNLA, and UNITA caused a flight of alien immigrant groups from areas under the control of each. Thus, Ovimbundu and Kongo people abandoned Luanda to the Mbundu-associated MPLA, and Ovimbundu coffee harvesters in Uige and Cuanza-Norte fled from the Kongo-dominated FNLA as well as later from the MPLA. The war of 1975-76 might have reinforced the numbers of Kongo refugees in Zaire as some estimates now place the size of the refugee population outside Angola at 600,000. The return of Ovimbundu from the north and from Luanda to Huambo and Bie Districts would have filled in the numbers of whites who left those districts. There is reported to have been some movement of townspeople back into the rural areas, but the size of this movement cannot be estimated; recent reports mention refugees from rural areas in Luanda. It is probably safe to assume that the cities have at least temporarily ceased to grow and that their populations in early 1977 were no higher than they were in 1974. Nonetheless, the basic population nodes of Angola -- in the port cities and in the main agricultural regions of the highlands, especially in the planalto of Huambo and Bie Districts -- may be accepted as permanent features of Angolan demography.

The loss of the white population has been accompanied by a reported exodus of some of the assimilado population (persons of mixed ancestry, generally dark in complexion but Portuguese in culture, estimated at around 1 percent of the population in 1960, perhaps as numerous as 2 percent by 1970). Their departure has left Angola extremely short of skilled personnel in nearly every field of specialization. Before 1974, the middle ranks of the civil service and the lower levels of the government schools were

staffed in significant part by persons of assimilado background. Educated European Portuguese dominated private business and the upper levels of all branches of the colonial bureaucracy. But by far the greater number of European immigrants were unschooled Portuguese who engaged in petty commerce, small-scale services (e.g., taxis), and farming in Angola. Their departure has presumably crippled transportation, commerce and truck gardening throughout the country.

1. Age and Sex Structure -- The crude age structure of the Angolan population, based on the 1950 and 1960 censuses, with trends projected to the year 2000, is shown in Table I-5. Age pyramids of the Luanda population show that the urban population probably contains a disproportionately large number of young males, a pattern typical of African cities elsewhere on the continent. To the extent that Angola's productive male population was concentrated in the cities and towns, the rural regions would have suffered a corresponding loss of labor. This shortage of youthful males would have been exacerbated during the 1960s and early 1970s by the conscription of many African males into the Portuguese colonial army and by the flight of populations from the war zones. Although no statistics on age and sex structure of the populations have been collected since 1974, spokesmen for the independent Angolan government have noted shortages of labor in the cities and coffee-producing regions of the country, suggesting that at least some of the urban exodus of 1975-76 was composed of these young men. It is too soon to predict what effects may result from government policies directed at putting the labor force back to work at productive activities.

### C. Culture

The vast majority of Angolan Africans (98 percent) speak languages of the Bantu family, which are related, much like English and Dutch, but not mutually intelligible. The present differences between Angola's ethnic groups result only partly from permanent adaptations to local environmental peculiarities and are therefore not irreconcilable, however strongly ethnically-defined forces may oppose one another at the moment. The ethno-linguistic distinctions recently observed in Angola were historically fluid in the sense that individuals were able to learn new cultures and thereby to alter their ethno-linguistic identities at will before 1900 or so. The imposition of colonial rule in this century tended to rigidify these distinctions, however, owing to mistaken European beliefs that "tribes" were immutable and permanent. Colonial administrative policies assimilated formerly small groups of Africans into larger ethnic configurations, which were in turn brought into opposition with one another at the level of the colony.

TABLE I-5

Age and Sex Structure of the Angolan Population  
(1950 - 2000)

<u>Medium/Variant</u>	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Population Total (in 1000)	3969	4337	4723	5154	5670	6353	7181	8188	9395	10808	12462
Population, Males "	2009	2196	2392	2611	2886	3216	3619	4112	4703	5406	6225
Population, Females "	1960	2141	2331	2543	2784	3137	3562	4075	4682	5401	6237
Pop., Ages 0-4 to Total (0/0)	18.2	17.8	17.1	16.7	16.8	17.6	17.8	18.1	18.1	18.0	17.7
Pop., Ages 5-14 "	25.6	25.6	25.5	25.1	25.2	24.5	25.1	25.9	26.4	26.8	27.0
Pop., Ages 15-64 "	53.6	54.0	54.8	55.6	55.7	55.3	54.4	53.3	52.7	52.2	52.2
Pop., Ages 65+	2.5	2.7	2.6	2.5	2.3	2.6	2.4	2.7	2.8	3.0	3.1
Pop., Under 20	54.1	53.6	53.0	52.3	52.2	52.4	52.6	53.6	54.5	54.9	55.1
Women Ages 15-49 to Females (0/0)	46.5	46.8	47.5	48.2	46.5	48.5	45.5	44.9	44.4	44.4	44.8
Dependency Ratios (per 1000)	845.1	853.4	825.7	797.0	795.3	807.2	837.8	875.8	896.8	915.2	916.5
Child-Women Ratios "	793.6	767.7	729.2	704.4	737.6	765.4	789.0	808.1	816.0	812.4	791.4
Sex Ratios (per 1000 Females)	102.5	102.6	102.6	102.7	103.7	102.5	101.6	100.9	100.4	100.1	99.8
Median Ages (years)	18.0	18.2	18.5	18.9	18.9	18.8	18.6	18.1	17.8	17.6	17.6
Proportion of Urban (0/0)	5.8	7.7	10.3	13.6	15.1	18.3	21.6	25.1	28.6	32.0	35.2
Population Density (per sq. km)	3	3	4	4	5	5	6	7	8	9	10
	<u>50-55</u>	<u>55-60</u>	<u>60-65</u>	<u>65-70</u>	<u>70-75</u>	<u>75-80</u>	<u>80-85</u>	<u>85-90</u>	<u>90-95</u>	<u>95-2000</u>	
Rates of Growth (0/0)	1.77	1.71	1.75	1.91	2.27	2.45	2.62	2.73	2.82	2.85	
Natural Increase Rates (0/00)	18.0	19.0	19.7	20.7	22.7	24.5	26.2	27.3	28.2	28.4	
Crude Birth Rates "	51.0	50.5	49.5	48.2	47.2	47.0	46.8	46.0	45.1	43.6	
Crude Death Rates "	33.0	31.5	29.8	27.5	24.5	22.5	20.6	18.8	16.9	15.1	
Gross Production Rates	---	---	---	---	3.20	3.20	3.20	3.15	3.07	2.92	
Net Reproduction Rates	---	---	---	---	1.91	2.01	2.11	2.17	2.21	2.20	
Total Fertility Rates (0/00)	---	---	---	---	6502	6502	6502	6401	6226	5939	
General Fertility Rates "	221.3	216.7	209.6	207.2	206.5	206.7	208.5	206.8	203.3	195.3	
Life Expectancy, Males (Years)	28.6	30.6	32.5	34.5	37.0	39.4	41.9	44.4	46.9	49.3	
Life Expectancy, Females "	31.5	33.5	35.5	37.5	40.1	42.6	45.1	47.6	50.2	52.7	
Life Expectancy, Total	30.0	32.0	34.0	36.0	38.5	41.0	43.5	46.0	48.5	51.0	

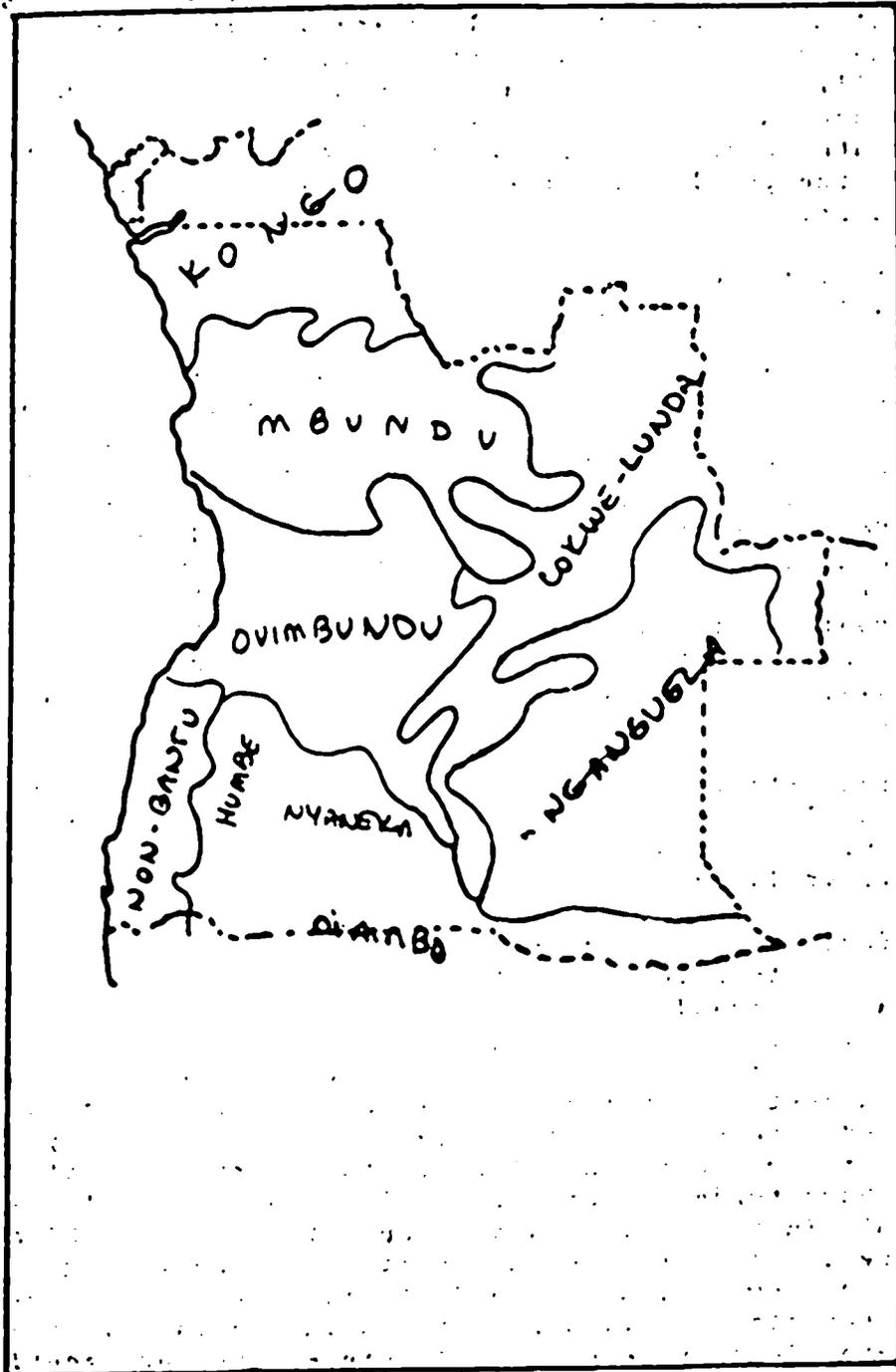
Thus the colonial period ended with Angola's population temporarily divided into three large political groups and a number of smaller ones.

The largest of the ethnic groups, the Ovimbundu (enumerated at 1,746,109 in the 1960 census, or approximately 37 percent of the Angolan population at that time), comprises most of the population of the central highlands. Ovimbundu recognize a number of subdivisions, the legacies of separate nineteenth century Ovimbundu kingdoms, that have not recently assumed much political significance. They are also one of only two major ethnic groupings in Angola that do not extend beyond the country's modern borders. The other entirely Angolan group is the second most numerous, the Mbundu or Kimbundu at 1,053,999 persons in 1960, or 22 percent of the population at that time. They live in the vicinity of Luanda and eastward in the districts of Cuanza-Norte and Malanje as far as the Kwango River. There is some consciousness of a distinction between the eastern Mbundu and the western residents of Luanda. A larger (though not precisely determined) portion of the Mbundu had adopted Portuguese ways before 1974 than any other group.

The northernmost ethnic group, the Kongo (or Bakongo), whose numbers in Angola amounted to 621,787 (or 13 percent of the population) in 1960, extends into neighboring Zaire and the Congo-Brazzaville and includes nearly all the African residents of Cabinda. The Cabindan Kongo regard themselves as distinct in some ways from the more southerly Kongo, and the Kongo within Angola have also subdivided themselves with regard to certain issues in the past.

The entire northeastern quadrant of Angola is inhabited by people designated by the hyphenated label Lunda-Chokwe (396,264 or 8 percent of the population in 1960), and are in fact the product of mixing of populations that occurred from the 1870s to about 1920 as a small Chokwe nucleus then living near the headwaters of the Kasai expanded and assimilated Lunda peoples living to the north and east. Distinctions between them, blurred less than two generations ago, are still recognized in some contexts. A similarly mixed Chokwe-Lunda population extends to the portions of Zaire lying east of the Kasai, and Chokwe populations interspersed with other groups occupy the lands beyond the northern Angola border. From a pan-Chokwe as well as from a pan-Lunda perspective, the modern international boundaries in this area are as indistinct as those in the Kongo area. The southeastern Angolan groups are lumped together in the single census category of Nganguela, which included 329,259 persons in 1960 (less than 7 percent of the population), but in fact regard themselves as belonging to a variety of more refined categories (Mbwela, Mbuzda, etc.), some of which extend into Zambia and Namibia.

FIGURE I-4



ANGOLA'S PEOPLES

The 8 percent of the Angolan peoples who live in the far south include three major divisions, each more like the others than any one resembles other ethnic groups to the north -- the Nyaneka 138,191 persons, and the Ovambo (or Ambo) 115,442 (all together 7 percent of Angola's people). They are primarily keepers of cattle rather than agriculturalists although most also cultivate sorghum, millet and other grains. The majority of Ovambo live in what is now Namibia where they are the largest ethnic group. Angola's southern boundary is as indistinct in terms of the identity of the people who live there as are the borders to the north and east.

The main significance of these cultural identities at present (1977) lies in the fact that some of them became politicized during the recent Angolan war. Most of the northern Angolan refugees are Kongo people, fugitives from the victory of the MPLA. They can cross the border into Zaire and reside among other Kongo people of basically similar culture as far to the northeast as Kinshasa. UNITA claimed the support of many Ovimbundu in recent years, and Ovimbundu in Luanda were treated as rivals of the local Mbundu during the 1974-75 civil disorders in the colony's largest city. The Mbundu regions have been most active in their support of the MPLA. The MPLA, whose following was defined less than most of its rivals in ethnic terms, has also been able to command the loyalty of many Lunda-Chokwe, some of the easternmost Ngangela, and elements of the urban population in all Angolan towns and cities.

Ethnic characterizations of the three major political movements in Angola during 1974-75 are neither entirely accurate nor necessarily a permanent facet of Angolan politics. The ethnic coloration of each derived in large part from their need to mobilize popular support during 1974-75 in a very short period of time. UNITA and FLNA therefore invoked a variety of culturally-defined appeals and drew on leadership networks that in the instances of the Ovimbundu and the Kongo included the descendants of local nineteenth century political elites. Each vilified its rivals as "tribalists" appealing only to narrow ethnic constituencies. The MPLA, which is explicitly non-ethnic in its policies and ideology and in fact can alone command some support in all regions of the country, suffered especially from misrepresentations of this sort. All of these strategies have tended to create an illusion of tribal politics, accurate only in the limited senses specified above, which need not continue to characterize the political scene in Angola. In the short run, however, heightened ethnic sensitivities are important components of national politics in Angola. They extend to the international sphere as well, since pan-Kongo sentiments afford refugees opportunities to cross from lower Zaire into

northern Angola and conversely to inject Angolan issues into Zaire politics (thus forcing Zaire politicians to adapt their stances on international relations to domestic tensions). Chokwe-Lunda sentiments similarly transcend the northeastern borders of the country. In the southwest Ovambo ethnic loyalties may allow local guerilla forces to move easily back and forth across Angola's border with Namibia, thus provoking conflict between South African and Angolan military forces. Although little-noticed in the international press, Angola's southeastern border with Zambia is similarly permeable in ethnic/cultural terms and local individuals may likewise cross it without difficulty.

The immediate economic difficulties stemming from Angola's present divisions are most pressing in the sphere of labor recruitment. Much of Luanda's recent surge in population resulted from the arrival of significant numbers of Kongo and Ovimbundu for the first time. Many of these workers fled during the urban disturbances of 1974-75, leaving only the local Mbundu in the city. The absence of former Ovimbundu and Kongo laborers, understandably reluctant to return to the city at the present time, leaves the city short of trained manpower. The main coffee-growing regions lie in Kongo territory, but the exodus of Kongo people into Zaire during the 1960s left Portuguese coffee growers there dependent on migrant Ovimbundu laborers, imported on a seasonal basis from south of the Kwanza. All these workers fled to their homelands in 1975, leaving the coffee harvest unpicked and the present government in dire need of adequate hands to take in the 1976 and 1977 crops. Other Angolan industries have depended to a similar extent on labor drawn from specific ethnic groups (e.g., Ovambo labor on the Cunene dam and hydroelectric scheme and Chokwe on the diamond mines of the northeast.) The independent government's labor strategies may have to take account of these traditions and preferences until ethnic sensitivities subside.

#### D. Education and Religion

The Portuguese lagged behind other colonial powers in government support of western education for Africans before 1960, undertaking systematic efforts to expand educational opportunities only after the outbreak of organized violence in 1961. Most education was left to a variety of Christian mission bodies -- primarily the Holy Ghost Fathers among the Catholics, English Baptists, American Methodists, and Canadian Congregationalists (now the United Church of Christ), plus the Plymouth Brethren Missions and the Portuguese Catholic Church. Education in Angola must therefore be treated as part and parcel of the offering of Christian religious faiths to rural Africans.

As of 1960, official government figures showed that virtually the entire white population were Catholics, while approximately 48 percent of the Africans were counted as members of the Catholic Church. About 17 percent of the Africans were identified as Protestants (mainly of the mission churches), 18 percent as practicing African religions, and 16 percent as having no religious beliefs. The significance of such statistics is by no means clear.

Just as the Portuguese church confined its efforts mainly to the towns where most of the European population resided, each of the major mission churches defined its responsibilities in geographical terms and thus concentrated its proselytization and educational activities in one or only a few of the major ethno-linguistic regions of Angola. Elements of almost every African group showed themselves eager for the western education, with the prominent exception of the southwestern cattle-keeping peoples -- the Ovambo, Myaneka and Numbi. Their economic specialization in herding required that they maintain a degree of mobility incompatible with the settled style of Christian education, and they therefore remained largely beyond the reach of western education down to independence.

One important result of Portuguese abandonment of education in Angola to missions was that separate educational systems were created by each of the Protestant missionary bodies and the Catholic Church. All recruited early converts from among the heirs of the nineteenth century political elites in the regions where each was active and trained the elites now heading the modern political movements. African politics among the nineteenth-century Kongo were intimately involved with the Catholic Church in northern Angola for example, and so the entry of the British Baptists had a political as well as a religious dimension. The Baptist schools produced not only mission preachers but also the stratum of educated Kongo that later coalesced in the political associations preceding the formation of the FNLA. The Methodists educated many future leaders of the MPLA from among the Mbundu of the towns. The Ovimbundu who came into the United Church missions were often of noble background, and so the pre-1974 hierarchy of the United Church in Angola corresponded closely to the old Ovimbundu political elite. None of the separate mission-schooled elites were familiar with their educated counterparts from other regions of the country. Thus, by the end of the colonial period, Portuguese denominational divisions reinforced the cultural, ethnic and economic distinctions created by other aspects of the colonial period. The seeds of the divisiveness evident in 1974 appeared as religious rivalries years before they matured into political enmity.

Portuguese lack of attention to education has left a dearth of accurate statistics on education before the last few years. Tables I-7 and I-8 are compiled from a variety of sources. They show that the Portuguese vastly expanded the availability of education in the years after 1960, attaining by 1971-72 enrollment percentages for primary (34 percent) and secondary (11 percent) schools equal to or in excess of pan-African averages in 1971. The government figures may slightly understate actual total enrollments in the territory of Angola, since between about 1965 and 1975 all the liberation movements claimed to operate independent educational systems in the area under their control. It is impossible to know how many students they may have enrolled, although a figure in the low thousands may have been attained within Angola. One should also count such secondary education as may have been provided to refugees in Zaire, Tanzania and Zambia and higher education abroad undertaken by graduates of the church and mission school systems. No figures for these enrollments are known to exist.

The totals given in the tables make no distinction between education provided for Africans and that provided for the European population in terms of quality or quantity. Some rough estimates may, however, provide a measure of the number of school places actually provided for the African population of Angola. Although the percentages for African education shown in the far right-hand column of Table I-9 are the results of several very rough estimates, the assumptions are intended to minimize the number of Europeans enrolled. The resulting estimates stress that education beyond the primary level was virtually unavailable for Africans before 1960 and indicate the small numbers of educated Angolans available to the present government. Further, although the Portuguese had no separate African school curriculum like the Bantu education in South Africa, the level of sophistication of the education provided for Africans was low, with the early portions of the secondary curriculum equivalent to primary education in many other systems.

Portuguese education statistics do not reveal the numbers of certificates awarded for completion of the various stages of primary schooling or the numbers of secondary school graduates. The growth in numbers of African children enrolled at the primary level occurred primarily in the first two-year cycle (segunda classe), with far fewer Africans taking the certificate of the second two year curriculum (quarta classe). There were correspondingly fewer African students who completed the full secondary school cycle than who entered. This fact, well known though not visible in available statistics, further underscores the paucity of skilled personnel in Angola today. This applies with equal force to teachers at the secondary level (most of whom were

TABLE I-6

Education in Angola

<u>School Year</u>	<u>Pupils in Primary Schools</u>		<u>Secondary Schools</u>		<u>Normal Schools</u>
	<u>Number</u>	<u>Percent</u> <sup>d</sup>	<u>Number</u>	<u>Percent</u> <sup>e</sup>	<u>Number</u>
1950-51	13,586	1.3	2,277 <sup>a</sup> <u>1,548</u> <sup>b</sup> 3,825	0.9	154
1956-57	68,759	6.2	3,729 <sup>a</sup> <u>2,164</u> <sup>b</sup> 6,893	1.6	---
			7,486 <sup>a</sup> <u>4,501</u> <sup>b</sup> 11,987		
1960-61	105,425	8.7	8,025 <sup>a</sup> <u>5,133</u> <sup>b</sup> 13,158	2.7	249
1966-67	267,768	20.7	16,700 <sup>a</sup> <u>15,559</u> <sup>b</sup> 32,259		997 <sup>c</sup>
1970-71	432,370	30.5	43,965 <sup>a</sup> <u>12,167</u> <sup>b</sup> 56,132	10.1	1,697
1971-72	516,131	36.1	74,625	31.1	2,987

a. Academic course

b. Technical course

c. 1965, African enrollment was only 208, 21 percent of total calculated. Based on UN estimates of proportion of population in 5-14 age group.

d. UN interpolations from censuses of 1950, 1960 and 1970

e. Calculated on basis of assuming 9.9 percent census population in 15-19 age group

TABLE I-7

Education in Angola

<u>Numbers of Schools</u>	<u>Year</u>	<u>1965</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Primary		2,561	3,803	4,211	4,651	5,070
Middle & preparatory		52	149	160	159	162
Vocational		53	83	80	87	101
Teacher training		9	12	15	18	19
High school		4	4	5	5	6

<u>Numbers of Teachers</u>	<u>Year</u>	<u>1965</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Primary		4,549	7,680	8,961	10,065	11,668
Middle & preparatory		591	1,661	2,142	2,603	2,613
Vocational		745	1,237	1,052	1,074	1,225
Teacher training		63	108	126	154	151
High school		96	183	225	285	346

**TABLE I-8**  
**Estimated Breakdown of European and African**  
**Enrollments in Angolan Schools**

<u>Year</u>	<u>School Category</u>	<u>Total Enrollment</u>	<u>Calculation of European Enrollment</u>			<u>African Enrollment (estimate)</u>	
			<u>Assumed Number Europeans in School-age Cohort</u>	<u>Estimate Europeans Enrolled</u>	<u>% European of Total Enrollments</u>	<u>Africans Enrolled</u>	<u>% African School-age Cohort Enrolled</u>
1950-51	Primary	13,586	19,706	9,853	72.5%	3,733	0.4%
	Secondary	3,825	7,883	1,971	51.5	1,754	0.2
1956-57	Primary	68,759	31,419	18,852	27.4	49,907	4.5
	Secondary	6,893	12,568	3,770	54.7	3,123	0.3
1960-61	Primary	105,425	43,132	30,192	28.6	75,233	6.1
	Secondary	13,158	17,253	6,470	49.2	6,688	0.6
1966-67	Primary	267,768	55,898	41,924	51.7	225,844	17.4
	Secondary	32,259	22,359	8,385	26.0	23,874	1.8
1970-71	Primary	434,370	70,326	56,260	13.0	378,110	26.5
	Secondary	56,132	28,130	11,252	20.0	44,880	3.2
1971-71	Primary	516,131	78,507	62,805	12.2	453,326	13.7
	Secondary	74,625	29,893	11,957	16.0	62,668	4.1

Portuguese), to skilled labor and to administrative cadres. Available statistics do not show the numbers of university-trained Angolans of any race as of 1975. The MPLA could claim the services of college-trained Africans numbering (very roughly) in the low hundreds, nearly all of whom had received their highest degrees in Portugal or abroad. There is no count of skills held by Angolans generally.

Such western education as was available before 1960 was concentrated in the towns, especially the Luanda-Malanje corridor from which much of the MPLA leadership has come. MPLA leadership is therefore the most Portuguese in culture of the three competing movements and is best prepared to assume the mantle of political authority abandoned by the Portuguese in 1975. In cultural terms, they provide the greatest degree of continuity in the eyes of essentially non-ideological rural Angolans. The common accusation that the education of the present leadership somehow reduces their legitimacy as representatives of illiterate rural Angolans loses its force in view of this fact. The MPLA, before 1974 and subsequently, has demonstrated its awareness of the need to understand the people of the country on their own merits and continues to proclaim its sensitivity to the concerns of rural villagers.

A university was organized in Angola during the 1960s. By 1971-72, its faculty numbered 274 and 2,987 students were enrolled, mostly youths of European background. The several campuses were spread between Luanda, Nova Lisboa, and Sa da Bandeira. The university provided primarily teaching facilities and sponsored little research.

There was also a scientific research institute (Instituto de Investigacao Científica de Angola) in Luanda with a modest program of research in all fields of science, natural, physical and human (i.e., history, anthropology). Its research staff was exclusively Portuguese and the level of work not advanced by standards prevailing outside of Portugal.

According to recent reports, the independent government of Angola has reorganized the University and the Research Institute to combine teaching and research under the University. One may anticipate that the government will place a high priority on education, given the demonstrated interest of the MPLA in schools and the advanced educational attainments of its top leadership. Whether emphasis will fall on primary, secondary or advanced training cannot yet be determined, but education appears to be one area in which development funds could meet a need perceived as pressing by the Angolan government. The Portuguese exodus has left the country desperately short of teachers. The narrowly Portuguese

nationalistic orientation of existing teaching materials, and the small scale of MPLA educational institutions before 1974 mean that the present government must begin from a practically non-existent resource base. Detailed plans for the future have not been publically announced and it is not known what steps have yet been taken for the construction of a national educational system.

The lack of trained personnel in Angola requires a short-run transfer of skilled technicians and administrators of all types from other nations. This is obviously the most urgent form of aid required at the present time, and the government began at once to arrange for assistance of this type (see section of politics below). The need for technical proficiency clearly exceeds the desire for ideological sympathy, and non-socialist professionals may be welcome (especially in the engineering and physical sciences.) Use of Portuguese, which will certainly become the language of administration in Angola, may turn the independent government toward Brazil and Portugal for help in the first instance.

## E. Politics

The present government of Angola, although new and severely tested by the year-long civil war of 1975-76, is not untried. The leaders of the present regime have been conducting guerilla warfare on three fronts since 1965, and they possess experience in international politics that extends back to the late 1950s. Their eight years' seasoning in administering the regions they controlled in southeastern Angola gave them the opportunity to work out coherent approaches to many of the difficulties that they now face as leaders of an internationally-recognized independent government. Indications of carefully-formulated policies have been appearing since the meeting of the Central Committee of the MPLA in early November, 1976. The government seems prepared to view the economic and political breakdown of 1976-76 as an opportunity to rebuild Angola according to its own precepts without the encumbrance of Portuguese institutions and commitments.

The current government of the People's Republic of Angola, in effective power since the date of national independence on November 11, 1976, is composed entirely of members of the Movimento Popular Para a Libertacao de Angola (MPLA), one of the three major liberation movements active in Angola before the Portuguese coup of 1974. The MPLA is the only political party officially recognized in Angola, and the government has been recognized by most countries, although neither the United States nor China had extended diplomatic recognition to the MPLA government by February 1977. A U.S. veto in the Security Council

and an early vote of admission in the General Assembly seems probable.

The MPLA is avowedly socialist in its economic and political philosophy and has historically been committed to popular participation in the planning and management of social, political and economic institutions. The movement apparently achieved some success in developing institutions modeled along these lines while restricted to the remote and thinly-inhabited regions of southeastern Angola between 1965 and 1974. During this period, the MPLA accepted military and financial assistance from the U.S.S.R. and countries in Eastern Europe. Its primary foreign bases were in Tanzania, Algeria and Congo-Brazzaville and it maintained supply lines to its guerilla fighters within Angola from Zambia and Congo-Brazzaville. During the civil war of 1975-76, the MPLA received substantial military assistance from the U.S.S.R. (U.S. Secretary of State Kissinger's estimate in early 1976 was \$200 million) and accepted 13,000-15,000 Cuban troops to support its military efforts against its challenger. Angolan President Agostinho Neto has repeatedly reaffirmed his government's commitment to national independence and emphasized that he will resist exchanging Portuguese colonial rule for neo-colonial domination by any other outside power. The origins of the MPLA in the middle 1950s lie partially in a shortlived Angolan Communist Party, closely related to the Portuguese Communist Party of that period. On the first anniversary of Angola's independence the MPLA announced its intention of reforming itself as a "Marxist-Leninist Workers' Party".

Elections were one feature of the 1975 Alvor agreement by which Portugal agreed to leave Angola in the hands of a transitional government leading to independence, but the promised voting never occurred. The MPLA thus assumed power without the benefit of a legitimate vote, although local elections for members of the People's Councils in Luanda were held on June 27, 1976. The results of these are not known and their significance difficult to assess.

During the years of exile, the MPLA was riven by deep hostilities among its several factions, believed by some to have been encouraged by outside powers, especially the U.S.. A last-ditch unity effort in 1974 barely sufficed to achieve a unified front for negotiations with the Portuguese for Angolan independence. Dissensions within the present government have been largely hidden from view since then, but rivalries may survive from the frustrating days in exile and draw new life from post-independence issues. One faction followed MPLA leader (now President) Agostinho Neto, another known as the Revolta Activa centered on Luanda-born

intellectuals hostile to Neto, and a third found some of the military leadership in opposition to the politicians in nominal charge of the movement. Although no accurate assessment can be made of recent cleavages along these or other lines, the decisions of the November 1976 meeting of the MPLA Central Committee appeared to confirm Neto's control over both the party and the government.

The military forcer of the two opposing Angolan nationalist movement -- the Frente Nacional de Libertacao de Angola (FNLA) and the Uniao Popular para a Independencia Total de Angola (UNITA) -- were defeated in the civil war of 1975-76 but remain thorns in the side of the MPLA. Before 1975, the FNLA, based domestically on the Kongo peoples of northern Angola, mounted guerilla operations out of Zaire. It maintained its exile headquarters in Kinshasa, where its leadership was closely connected with the Mobutu regime and supported in some part by U.S. funds. The sources of its military hardware have not been publically acknowledged but are widely assumed to have been American. Zaire troops almost certainly joined in its 1975 operations in Angola. The FNLA president, Holden Roberto, returned to Zaire after the defeat of his partisans, and the FNLA periodically claims to continue to mount guerilla-style incursions along the Zaire border of northwestern Angola. The extent of these operations cannot be determined with accuracy, but they do not seem to seriously hinder the national reconstruction program undertaken by the MPLA so long as Cuban military assistance remains available.

UNITA apparently remains a more serious threat to the internal stability of Angola. After President Jonas Savimbi was driven from his 1975-76 capital of Huambo in the central highlands, he converted his movement back to guerilla-style operations in April-May 1976. UNITA seems to have maintained a military presence in most of the southeastern quadrant of Angola throughout the remainder of 1976. The MPLA and the Cubans mounted several sweeps through these regions in October and November, 1976, evidently intended to clear the region of the remaining UNITA forces. They may also have engaged South African units pursuing Southwest African People's Organization (SWAPO) guerillas to their sanctuaries on the Angolan side of the Namibian border. At the same time, Savimbi announced the formal reorganization of UNITA and created five military regions covering the whole of Angola south of a line from Benguela-Lobito through Huambo to Luena (formerly Luso) and Teixeira de Sousa on the line of the Benguela Railway. Although reports have differed as to the effectiveness of continued UNITA operations, the MPLA did not reopen the railway by its announced target date of August, 1976. The MPLA-Cuban sweep force remained in the field at the end of that year, although reports of UNITA activities diminished in early 1977. In addition, the MPLA government in

September suspended South African work on the dam and hydro-electric complex along the lower Kuene River in apparent protest against what may be presumed to be covert South African support for UNITA forces in the region.

The violence of the war of 1975-76 (in which anywhere from 100,000 to 300,000 persons are estimated to have lost their lives) and the flight of the Portuguese settlers have made parts of the country difficult for the MPLA to administer effectively in the short run. A paralyzing shortage of skilled personnel afflicts all sectors of the administration and the economy. Peasants and herders in former FNLA and UNITA regions are reported suspicious and resentful. Some left the towns and villages near the major roadways (where they had been moved by the Portuguese for reasons of security before 1974) to retreat into the remoter regions of the northwest, the southeast and the central highlands. In addition, workers (even in the towns historically most favorable to the MPLA) experienced initial disillusionment as they confronted the reality that followed the euphoric expectations of the immediate pre-independence period. Frequent labor stoppages and worker demands for higher wages began in 1974 and continued well into 1976 despite repeated MPLA exhortations against labor indiscipline. The government took power without knowing what resources it commanded and which ones it required. For all of these reasons, its initial degree of management effectiveness was low -- although even during the height of the civil war essential services never failed in Luanda and other cities under MPLA control. Its potential for effective administration began to appear by the end of 1976 and in the longer run seems high. It quickly completed systematic surveys of its assets, established priorities for the initial stages of reconstruction, and undertook negotiations to obtain materials and technical assistance that it required.

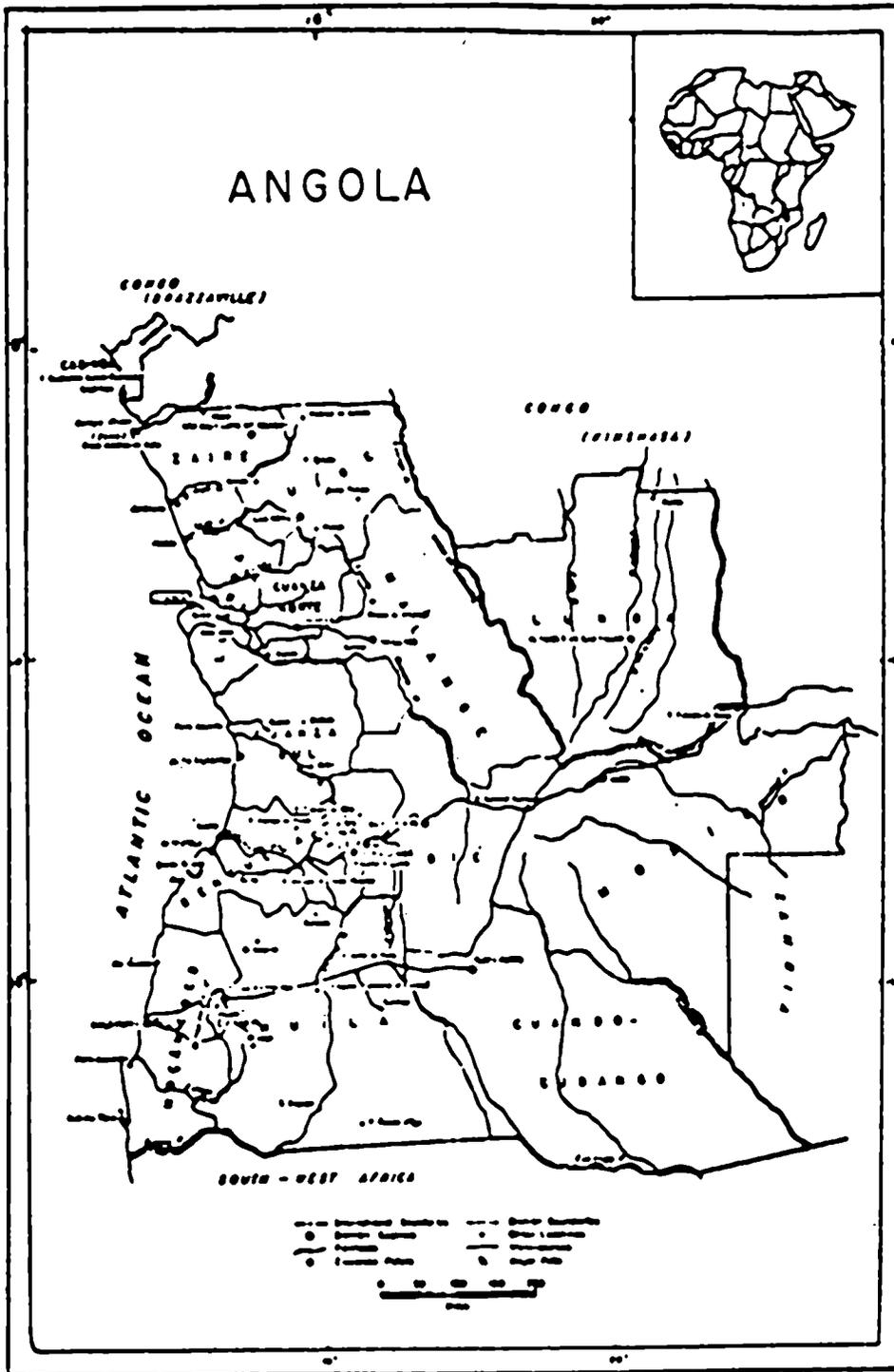
The present climate for national reconstruction in Angola is favorable. The government is committed to the creation of institutions that will restore economic production to pre-1974 levels, replace the damaged infrastructure, restore labor productivity, and reduce the autonomy of large-scale private and foreign enterprise in Angola. This has meant, in its initial stages, nationalization of banks, insurance companies, all Portuguese-owned enterprises abandoned by their owners, and a variety of other corporate entities. The nationalization decrees specifically exempted non-Portuguese participation in these enterprises from government takeover. The assets of Cabinda Gulf Oil (the major U.S. investor in Angola) have not been touched, nor has the government assumed ownership of DIAMANG, the major foreign-owned mining consortium in the country, although negotiations intended to give the government a controlling interest in the process have

begun. Clearly, the government intends to proceed responsibly and with caution in this respect.

The second stage of industrial reconstruction began in August, 1976, with the creation of a series of government commissions empowered to take stock of the resources that the independent government had inherited from the Portuguese and to plan for their future development. Commissions were created for the restructuring of food processing, cane sugar production, textiles, light industry, heavy industry, the petroleum industry, mining and geological exploration, and electricity. It appears that economic development in Angola will be closely supervised by the government.

Foreign intervention in Angolan politics remains a reality. The MPLA regime took power in the midst of overt Cuban and South African involvement in the domestic politics (and/or war) of 1975. The U.S. and U.S.S.R. accused one another of active involvement behind the outside forces openly present in Angola. Zaire is widely alleged to have participated in the FNLA military operations of that period, and foreign mercenaries of several nationalities (including British and American) turned up among the captives taken by the MPLA from FNLA forces. It is no wonder that President Neto appears to remain sensitive to the possibility of further foreign interference in Angola's affairs, even as he allows Cubans to remain in Angola in numbers only slightly reduced from their peak in late 1975. Recent accusations of foreign intervention have been directed primarily at the Republic of South Africa, although tensions with Zaire lurk just beneath the surface of Angola's recently-inaugurated diplomatic relations with its neighbor to the north and east. The prospects for immediate Cuban withdrawal seem slight even if the decision to dismiss them will rest on internal conditions rather than international relations. The government presently requires Cuban military assistance against UNITA and FNLA/Zaire. Reconstruction of roads and other war-damaged infrastructure depends on Cuban (and other) military and civilian support. The Cubans are useful as a counter in diplomatic negotiations on a variety of other fronts, and their attention to the tasks of domestic peace-keeping in a divided nation frees top government personnel for other aspects of national reconstruction of greater long-term potential return. On the international level, the U.S. seems unlikely to adopt direct interventionist policies at a time of transition to a new administration, and the thrust of the larger confrontation in southern Africa has shifted momentarily to Rhodesia/Zimbabwe and Namibia. Angola is, one might say, momentarily on the back burner for most major outside powers. No change in this situation seems likely for the next eighteen to twenty-four months (or until the Rhodesian situation develops crisis proportions).

FIGURE I-5



ADMINISTRATIVE SUBDIVISIONS OF ANGOLA

# **II**

## **ECONOMIC OVERVIEW**

- **GDP**
- **Balance of Payments**
- **Other**

## II. ECONOMIC OVERVIEW

### A. Gross National Product

The Angolan government does not appear to have published statistics on gross domestic product, but a variety of estimates may be pieced together to obtain the GNP picture shown in Table II-1

Other (unidentified) sources have estimated the growth rate of the GNP at 10.7 percent/annum at constant prices from 1966 to 1970 and 16.4 percent annum at current prices, a report which is difficult to reconcile with the escudo or \$US figures reported in Table II-1. Their meaning is also unclear owing to probable undercounting of rural African production for the unmonetized sector of the economy. The evident unreliability of these estimates makes it difficult to derive meaningful conclusions with regard to the growth of the Angolan GNP before 1974. The disruption of the 1975-76 civil war, the reorientation of the Angolan economy that is likely to ensue under the independent government, and the inaccuracy of available statistics make futile any attempt to derive a projected GNP for the 1976-80 quinquennium.

It should be stressed that the apparent growth in GNP/Capita hides a significant distinction between the relatively small share of national product reaching the African population and the proportionately much larger share remaining in the hands of a growing number of Portuguese colonists (who on the whole accounted for a far larger share of measured production than Angola's Africans), and non-Angolan economic interests.

Although no quantitative estimate is possible for GNP in 1974, all indicators point to a sharp drop in GNP in 1975 and a further decline in 1976. Some industries are reported producing at less than 10 percent of the 1974 rate and virtually all sectors in 1976 are more than 50 percent below previous peaks. Measures undertaken by the independent government during 1976 are expected to halt the decline by 1977, although isolated official projections for specific sectors speak of a return to 1974 levels of production only after five to ten years. Obviously, much will depend on the amount of foreign technical assistance extended to the new government during that period and on the success of the MPLA government in bringing Angolan labor back to former levels of productivity.

TABLE II-1

Estimates of Angola GNP 1958-74

<u>Year</u>	<u>Estimate</u> <u>(million escudos)</u>	<u>U.S. Dollar Equivalent</u> <sup>d</sup> <u>(million)</u>
1958	11,000 a	
1960		1,395
1963	24,528 b	
1965	25,600 c	1,772 e
1967	29,500 c	
1970	53,800 j	2,455 f
1971	59,700 j	2,578 g
1972	67,800 j	2,709 h
1973		2,980 i
1974		3,160

- a. Estimate based on FAO reconnaissance mission consultation with unidentified government sources.
- b. Unofficial report adopted by Economic Commission for Africa ("Summaries of Economic Data: Angola", M75-87, Dec. 1974).
- c. At 1960 constant price; source unidentified
- d. Entire series taken from "Africa: Economic Growth Trends" (Statistics and Reports Division, Office of Financial Management Services, A.I.A., March 1976), Stated in 1973 constant dollar equivalents.
- e. Inconsistent with reported escudo figure; there were approximately 29 escudos to the \$US in 1965, and the figures reported in the table work out to 14.45 esc./\$. It is doubtful that the higher escudo figure that would be obtained by converting the escudo total to current value and the lower \$ figure at current prices would account for the 50% difference noted. An estimate of the remaining difference is 14%.
- f. The apparent conversion ratio is 21.91 esc./\$, fairly close if the escudo figure is in current prices (not known, but probable) and the \$ price index 87.6; the adjusted conversion ratio then become 25.19, at a time when the esc./\$ ratio was approximately 30, a discrepancy of 16% (\$US figure higher than escudo estimate).
- g. The apparent conversion ratio is 23.15, and adjustment of the \$US total to 1971 current prices yields a ratio 25.31 esc./\$, a difference of approximately 15% (\$US figure higher than escudo estimate).
- h. The apparent conversion ratio, 25.02, adjusted becomes 26.18 esc./\$, approximately 12% difference (\$US higher than escudo estimate).
- i. No recent Portuguese (escudo) estimates available.
- j. Overseas Companies of Portugal citation of estimate from unidentified source.

TABLE II-2

GNP/Capita - Angola, 1958-74

<u>Year</u>	<u>Estimated GNP/ Capita (\$US)</u>	<u>Source</u>
1958	\$ 90	a
1960	290	b
1965	341	b
1970	431	c
1971	444	c
1972	457	c
1973	492	d
1974	509	d

a. Based on FAO estimate (see footnote a, Table II-1)

b. AID estimates

c. AID estimates GNP/capita

d. Based on estimates of Overseas Companies of Portugal (see footnote j, Table II-1) was \$372 in 1970 (= \$425 in 1973 dollars), \$406 in 1971 (= \$444 in 1973 dollars), and \$456 in 1972 (= \$477 in 1973 dollars).

Growth rates for Angolan GNP are also estimated as follows:

Growth Rates - Angola GNP, 1960-74

<u>Year</u>	<u>GNP</u>	<u>GNP/Capita</u>
1960-65	+4.9%	+3.3%
1965-70	6.7%	4.8%
1970-74	6.4%	4.2%

Source: AID (see footnote d, Table II-1)

1. Employment -- The total labor force in Angola was reported to have numbered 1.66 million in 1970, but the Portuguese government did not publish detailed statistics on employment during the colonial period. Estimates put the proportion of the economically active population engaged in agriculture at from 75 percent to 85 percent. (MIAA figures place the number of "traditional" cultivators at 1.07 million and conform to the estimated percentage if -- at a very rough guess -- perhaps 200,000 to 300,000 laborers on commercial agricultural enterprises owned by Europeans are taken into account.) According to a different source, Angolan manufacturing employed 76,569 persons in 1968; if industrial employment grew in direct proportion to the value of manufacturing, by 1970 there would have been approximately 128,000 workers in Angolan industry. By 1973 their numbers would have exceeded 225,000 according to this method of estimating. Adding the crude estimates for 1970 and subtracting from the estimated total workforce leaves approximately 200,000 persons employed in domestic service, government, and service industries. The figure seems plausible. The approximate estimated sectoral composition of the Angolan workforce in 1970 would have been 64 percent in traditional agriculture, 16 percent in commercial agriculture, 8 percent in manufacturing, and 12 percent in government, domestic service, and service industries. These proportions probably shifted toward greater employment in the industrial and commercial agriculture sectors by 1974. (Although not stated by the sources from which these figures are derived, the statistics are likely to include both African and European workers. The Portuguese exodus would have reduced these totals by about 70,000-100,000 persons, nearly all from commerce and industry.)

The Portuguese government did not publish statistics on wages in Angola, but the general outline of the wage structure was clear. Europeans were relatively well-paid, while Africans received very little for their labor. Based on MIAA statistics, the mean value of agricultural production of farmers in the "traditional" sector was approximately 2,380 escudos, or \$US88; the incomes of these farmers may have been higher. In 1968, Angolan industry employed 64,385 "non-specialized workmen", who may be taken to have been nearly all Africans. Their average income was just over 2.5 escudos (\$US.09) per hour. Based on an assumed forty-hour week, annual income for African employees in the manufacturing sector would have been 5,000 escudos, or approximately \$US185. Persons in the category of "specialized workmen", who would have been partly African and partly Portuguese, numbered 8,616 and received an average hourly wage of more than 16 escudos (\$US.59); translated into annual income, this wage would yield approximately 32,000 escudos, or \$US1,180. Technical and office employees, most of whom would have been white or assimilado, received an

average salary of 4,912 escudos per month (\$US182), or approximately 59,000 escudos per year (\$US2,183). The average remuneration received by the 1,590 managerial staff, nearly all European, was 191,000 escudos/annum, or \$US7,074. White European managers were paid at a rate three times that of the mixed European/assimilado office and technical staff, six times that of the mostly African group of specialized workers, and thirty times that of unskilled African workers. The relative proportions changed little before independence, and the majority (60-70 percent) of the workers in the skilled and unskilled categories in 1968 were below the mean figures quoted.

These sharp differentials according to race in the rate of compensation in Angolan industry explain its heavy reliance on unskilled labor. As of 1968, 84 percent of the total labor force was unskilled and another 11 percent was composed of skilled labor. Office, technical and managerial staff was only 5 percent of total employment. More than 92 percent of the industrial labor force was male, with women representing a significant proportion of the category of office and technical staff (14.4 percent). The average number of employees per firm (approximately 1,300 included in the survey) was 59, and the average fixed investment per employee was under \$3,000. The low wage costs prevailing in Angolan industry explain much of the rapid increase in manufacturing that occurred in Angola between 1965 and 1974. Little significant improvement took place in this sector before the Portuguese revolution, but strikes and other labor actions were reported to have gained wage increases of several hundred percent in some industries during 1974 and 1975. Present wage levels cannot be estimated.

Wages paid to workers in commercial agriculture were not reported but may safely be assumed to have been less than unskilled labor in industry. As of 1970, remuneration in the range of 12 escudos per day (\$US.44) was not uncommon. Although no statistics of any order were published by the Portuguese on income distribution in Angola, the rough estimates employed here suggest that few Africans had much disposable cash income in Angola before 1975. Wage increases since then have undoubtedly been absorbed in large part by inflation.

Before 1974, workers in Angola could organize only in the form of government-sponsored unions that were totally ineffective in raising wage levels. Many laborers organized during 1974 and 1975 in a variety of independent unions. The MPLA government will certainly bring these under its control as quickly as it may be able.

2. Price Data -- The Luanda retail price index (base December 1965 = 100) was reported as follows:

1965 - 100  
1966 - n/a  
1967 - 105  
1968 - 114  
1969 - 126  
1970 - 134  
1971 - 141  
1972 - 152  
1973 - 173  
1974 - 205

The accelerating inflation of 1973 reflected in part the world-wide inflationary surge of that year and in part the effect of exchange controls which bottled up a good deal of currency in Angola. Estimates for years subsequent to 1974 are not available, and the effects of war, breakdown in distribution networks, and the disposition of assets at panic prices by emigrating Portuguese colonists in 1975 make the overall picture of recent retail prices impossible to discern.

No calculation of the terms of trade for Angola has been published. A rough indication of its likely course in the near future can be gained from current trends in the world prices for Angola's major exports, all of which are high and rising. Imports in the short-term future will probably be concentrated in machinery and transportation equipment, which are unlikely to rise as rapidly as prices for Angola's exports of diamonds, petroleum, and coffee. Angola seems in a favored position to buy and sell in world markets, provided that pre-independence production levels can be regained.

### B. Balance of Payments

The rapid development of European mining, farming, and services that accompanied the anti-liberation Portuguese war of 1961-74 meant that Angola imported a good deal more than it exported from the beginning of the major military effort in the latter 1960s through the imposition of strict exchange controls and the growth of petroleum exports from the Cabinda fields in 1972. The simultaneous restriction in imports produced positive trade balances in 1972 and 1973, the last years for which definite figures are available. The meaning of these figures is very difficult to interpret, however, owing to peculiarities of the Angolan provincial accounts kept under the Portuguese regime. Major components of Angola's real exports were not included in the territory's

TABLE II-3

Angola Balance of Payments, 1964-1974  
(In \$US millions)

	<u>1964</u>	<u>1966</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
<b>Current Transactions/Merchandise</b>									
Exports, f.o.b.	+151.2	+188.4	+270.8	+326.9	+319.9	+323.9	+444.7	+586.6	+809.0
Imports, c.i.f.	-169.1	-167.4	-302.6	-321.7	-357.3	-402.5	-346.7	-498.5	-650.5
Total Balance	-17.9	+21.0	-34.9	-57.8	-37.4	-78.5	+100.0	+88.1	+158.5
<b>Current Invisibles</b>									
Tourism	+ 8.5	+ 11.6	- 12.7	- 15.2	- 16.2	- 18.1	- 7.2	- 30.0	- 60.5
Transport	- 7.4	- 9.1	+ 3.1	+ 6.0	+ 20.6	+ 20.1	+ 24.4	+ 47.3	+ 49.9
Insurance	+ 0.5	+ 0.7	- 0.9	- 0.9	- 0.1	- 0.1	- 1.6	- 0.4	- 1.2
Investment Income	+ 24.7	+ 12.0	- 18.5	- 20.9	- 21.8	- 7.0	- 15.0	- 30.6	- 33.7
Government	- 14.5	- 23.3	+ 25.4	+ 15.5	+ 18.5	+ 9.9	- 5.4	- 0.8	- 6.4
Other Services & Profits	+ 7.3	- 0.4	+ 5.6	- 6.2	+ 0.6	+ 18.2	- 24.9	- 14.1	- 22.0
Private Transfers (net)	+ 14.8	+ 11.2	- 12.6	- 13.9	- 11.5	- 11.0	- 8.4	- 9.3	- 19.5
Total Invisibles	+ 34.0	+ 2.6	- 11.6	- 35.6	- 9.9	+ 12.0	- 38.0	- 36.2	- 93.4
Total Current	+ 16.0	+ 23.6	- 46.5	- 93.4	- 47.3	- 66.5	+ 62.0	+ 51.9	+ 65.2
<b>Capital Movements</b>	- 7.2	+ 6.7	+ 16.8	+ 41.7	+ 20.9	+ 2.4	- 26.3	- 39.8	- 53.1
<b>Overall Balance</b>	- 8.9	+ 30.3	- 29.7	- 51.7	- 26.4	- 64.0	+ 35.8	+ 12.2	+ 12.0

\* Adding error from original document

Sources: 1964 - 1970 Banco de Angola  
1971 - 1974 Data provided by Angolan authorities

figures; for example, diamonds taken from Angolan soil were sold directly by DIAMANG to Portugal, where they were sold abroad for foreign currency credited to the metropolitan Portuguese payments accounts. Petroleum exports from Cabinda were used to offset imports of equipment, so that their real contribution to Angolan exports was understated considerably. Further, Angola's foreign exchange earnings were diverted from the provincial accounts by a system which retained all foreign exchange in Portugal.

Nonetheless, the balance of payments figures for 1964-1974 are shown in Table II-3. Changes in accounting procedures, the failure of record-keeping in 1975 and 1976, and restructuring of the post-1976 Angolan economy make it impossible to attempt detailed projections for the future. It may safely be assumed that declines in production during 1976, combined with the need to rebuild the war-ravaged infrastructure of the independent nation, will produce substantial deficits for several years.

Angola was primarily an exporter of coffee and diamonds until recent years, ranking as the world's fourth largest producer of coffee (behind Brazil, the Ivory Coast, and Columbia). The development of the Cabinda oil field after 1968 moved crude petroleum into the first place in the list of Angola's exports for 1976. Sisal has long been important among the crops exported from Angola, and iron ore became the leading mineral export (behind diamonds) during the 1960s. Table II-4 shows these and other exports for the period of 1968-74.

Immediately prior to independence, the composition of imports shifted toward transportation equipment and other capital goods, in response to the priorities established with the imposition of exchange controls in 1972. Consumer goods, not a major component of Angolan imports in the period since 1965, declined in importance.

One significant feature of the pre-1975 structure of Angola's imports and exports was its close trading relationship with Portugal. Portugal, although less than a minor industrial power on a world scale, ranked first in the volume of Angolan exports until the rise of petroleum exports to the United States and Canada put the U.S. in first place in 1974. Portugal's position as a dominant source of Angolan imports remained firmly established, even after the sharp reduction in Portuguese goods entering the country after the introduction of exchange controls in 1972.

The termination of colonial rule and the release from the tight restrictions which Portuguese overrule had placed on the pattern of Angola's foreign trade will undoubtedly allow a major reorientation of these aspects of Angola's balance of payments. Diversification of trade relations is a goal of the independent

TABLE II-4

Angolan Exports/Imports, 1971-74  
(1968-1970 - one SUR = one U.S. Dollar)

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
<b><u>Exports</u></b>				
Crude petroleum	76.4	130.9	233.3	589.5
Coffee	142.7	142.0	209.2	247.0
Diamonds	54.0	58.6	81.1	96.9
Sisal	7.8	12.3	19.0	50.0
Iron ore	42.1	37.5	49.1	47.7
Fish meal	7.5	20.6	30.0	19.2
Raw cotton	23.0	10.5	25.2	18.4
Tobacco	10.6	10.7	9.4	7.7
Maize	6.4	5.3	10.1	7.5
Dried fish	4.5	5.1	3.0	2.0
Raw sugar	1.1	1.5	1.5	1.0
Other	<u>55.2</u>	<u>44.5</u>	<u>73.2</u>	<u>133.0</u>
Total	431.3	478.7	744.1	1219.9
<b><u>Imports</u></b>				
Transportation equip.	70.1	62.4	122.8	133.6
Machinery	93.6	102.7	71.4	91.1
Metals/metal products	48.4	47.6	62.1	83.9
Foodstuffs, cattle, tobacco	58.4	47.6	73.0	78.3
Chemical products	38.4	41.5	59.8	71.8
Textiles	52.8	30.0	56.4	55.9
Plastics	14.6	14.0	22.2	32.1
Mineral products	13.7	20.6	27.2	31.3
Other	<u>31.9</u>	<u>25.8</u>	<u>45.8</u>	<u>45.2</u>
Total	421.9	392.2	542.7	623.2
Surplus/(Deficit)	9.4	86.5	201.5	596.7

government. The MPLA government, during 1976, established initial trade ties with Brazil (coffee in exchange for transportation equipment), the U.S.S.R. (a general trade and friendship agreement signed in October), Yugoslavia, and other countries of Eastern Europe. The proportion of petroleum export to North America has not decreased, owing in part to continued independence on specialized refining capacities required for Angolan crude, and in part to the fact that petroleum production has been maintained. (By late 1976, Cabinda Gulf was reported to have regained 90 percent of 1974 production levels). (See Table II-5).

Angola's position as an oil producer (minor on a world scale, though still in the class of "giants" with reserves in excess of 1 billion tons) has meant that the post-1973 rise in world oil prices has worked strongly in her favor. Although some of the pre-1975 production was sold to Portugal at prices below the world market, future increases in petroleum prices will favor Angola even more than they have in the past. Angola applied for membership in the Organization of Petroleum Exporting Countries (OPEC) in 1976 and was renegotiating its royalty agreement with Cabinda Gulf and establishing a national oil company (SONANGOL) which would have a 55 percent control of production and distribution.

#### C. Government Budget

Table II-6, though of no relevance for the future, summarizes Portuguese Angola's government receipts and expenditures for 1971-75.

#### D. Government Economic Plan

The Portuguese development plans for Angola bear no relevance to the purposes of the independent government. The first national development plan is due to be announced in 1977 and will run for a three year term (1977-79). Thereafter regular five year development plans will be introduced. Present efforts are directed almost entirely at taking stock of available resources and restoring the disturbed infrastructure of the country to normal. Top priority has been given to controlling the labor situation in the ports, repairing the highway bridges destroyed during the civil war, rebuilding damaged sections of the highway network, and drawing people out of the remote regions and back to the coffee, cotton, sisal and other agricultural producing regions. There is nothing to be gained from premature speculation on the likely emphases of future development plans.

TABLE II-5

Angola Direction of Trade, 1968-74  
(In millions of SDRs)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>Jan-June 1974</u>
<b>Exports</b>							
United States	64.4	51.4	66.0	82.6	72.2	157.7	179.4
Portugal	93.1	121.7	145.1	127.0	117.3	164.5	156.9
Canada	6.1	5.5	8.6	20.4	42.6	45.5	76.2
Japan	13.2	15.2	27.7	41.4	44.4	55.4	22.0
Germany	14.9	26.4	26.8	11.1	19.8	38.4	17.7
Spain	6.5	11.9	19.5	14.1	20.6	26.7	16.0
Netherlands	27.0	37.2	46.2	29.9	18.1	11.2	8.4
Italy	1.9	2.7	2.7	3.2	4.2	7.5	7.4
Belgium	3.4	2.6	4.4	6.0	4.9	9.6	7.0
France	1.3	4.8	5.3	6.7	14.0	13.6	6.4
South Africa	4.7	4.9	5.1	5.6	5.2	4.1	5.4
United Kingdom	4.1	6.0	14.5	6.2	16.2	28.8	4.6
Africa:	12.3	17.9	19.4	20.1	27.5	22.1	11.8
Cabo Verde	(1.3)	(3.1)	(1.8)	(4.2)	(4.2)	(4.1)	(4.3)
Mozambique	(4.8)	(5.7)	(7.2)	(7.4)	(4.9)	(5.5)	(2.4)
Zaire	(3.8)	(1.9)	(5.0)	(5.0)	(7.6)	(6.7)	(1.4)
Other countries	17.9	18.7	31.6	55.9	33.7	39.1	20.2
Total	<u>270.8</u>	<u>326.9</u>	<u>422.9</u>	<u>430.1</u>	<u>440.9</u>	<u>624.2</u>	<u>539.3</u>
<b>Imports</b>							
Portugal	110.5	119.2	129.7	132.9	84.0	129.1	51.4
Germany	34.0	33.6	41.2	47.9	44.7	55.7	33.7
South Africa	7.7	10.2	14.6	15.4	16.6	19.0	28.2
United States	36.2	33.9	40.0	46.5	46.1	38.1	24.7
United Kingdom	27.4	29.1	34.5	37.9	32.3	35.3	18.3
France	15.9	15.9	19.8	19.4	21.6	31.5	15.7
Italy	7.6	9.4	11.7	15.8	16.2	18.7	11.6
Japan	10.2	14.7	16.0	23.3	20.8	24.8	11.4
Belgium	8.7	11.9	10.6	13.7	13.5	17.4	8.6
Spain	1.6	3.2	2.9	5.8	6.1	8.1	5.5
Netherlands	10.9	4.5	5.0	9.3	7.1	8.2	5.0
Africa	7.6	7.1	8.0	9.6	5.2	5.8	4.9
Mozambique	(6.5)	(5.7)	(6.5)	(8.6)	(3.5)	(3.9)	(4.1)
Other countries	24.3	29.0	34.5	43.3	47.1	63.5	35.6
Total	<u>302.6</u>	<u>321.7</u>	<u>368.5</u>	<u>420.7</u>	<u>361.2</u>	<u>455.2</u>	<u>254.6</u>

Source: IMF, Direction of Trade

TABLE II-6

Angola Central Government Finances, 1971-75  
(In millions of Angolan escudos)

	<u>Actuals</u>			<u>Budget Estimates</u>	
	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Revenue	7,248.8	8,709.3	10,713.4	13,719.7	20,252.6
Petroleum industry	(222.9)	(1,360.5)	(2,260.2)	(4,716.0)	(11,073.0)
Current expenditure	-6,503.3	-7,832.9	-9,101.4	-9,807.8	-13,343.6
Current budget surplus	745.5	876.4	1,612.0	3,911.9	6,909.0
Development expenditure	-1,825.8	-1,647.6	-2,058.7	-4,363.0	-8,390.1
Budgetary deficit	-1,080.3	-771.2	-446.7	-451.1	-1,481.1
Financing	1,080.3	771.2	446.7	451.1	1,481.1
Foreign (net) <sup>a</sup>	23.0	-75.7	-68.1	152.9	-177.1
Domestic (net)	713.2	954.7	616.1	125.6	1,700.2
Bonds & Treasury bills (net)	(266.6)	(523.0)	(323.1)	(-17.0)	(573.7)
Advances from Bank of Angola	(512.3)	(267.4)	(216.7)	(54.2)	(-127.0)
Other borrowing (net)	(74.3)	(164.3)	(76.3)	(88.4)	(1,253.5)
Other (net) <sup>b</sup>	344.1	-107.8	-101.3	172.6	-42.0
Memorandum item					
Debt amortization	311.1	347.9	390.3	704.5	533.3

Source: data provided by the Angolan authorities

<sup>a</sup> payable in Portuguese escudos

<sup>b</sup> includes changes in cash balances, and errors and omissions

## E. Development Problems and Opportunities

Leaving aside the short-term reconstruction problems remaining from the civil war of 1975-76, Angola's proved and suspected mineral resources, existing transportation system, hydroelectric potential, low population density, and the zeal of a new government with a coherent ideology presents a wide range of development opportunities for the country. At the same time, the low population densities in many regions of the country make the delivery of services costly and limit the domestic market for consumer goods. Lack of skilled personnel and possible reluctance on the part of Kongo and Ovimbundu peoples may make difficult the distribution of the benefits likely to accrue from the opportunities listed above.

Petroleum exploration concessions, other than in the producing field at Cabinda, had been awarded by the Portuguese for virtually the entire coastline of Angola. In late 1974 it was reported that Texaco had discovered petroleum reserves just south of the mouth of the Congo River that exceeded those of Cabinda by ten times (thus equalling nearly half of Nigeria's reserves). Although no reports are available on possible reserves in areas farther south, this reported find would in itself present a major development opportunity, since it alone could yield annual revenues several times the total of government receipts in 1974.

Similarly optimistic reports have circulated about mineral prospecting in southern Angola undertaken by two South African firms just before independence. General Mining Ltd has already found commercially promising fluorspar, lead, and zinc anomalies. Johannesburg Consolidated Investments has what is reported to be a huge mineral prospecting concession and evidently finds sufficiently interesting opportunities to remain active in Angola despite the vagaries of war in the area of its concessions and uncertain diplomatic relations between the Republic of South Africa and Angola. It has issued no detailed report of its findings, but rumors of untapped copper and uranium deposits have recently circulated.

Angola's three railroads, terminating at Luanda, Benguela/Lobito, and Mocamedes, climb through the difficult escarpment near the coast and open onto the relatively unbroken plateaux of the interior. One, the Benguela line, already traverses the entire country from west to east. One legacy of the Portuguese counter-insurgency efforts of 1965-74 was a highway system ranking among the best developed in Africa (outside of the Republic of South Africa and Rhodesia). Asphalt roads link almost all the district capitals and exploited natural resources. Given the availability

of transportation equipment and clearance of backlogs in the three main ports, the railroads are capable of handling -- or being expanded to handle -- significantly increased production in all sectors.

Angola's hydroelectric potential in the several large rivers that descend through the escarpment from the highland interior to the coastal plains exceeds several times the amount of electricity consumed in 1974. The large dam at Cambambe near Luanda is reportedly capable of generating nearly twice its 1974 production. Development schemes already underway on the Kunene River can alone generate energy in excess of Angola's total consumption in 1974. Other existing dams are disused or underused. Evaluation of the potential of the northward flowing tributaries of the Kasai in northeastern Angola has barely begun. Angola seems unlikely to face energy shortage in the foreseeable future if the existing potential is developed.

The mineral resources, the power to exploit them, and the transportation network to bring them to the world market can generate revenues enormous by African standards, particularly so in view of Angola's relatively sparse population. GNP/capita (at \$509 in 1974 already over twice the average for Africa excluding the Republic of South Africa) cannot fail to rise, particularly in view of the evident intention of the new government to take control of these resources and to exploit them fully.

The MPLA government has repeatedly affirmed its intention to manage the national resources in the interests of the Angolan people. It has also indicated its unwillingness to see the benefits of national independence and economic development sequestered by a small urban middle class of the sort that developed after independence in many other African nations. This commitment means that the government must face the problems of delivering anticipated returns in whatever form they decide may be most beneficial to people who are hostile to the new regime. It remains to be seen whether the domestic market for consumer goods, even given substantial purchasing power in the hands of a large number of people (a condition entirely absent under Portuguese rule), can grow large enough to support local industrial development beyond the level attained before 1975. Some manufactured items will undoubtedly remain cheaper to import than to fabricate locally, unless the government chooses to subsidize the industrial sector of the economy.

The primary obstacles to development remain those of greatest importance in the short run: restoration of road and rail facilities, rebuilding the pool of vehicles, overcoming the reservations of the Kongo and Ovimbundu people toward the MPLA

government, and restoring labor discipline in the cities. After these problems have been solved, Angola's prospects for economic development seem among the brightest in sub-Saharan Africa.

# **III**

## **FOREIGN DONOR ASSISTANCE**

### **XIII. FOREIGN DONOR ASSISTANCE**

Angola began to line up assistance in meeting its most pressing short-term needs within its first year of independence. The government has expressed its determination to "pay its own way" and to repay foreign donors for assistance rendered. It is confident of its long-term ability to finance its own development and will take international aid only in forms consistent with national pride and self-respect.

1. The United Nations High Commission for Refugees was in August, 1976, reported to be putting together an \$80 million program for the relief of an estimated 1,000,000 refugees in Angola and neighboring countries. Additional assistance in this regard has been called for by UN officials.

2. An agreement has been concluded with Brazil to supply \$1.5 million worth of vehicles from Brazil Volkswagen, with 475 cars and buses to be delivered before the end of 1976. Volvo (Sweden) has already begun delivery of an ordered 950 heavy trucks. These represent only a fraction of the ultimate need for transportation equipment, and the government might be receptive to opportunities to acquire additional vehicles.

3. Brazil has extended an \$8 million credit which may eventually allow Angola to obtain fishing boats, freighters, hospital equipment and rice.

4. Petroleum producing equipment may be obtained through a \$150 million loan extended by Libya and Algeria; these north African nations have also agreed to provide technical assistance in petroleum production and marketing.

5. The abandoned properties of former Portuguese residents -- houses, apartments, plantations, small businesses, and large enterprises (including the country's largest coffee trading company, the Companhia Angolana de Agricultural) -- have been nationalized and will be distributed to Angolan citizens or operated on their behalf. To the extent that former owners will fail to receive compensation, the value of these expropriated assets constitutes a form of (forced) foreign assistance. News media, banks, and other formerly Portuguese-owned properties have also been nationalized.

6. Cuban military forces have undertaken a variety of tasks, ranging from rebuilding damaged roads and bridges to training Angolan military cadres. Cuba is also reported to have provided

medical assistance, technical assistance in the forestry sector, teachers, and skilled technical personnel in a variety of other fields. Agreements dated July 29, 1976, and December 5, 1976, provide for scientific, economic and technical cooperation, but at the same time reports circulated to the effect that declines in the world price of sugar had left Cuba hard-pressed to fulfill its commitments to Angola.

7. Technical assistance, specifically in the sector of stock-raising, has been offered by East Germany.

8. Economic, technical, scientific and cultural cooperation between Angola and the U.S.S.R. is envisaged in the terms of a treaty signed in October in Moscow. President Neto has stated that aid received under this agreement will be repaid by delivery of goods or freely convertible currency over a period of ten years.

9. Sweden is planning to give \$7 million worth of education supplies, medicine, transportation equipment, and bridge-building materials.

10. Angola has requested \$600 to \$700 million in war reconstruction compensation from the Republic of South Africa. South Africa has shown no inclination to respond favorably to the Angolan claims.

11. It may be expected that other bilateral aid agreements will be announced during the coming months. Great Britain, the Netherlands, West Germany, Belgium, and Denmark are reported to be among the members of the European Economic Community who had offered aid by March, 1976. Much of this assistance will be coordinated by United Nations agencies.

No foreign assistance was provided under the Portuguese regime. The details of Portuguese development schemes for Angola are shown in Table III-1, but these did not constitute foreign assistance since they were funded entirely from local revenues.

Foreign donor assistance to Angola has, of course, historically been the almost total responsibility of Portugal. Gross official flows from Portugal to Angola between 1962 and 1968 averaged \$1.8 million annually, declining over that period. Accounts show 100 percent of this to be loans, concessional and non-concessional. These flows from Portugal accounted for 97 percent of all gross official flows to the country, with the 3 percent remaining being loans from DAC nations.

TABLE III-1

Angola Development Plan Expenditures, 1966-72  
(In millions of escudos)

<u>Extraordinary Expenditure</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
<u>Development Plan</u>							
Communications & transport	376	355	734	564	606	573	432
Education	30)	30	66	111	78	87)	155
Health	)	26	69	87	90	95)	
Other	388	348	483	430	570	525	755
<u>Other Expenditure</u>	<u>320</u>	<u>284</u>	<u>541</u>	<u>844</u>	<u>1,014</u>	<u>1,167</u>	<u>971</u>
<u>Total</u>	<u>1,164</u>	<u>1,059</u>	<u>1,893</u>	<u>2,026</u>	<u>2,360</u>	<u>2,447</u>	<u>2,313</u>
<u>Plan Expenditure in Detail</u>							
Agriculture, irrigation, forestry, livestock	138	103	131	81	81	139	289
Fishing	25	26	33	12	42	9	12
Energy	87	99	39	72	100	73	134
Mining	37	36	35	40	104	36	32
Manufacturing	---	---	105	4	---	6	3
Roads	230	214	581	367	390	267	233
Railways	16	23	22	37	67	56	40
Airports	69	66	37	42	39	114	72
Ports	34	34	30	46	42	21	49
Telecommunications	26	18	65	71	68	115	37
Education	80	30	66	111	78	87)	155
Health	)	26	69	87	90	95)	
Other social affairs	)	16	---	---	---	---	---
Housing	29	23	20	16	32	44	39
Urban affairs	7	9	22	66	67	58	83
Cartography	33	26	18	10	9	6	---
Investigation	22	20	21	106	129	148	161
Other	11	7	58	34	8	6	3
<u>Total</u>	<u>844</u>	<u>776</u>	<u>1,352</u>	<u>1,202</u>	<u>1,346</u>	<u>1,280</u>	<u>1,342</u>
				<u>31 December</u>			
<u>Public Debt</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
To Portugal	3,200	3,218	3,298	3,401	3,395	3,470	3,417
To others	1,509	1,705	2,251	3,121	3,865	4,200	4,975
<u>Total</u>	<u>4,709</u>	<u>4,923</u>	<u>5,549</u>	<u>6,522</u>	<u>7,260</u>	<u>7,670</u>	<u>8,392</u>
<u>Increase</u>	<u>510</u>	<u>214</u>	<u>626</u>	<u>973</u>	<u>738</u>	<u>410</u>	<u>722</u>

\* Part estimated

Since the birth of the ODA accounting concept in 1968, Portugal has shown an average \$23 million ODA to Angola annually (through 1974) with a trend towards increase over the period. This accounted for 99 percent of ODA to Angola. The remainder was \$0.8 million from DAC nations and \$0.1 million from international agencies, both primarily in the most recent period. The net result was a low \$3 per capita average in recent (1971-74) years, which is a very low 1 percent of GNP. Only Rhodesia in the region received less.

Taking Angola in the larger sense to include the areas under administration by the liberation movements prior to 1974, small amounts of foreign donor assistance may be said to have reached Angolan peoples. UNESCO, the Food and Agriculture Organization, and the World Food Program assisted in the form of education for movement leaders in Tanzania (primarily MPLA) and nearly a million dollars worth of food to liberated areas of Angola in 1974. A variety of international organizations cooperated on aid for refugee populations outside Angola before 1975.



# **IV**

## **SECTOR ANALYSES**

- **Agriculture**
- **Mining and Minerals**
- **Transportation**
- **Energy**
- **Health**
- **Education**
- **Population**
- **Industry**
- **Other**

## IV. SECTORAL ANALYSES

No statistical series exist that might permit a calculation of the overall sectoral contribution to Angolan gross national product under the Portuguese. Even less is known about the structure of the economy since 1975. Agricultural production, clearly the major component of the Angolan economy, has been expressed only in terms of area cropped and in terms of production by volume. Minerals, primarily petroleum, and light industry made significant contributions, as did transportation.

### AGRICULTURE

Agricultural production in colonial Angola was developed as two distinct economic sectors: a relatively highly capitalized European sector comprised of larger-scale units and a small-scale African sector based on rudimentary technology. The European sector, which depended heavily on low-paid African labor, produced the bulk of agricultural commodities destined for export. The contribution of the major Angola commercial crops to its non-petroleum exports in the final years of the colonial period was approximately 52-54 percent, although rising exports of crude oil during those years lessened the relative importance of agriculture to total exports.

Angola's soils are generally regarded as of limited use for agricultural purposes, owing to their low fertility and moisture-holding capacity. The soils of the coastal plain are sandy, interspersed with heavy black clays in the river valleys to the north. The western half of the interior plateau is made up of laterized reddish soils of moderate fertility, and this is where most of Angola's agricultural development has taken place. The entire eastern half of the country, and nearly all of the south, is covered by yellow or grey "Kalahari sand". Detailed soil surveys are available.

FAO statistics indicate that approximately 17,000,000 hectares were under cultivation in Angola in 1974, or approximately 1.4 percent of the country's total land area. No figures were available for the proportion of arable land that this may have represented. In 1971-72, however, the Missao de Inqueritos Agricolas de Angola (MIAA) conducted an agricultural sample survey which indicated that the total cropped area of Angola was 37,000,000 hectares, or nearly 3 percent of Angola's territory. The FAO statistics made no distinction between European commercial production and African cultivation, but the MIAA statistics classified 29,000,000 hectares (or 79 percent) as "traditional"

TABLE IV-1

Contribution of Major Agricultural Commodities  
to Angolan Exports, 1971-74

<u>Commodities (Agricultural)</u>	<u>% of Non-Petroleum Exports</u>				<u>% of Total Exports</u>			
	1971	1972	1973	1974	1971	1972	1973	1974
Coffee	40.2	40.8	40.1	39.2	33.1	29.7	28.1	20.2
Sisal	2.2	3.5	3.7	7.9	1.8	2.6	2.6	4.1
Raw cotton	6.5	3.0	4.9	2.9	5.3	2.2	3.4	1.5
Tobacco	3.0	3.1	1.8	1.2	2.5	2.2	1.3	0.6
Maize	1.8	1.5	2.0	1.2	1.5	1.1	1.4	0.6
Raw sugar	0.3	0.4	0.3	0.2	0.3	0.3	0.2	0.1
Total <sup>a</sup>	54.0	52.3	52.8	52.6	44.5	38.1	37.0	27.1

<sup>a</sup> Does not include agricultural component of category "other exports", fish meal, or dried fish.

(roughly equivalent to African) and 8,000,000 (or 21 percent) as "commercial" (roughly equivalent to European). MIAA counted 1,067,230 producing units in the traditional sector working a total of nearly 3,000,000 plots. Most "traditional" cultivators held two or three plots, although about a fifth had only a single plot and a fourth had more extensive holdings. The average size of a plot was 1.4 hectares and the mean total number of hectares worked for cultivation was 3.9. A large percentage of these plots were cultivated by varying techniques of shifting cultivation, although some were relatively permanent fields in alluvial lands or fertilized by animal manure. The number of "commercial" producers was not published.

Maize, manioc (cassava), and beans were the most widely-grown crops in the "traditional" agriculture sector, according to MIAA statistics. Nearly all grew some maize (84 percent), while 70 percent cultivated manioc, clearly the two important starchy staples of the Angolan African diet. Millets, sorghum, and rice fall in a distant second category, each cultivated by approximately 5 percent of the "traditional" producers. Potatoes were grown by just over 11 percent of these cultivators. Beans were the major source of vegetable protein (grown by 47.2 percent of the cultivators), although nearly half as many "traditional" producers (21.0 percent) grew peanuts. Coffee was the cash crop preferred over all others by far, although only 26.8 percent of the "traditional" cultivators harvested this crop. Cotton and wheat were grown by only about 2 percent of the "traditional" farmers in Angola. MIAA valued the total production of the "traditional" sector at 2.536 billion escudos, or 61.6 percent of the value of "commercial" agriculture in Angola. Value produced per hectare in the traditional sector was 860 escudos (approximately \$US30). The value produced by each hectare in "commercial" agriculture was 6,311 escudos (approximately \$US233). The value per hectare of "commercial" crops other than coffee (value 9,812 escudos or \$US363) was 2,922 escudos (or \$US108), 3.4 times the value produced by all "traditional" agriculture including coffee.

According to FAO estimates based on Angola's agricultural exports, Africans contributed only maize in significant amounts to the commercial sector. All other African-grown agricultural crops taken together (manioc, palm oil, coconuts, beans, rice, and peanuts) amounted to little more than the value of maize alone on the commercial market. The export figures, which are the hardest statistics available, give only an inexact picture of the role of agriculture in the Angolan economy, since they take little account of production of food crops in the African sector or of truck gardening to supply foodstuffs to the cities of Angola. Under Portuguese rule, government support for agriculture went almost

TABLE IV-2

Numbers of Plots Worked by "Traditional"  
Cultivators - Angola (1971-72)

<u>Number of Plots</u>	<u>Percentage of Farmers Working that Number</u>
1	22.1
2-3	52.8
4-5	20.0
6-9	4.9
10+	0.2

---

TABLE IV-3

Percentages of "Traditional" Cultivators  
Producing Different Crops - Angola (1971-72)

<u>Crop</u>	<u>Percentage of Producers</u>
Maize	84.1
Manioc (cassava)	70.0
Beans	47.2
Coffee	26.8
Peanuts	21.0
Oil Palm	13.4
Potatoes	11.3
Millet, sorghum	9.7
Rice	4.8
Wheat	2.1
Cotton	1.9

entirely into European farms and plantations for export crops or provisioning the urban areas (witness the lack of statistics on African production in ordinary government fiscal data series\*), and Africans were in numerous subtle and overt ways discouraged from participating in these sectors of the economy. Since independence, the government has given every indication that it will eventually shift the emphasis of its agricultural policies to peasant production, after it has restored large-scale agriculture for export and given African laborers on the plantations a government-led voice in the conduct of their operations.

Angola's principal crops in terms of tonnage produced (according to FAO figures\*) are cassava and sugar cane, with maize also important; significant quantities of coffee, bananas, and sweet potatoes and yams are also produced. Maize, however, occupies the top position in terms of area harvested with coffee a close second, and cassava, beans, millet/sorghum, and sisal in the second rank. Table IV-4 shows the area devoted to these crops and estimated yields for each. The only statistics on the relative significance of Angola's crops by value are those of MIAA for 1971-72 (see Tables IV-4 and IV-5 following). They rank export crops much higher and the African foodcrops lower than the figures showing production by weight and areas harvested. In terms of volume produced and area planted the majority of Angolan agriculture is devoted to the production of staples for domestic consumption.

TABLE IV-4

Agricultural Production in Angola Crops by Area Harvested (thousand hectares)

<u>Crop</u>	<u>1972</u>		<u>1973</u>		<u>1974</u>	
	<u>Area</u>	<u>Yield<sup>a</sup></u>	<u>Area</u>	<u>Yield<sup>a</sup></u>	<u>Area</u>	<u>Yield<sup>a</sup></u>
Maize	530	7.5	530	8.1	530	8.6
Coffee	500	4.2	500	4.2	500	4.2
Cassava (manioc)	123	132	123	132	124	132
Dry beans	120	5.8	120	6.0	120	6.0
Millet, sorghum	93	8.4	93	8.4	93	8.6
Sisal	70	9.3	70	8.6	70	9.7

Sources: Same as Table IV-3

a In 100s of kilograms per hectare

\* But cf. the agricultural censuses of the Missao de Inqueritos Agricolas de Angola (short bibliography): Tables IV-4 and IV-5

TABLE IV-5

Agricultural Production in Angola Crops by Weight  
(Thousand metric tons/annum)

	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Cassava (manioc)	1,525	1,545	1,590	1,600	1,610	1,620	1,630	1,640
Sugar cane	722	685	683	764	880	903	967	980
Maize	380	400	494	456	404	400	430	450
Bananas	213	213	250	300	300	250	300	320
Coffee	235	198	215	204	225	210	210	220
Sweet potatoes, yams	145	140	145	147	150	155	160	165
Citrus fruit	78	78	81	82	82	83	84	85
Millet and sorghum						78	78	80
Dry beans	64	64	64	64	70	70	72	72
Seed cotton	27	41	60	81	86	48	95	101
Cottonseed						40	63	60
Cotton (lint)						18	16	38
Sisal	29	61	66	68	46	77	62	70
Others								
potatoes								
rice								
groundnuts								
palm kernels								
wheat								
tobacco								
castor beans								
sesame								
kenaf (mesta)								

9-AT

Sources: FAO statistics and estimates. Clearly, many of these are very rough projections based on estimates of unknown reliability, particularly in the case of unmarketed African-grown foodcrops.

TABLE IV-6

MIAA Statistics on Angola's "Traditional Sector" - 1971-72

<u>Crop</u>	<u>Number Producing Units in which Grown <sup>a</sup></u>	<u>Cultivated Area (Equiv- alent to un- mixed culti- vation) [hectares]</u>	<u>Production (tons)</u>	<u>Value (1,000 escudos)</u>
Wheat	22,828	23,810.1	9,783.5	26,372
Rice	51,255	25,163.4	29,812.6	60,632
<u>Mauango</u> (sorghum?)	58,664	125,889.3	42,399.0	50,316
<u>Massambala</u> (millet?)	98,179	111,038.8	31,828.1	36,642
Maize	897,295	1,459,308.1	680,458.1	791,004
Beans	504,103	210,165.1	63,171.8	251,924
Potatoes	120,656	26,685.5	64,194.6	77,960
Cotton	20,673	17,556.1	19,992.9	97,102
Manioc (cassava)	746,897	688,601.5	1,134,262.2	665,007
Peanuts	224,258	48,728.2	26,563.6	92,987
Coffee	286,553	178,232.5	49,922.6	374,278
Oil palm	142,698	30,368.7	2,471.1	12,143

Source: Missao de Inqueritos Agricolas de Angola, Estadisticas Agricolas Correntes (1971-72)

<sup>a</sup> Total number of producing units - 1,067,230

TABLE IV-7

MIAA Statistics on Angola's "Commercial Sector" - 1971-72

<u>Crop</u>	<u>Number Producing Units in which Grown <sup>a</sup></u>	<u>Cultivated Area (Equiv- alent to un- mixed culti- vation) [hectares]</u>	<u>Production (tons)</u>	<u>Value (1,000 escudos)</u>
Wheat	n/a	36,520.0	12,782	35,547
Rice	n/a	30,880.0	27,791	71,759
Maise	n/a	22,725.7	29,292	37,989
Beans	n/a	4,634.8	2,307	10,820
Potatoes	n/a	12,764.8	74,562	98,262
Cotton	632	62,919.0	62,795	354,917
Peanuts	n/a	345.0	372	1,116
Tobacco	288	3,335.0	3,258	54,513
Sugar cane	n/a	13,931.2	75,864	227,392
Sunflower seed	n/a	22,427.0	17,930	78,894
Coffee	2,340	383,250.0	166,000	3,758,240
Oil palm	n/a	n/a	n/a	n/a
Sisal	139	184,841.0	47,920	175,571
Cocoa	n/a	n/a	500	6,500

Source: Misser de Inqueritos Agrícolas de Angola, Estatísticas Agrícolas de Angola (1971-72)

<sup>a</sup> Total number of producing units not available

Various sources quote a figure of 2 percent as the percentage of Angola's total land under "active exploitation" or "intensive cultivation". No explanation of what "active exploitation" or "intensive cultivation" might mean, or figures on the proportion of arable land relative to the country's total land area, accompany this estimate. The percentage would certainly rise if the agricultural land lying fallow in the African shifting agricultural sector were included, and the resulting higher figure would undoubtedly represent more accurately the effective utilization of arable land in Angola. The quoted figure clearly understates the effective utilization of land in Angola since so low a percentage seems inconsistent with documented land shortages in the Central Highlands and elsewhere under Portuguese rule. An assumed average ten-year fallow in the shifting cultivation sector would raise the proportion of total land area under effective utilization (cultivated and fallow) to the neighborhood of 30 percent, a high percentage in a country with extensive areas in the south and east too dry for unirrigated farming, mountainous and forested regions in the north and west, and much of the best land given over to European commercial production during the last years of the colonial period.

Portuguese strategies of "agricultural development" before 1974 were skewed toward government subsidization of several forms of European agriculture and either neglected African agriculture or in places actively destroyed it. Large European-owned plantations produced coffee, sisal, cotton, and other export crops. Moderate-sized European estates engaged in truck gardening for Angolan cities, especially in the central planalto and in the environs of Luanda. Finally, some European Portuguese colonists were established on government-financed settlement colonies (colonatos), notably at Cala in the central plateau and at Matala in the upper valley of the Kunene River. The colonatos were comprised of small-scale (12-45 acres per family) and theoretically self-sufficient family farms. A very small number of African families qualified for this form of government assistance to agriculture. No estimates show how much of the \$2.5 to \$4 million expended each year on agricultural development in the 1960s found its way to the African population, it is safe to assume that the African share was very low.

Little African agriculture in Angola remained pure "subsistence" by 1974, except perhaps in the most remote regions of the southeast (although even there many peasants grew surpluses to support MPLA operations in their territory). NIAA statistics for 1971-72 classified 22.3 percent of the producers in the "traditional" agricultural sector as only secondarily occupied in their own fields, 13.6 percent mainly so occupied, and 63.9 percent as exclusively

so. These figures would appear to indicate that well over one-third of the "traditional" farmers also worked at other occupations or in the agriculture enterprises of others. Some of the two-thirds of the producers in the "traditional" sector exclusively occupied in their own fields would have grown cash crops, and an unknown proportion of all these cultivators would have been part of family production units including members employed by commercial enterprises or in domestic service to Europeans. The concentration of Portuguese agricultural development funds in the European farms and plantations of Angola meant, however, that the independent government inherited an African sector producing mainly the staple cereals and tubers of the Angolan diet. But many African farm families sold maize or manioc to feed the populations of the towns, produced cotton or tended a bit of coffee to obtain cash for payment of taxes. Many purchased a portion of their food from cash earned by younger members who worked in the European sector of the economy.

The independent government has recognized the dependence of most Angolan farmers on the national economy and acknowledges its commitment to the spread of development assistance to all parts of the population. It faces two immediate problems in the development of the agricultural sector. The civil war of 1975-76 forced some peasants to shift to primarily self-sufficient farming, and the government will need to bring these farmers back into the market economy of the nation. This is most critical with respect to the provision of staple foods for the cities. The second short-term task facing the independent government is to bring abandoned European farms and plantations, which had absorbed so much of the agricultural development budget before 1974, back into production. The latter is more important for earning foreign exchange, particularly in the short run, since the war necessitated increased imports at the same time as it sharply reduced Angola's exports in the mineral sector. Restoration of some formerly European farms will also restore supplies of fruits, vegetables, and dairy products for the towns. Both priorities translate into immediate needs for trucks and other transportation equipment to move produce to the markets and into organizing the Angolan labor force for the harvest of perennial plantation crops. Re-entry of the peasantry into the market economy should solve these short-term difficulties and eventually make Angola self-sufficient in basic cereals and tubers and potentially so in other components of the nation's diet.

Coffee (almost entirely of the robusta variety), Angola's leading export crop in terms of value, is grown mostly on large estates in the montane forests of the provinces of Cuanza Sul, Cuanza Norte, and Uige. Ownership of many of these plantations fell to the

government under the terms of 1976 decrees confiscating properties abandoned by former Portuguese residents. Others may be subject to government control under policies declaring that national resources "must be collectively owned by the people". Significant quantities of coffee were stockpiled in Angola prior to 1974, owing to production beyond the restrictions imposed by international coffee marketing agreements. These stockpiles were reported sufficient to cover Angola's allotments through 1976. The harvest fell sharply in the 1975-76 growing year, and there seems little prospect of significant recovery in the coming year owing to deterioration affecting bushes left untended since 1974. Angolan coffee stocks will therefore probably be depleted. The government has given priority to restoring production for 1977, no doubt in part a response to the windfall opportunities presented by recent increases in world coffee prices. Labor and lack of technical expertise are the primary local constraints on coffee production in the short-run. Longer-run limitations include Angola's quota under the International Coffee Agreement and re-establishment of bushes lost through neglect during the war of 1975-76.

TABLE IV-8

Angola Coffee Production, 1973-74  
(60 kilo bags)

<u>Year</u>	<u>Production</u>	<u>% of World Production</u>	<u>World Price</u>	<u>Value of Sales</u>
1973-4	3,200,000			\$231 million
1974-5	3,000,000	3.7	£ 400	
1975-6	1,500,000 <sup>a</sup>	2.0	£1200	

<sup>a</sup> Other estimates place the decline in the current year at 85 percent from former levels of production.

Production of sisal and cotton, Angola's two second-ranking agricultural exports, has fluctuated over the decade before independence, depending on world prices for the two crops and on adequacy of rainfall in the primary growing areas. Both are grown in the drier regions of the west-central provinces, sisal primarily on formerly European estates on the western slopes of the central highlands in Benguela Province, and cotton on plantations owned by Europeans in the Kwansa valley, in Luanda and Cuanza Sul Provinces, and in the Kwango valley of Malanje. In 1970 in Malanje (which contained 46 percent of the total area planted in cotton), European farms (1.5 percent of total growers) controlled 75.8 percent of the cotton acreage and harvested 85.8 percent of the total crop;

these proportions had not changed significantly by 1974. Since cotton production elsewhere depended to a similar extent on European efforts, the current development problems facing the independent government resemble those associated with coffee: re-activation of abandoned acreage, mobilization of labor (particularly for picking in July and August), arranging for technical assistance, and transportation.

TABLE IV-9

Angola Production of Cotton and Sisal  
(Thousands of metric tons)

<u>Year</u>	<u>Cotton</u>	<u>Sisal</u>
1971-2	31	n/a
1972-3	18	62
1973-4	30	70
1974-5	38 (est.)	40

The Angolan government is likely to see longer-run development opportunities in agriculture more in the sphere of extension services for African farmers, improved marketing arrangements to bring a larger share of each harvest's proceeds to the producer, and the development of cooperatives for the use and maintenance of such mechanization as may contribute to the efficiency and productivity of small-scale peasant agriculture. Assistance needs will therefore arise in the areas of technical advice, research into soil and climate conditions, and in transportation and marketing. The Portuguese Government attempted large-scale farming and grandiose settlement schemes for small farmers (Matala and Cela, etc.) and all proved extremely expensive. MPLA planners are unlikely to attempt to duplicate these failures.

A. Livestock Raising

Angola has the advantage of possessing extensive arid and semi-arid lands in the central and southwestern parts of the country that are suitable for grazing cattle. Angolan herds were variously estimated to have totalled between 2,850,000 and 4,430,000 head in 1973. Tsetse fly renders much of the northern half of the country unsuitable to cattle, although after about 1968 European ranching spread into the higher elevations of Malanje District. Portuguese

government assistance to livestock raisers went almost exclusively to a small number of European ranchers (the Livestock Development Fund extended credit facilities in 1968 to only 190 stockowners, to only 221 in 1969, and to only 242 in 1970). Many of the fenced in rangelands along the Kunene River are part of a large development scheme that also included a hydroelectric system and the colonoato of Ntatala. Detailed research conducted in the 1960s showed that the productivity of large-scale enterprises in the so-called "modern sector" did not exceed that of the African sector, despite the substantial funds expended in support of European ranching in southwestern Angola. European livestock raisers in the late 1960s maintained fewer head on these government-supported ranches than Europeans had owned in the same region during the 1930s, when herd management was entrusted to local African herdsmen following African methods of stock-keeping. Returns on the government investment were certainly low in comparison to returns on the unsupported African herds. Government development programs, which resulted primarily in fences enclosing European herds on the best grazing land and near watering points, placed severe stresses on the complex migratory movements of African herd managers. Still, the Africans maintained a higher beast/area ratio than European ranchers were able to attain, supplied European ranches with young steers for feeding and eventual slaughter, and produced dairy products that were a significant component of the local diet.

In view of these economic facts, and taking account of the social disruption that resulted from the establishment of large-scale European ranches, the MPLA Government seems unlikely to embark on subsidized livestock development schemes similar to those tried by the Portuguese. Rather they are likely to improve the productivity of existing African techniques of herd management through technical assistance, water conservation, veterinary medicine, and improved marketing facilities both for dairy products and the sale of young steers to the agricultural regions of Angola where they may be raised for slaughter. Some rebuilding of herds will undoubtedly be necessary, since the war in the southern parts of the country may have eliminated up to half of the herds present in 1974.

Other species of livestock have not been raised on a large-scale commercial basis in Angola. Goats are ubiquitous features of African family compounds throughout the country, and pigs are not uncommon. The location of the sheep reported in the FAO estimates given in Table IV-10 is not readily apparent, although some flocks were developed by European interests in the south area of Benguela. These animals provide significant amounts of meat in the rural areas, and might have potential for development as a commercial meat source for urban areas as well.

TABLE IV-10

Stockbreeding and Animal Products, 1960-73

Year	Livestock <sup>a</sup>				Dairy Products			Meat Production	
	<u>Cattle</u>	<u>Goats</u>	<u>Pigs</u>	<u>Sheep</u>	<u>Milk</u> (000's Liters)	<u>Butter</u> (Metric tons)	<u>Cheese</u> (Metric tons)	<u>Beef</u> (Metric tons)	<u>Pork</u> (Metric tons)
	(000's)								
1960	---	---	---	---	---	61	5	---	---
1961	---	---	---	---	---	67	30	---	---
1962	---	---	---	---	878	159	169	---	---
1963	---	---	---	---	1,112	192	185	---	---
1964	---	---	---	---	6,773	261	113	---	---
1965	---	---	---	---	9,356	241	155	---	---
1966	1,154	254	87	27	10,000	278	178	---	---
1967	2,095	715	315	137	11,435	352	417	---	---
1968	2,115	731	317	142	15,632	464	1,112	---	---
1969	2,171	759	320	161	16,791	468	736	16,180	7,152
1970	2,727	821	332	171	24,455	489	858	17,881	7,205
1971	2,852	1,763	1,182	233	26,850	451	1,517	21,351	7,929
1972	4,101	1,951	1,261	357	33,067	433	1,967	22,420	6,892
1973	4,431	2,088	1,299	385	36,130	591	1,850	24,488	7,378

Source: Bank of Angola, Economic and Financial Surveys of Angola.

<sup>a</sup> Estimated

TABLE IV-11

1982

Livestock Populations  
(Alternative estimate)

<u>Year</u>	<u>Cattle</u>	<u>Sheep</u>	<u>Goats</u>	<u>Pigs</u>
1960	1,234,000	130,000	476,000	296,000
1961	1,325,000	140,000	485,000	296,850
1962	1,430,000	145,000	495,000	298,000
1963	1,500,000	150,000	500,000	300,000
1964	1,650,000	160,000	543,000	305,000
1965	1,800,000	165,000	580,000	307,000
1966	1,900,000	160,000	620,000	310,000
1967	2,096,233	140,000	660,000	312,000
1968	2,095,222	136,691	714,760	314,677
1969	2,300,000	147,000	740,000	318,000
1970	2,514,180	159,281	770,286	324,018
1971	2,727,000	171,000	821,000	332,000
1972	2,800,000	180,000	850,000	340,000
1973	2,850,000	187,000	870,000	345,000

Source: FAO Statistical Yearbook

## B. Timber

Angola's timber resources consist in tropical hardwoods from the Cabinda enclave and in extensive eucalyptus stands along the railroads of the drier central portions of the country. Timber exports from Cabinda peaked in 1969 at 152,000 tons but declined in subsequent years owing to intensified warfare in the tropical forests of the enclave. The fast-growing eucalyptus stands, planted originally to provide fuel for wood-burning locomotives on the Benguela and Malanje railroads, have become available for fuel, construction timber, fence posts and other domestic uses with the recent change to diesel-powered locomotives on these lines. The MPLA Government may wish to utilize these resources in developing housing programs in the cities and towns of Angola but will require technical assistance and training in forest management to do so.

## C. Fishing

Fishing is generally regarded as an area of significant development potential in Angola. The upwelling cold waters of the Benguela Current bring large amounts of nutrients from deeper regions of the South Atlantic and make Angolan waters a rich source of fish. The Portuguese began to exploit this potential during the 1960s and between 1962 and 1972, landings of fish doubled from 300,000 tons annually to almost 600,000 tons. At the same time, international fleets excluded from fishing grounds in the northern hemisphere increased their activity off the Angolan (and Namibian) coast, bringing the total catch to the vicinity of 1,000,000 tons per year. Of the Angolan catch, a large proportion (450,000 tons in 1972) was processed into fishmeal and preserved fish for export, and Angola became the second largest fish processor in western Africa. Exports of fish products show uneven growth in processing of fish meal in the late 1960s and early 1970s. As in the case of other agricultural development in Portuguese Angola, most of these gains went to European operators of fishing fleets (who employed African labor on their boats) and the owners of processing plants in Mocimedeas, Luanda, and Lobito. The Angolan fishing fleet was estimated in 1974 to include 250 purseiners and eighty handliners in addition to 500 small-sized units (worth \$US 30 million).

The flight of Portuguese colonists from Angola in 1975 was made in part aboard the larger vessels in the colonial fishing fleet, and so the former equipment was reduced by 1976 to twenty-three small crafts (averaging fifteen years age) totalling 28,000 tons. Some of the remaining equipment must have become inoperable through sabotage, lack of spare parts, and lack of trained

TABLE IV-12

Angola Exports of Fish Products by Value  
(In millions of \$US)

<u>Product</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Fishmeal	4.7	12.1	10.0	7.5	18.1	25.2	16.0
Dried fish	4.1	2.9	3.7	4.5	4.7	2.5	1.7

operators. The present Angolan Government therefore faces a major expenditure even to restore the fleet that existed in the country two to three years ago, in order to realize the development opportunity in this sector. No longer encumbered by the presence of numerous inefficient small-scale units, the government has begun by purchasing larger second-hand ships. It may ultimately wish to invest in large modern trawling equipment, improve processing facilities, expand into freezing plants and develop the distribution network to carry fish to the populations of the interior. Further, independent Angola will undoubtedly exclude foreign fishing fleets from areas that are presently international waters. Considerable technical assistance, as well as capital investment, will be required to develop and manage the country's marine resources in the interests of its domestic markets and foreign sales. Fish could assume a more prominent position in Angola's economy than before 1974 (when exports amounted to approximately 2 percent of foreign trade by value) in a world of increasing international competition for food from the seas.

#### SUMMARY

The wide range of altitudes in Angola and the gradation in rainfall from north to south give Angola the capacity to produce a diversity of agricultural commodities, including in addition to those discussed specifically in preceding sections: sugar cane, rice, wheat, peanuts, tropical fruits, tobacco, beans, cashews, olives, and garden vegetables. Cocoa, important for Sao Tome, grows in Angola only in the Cabinda enclave and has not been important. Rubber, important before 1910, has not proved to have commercial possibilities in competition with plantation rubber from Southeast Asia and synthetics. Some export potential may exist for crops other than coffee, maize, cotton, sisal, and processed fish, but exports of sugar, tobacco, hides, and other minor products during the colonial period were dependent on protected markets in metropolitan Portugal and may not survive into the

independent period. The country appears potentially self-sufficient in basic starches and protein when short-range problems of transport and technical assistance are overcome. Middle-term development opportunities seem to exist primarily in establishing rural cooperatives and in refining marketing and distribution systems. Longer-range potential, which may involve Angola in negotiations with other nations, lies foremost in fishing and secondarily in expanding coffee production.

### **MINERALS AND MINING**

Petroleum, iron, diamonds, and (in the future) other minerals make Angola a potentially wealthy nation by African standards. Mineral exploration, neglected for years by Portuguese regimes intent on restricting foreign participation in the development of their African colonies, began in earnest in the 1930s and by 1974 had brought oil into the primary position (by value) among Angola's exports. Diamonds occupied the third place (behind coffee) and iron held the fourth position (except slightly behind an exceptionally valuable sisal crop in 1974).

Petroleum exports, which grew from nothing to over 40 percent of Angolan export revenues during the final eight years of the colonial period, accounted for nearly two-thirds of the growth in value of Angola's exports and by 1974 alone were nearly equal to the value of Angola's imports and to the colony's trade surplus in that year. Portuguese policies after 1965 encouraged expansion in this sector of the economy, with evident success, and the independent government appears committed to continued development along the same lines. The war-induced decline in agricultural production has temporarily made oil revenues (though diminished in 1975 and 1976) the major component of Angola's exports. Petroleum exports are critical in Angola's effort to maintain a relatively healthy balance of payments picture in the short-run. Diamond production may be expected to resume its recent levels, and other minerals seem likely to become available within the medium to long-term future. These should enable Angola to import whatever foodstuffs it may require until domestic agriculture regains its former vitality and eventually enable Angola to import capital goods for industrial growth and diversification. Angola may be expected to become a member of the Organization of Petroleum Exporting Countries.

TABLE IV-13

Angola Exports of Minerals by Value  
(In millions of \$US)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
<u>Commodity</u>								
Crude petroleum (estimated)	0.2	16.9	48.6	76.2	120.6	195.7	490.2	420.0
Diamonds	47.4	64.1	81.4	53.8	54.0	68.0	80.6	n/a
Iron ore	<u>22.4</u>	<u>38.2</u>	<u>49.5</u>	<u>42.0</u>	<u>34.5</u>	<u>41.2</u>	<u>39.7</u>	<u>n/a</u>
Total	70.0	119.2	179.5	179.5	209.1	304.9	610.5	
<u>Percentage Total Mineral Exports</u>	25.9	36.5	42.4	41.7	47.4	48.8	60.2	

61-41

## A. Petroleum

The major producing field in Angola is the offshore production area near the Cabinda enclave north of the Zaire River (see Figure IV-1), operated by Cabinda Gulf, a subsidiary of the U.S. Gulf Oil Company. Reports have varied as to the recent actual rates of production and the remaining reserves, but most estimates place pre-independence output at 150,000 barrels per day (ca. 7.5 million tons per year) and Gulf's eventual production target in the vicinity of 200,000 bbl/day (ca. 10 million tons/year). Other reports of target figures around 12 to 15 million tons/year also circulate. Estimates of Cabindan reserves are in the neighborhood of 300 million tons, which at the lower (and more likely) of the two production rates would yield a field life of thirty to forty years; others have guessed that the field may remain in production for as little as ten to fifteen years. Cabinda alone makes Angola the second leading oil producer in Africa (behind Nigeria at two million barrels/day).

Other fields are currently in production in Angola, and a spate of recent concessions for exploration along other sections of the Angolan coastline suggests that these may provide Angola with petroleum revenues for decades to come. PETRANGOL, a Portuguese-Belgian company, has been producing oil for domestic Angola consumption from several wells in the Luanda area for some years, recently at a rate of 30,000 bbl/day. Texaco, operator for a PETRANGOL-Texaco association, has reported a major find off the southern side of the Zaire River mouth; its size is sometimes reported as twice that of the Cabinda reserves (or 600 million tons) but more often as ten times their size (or 3 billion tons -- half the reserves of Nigeria). If the larger estimates prove accurate and if exploration rights granted by the Portuguese to several subsidiaries of American oil companies (American Hess Corp. of Angola, Angola-Sun Oil Company, Angola Cities Service, and Esso Angola) yield comparably promising results, Angola may become one of the world's important petroleum-producing countries. Production has grown in recent years as shown in Table IV-14.

According to newspaper reports, oil production at Cabinda was halted at the end of 1975 as warfare intensified and as international tensions rose over the future of newly-independent Angola. Pumping resumed in April 1976 and was returning to pre-independence levels at the end of the year while the MPLA Government negotiated a new concession agreement with the operating company. Cabinda Gulf temporarily held oil royalties owed to the Portuguese Government in an escrow account after November 11, 1975, until the victory of the MPLA and their right to inherit these revenues was recognized early in 1976. When it became apparent that Gulf's

**FIGURE IV-1**  
Potential Gas and Oil Fields

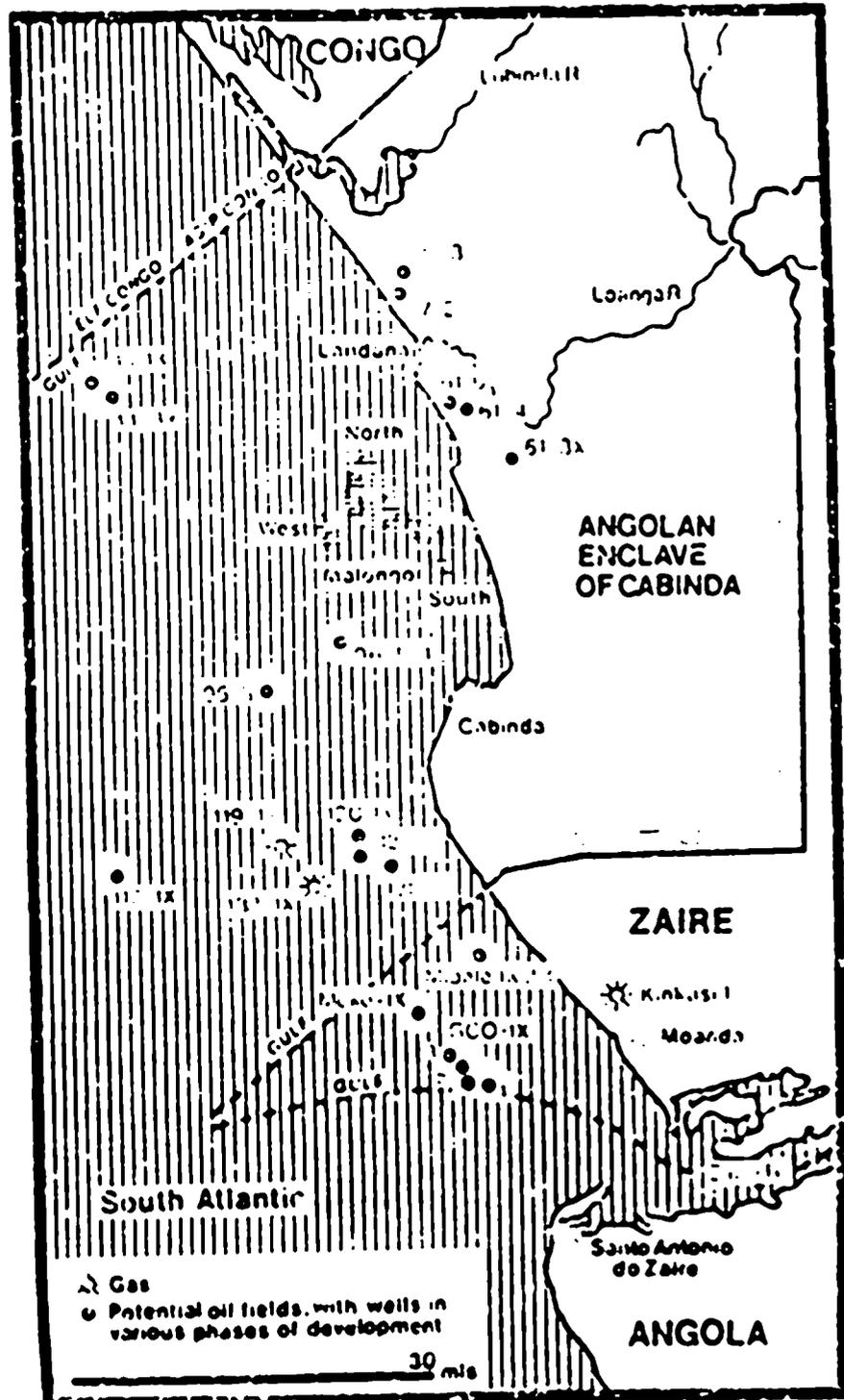


TABLE IV-14

Angola Petroleum Production  
(In millions of tons/annum)

<u>Year</u>	<u>Production</u>	<u>Export</u>	<u>Percentage Exported</u>
1966	2.457	2.902	61
1970	5.065	4.269	84
1971	5.721	4.747	83
1972	7.037	6.929	97 (?)
1973	8.175	7.323	90
1974	6.164 <sup>a</sup>		
1975	8.000 (est.)		

<sup>a</sup> January-September only -- Cabinda fields shut down in December

Temporary abandonment of the field was endangering the operability of the production equipment in Cabinda. MPLA and Cabinda Gulf came to an agreement whereby the contractor would release the withheld royalties and resume production and the independent government would renegotiate the terms of the producer's concession. Angola has created a national oil company, SONANGOL, which is expected to assure 55 percent government control of oil concessions in the country and which will supervise production and distribution in accordance with government determination to make Angolan national resources "the collective property of all Angolans". Production, which resumed on April 29, 1976, was edging back toward pre-war levels at the end of 1976 (reported to be nearly 120,000 bbl/day with a projected total of 3.5 million tons for 1976) apparently guaranteeing Angolan exports for 1977. The MPLA has given no indication that it intends to transfer production to another operator in Cabinda. The future of other concessions has not received public comment. PETRANGOL appears to have continued to produce throughout the war (total production projected at 2.5 million tons) although drops in the efficiency of the Luanda refinery (capacity -- 1,000,000 tons) that processes crude into gasoline, gas-oil, kerosene, aviation fuel, and other derivatives for domestic use have reduced the supplies of these products available locally. This has worked little hardship, owing to the collapse of oil-powered transportation in the aftermath of war.

It is expected that the Angolan Government will diversify the destinations of its petroleum exports, nearly all of which formerly went to Portugal (at below world market prices since 1973).

Canada, Japan and to the United States. It is not known whether this may be accomplished by reducing current shipments to its existing buyers or by directing future growth in new directions.

Petroleum extraction and processing clearly constitutes the single major development opportunity for Angola. The country has an urgent short-term need for technical personnel in all areas of petroleum engineering, marketing, and negotiation and has taken initial steps to obtain experts from Algeria and Libya. Angola expects to reduce its reliance on foreign assistance in this field as rapidly as Angolan replacements can be trained, a process estimated to require a minimum of eight to ten years. It will presumably require assistance in training its own experts, either through the establishment of local institutes of petroleum engineering or through fellowships for trainees abroad. The Luanda refinery, currently with a capacity of 1,000 tons/annum, can be expanded to handle 2,000,000 tons per year, and a new refinery with a capacity of 3,000,000 tons per year was planned near the southern port city of Mocimboa do Congo before Angola became independent. It seems probable that the MPLA will eventually resurrect these plans, or develop others for building a domestic refining capacity in an effort to process a proportion of its crude petroleum for itself. Angola is therefore likely to require technical assistance in the planning and construction of these plants and may be in a position to drive a hard bargain for the equipment that it ultimately installs.

#### B. Iron

Iron ore for export has been mined on a small scale in the central highlands districts of Huambo and Bihe since 1956, but the major source of iron has been at the Cassinga mines in Huila District. From the mid-1960s, the Portuguese Government-owned, Companhia Mineira do Lobito, through its operating agent, the Krupp interests of West Germany, exploited the high-grade ores at this site, reputedly "one of the world's richest deposits". Estimates of ore reserves vary from 100 million tons to 5 billion tons of low-grade ore; "proven reserves" are elsewhere placed at 1 billion tons of high-grade hematite. Exports of Cassinga iron ore reached the coast via a spur connecting to the Mocimboa do Congo-Serra Pinto railway. A new ore-loading facility with a capacity of 7 million tons annually has been built at a harbor north of Mocimboa do Congo to handle Cassinga iron ore. Production exceeded 6 million tons in some years during the decade before the Angolan independence, with revenues to the government as high as \$US 42 million, or more than 10 percent of non-petroleum exports.

TABLE IV-15

Angola Iron Ore Exports  
(In millions of tons)

1969	5.478
1970	6.052
1971	6.160
1972	4.830
1973	6.052
1974	5.237

The status of the Cassinga mines since the outbreak of the 1975 civil war, as with much else in southern Angola, has been extremely unclear. The Companhia Mineira do Lobito went into bankruptcy in June 1975, and ceased mining operations in August. Claims have been made that the high-grade ores of the Cassinga deposit had become depleted and that remaining ores were located too far from its washing plant for efficient extraction. This seems unlikely, in view of the fact that the 40 to 50 million tons of ore extracted prior to 1975 constituted so minute a fraction of total deposits (according to most estimates). It has elsewhere been reported that fighting forced the mines to cease operations. The Angolan Government indicated its disapproval of the Lobito Company's "irrational" exploitation of the deposits in November 1976, and stated that it would restart production, emphasizing the extraction of lower-grade ores and using hydroelectric power from the Kunene Development scheme (see section on energy below). With Cassinga iron effectively in government hands, the railroad and port constructed, and substantial reserves remaining in the ground, little seems to preclude the resumption of iron exports as soon as new equipment can be put in place. Granges International, a Swedish metals conglomerate, is reported to have shown interest in operating the facilities. Exports have in the past gone mainly to Japan, Western Germany, and Britain.

C. Diamonds

The Companhia de Diamantes de Angola (DIAMANG), controlled by South African, Belgian, British and U.S. interests, is the oldest mineral exploiting concession in Angola and until 1971 enjoyed a monopoly over diamond extraction everywhere in the colony. Its main facilities were located at strip-mining sites in the north-eastern district of Luanda, not far from the border with Zaire.

A secondary production region was developed in the middle Kwango valley, also near Zaire, in the decade or so prior to independence. Before 1971, DIAMANG enjoyed virtual sovereignty over the Luanda District, maintaining its own guards at the district boundaries, operating on a different time zone from the rest of the province and importing equipment and exporting diamonds under a special agreement exemption from the Angolan duties. Official production of diamonds hovered in the range of 2 million carats (4 to 5 percent of world production) in the years just before independence. Almost three-quarters of the total was in gemstones. Exploration by other firms subsequent to the expiration of the DIAMANG monopoly in 1971 revealed diamond deposits of commercial quality in the southern and eastern Angolan districts of Bihe, Moxico, and Cuando-Cubango.

TABLE IV-16

Angola Diamond Production  
(In millions of carats)

1969	2.021
1970	2.396
1971	2.413
1972	2.155
1973	2.125
1974	n/a

The war of 1975-76 caused a sharp drop in Angolan diamond production and diverted a significant proportion of it from the narrow channels of the De Beers' Central Marketing Organization, which had up to that year regulated prices, imposed quotas on production, and limited the amount of diamonds released for sale at any time. DIAMANG shifted its royalty payments from the Portuguese Government to the MPLA in mid-1975, in advance of the MPLA victory over its rivals, and has been negotiating to turn its concessions back to the Angolan Government while remaining as operator on a contract basis. The departure of many DIAMANG's European technicians and loss of African workers (6,000 remaining in 1976 out of a 1974 workforce of 20,000) sharply reduced production in 1975 and 1976, with recent estimates placing production at or below two-thirds of normal. There is no evidence that the extensive investments of DIAMANG in Luanda District (including elaborate housing and recreational facilities for its European staff, dam and hydroelectric station, herds of livestock and acres of gardens, in addition to productive plant) were damaged by war.

Diamond smuggling, always a problem even in the tightly-guarded facilities of DIAMANG, totally escaped the control of the government during the confusion of 1975 and 1976. Some guesstimates have placed the proportions of diamonds leaving Angola illegally at more than half the total as fleeing Portuguese settlers and returning military personnel converted their Angolan assets into diamonds for easy transfer outside the country. Competing liberation movements supported themselves in similar fashion, and ordinary citizens freed from the former tight control imposed by DIAMANG police availed themselves of the chance to pick up diamonds which in some locations are literally lying on the surface of the northeastern Angolan sands. Angola's diamond resources were vastly underexploited under the DIAMANG monopoly, and the MPLA is said to have millions of pounds (sic: worth?) of diamonds stockpiled under its control. One western intelligence report alleged that the Cubans gained a position in diamond smuggling from Angola during 1976 and illicitly sold significant quantities of stones in Brazil.

Diamond production would seem from these indications ready to resume its former levels as soon as technical personnel return and a labor force can be reassembled. Exploitation ought to continue indefinitely at the restricted levels imposed on Angola by international marketing agreements, with production spreading from the single main field in Lunda Province to other regions of the nation. Full control will certainly be exercised by the Angolan Government, although operation of existing facilities may in the short-run fall into foreign firms like DIAMANG. Angola would seem to have little reason to open additional deposits before it has its own technical personnel ready to assume direction of their exploitation. Short-term problems center on regaining control over the sale of diamonds. This forms a part of the larger task facing the government of establishing an effective presence throughout the country. Revenues from diamonds will probably remain for some years a fraction of their levels before 1975. While potential for development lies in this field, the primary needs for assistance lie, once again, in the sphere of technical assistance; the MPLA seems likely to arrange with private contractors for the personnel required in the short-run. Some observers have expressed fears that smuggled Angolan stones may combine with low current demand to destabilize the carefully regulated world diamond marketing system; if this were to happen, prices might collapse, depriving the Angolan Government of much of the 25 percent of its export revenues that diamonds have provided in recent years.

#### D. Other Minerals

Although other minerals were not extensively exploited under the Portuguese, Angola is widely regarded as having abundant resources of a variety of valuable strategically important ores. South African firms (General Mining Ltd., Johannesburg Consolidated Investments, etc.) held huge exploration concessions and have reported promising indications of fluorspar, lead, and zinc. Cabinda is reported to have manganese deposits on the order of 80 to 100 million tons, and manganese was exported in small quantities from Malanje District in 1973. Phosphates are present in Cabinda and Zaire Districts, and the Angolan Government intends to convert them into fertilizer for domestic use and for export; a consortium (including Rockefeller interests) has already been organized to exploit these. A 23 million reserve of copper in Uige District was being exploited at a rate of 20,000 tons per year in 1973.

Angola has extensive sources of sea salt at several locations along the coast (notably at Cacucaco north of Luanda and at Lobito), and the final years of colonial rule witnessed the announcement of discoveries of gold, bauxite, semi-precious stones, uranium, and other radioactive metals in unknown quantities. As one observer remarked: "Angola has a truly astonishing wealth of minerals which should ensure a viable economy, provided that the country can find investment and technical skill and recover its internal peace." Most outside investors in Angola's minerals did not waver throughout the transition to independence, and oil revenue constitute a significant source of domestic capital in the longer term. Technical skill and effective administration therefore hold the keys to realization of this potential. The Angolan Government has stressed that it will place heavy emphasis on mining to realize funds with which to create a heavy industrial sector in the Angolan economy. Assistance may therefore be welcome in the short-term provision of technical expertise and in the longer term training of Angolan technical personnel.

#### TRANSPORTATION

Angola's transportation network consists of three major railroads (Luanda-Malanje, Benguela/Lobito, and Mocimadas-Serpa Pinto) and two minor railroads (Porto Amboim and Cuio), something over 5,000 miles of paved roads reaching every provincial capital, an internal airline reaching all provincial capitals (with numerous additional landing strips throughout the country), and expanding port facilities at Cabinda, Mocimadas, Lobito, and Luanda. The

war of 1975-76 disrupted primarily the road network; bridges were destroyed and the number of serviceable cars, buses, and trucks dropped sharply with the departure of the Portuguese settlers and a cessation in the arrival of spare parts. The Benguela railroad, which links at its eastern terminus with the southern African railway network, provided (before 1975) a significant component of Angola's balance of payments by carrying copper from Zaire and Zambia to the port at Lobito. The railroad has been closed since August, 1975, and has failed to reopen despite repeated Angolan assertions that damage to roadbed and equipment sustained during the war has been repaired.

TABLE IV-17

Contribution of Transportation to  
Angola's Balance of Payments (\$US)

<u>Year</u>	<u>Transportation</u>	<u>Overall Balance</u>
1970	\$ 20,600,000	\$ -26,400,000
1971	20,100,000	-64,000,000
1972	22,500,000	33,000,000
1973	39,700,000	10,200,000
1974	41,500,000	10,000,000

A. Railroads

Angola's three major railroads differ in ownership, traffic, and in their significance to the Angolan economy. The Benguela Railway, 90 percent owned by Bahamas-based Tanganyika Concessions Ltd. (the Angola Government has inherited the other 10 percent interest from the Portuguese and under the agreement in effect in 1975 stood to assume control over the entire operation in 2001), runs approximately 840 miles from the coastal port of Lobito through Benguela, up the steep escarpment of the central highlands, through Huambo, the commercial center of the plateau, and east to link with Zaire railways at Teixeira de Sousa. The Angolan Government was widely expected to nationalize the railroad but in 1976 was reported to have allowed it to remain in the hands of its present owners. Freight destined either to or from Zambia and Zaire accounted for about half of the Benguela railway's total tonnage in 1972 and 1973, but improved rail connections to east Africa from the Shaba and Zambian Copperbelt have made these nations less dependent on railroad in recent years than formerly.

TABLE IV-18

Angola Rail Transportation

<u>Year</u>	<u>Passengers</u>	<u>Freight (metric tons 000's)</u>
1960	1,301	4,315
1961	799	4,093
1962	949	3,955
1963	929	2,197
1964	1,179	2,749
1965	1,350	2,774
1966	1,465	2,482
1967	1,554	3,175
1968	1,524	5,455
1969	1,692	7,975
1970	1,934	8,791
1971	2,214	8,862
1972	2,495	7,878
1973	2,965	9,275

TABLE IV-19

Zambia and Zaire Use of  
the Benguela Railway (tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>
Zambia/Zaire tonnage	1,183,551	1,442,382	3,000,000 (est.)
Total tonnage	2,688,979	2,557,352	n/a
Zambia/Zaire percentage	44.0%	56.4%	

The commodity composition of Zambian and Zairean exports and imports was as shown in Table IV-20. Total revenues of the railroad are reported as having been about \$30 million before disruption of international service in 1975.

The capacity of the railroad was limited before 1975 by inadequate locomotives (elderly wood-burning) and by bottlenecks where the line ascends the escarpment and in the port at Lobito. Tanganyika Concessions doubled the line's capacity in 1974 by investing a reported \$100 million in a new 138-mile stretch up the mountains (the so-called "Cubal Variant") and \$30 million in new diesel-powered locomotives. Dockworker strikes in the port at Lobito after the April 1974 revolution in Portugal severely crippled its cargo-handling capacity, and so the railroad was unable to realize the full potential of its new equipment before closing on August 10, 1975. It therefore seems that the railroad itself has more than adequate capacity in the short run and that the main transportation bottleneck in the system will remain in the port at Lobito.

The new capacity of the Benguela railway, well in excess of domestic Angolan requirements, may never be used by Zambia, although Zaire may be a potential shipper on the line. Recent analyses suggest that Zambia can develop satisfactory alternative access to the sea through Malawi and Mozambique as well as along the new (1974) TAZARA railroad from Zambia to Dar-es-Salaam (Tanzania). Some commentators argue that the TAZARA railway may be able to handle all of the former traffic sent through Lobito, although others point out that congestion in Dar-es-Salaam harbor is the more important restraint in that direction, and that the Benguela Railroad provides Zambia's only means of importing large mining machinery. On the other hand, the limited capacity of Lobito port facilities and strike-induced congestion in Angola may render the Benguela Railroad inferior to alternatives for some time to come. The strategic significance of the railroad may therefore be less than has commonly been supposed, leaving it primarily available for development of the central Angolan plateau and for possible future mineral exploitation.

There is little agreement on the reasons why the Benguela Railroad has not reopened to international traffic since the MPLA victory in early 1976. For some time, traffic was halted by the destruction of two bridges along the eastern portion of the line; otherwise, war damage to the right-of-way and to rolling stock was reported as light. The bridges have been repaired since mid-1976, and Angolan authorities originally planned to resume international operations on August 9, 1976, exactly a year after the closure of the system in 1975. Their failure to do so has been attributed by UNITA propaganda to the ability of UNITA guerrillas to disrupt the railroad at will. UNITA asserts that

TABLE IV-20

Zambian and Zairean Traffic through Lobito  
(tons)

	<u>Year</u>	<u>Imports</u>	<u>Exports</u>
Zaire	1972	260,864	518,413
	1973	111,560	624,138
Zambia	1972	246,611	157,663
	1973	347,456	359,228

Principal Commodities in Transit in 1973

<u>For Zaire</u>	<u>tons</u>	<u>From Zaire</u>	<u>tons</u>
Petroleum products	128,118	Manganese ore	320,951
Drugs and chemicals	30,156	Copper concentrates	75,589
Building materials	26,259	Copper ingots	73,489
Machinery	12,336	Copper cathodes	61,506
Permanentway material	11,324	Cobalt	19,742
Malt	9,596	Bulk zinc	10,432
Tobacco	5,418		
<u>For Zambia</u>	<u>tons</u>	<u>From Zambia</u>	<u>tons</u>
Building materials	86,949	Copper ingots	240,854
Coal	56,516	Copper cathodes	93,170
Drugs and chemicals	55,740	Zinc ingots	18,095
Wheat	30,558		
Machinery	25,700		
Paper	20,841		
Foodstuffs	17,890		

Source: Servicos de Portos, Caminho de Ferro e Transportes de Angola, March, 1974.

former railroad engineers and laborers now fighting against the Luanda Government are able to remove rails and to hide them in the bush whenever they wish. MPLA officials counter with assertions that domestic services operate normally along the entire length of the route. Resumption of near-normal operations has been verified along the western sections of the line.

Other explanations for the line's closure center on the flight of Portuguese administrative and technical personnel in 1975, on the disappearance of many Ovimbundu technical staff and laborers after UNITA withdrawal in early 1976 (total workforce was said in late 1976 to have declined from 11,000 to 7,000), and on the congestion in Lobito harbor. It is also possible that the MPLA wish to accord priority to bringing supplies for domestic needs through the limited existing facilities and therefore do not desire to make international commitments that might hinder national reconstruction. Such reasoning would be consistent with nationalist assertions that the Portuguese committed excessive Angolan resources to foreign interests before 1975. Ambivalent diplomatic relations between Angola, Zambia, and Zaire have also hindered agreement on terms under which the copper producers might be able to use the railroad. Angola has had 15,000-20,000 tons of Zambian copper on Lobito's docks and holds several Zambian locomotives and hundreds of railway cars on the line's tracks. The official MPLA explanation for the delay (November, 1976) was that Zaire has refused for political reasons to sign an agreement for the transit of its copper, manganese, and zinc on the line.

The Mocimedes railway runs from the coast approximately 510 miles east to the provincial capital of Menongue (formerly Serpa Pinto), with a spur on the Humpata plateau south to Chiange and another spur leading to the iron mines at Cassinga. The main line to Serpa Pinto has had relatively little commercial use, but it could become important as a trunk line leading to branches opening up the anticipated mineral resources of southeastern Angola. The spur to Chiange was designed to facilitate the general agricultural development of the southern plateau and served areas primarily developed through white settlement under the Portuguese. The bulk of the traffic on the Mocimedes line since 1966 has come from Cassinga. Freight carried in 1966, the year before mining at Cassinga gathered momentum, was only 291,000 tons, but tonnage rose to 938,000 in 1967 and in the early 1970s hovered in the 5-7 million ton range as mining at Cassinga reached its full scale. This railroad was operated by a state corporation before 1975. Its present ownership and status have not been reported. Its capacity, designed to handle iron exports from Cassinga, seems to have been nearly reached before 1974, but the uncertain future of the Cassinga mines may allow its utilization for other purposes in the short run. The primary bottleneck lies in the port at

Mocimboa where a major expansion was planned at the time of independence. One may anticipate that it will be some time before the railroad is fully utilized again but it can also be expected that substantial mineral development in southern Angola may eventually require further expansion of the railroad as well as the port.

The Luanda railroad, conceived during the central African rubber boom of the late nineteenth century and built in part to thwart the territorial ambitions of Portugal's rivals during the "scramble for Africa" in the 1880s, has never fulfilled the expectations of its planners. It extends 264 miles from Luanda to the provincial capital of Malanje and was state-owned and operated under the Portuguese. Many of its old wood-burning locomotives had been replaced with diesel-powered equipment in the 1960s and 1970s. Freight carried in 1972 and 1973 ran just over 300,000 tons each year, down from 420,000 tons in 1967; passenger traffic in the heavily-populated corridor of Luanda was relatively important (728,000 in 1972, 946,000 in 1973). Most freight tonnage came from iron and manganese. Raw cotton products from Malanje and coffee from northern Angola have continued to move by truck to the port at Luanda. Plans had been made for the eventual construction of a spur into the Carmona region to carry the coffee of Uige District to the sea.

Angola's major railroads each open one of the major interior plateaus to the sea and appear to have more than sufficient capacity to handle the export of already-developed domestic resources. They do not link together into an internal rail network. The Porto Amboim and Cuio railroads were privately-owned narrow-gauge systems serving, respectively, the coffee plantations of Gabela and the sugar and palm oil plantations of the (now nationalized?) Companhia de Acucar de Angola; the latter was also of a narrower gauge. Past plans for development of Angola's railroads have included extending the Amboim-Gabela line to the European colony at Cela on the central highlands, continuing the Mocimboa line toward Rhodesia, expanding the Malanje railroad toward Zaire (and DIAMANG's operations in Lunda District), and building a new southern line from Baia dos Tigres toward the middle Kunene and beyond. Of these possibilities, the Cela extension now seems the least promising unless the independent government should decide to revive that expensive symbol of European colonization in Angola. A black-ruled Rhodesia would seem to have much less reason than the present white regime to use the longer western rail route to Mocimboa (conceived at a time when the Portuguese seemed firmly in control of Angola) when it would have direct access to Beira in Mozambique. The development potential of the middle Kunene, combined with the possibility of major mineral finds in southern Angola, makes a line from Baia dos Tigres a potentially attractive

possibility but not yet a necessity. More important in view of the MPLA's emphasis on heavy industrial development would be the construction of north-south links integrating Angola's railroads into a single network. Such a project would enable the government to redirect exports according to congestion at the country's various ports, transport raw materials to locations where they can most efficiently be processed, and draw the several regions of the country together in ways that have not previously been possible. Integration of a national rail network is, however, unlikely to be one of Angola's most urgent development priorities.

### B. Harbors

More urgent is completion of planned expansions of the port facilities at Lobito, Mocamedes, and Luanda. Cabinda rose to rank first among Angola's ports in terms of tonnage handled with the growth of petroleum loadings there during the last years before independence. Most freight moving through Mocamedes, the second-ranking port in the early 1970s, consisted of iron ore from Cassinga. A major share of the traffic at Lobito was international freight to or from Zambia and Zaire. Most of Angola's domestic imports came through the port at Luanda, where traffic was more diversified than at the other Angolan harbors. Coffee, the main export at Luanda, accounted for a smaller proportion of total shipments there than did the primary components of the cargo handled elsewhere. The relative domestic importance of Angola's major ports may be the inverse of the ranking indicated by their total loadings and unloadings.

Port facilities have in recent years been the major bottlenecks in Angola's sea-rail connections to the world economy. At Cabinda, construction began in 1974 on a major expansion program linking shore facilities to deep water moorings which lie some distance from the land. The initial phase of the project involved a shore-to-terminal bridge and a 1,400-meter approach channel estimated to cost approximately 75 100 million. Plans also called for a deepwater berth at sea. The port at Lobito was to be expanded between 1974 and the end of 1976 by the addition of 850 meters of quay (contract worth \$65 million). Ore-loading facilities at Mocamedes (Porto Salazar) capable of handling ore carriers up to 150,000 tons were to have been in place by 1970, and the capacity of that port was to have been upgraded to handle 200,000-ton carriers by 1973. The port at Luanda was expanded by the addition of a new 400-meter quay, put into use just before the end of colonial rule in 1973 or 1974. The docks were among the first sectors of Angola's economy to be crippled by strikes in 1974; estimates of cargo handled indicated a drop in productivity on the order of 90 percent, and labor troubles continued

to disrupt port operations through 1976. West African shipping federations maintained surcharges of 50 percent to 70 percent on vessels calling at Angola's ports throughout the initial year of independence.

Priority is likely to be given to the completion of works in progress and to further expansion of Angola's harbors, in view of their limited capacity relative to railroad facilities and the mineral potential of the country. Opportunities range from short-term needs to raise the efficiency of existing equipment to long-term expansion adapted to future development of Angola's mineral resources.

TABLE IV-21

Sea-Borne Shipping at Angolan Ports  
(In thousands of metric tons)

	<u>Year</u>	<u>Cabinda</u>	<u>Mocimbejos</u>	<u>Lebico</u>	<u>Luanda</u>	<u>Total (incl. others)</u>
Goods loaded	1970	4,364	6,253	936	965	12,624
Goods unloaded		76	154	739	704	1,720
Total		<u>4,440</u>	<u>6,407</u>	<u>1,675</u>	<u>1,670</u>	<u>14,344</u>
Goods loaded	1971	5,092	5,482	957	799	12,432
Goods unloaded		128	183	962	713	2,033
Total		<u>5,220</u>	<u>6,665</u>	<u>1,919</u>	<u>1,512</u>	<u>14,463</u>
Goods loaded	1972	6,487	4,835	988	591	13,007
Goods unloaded		18	149	649	718	1,537
Total		<u>6,505</u>	<u>5,984</u>	<u>1,537</u>	<u>1,309</u>	<u>14,544</u>
Goods loaded	1973	7,412	6,168	1,222	863	15,847
Goods unloaded		19	155	1,009	880	2,363
Total		<u>7,431</u>	<u>6,323</u>	<u>2,231</u>	<u>1,743</u>	<u>17,912</u>

TABLE IV-22

Angola Port Turnover

<u>Year</u>	<u>Vessels Arriving</u>	<u>Cargo Carried (metric tons 000's)</u>
1960	-	2,790
1961	-	2,671
1962	-	2,717
1963	-	4,323
1964	-	3,834
1965	4,053	3,447
1966	3,883	3,321
1967	3,606	3,325
1968	4,107	6,235
1969	4,518	10,208
1970	4,551	14,192
1971	4,985	14,316
1972	5,275	15,211
1973	5,765	18,801

C. Aviation

During colonial rule, the Portuguese international airline, TAP, connected Angola's international airport at Luanda to Lisbon, Salisbury, Windhoek, Johannesburg, and Lourenco Marques and Beira in Mozambique. There were no direct flights to independent African nations or elsewhere in Europe. The Portuguese also maintained an internal airline, DETA, with turbo-jet service connecting all the district capitals of the territory. DETA flew nearly 3.4 million miles in 1973 and carried 198,667 passengers. A new international airport is currently being constructed at Luanda and the Angolan Government is said to be considering expansion of several domestic airfields (civilian and military) elsewhere in the country. 170 smaller landing strips were constructed for military and civilian purposes by the Portuguese during the anti-guerilla warfare of the 1961-74 period, so that air transport is possible to all parts of Angola.

Since independence, Angola has inaugurated a single national airline, Transportes Aereos de Angola (TAAG), with both domestic and international service. International air links remain with Lisbon and Mozambique and have been initiated with Moscow and Rome; others may be expected in the near future. TAAG has acquired two Boeing

737 jet aircraft and five YAK-4Ds for its internal routes, and this system is reported to be functioning smoothly. Immediate development of these facilities might move in the direction of acquiring aircraft of intercontinental range and the expansion of provincial airfields to accommodate jet equipment. Smaller aircraft capable of using the numerous landing strips may also be required.

TABLE IV-23

Angola Air Freight  
(In kgms 000's)

<u>Year</u>	<u>International</u>	<u>Domestic</u>
1965	434	1,208
1966	571	1,192
1967	839	1,406
1968	1,478	2,103
1969	2,031	2,022
1970	2,591	2,217
1971	3,801	2,716
1972	3,357	2,437
1973	6,576	2,636

D. Roads

The all-weather road network in Angola was sufficiently developed that the war of 1975-76 could be fought with conventional weapons moved in large part along the nation's asphalt highways. Approximately 5,000 miles of asphalted road surface linked nearly all the country's district capitals, but the war led to the destruction of 128 bridges. Another 40,000 miles of unpaved roads of varying quality gave Angola a relatively well-developed road system by African standards, although these ranged in quality from rough bush tracks through improved gravel surfaces. Many unpaved roads become impassable during the rains and require constant maintenance and regrading to allow traffic even during the dry season. One of Angola's most urgent needs is for repair to the bridges damaged during the recent fighting. A number of foreign countries and international agencies have responded to this situation so that "Bailey bridges" have been replaced a number of them. Tontoon bridges have been purchased to replace some broader spans. It is estimated, however, that other bridges may remain

out of order for several years. Given the high priority that the government attaches to restoring road connections to all parts of the country, assistance in this sphere of rebuilding would be well received. In the longer run, government desires to improve distribution and marketing facilities for rural populations will require improvement and maintenance of the secondary road system.

The inadequacies of the rail system for internal communications and the booming economy of Angola in the decade before 1975 made transportation equipment one of Angola's most important imports. But most of this development went exclusively into the hands of Portuguese settlers, foreign enterprises, and the government (taking no account of the thousands of military vehicles brought into Angola during those years). By 1973 there were 173,021 registered (civilian) motor vehicles (cars, trucks, motorcycles). A post-independence survey indicates that the number of trucks in Angola before 1975 was around 30,000. The number of motorized vehicles remaining in Angola in 1976 was a tiny fraction of the pre-war total. Fleeing settlers used many vehicles to escape from Angola in 1975, others were abandoned and still others became inoperable for lack of replacement parts and technicians to service them.

Angola depends on obtaining new trucks, cars, and buses to restore communications within the nation, to provision the cities, and to bring coffee and other export commodities to the ports. The government has begun to take control over this sector by forming a state-run transportation company and by purchasing on credit 2,500 trucks, 300 buses, and 1,500 cars from Brazil, Sweden, the German Democratic Republic, Czechoslovakia, Italy, Yugoslavia, and West Germany. Negotiations are currently underway to obtain several hundred Dutch DAF trucks. Efforts to acquire additional equipment will undoubtedly continue.

#### ENERGY, POWER AND COMMUNICATIONS

Angola has significant hydroelectric potential in the streams flowing down in all directions from the crest of the central highlands. It produced power in excess of its requirements in 1973 (914 million kwh), even as several of the existing dams were utilized at less than their full capacity. Work was proceeding on the one billion kwh Kunene Development Project near the Namibian frontier; if political problems associated with the extensive South African participation in the financing and construction of this project can be overcome, Angola could become an important exporter of hydroelectric power to neighboring nations.

TABLE IV-24

Angola Electric Power  
(In 000 kilowatt hours)

<u>Year</u>	<u>Consumption</u>	<u>Production</u>
1960	142,555	117,715
1961	180,970	149,435
1962	195,650	167,540
1963	215,285	185,090
1964	260,160	231,535
1965	320,458	306,711
1966	350,510	334,058
1967	390,799	372,745
1968	456,775	406,480
1969	541,468	486,505
1970	643,761	548,859
1971	741,906	701,968
1972	838,103	787,152
1973	984,324	914,481

The European sections of most of Angola's cities were electrified by the late 1960s, but electrical power was not supplied to many of their African quarters nor to smaller towns and not at all to rural areas. Some smaller communities possessed gasoline-driven generators that provided power for electrical lighting locally for a few hours each night. The DIAMANG installations in Lunda District included their own power supply from a hydroelectric station on the Luachimo River at Dundo (capacity 17 megawatts). As of 1973, a second station was planned for construction on the Chicapa River with a capacity of 20 mw bringing DIAMANG's total to 37 mw. Luanda and the districts along the lower Kwana received power from the large Cambambe dam, which produced over 370,000,000 kwh in 1972 and was designed for an eventual capacity more than twice that figure. A second dam near Luanda, Mabubas at Cazito on the Dande River (capacity 17,800 kilowatts), was practically disused. Lobito and Benguela obtained electricity from Lomaum (capacity 20,000 kilowatts) further up the same stream; these two generating plants produced over 206,000,000 kwh in 1973. Nova Lisboa/Wuambo in the central highlands received its power from these facilities. The southern portions of the country -- Lubango, Mocimedeas, the Cassinga iron mines, etc. -- obtained electricity from the dam at Matala (27,000 kilowatts) where the railroad crosses the upper Kunene; this was part of the first phase of the huge joint Portuguese-South African scheme of

hydroelectric and irrigation development on the Kunene. None of these installations is known to have been damaged significantly by the war of 1975-76.

The best-known and most controversial component of Angola's hydroelectric installations is the Kunene River Development Project, a series of dams, generating stations, and irrigation projects in southern Angola begun under a 1965 agreement between the Portuguese and the Republic of South Africa. The original conception foresaw construction proceeding through several phases, the first of which was due for completion in 1977 and would result in the construction of a storage dam at Cove on the upper Kunene to provide further storage for the existing dam and generating station at Matala, and a second power generating station at Ruacana on the Angola-Namibia border. A third major dam at Calueque, about ten miles upstream from Ruacana, would maintain an even flow of water at the second generating station below it and would include a pumping station for irrigation in Namibia. The completed scheme would include an additional fourteen dams, with another nine generating stations capable of producing a total of 2,385 megawatts (15 percent greater than the initial capacity of the Cabora Bassa Project on the Zambezi in Mozambique). Its total cost was estimated in excess of 1 billion rand (ca. \$1.2 billion US), with virtually the entire cost to be borne by South Africa through loans to the Portuguese. These would be repaid through the sale of water to Namibia.

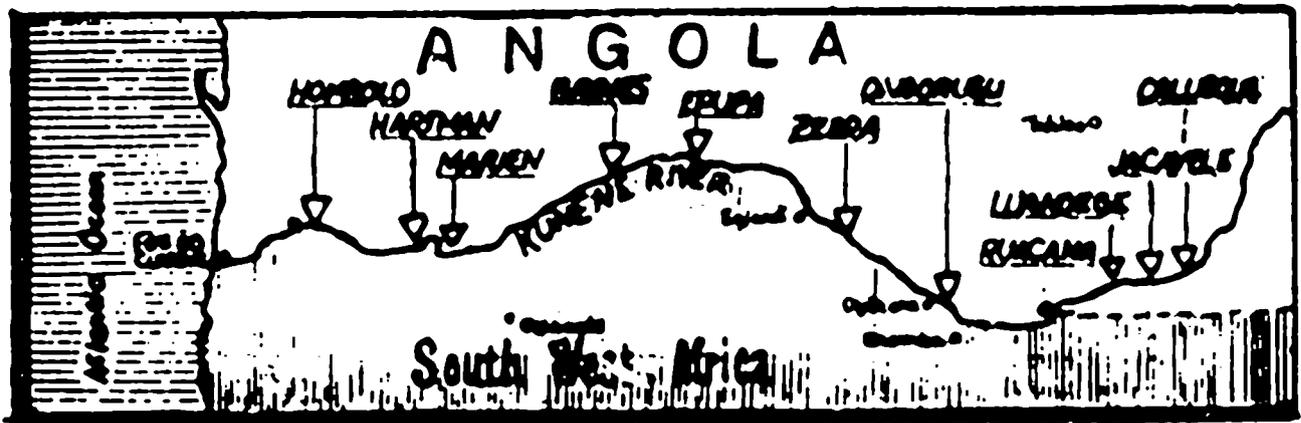
South Africa, which was supervising construction and was scheduled to operate the project as well, had approximately \$US 150 million invested at the end of 1975 and was planning to put a total of about \$US 290 million into the first phase. The water diverted from Calueque began flowing into irrigation channels in 1973 and was said by the South Africans to be destined for irrigation in Ovamboland, the largest African "homeland" in northern Namibia. Critics allege that the long-run purpose of the diversion of Kunene waters into Namibia was to supply European agriculture and industry in the central and southern portions of that territory. Some additional irrigation was planned in Angola as part of a development scheme centered on European ranching. Plans called eventually for irrigating 300,000 acres for agriculture and another 700,000 for cattle grazing. Virtually all of the electrical generating capacity of the project's first phase (generators to be brought on stream beginning in 1977) was committed to Namibia, where projected mining development could not take place without power from Angola. Angola was scheduled to receive water royalties (pegged at 0.17/unit), and potential for electrical generating capacity for Angola had a place in the later phases of the scheme.





FIGURE IV-3

Kuanze River Development Project



The present status and prospects for this scheme are very much in doubt in view of the political developments in Angola and Namibia during the past two years. South African troops occupied the Ruscana and Calueque sites during the war of 1975-76 but were withdrawn in April, 1976. The 900 or so construction workers engaged on the project were Ovambo and sympathetic to the MPLA and to the Southwest African People's Organization (SWAPO), the latter the most important armed guerilla movement in Namibia. The Angolan Government allowed the South Africans to resume work on the dam and power station, with South Africa taking over the commitments of the Portuguese contractors that had been involved before 1975, but work was again interrupted in October. The last progress report (August, 1976) stated that the Gove dam was complete, and that Ruscana was scheduled for completion in October. Calueque was to follow in December, 1976. Angola's relations with South Africa became strained as South Africa massed troops reported to number around 50,000 on its side of the border while joint Angolan-Cuban operations pursued UNITA forces in southern Angola. Meanwhile, SWAPO bands have aggravated relations in their movements back and forth across the frontier.

The future of the Kunene scheme hinges on the outcome of this fluid situation. The benefits of the scheme's first phase would flow so exclusively to Namibia, and Angola has so little invested in it that the Angolan Government can afford to use the dam's bargaining counters in its short-term relations with South Africa or with whatever regime may emerge in an independent Namibia. South Africa currently has about \$US 72 million invested in Angola (the remainder being in transmission lines, canals, and so forth on the Namibian side of the lower Kunene). In the longer run, Angola may wish to control and operate the upper Kunene dam for its own purposes, finishing the apparently small amount of work that remains to bring them to completion.

Development opportunities in power lie primarily in utilizing the existing generating capacity of Angola's hydroelectric stations. Strategies could stress either industrial consumption (the Portuguese had long contemplated aluminum smelting) or electrification of the poorer sections of the Angolan cities and the introduction of electrical service to the smaller towns that still lack full-time power. Although no explicit statement of government energy policy is available, its general development strategies suggest that it could attempt both. It will certainly wish to train Angolan electrical engineers to operate the facilities it possesses, and investment in an expanded transmission grid will undoubtedly be an important part of both strategies. Angola's long-run potential for the production of electricity seems almost unlimited in view of untapped hydroelectric potential and the possibility of building petroleum-fueled generating plants.

## A. Communications

Almost nothing is known about the status of Angola's communications facilities since independence. Portuguese Angola had four radio stations -- one parastatal, one religious (Catholic), and two commercial, all located in Luanda. Plans have been made to introduce television in the middle of 1976. The government reported 115,000 radio receivers (one for every fifty-two inhabitants) in 1974. All international communications were formerly routed through Lisbon, but an agreement has recently been signed with the Italian state communications company, ITALCABLE, to make Rome the terminal and relay point for intercontinental telex and telephone communications with Luanda. The government assumed control over all news media by a decree of May 25, 1976.

Angola inherited from the Portuguese a modest postal system and the rudiments of what could become a national telephone network. As of 1971, the postal service (then part of the Portuguese posts) handled 45.6 million domestic letters (7.5 letters per inhabitant, although these would have been heavily concentrated in the European segment of the population). Telephones in use in 1971 numbered 31,900 (approximately one for every 188 inhabitants, or, more reflective of the concentration of telephones among the European Portuguese, less than one for every nine of them), most of them in Luanda but with local systems in the larger district capitals (Nova Lisboa, Sa da Bandeira, Mocimedes, Malanje, etc.). These local telephone networks were joined tenuously to one another, but none reached rural areas and a number of local administrative posts could be reached only by radio. Nothing is known about the present status of these systems, but they are unlikely to have survived the war intact and may also suffer from lack of attention from trained technical personnel. The Angolans will eventually wish to replace and/or expand existing facilities, but this may not have a high position on their current list of priorities.

## HEALTH

Health facilities provided by the Portuguese for African populations in Angola were rudimentary, although improving. (see Table IV-25). The major hospital facilities were located in Luanda, although hospitals also existed in Lobito, Malanje, and other large towns in the interior. Health services for the European population were far better than those provided for Africans, even though significant improvements were made in building rudimentary dispensaries in the rural areas between 1965 and 1974. The MPLA established its own public health service in the areas of Angola that it administered during those years.

TABLE IV-25

Medical Facilities in Angola

	<u>1960</u>	<u>1967</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
General hospitals (total)	160	175	173	168	197
Government	97	101	88	82	97
Maternity homes	33	n/a	42	53	60
TB sanitariums	1	6	7	7	2
Sanitary posts	649	687	691	1,183	1,318
Beds in medical installations		9,341	15,191	15,797	18,645
Inhabitants/bed			373		
Physicians	234	290	464	415	561
Inhabitants/ physician	20,700	18,400	12,200	13,900	n/a
Dentists	8	20	23	n/a	n/a
Inhabitants/ dentists	605,000	266,000	247,000	n/a	n/a
Pharmacies	46	68	90	n/a	97
Nurses	577	840	1,629	1,780	1,994
Midwives	116	191	211	222	317

Since independence, virtually the entire body of trained medical personnel in Angola (most of whom were European Portuguese) left the country. At the same time, war disrupted food supplies, forced many people to flee as refugees either into neighboring countries or into the Angolan towns and cities, and generally brought a deterioration in the already low standard of public health. UN estimates place the total number of refugees on the order of one million, nearly a sixth of the entire population. Angola therefore has an extremely urgent need for relief supplies of food, medicine, trained medical personnel, and in the longer run medical training facilities. The United Nations has begun to respond with an \$80 million program including \$32.5 million in cash and 48,000 tons of food. Communist-bloc countries and the Scandinavian nations have also contributed, as well as the European Economic Community. Room certainly remains for substantial additional external assistance in this sector. In the short run, trained medical personnel are in urgent demand. In the longer term Angola will wish to train its own physicians, nurses, and technicians.

## EDUCATION \*

The Portuguese educated few Angolans and left few educational institutions useful to the present government of Angola. The MPLA which acquired several years' experience operating its own school system in the rural portions of southeastern Angola is acutely conscious of the importance of education in national reconstruction. It places strong emphasis on the creation of schools to remedy short supplies of trained personnel in all fields and as part of its effort to consolidate its power in the face of domestic opposition. Antonio Jacinto, Minister of Education, until December 28, 1976, announced the receipt late that year of the first 10,000 literacy manuals that will be used in a nationwide universal literacy campaign (in Portuguese). The government has expressed its urgent need for secondary school teachers to replace Europeans who fled in 1975. It is unclear to what extent the MPLA may be able to staff a primary school network from Angolan personnel drawn from its own system and from teachers remaining from the colonial period, but it seems probable that their needs at this level are less pressing than at more advanced levels. MPLA experience before 1974 may enable the government to create primary schools with a minimum of public expenditure and with rudimentary equipment, perhaps utilizing school buildings constructed by the Portuguese before 1975. It will, however, need to develop suitable instructional materials at all levels and to train teachers at a rapid pace. The government has indicated its readiness to accept assistance in this regard.

## POPULATION \*

The demographic experience of Angola's people under colonial rule may not provide a secure basis for estimating future population growth now that Angola has an independent government committed to public welfare. UN projections based on standard demographic models suggest that the population growth rate of the recent past (in the vicinity of 1.7 percent per year) might increase to between 2.5 percent and 3.1 percent per year; in that event, Angola's population would double its 1970 level sometime between 1990 and 2000. The extremely low densities of past years (only 13 per square mile at the time of independence) would by then only slightly surpass those in Zaire in 1974 (23/m<sup>2</sup>) and not yet equal those of Mozambique in the same year (30/m<sup>2</sup>). They would have far to go before attaining the densities of 1974 in Zimbabwe (44/m<sup>2</sup>) or Tanzania (40/m<sup>2</sup>). Given the natural wealth of the country

\* (see also Section I)

growth in GNP ought to exceed the population growth assumed in these projections. Estimates by international financial institutions placed the post-1961 growth rate of the economy at 8 to 9 percent and (suggested) that even faster rates could be obtained with proper government policies. It may be expected that the independent government will do better in this regard than the Portuguese. Population growth does not seem to present important obstacles to development, except to the extent that low densities will hinder the growth of domestic markets for consumer goods and raise the cost of distributing social welfare evenly throughout the country. The independent government has not publicized population programs or expressed its attitudes toward family planning.

#### INDUSTRY

Industrial production led Angola's wartime domestic boom during the 1960s. The Portuguese Government loosened regulations that before 1965 had restricted the growth of manufacturing that might compete with metropolitan interests, and a growing European settler population and military personnel in excess of 50,000 provided a local market for consumer goods. Construction-related industries also grew in line with a surge in housing stimulated by rising white population, especially after currency controls bottled up substantial amounts of money in the colony after 1972, and sparked a wave of speculative construction.

Processing of Angolan raw materials for local consumption -- petroleum products, sugar, cotton ginning and weaving, tobacco products -- also grew rapidly. By 1970 the gross value of industrial production exceeded 2.200 million escudos, approximately 15 percent of the GNP in that year. By the end of the colonial period, manufacturing may have reached 20 percent of the GNP but provided only 7 percent of exports (1973) and still totalled something less than two-thirds of the value of imported manufactures (1973). Lacking a developed machine tool sector, Angolan industry remained dependent on imports for capital equipment and replacement parts and was totally dependent on European Portuguese for supervision and management. The disruptions in the ports in the wake of the Portuguese revolution, strikes, and the exodus of skilled Portuguese during the 1975-76 war reduced production by more than three-fourths. Industrial production must have been reduced to an insignificant position in Angola's economy during 1976 and will undoubtedly require years of rebuilding to recover the levels of 1973.

TABLE IV-26

Building in Main Urban Centers  
(A. esc 000's)

1960	339,843
1961	273,257
1962	159,502
1963	163,145
1964	149,517
1965	214,277
1966	404,202
1967	510,109
1968	572,659
1969	696,085
1970	833,534
1971	954,834
1972	1,224,556
1973	1,277,158

Nearly all colonial industrial development in Angola was concentrated near the ports and inexpensive electricity of Luanda (70 percent of the total) and Lobito, although the last years of Portuguese rule witnessed some spread of light industry into the larger towns of the highlands (especially Nova Lisboa and Sa da Bandeira). Significant manufacturing activity only rarely disturbed the other inland towns (e.g., cotton ginning in Malanje), which remained almost exclusively administrative service, and commercial centers.

Detailed figures on pre-independence Angolan manufacturing appear in Tables IV-27, IV-28, IV-29 and IV-30.

Food processing industries were the most developed sector of Angola's manufacturing sector by 1973, with their production valued at 3,820 million escudos (approximately \$US 127 million). Beverages (mainly beer) and tobacco were in the second position, at 2,356 million escudos (approximately \$US 76 million). Textile industries had grown into third place with production valued at 1,731 million escudos (approximately \$US 58 million). The 702,063 tons of crude oil processed in the Luanda refinery put petroleum products in fourth position with 1,119 million escudos (approximately \$US 37 million). A steel works and rolling mill was

TABLE IV-27

Gross Value of Production in  
the Manufacturing Sector, 1960-73  
(In current prices)

<u>Year</u>	<u>A. Esc millions</u>	<u>Index</u>	<u>Year</u>	<u>A. Esc. millions</u>	<u>Index</u>
1960	1,592	100	1967	3,937	247
1961	1,793	113	1968	4,918	309
1962	2,138	134	1969	7,171	450
1963	2,450	154	1970	8,242	518
1964	2,832	178	1971	9,540	599
1965	3,158	198	1972	11,359	713
1966	3,653	228	1973	14,539	913

Source: Bank of Angola, Economic and Financial Surveys of Angola.

founded in 1963. The beer, cigarettes, shirts and pants, and gasoline that featured heavily in these totals illustrated the extent to which manufacturing in Angola served the European market rather than African consumers, most of whom remained too poverty-stricken to purchase manufactured products more than occasionally.

In the final years before independence, Portuguese and foreign investors began to move into paper manufacturing, chemicals, glass, plastics, bicycles, and car and truck assembly plants. Plans were rampant for further investment in manufacturing, including a steel mill with a capacity of 60,000 tons of cold rolled steel per year, electric cable and wire, increased cement capacity, fish processing plants, and fertilizers; detailed information on the fate of these plans is not available. Virtually all Angolan manufacturing capacity was owned by European Portuguese and/or foreign interests, attracted by tax incentives and low-paid African labor as well as by expanding local markets.

The ownership of many of these enterprises began to fall into government hands before Angolan independence, during 1974 and 1975 when nationalization policies decreed in Lisbon brought many large firms under state control. The independent government has continued along these lines, partly in order to resume use of idle plant and equipment left behind by fleeing Portuguese owners and managers in 1975-76. Nationalization decrees distinguish between Portuguese ownership, to which the government now lays claim, and foreign interests that have been allowed to remain in private hands.

TABLE IV-28  
MANUFACTURING INDUSTRIES, 1960-73

(Volume in metric tons; value in thousands of Angolan escudos)

	<u>Milling<sup>1/</sup> &amp; husking</u>		<u>Livestock fodder</u>		<u>Sugar</u>		<u>Cotton ginning</u>		<u>Sisal fibers</u>	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
1960	--	18,630	--	--	67,539	196,716	--	111,688	--	--
1961	--	19,900	--	--	65,615	184,794	--	78,774	--	--
1962	--	135,262	--	--	71,116	205,961	--	134,066	--	--
1963	--	166,577	--	--	64,645	199,076	--	95,409	--	--
1964	47,261	145,055	--	--	65,423	204,971	--	80,810	--	--
1965	52,418	163,146	--	--	66,920	222,473	18,820	117,306	--	--
1966	58,298	179,875	--	--	68,053	236,880	18,618	124,387	--	--
1967	61,831	109,486	26,487	62,750	67,036	272,162	21,743	155,004	--	--
1968	99,105	313,247	24,390	70,383	65,213	245,057	36,262	258,413	--	--
1969	158,429	419,581	37,614	105,255	65,737	258,689	51,716	332,929	65,456	237,707
1970	173,547	473,845	51,775	141,544	78,766	318,726	70,459	549,304	61,661	205,738
1971	193,321	570,105	66,453	181,502	106,823	317,188	90,656	649,892	65,154	223,803
1972	230,474	734,612	82,953	220,955	114,560	367,001	35,786	276,371	80,038	355,270
1973	247,488	794,699	55,811	293,794	107,759	346,715	39,542	476,307	66,225	450,368

Source: Bank of Angola, Economic and Financial Surveys of Angola

<sup>1/</sup> Milling only up to 1967.

TABLE IV - 29

MANUFACTURING INDUSTRIES, 1960-73  
(Volume in metric tons; value in thousands of Angolan escudos)

	Chemicals				Petroleum derivatives		Paper and related products Value	Transportation material Value	Metal products Value	Rubber Value
	Paints & allied products		Soap		Volume					
	Volume	Value	Volume	Value	Volume	Value				
1960	--	--	--	--	177,000	278,506	--	--	--	--
1961	--	--	--	--	198,000	303,954	--	--	--	--
1962	349	13,019	10,015	46,012	337,000	383,859	--	--	20,000	--
1963	397	14,487	9,636	38,193	455,000	454,949	73,000	--	--	--
1964	369	13,157	9,746	38,344	504,000	503,754	111,000	--	--	--
1965	804	32,211	10,235	44,456	527,000	289,939	112,000	71,500	--	--
1966	1,182	41,409	11,207	49,062	603,000	435,500	113,100	65,600	90,000	25,820
1967	1,701	58,912	11,912	50,998	592,000	399,000	151,000	110,900	111,000	32,663
1968	2,164	66,739	12,824	56,130	532,000	515,000	167,000	174,200	132,000	147,466
1969	2,675	85,540	13,365	62,485	622,000	485,000	234,000	209,000	176,460	179,086
1970	3,477	98,566	14,810	70,752	659,000	457,000	281,000	239,155	238,066	220,431
1971	3,689	112,575	15,168	77,545	656,000	507,000	354,000	294,469	333,775	269,913
1972	6,227	189,942	19,735	102,185	659,000	533,000	406,000	327,241	404,339	304,294
1973	8,449	267,028	18,400	106,638	720,000	551,000	429,000	411,075	539,298	339,539

Source: Bank of Angola, Economic and Financial Surveys of Angola, and Annual Reports

TABLE IV-30  
 MANUFACTURING INDUSTRIES, 1960-73  
 (Volume in metric tons; value in thousands of Angolan escudos)

	Spinning, weaving, and finishing Value	Beverages		Cigarettes and loose tobacco		Minerals (nonmetallic)		
		Beer Value	Soft drinks Value	Volume	Value	Hydraulic cement Volume	Value	Fibro-cement articles Value
1960	24,887 <sup>1/</sup>	82,682	32,937	1,107	116,746	158,000	106,762	--
1961	33,221 <sup>1/</sup>	126,907	35,237	1,258	137,638	162,000	108,123	--
1962	56,656 <sup>1/</sup>	211,768	45,339	1,308	166,300	169,000	115,125	--
1963	66,772 <sup>1/</sup>	256,069	55,904	1,400	182,349	194,000	118,123	--
1964	188,416	282,967	62,836	1,576	204,745	214,000	132,353	--
1965	224,237	331,277	71,426	1,719	226,454	245,000	159,143	--
1966	202,899	365,524	71,417	1,750	243,916	264,000	176,836	--
1967	163,031	400,909	75,915	1,785	271,469	279,000	179,832	62,994
1968	170,547	473,248	87,225	1,853	293,127	311,687	199,567	72,218
1969	191,982	547,744	105,727	2,106	314,878	382,759	258,510	69,987
1970	188,217	623,318	126,959	2,025	342,878	446,249	303,444	104,640
1971	261,058	653,780	149,582	2,188	378,652	529,594	355,022	132,707
1972	335,350	705,916	170,451	2,453	492,917	624,394	405,402	138,853
1973	426,238	1,118,870	235,962	2,596	619,070	768,000	486,274	164,130

Source: Bank of Angola, Economic and Financial Surveys of Angola  
 1/ Spinning and weaving only.

Despite widespread publicity given to a limited number of nationalizations of large and prominent firms (a.g., the CADA coffee plantation, the CUCA beer brewery, etc.), most private assets have not been affected. A post-independence government survey of manufacturing capacity has classed 504 firms in the category of "heavy industry", only seventy of which had been nationalized in late 1976. Long-term government objectives are to acquire control over 80 percent of this sector, but it is not known whether this will be accomplished by further nationalizations or by state-controlled growth of new enterprises in future years.

Official development strategy is based on the exploitation of mineral resources to finance the creation of a related heavy industrial sector of the economy. Presumably this will feature processing and fabrication of Angola's resources of iron, bauxite, phosphates, and petroleum. The government has stated its intention of nationalizing some portions of this sector, as, for example, by combining dozens of small machine-tool establishments into a few larger and more efficient plants. It will construct a "middle" sector around cement factories, a paper pulp mill, the shipyard at Lobito, and so on; the hope is that petrochemicals will eventually be included. The light industrial plant is largely already in place, and here initial development strategy focuses on bringing abandoned enterprises back into production. Government investigators have found equipment damaged, account books missing, and other evidence of sabotage intended to hinder their recovery. Technicians are lacking, and transportation has not been available to move finished products to their markets. These problems are being dealt with by government "intervention commissions" appointed to solve the most pressing short-run difficulties, including worker demands for higher wages and continuing strikes. The government seems confident of its ability to convert the industrial base built up before 1975 to satisfy the needs of Angolan citizens generally, with self-sufficiency to be attained in most foodstuffs, clothing, and bicycles, among other things. Large firms will be state-run for the most part, but small firms judged as contributing to the development of the national economy will be left in private hands. Full realization of these goals will take years.

Industrial reconstruction depends in the first instance on an inventory of natural resources and an assessment of national needs; the government appears to have progressed far along this line in the first year of independence. It has also taken steps to meet worker demands and to control strikes and other factors contributing to manpower shortages which have hindered industrial production since 1974. It now requires funds and skilled technical personnel for the repair and restarting of existing industrial plants; recent agreements with Cuba (July 29 and December 5, 1976) and negotiations

apparently underway with the Soviet Council for Mutual Economic Assistance may bring economic and technical assistance to this sector, as well as initiate development in the heavier industrial sectors. In the longer term, the training of Angolan technical personnel will certainly become a prominent part of any projects undertaken.

## SPECIAL PROBLEMS

### A. War Reconstruction

Foreign Minister Jose Eduardo dos Santos has estimated that war damage, for which he held South Africa responsible, amounted to between \$600 and \$700 million (or half again Angolan Government receipts in 1974, and probably more than four times 1976 receipts, which are estimated to have fallen by two-thirds from their earlier levels). Dos Santos also estimated that an additional \$300 million would be required to rebuild the war-shattered economy and urged the United Nations to help raise this amount through an international reconstruction fund.

### B. Housing

Several partially-finished apartment buildings were abandoned in 1975, and an opportunity to add to the supply of modern housing in the urban areas could lie in rushing these to completion. These structures are unlikely to produce a return in the near future, so that government subsidization will probably be necessary. There is a broader need for improved urban housing, especially in Luanda, since the modern sector of colonial Luanda was relatively small and the several hundred thousand African residents of the city lived in rudimentary dwellings spread around the periphery of the city. The sort of industrial development implied by recent government policy statements will continue to draw rural Africans into the cities, and some form of organized development of housing will be necessary to accommodate not only these people but also those already living there.

### C. Municipal Utilities

By the same token, public transportation, water, sewage, telephone, and electric utilities will require substantial investment to expand them beyond their present limits within the confines of the

formerly European sections of the cities. Provision of adequate public services may, in most instances, involve urban redevelopment of the most basic sort, since additional water supplies may need to be brought long distances, and dirt roads leading to and from the formerly African sections of the towns (which often became impassable during the rains) must be improved. The provision of utilities may well be deferred until plans are firm to replace the present dilapidated structures with new residential blocks.



## **BIBLIOGRAPHY**

## BIBLIOGRAPHY

### General sources/useful background

Abshire, David M., and Michael A. Samuels, eds. Portuguese Africa: A Handbook, New York, Praeger, 1969.

Although oriented toward Portuguese Africa in general (Mozambique, Guine-Bissau, Sao Tome and Principe, as well as Angola), the team writing under the direction of Abshire and Samuels has assembled a substantial amount of information in the context of Portugal's mid-1960s response to that nationalist challenge to its rule in Africa.

Wheeler, Douglas, and Rene Pelissier, Angola, London, Pall Mall, 1970.

This is the only English-language attempt at a comprehensive country-history for Angola. It is primarily political in its coverage, with nearly a third of the volume devoted to events subsequent to the outbreak of violence in 1960.

Davidson, Basil, In the Eye of the Storm: Angola's People, Garden City, N.Y., Doubleday, 1972.

Primarily an overview of the politics of the nationalist movements in Angola, and discernibly sympathetic to the ideals of the MPLA, this is the best introduction to the political background to the hostilities of 1974-76 in Angola. It also contains schematic historical sections, vignettes of conditions in MPLA-controlled areas before 1972, and the author's statement of his position on development issues in Africa.

Banco de Angola, Economic Studies Department, Annual Report and Economic and Financial Survey of Angola, Luanda: Banco de Angola, 1960-

With the mid-1960s opening of Portuguese Africa to foreign investors, the Banco de Angola began publishing an annual English-language survey of economic data on the country; it, together with the statistical annuale and the censuses of 1960 and 1970 (the latter only partially published), it is the primary source for almost all economic data on modern Angola. The first issue covered the six years 1960-65, and subsequent annual summaries appeared through the year 1973.

**Economist Economic Report. "Quarterly Economic Report: Angola/Mozambique" (London, quarterly and continuing ...)**

A convenient (but secondary) compilation of statistics and some reports from the international press. The statistics are no more current than the standard UN publications.

**Angola. Direccao dos servicos de estatistica, Anuario estatistico, Luanda: Government Printer, 1940/43-1972.**

The fundamental government source of statistics during the Portuguese period. (See also Portugal.) Title of issuing agency varies.

**Portugal. Instituto Nacional de Estatistica, Bolctim Mensal de Estatistica: Serie B: Provincias Ultramarinas, Lisbon, Imprensa Nacional, 1968-**

Angola, as an overseas territory of Portugal, is included in this series of Portuguese statistics and annual summaries of the monthly data down through the most recent available year (1972).

**Luanda, Governo Geral de Angola, Direccao geral de economia, Comissao para os inqueritos agricolas no ultramar, "Recenseamento agricola de Angola", (Mimeo).**

The Portuguese Government undertook a systematic agricultural census in Angola between 1962 and 1969 as part of the FAO world wide agricultural census, generating enormous amounts of data on the rural areas. This and the following item contain the basic data that have as yet been published (38 vols, Luanda, 1969-72).

**Portugal, Missao de Inqueritos agricolas de Angola, Estatisticas agricolas correptes de Angola: 1969/1970, Luanda, 1971.**

See above. Yearly agricultural censuses; not known how many issues were published.

**A note on current sources: the Portuguese withdrawal from Angola brought to an end the publication of statistics from Angola with the summaries for 1972 or 1973. Government collection of statistics broke down during 1974, and it is doubtful that meaningful figures for that year will ever appear. It is safe to assume that no significant data were generated for 1975 and one can only speculate on when the government of the Republica Popular de Angola will be able to generate accurate data on its own operations. For the period since about 1972, therefore, such figures as are**

available must be culled from the crude estimates appearing in scattered journalistic and intelligence sources. Some of those worth following are listed below:

"Facts and Reports" (edited by the Angola Comite, Da Costas-  
straat 88 Amsterdam, the Netherlands).

A biweekly collection of reports from the world press, including many foreign (especially African) sources; a useful supplement to the American newspaper clippings available in AF Press Clips.

#### African Development

Africa Research Bulletin (Economic series)

Africa Contemporary Record, ed. Colin Legum, London, annual.

Contains country-by-country annual surveys, with feature articles on topics of current concern. Up-to-date, usually available late in the year following time period covered.

Bibliography: Gerald J. Bender, Tamara L. Bender, Donna S. Hill, Colleen A. Hughes, Cesar T. Rosario. "Portugal in Africa: A Bibliography of the UCLA Collection" (Occasional Paper No. 12, African Studies Center, University of California, Los Angeles, 1972.)

#### Select Bibliography

Actividade Economica de Angola (Luanda).

Adelman, Kenneth, "Report from Angola", Foreign Affairs, 53 (Apr. 1955), 558-74.

Africa: Economic Growth Trends (Statistics and Reports Division, Office of Financial Management, Bureau for Program and Management Service, Agency for International Development) (March 1976).

Afrique Contemporaine (Numero special: "Le Portugal et l'Afrique"), No. 77 (Jan.-Feb. 1975).

Amaral, Ilidio de, Ensaio de um estudo geografico da rede urbana de Angola, Lisboa: Junta de Investigacoes de Ultramar, 1962. (Estudos, Ensaios e Documentos, No. 74).

"Angola", by Rene Pelissier, in Africa South of the Sahara, 1976-77, London, Europa Publications, 1976.

Angola, IDOC International, 1975. Rome, 1975.

Angola. Direcção dos serviços de estatística.

Anuário estatístico, 1940/43-72.

Boletim mensal de Estatística.

Comércio externo. 2 vols., annually.

Informações estatísticas. (annual)

Anuário Comercial de Portugal (Vol III: Ilhas e Ultramar)

Banco Comercial de Angola, Estrutura da Indústria transformadora em Angola, Luanda, 1969.

Informação económica.

Relatório: Balanço e contas.

Banco de Angola, Annual Report and Economic and Financial Survey of Angola, Luanda, 1960/65, 1966+ (annual)

Boletim trimestral.

Relatório e contas.

Bender, Gerald J., "La diplomatie de M. Kissinger et l'Angola", Revue française d'études politiques africaines, No. 126 (juin, 1976), 73-95.

Bender, Gerald J. "The Limits of Counter-Insurgency: An African Case", Comparative Politics, I, 3 (1972), 331-60.

"The Myth and Reality of Portuguese Rule in Angola: A study of Racial Domination", (PhD dissertation, University of California at Los Angeles, 1975).

Bender, Gerald J. and Allen F. Isaacman, "The Changing Histrography of Angola and Mozambique" in Christopher Fyfe, ed., The Changing Direction of African Studies since 1945 (Edinburgh, 1976), 220-48.

Bender, Gerald J. and P. Stanley Yoder, "Whites in Angola: On the Eve of Independence: The Politics of Numbers", Africa Today, XXI, 4 (1974), 23-38.

Boge, Wolfgang, "Dekolonisation und amerikanische Aussenpolitik: Eine Analyse der politischen Beziehungen Angola-USA 1945-75", Afrika Spectrum, X, 3 (1975), 219-31.

- Borchert, Gu. cer, Die Wirtschaftsräume Angolas: Transport probleme und Rentabilitätsgrenzen der Produktion, Hamburg, 1967.
- Brown, Kevin, "Report from Luanda: A New Angolan Society", The Nation (July 17-24, 1976), 42-6.
- Carrico, Jacinto dos Santos, and Julio Artur de Moraes, Perspectivas de Desenvolvimento Regional do Huambo, Nova Lisboa, 1971.
- Chapman, Michael, Angola: On the Road to Progress, Luanda: Angola Consultants, Ltd., 1971.
- Cruz de Carvalho, Eduardo, "Esboço da zonagem agrícola de Angola", Fomento (Lisbon), 1, 3 (1963), 67-72.
- Cruz de Carvalho, Eduardo, "Traditional' and 'Modern' Patterns of Cattle Raising in Ranching in Southwestern Angola: A Critical Evaluation of Change from Pastoralism to Ranching", Journal of Developing Areas, VIII, 2 (1974), 199-226.
- Dash, Leon, Get Off My Mountain: The Roots of Revolt in Angola, Washington, D.C., Howard University Press, forthcoming.
- Davidson, Basil, "African Economies", The Nation (Jan. 3-10, 1976), 17-20.
- Davidson, Basil, "African Peasants and Revolution", Journal of Peasant Studies, I, 3 (1974), 269-90.
- Davidson, Basil, "South Africa and Portugal", ISSUE, IX, 2 (1974), 10-20.
- Davidson, Basil, "Les territoires portugais et les mouvements nationalistes", C.R. Trimestrielle Seances Academie des Sciences d'Outre-Mer, XXXIII, 3 (1973), 303-21.
- Davidson, Basil, "What Chance for Angola?", West Africa (30 Sept. 1974), No. 2989, 1182-3.
- Dinis, A. Castanheira and F.O. Barros Aquilar, "Regiões naturais de Angola: Esboço de Zonagem", Fomento, V, 1 (1967).
- Economist Intelligence Unit, EIU Special Report No. 32, "Interdependence in Southern Africa: Trade and Transport Links in South, Central and East Africa", by Julian Burgess (July 1976).
- "Quarterly Economic Report: Angola/Mozambique".
- "Quarterly Economic Report: Portugal".

- El-Khawas, Mohamed, "American Involvement in Portuguese Africa: The Legacy of the Nixon Years", Ufahamu, VI, 1 (1975), 117-30.
- Eurodelta, Etude economique (sur) Angola, Cap-Vert, Guinee-Bissau, Mozambique, Sao Tome et Principe, Bruxelles, 1974.
- Germany, Statistisches Bundesamt, Landerkursberichte: Angola, 1975-, Stuttgart: W. Kohlhammer, 1975.
- Gilchrist, S., Angola Awake, Canada, Ryerson Press, 1968.
- Government Policy and the Church in the Portuguese Territories of Africa, Pro Mundi Vita, Brussels, 1972.
- Heimer, Franz-Wilhelm, "Decolonisation et legitimite politique en Angola", Revue francaise d'etudes politiques africaines, No. 126 (Juin 1976), 48-72.
- Heimer, Franz-Wilhelm, "Les dilemmes de la decolonisation en Angola", Cultures et developpement, VIII, 1 (1976), 3-42.
- Heimer, Franz-Wilhelm, "Der Entkolonisierungskonflikt in Angola", Afrika Spectrum, 75/3 (1975), 209-18.
- Heimer, Franz-Wilhelm, Social Change in Angola, Munich: Weltforum, 1973.
- Henriksen, Thomas, "End of an Empire: Portugal's Collapse in Africa", Current History, 68 (May 1975), 211-15, 229.
- Henriksen, Thomas, "People's War in Angola, Mozambique, and Guinea-Bissau", The Journal of Modern African Studies, XIV, 3 (1976), 377-99.
- Herrick, Allison Butler, et al., Area Handbook for Angola, Washington, D.C., 1967.
- Huibregtse, Pieter Cornelis, Angola: The Real Story, Den Haag, 1973.
- Humarac, Arslan, and Nicolas Muchnik, Portugal's African Wars: Angola, Guinea, Bissao, Mozambique, London: MacMillan, 1974.
- International Monetary Fund confidential document: "The Economy of Angola" (SM/75/248). October 10, 1975.
- ISSUE: A Quarterly Journal of Africanist Opinion (Summer 1974) - special issue on Mozambique.

- Katzellenbogen, Simon Ellis, Railways and the Copper Mines of Katanga, Oxford: Clarendon Press, 1973.
- Kornegay, Francis A., Jr., "The Impact of Post-Coup Portuguese Africa Policy on the Southern African Subsystem", A Current Bibliography on African Affairs, VIII, 1 (1975?)
- Kuder, Manfred, Angola: Eine geographische, soziale, und wirtschaftliche Landeskunde, Darmstadt, 1971.
- "Labor in Angola: Documents", Rural Africana, No. 24 (1974), 75-88.
- Legum, Colin, "National Liberation in Southern Africa", Problems in Communism (Jan. 1975).
- Legum, Colin and Tony Hodges, After Angola: The War over Southern Africa, New York: Africana, 1976.
- Marcum, John, The Angolan Revolution, Vol. I: The Anatomy of an Explosion, Cambridge, Mass., MIT Press, 1969 (Vol. II forthcoming, 1977).
- Marcum, John, "Lessons of Angola", Foreign Affairs, 54, 3 (1976).
- Marcum, John, "The Politics of Indifference: Portugal and Africa: A Case Study in American Foreign Policy" (Eastern Africa Studies Program, Syracuse University, 1972).
- Martin, Phyllis M., "The Cabinda Issue: A Historical Perspective", African Affairs (forthcoming 1977).
- Mendonca, Pio Coelho de, Algumas reflexoes sobre pagamentos interterritoriais no espaco portugues, Lisboa: Coimbra Editora, 1973.
- Miller, Joseph C. "The Politics of Decolonization in Portuguese Africa", African Affairs, 72 (No. 295) (1975), 135-47.
- Monteiro, Ramiro Ladeira, A Familia nos musseques de Luanda, Lisboa, 1973.
- Morais, Julio Artur, "Contribution a l'etude des ecosystems pastoraux: Les Vakuvala du Chingo" (unpublished dissertation, Universite Paris VII, 1974).
- Middrie, David L., "Changing Settlement Pattern in Angola", Rural Africana, No. 23 (1974), 47-78

"Notes sur le Cabinda, partie integrante de l'Angola", Revue française d'études politiques africaines, 11 (No. 121) (1976), 58-69.

Overseas Companies of Portugal, Intelligence Report.

Pelissier, Rene, "Angola: Un equilibre precare", Revue française d'études politiques africaines (Feb. 1975), 18-21

Pelissier, Rene, "Consequences demographiques des revoltes en Afrique Portugaise (1961-1970)", Revue française d'histoire d'outre-mer, 61 (No. 222) (1974).

Pelissier, Rene, "Evolution des mouvements ethno-nationalistes bakongo d'Angola", Revue française d'études politiques africaines, (March 1975), 81-103.

Pelissier, Rene, "La guerre en Angola oriental", Revue française d'études politiques africaines (Juli 1974), 87-109.

Pelissier, Rene, "Origines du mouvement nationaliste moderniste en Angola", Revue française d'études politiques africaines, No. 126 (Juin 1976), 14-15.

Pereira, J. Lima, "Fomento da bovinicultura em Angola", Fomento, IV, 4 (1966) 339-44; V, 1 (1967), 29-42.

Portugal, Inspeccao superior do plano de fomento, Relatorio final da execucao do I plano de fomento, 1953-58, Lisboa: Imprensa Nacional, 1959.

Plano de fomento para 1959-64, programa de financiamento, Lisboa: I.N.

Plano intercalar de fomento para 1965-67, programa de execucao, Lisboa: I.N.

Portugal, Presidencia do Conselho, Plano de fomento para 1959-64: programa geral de execucao dos investimentos inscritos ..., Lisboa, 1959.

III Plano de fomento para 1968-73, Lisboa, 1968.

Plano intercalar de fomento para 1965-67.

Projecto do III plano de fomento para 1968-73, Lisboa, 1967.

III Plano de fomento: Programa de execucao.

Relatorio da execucao do plano intercalar de fomento 1965-67, (annual - vol. 2 of each year covers overseas provinces), Fomento, Lisboa, 1968.

Relatorio final preparatorio do II Plano de Fomento, Lisboa, 1961-70.

Relatorio da execucao do II Plano de Fomento, Lisboa, 1961-70.

Relatorio da execucao do III Plano de Fomento, Lisboa, 1970+.

- Portugal, Instituto nacional de estatística, Boletim mensal de estatística, Ser. B: Províncias Ultramarinas, (1968+)
- Portugal, Missao de estudo do rendimento nacional do ultramar, Estimativas abreviadas do rendimento nacional do ultramar portugues, Lisboa, 1969.
- Portugal, Missao de Inqueritos Agricolas de Angola, Estudos, (No. 2: A. Castanheira Diniz, "Características mesológicas de Angola ..."), Nova Lisboa, 1973.
- Estatísticas agrícolas correntes de Angola, 1969/70+, Luanda, 1971+.
- Recenseamento agrícola de Angola, Luanda, 1964-72 (38 vols.)
- Possinger, Hermann, "Ländliche Genossenschaften in Angola: Ein unterbrochenes Experiment", Afrika Spectrum, X, 3 (1975), 233-44.
- Possinger, Hermann, Landwirtschaftliche Entwicklung in Angola und Mocambique, München: Weltforum Verlag, 1968.
- Poehlm, Christian P. and Richard Dale, eds., Southern Africa in Perspective, New York, 1972.
- Selcher, Wayne A., "Brazilian Relations with Portuguese Africa in the Context of the Elusive 'Luso-Brazilian Community'", Journal of Interamerican and World Affairs, XVIII, 1 (1976).
- Sendler, E.G. Gerhard, Angola und seine Seehafen, Hamburg, 1967.
- Silva, Fernando Diogo da, O Huambo: Mao-de-obre rural no mercado de trabalho de Angola, Luanda: Fundo de Accao Social no Trabalho em Angola, 1970?
- Silva, Jorge Vieira da, Notas sobre a Criacao de Gado Bovino em Angola, Lisboa: Junta de Investigações do Ultramar, 1960. (Estudos, ensaios e documentos, No. 75).
- Silva, Jorge Vieira da and Julio Artur de Moraes, "Ecological Conditions of Social Change in the Highlands of Angola", Environment in Africa (Dakar: Environment Training Program, 1974), 51-69.
- Smaldone, Joseph P., "African Liberation Movements: An Interim Bibliography", African Studies Newsletter, VII, 3 (1974), insert.
- Societe africaine d'edition, L'economie africaine (annual).

- Sousa Ferreira, Eduardo, "Portugal and her Former African Colonies: Prospects for a Neo-Colonial Relationship", Uíahany, V, 3 (1975), 159-70.
- Sousa Ferreira, Eduardo, Portuguese Colonialism from South Africa to Europe, Freiburg, 1972.
- Standard Bank Ltd. (London), Annual Economic Review: Angola.
- Stevens, Christopher, "The Soviet Union and Angola", African Affairs, (1976)
- Totemeyer, Gerhard, "Die rol van die Wambo elites in die politieke ontwikkeling in Ovambo" (these de doctorat, Universiteit Stellenbosch, 1974).
- United Nations, Agricultural Economics Bulletin for Africa.  
 "Foreign Trade Statistics of Africa - Series A".  
 "Survey of Economic Conditions in Africa" (annual)
- United Nations, Economic Commission for Africa, "Summaries of Economic Data: Angola (1973)" (compiled December 1974).  
Economic Survey of Africa.  
Statistical Yearbook.
- UNESCO, Statistical Yearbook.
- United Nations, Food & Agriculture Organisation, Agricultural Commodity Projections 1970-80, Rome, 1971.  
Production Yearbook.  
Trade Yearbook.  
 General Assembly. Special Committee on the Situation with regard to the Implementation of the declaration for the granting of Independence to Colonial countries and peoples, Activities of Foreign and Other Economic Interests (report).
- United Nations Development Program, "Preliminary Country Development Brief: ANGOLA" (internal working document, Oct. 21, 1974).
- United States Department of Agriculture, Economic Research Service, Indices of Agricultural Production in Africa and the Near East 1965-74, Washington, D.C., 1975.
- Urquhart, Alvin W., Patterns of Subsistence and Settlement in Southwestern Angola, Washington, D.C., 1963.

- Van Dongen, Irene S., "Coffee Trade, Coffee Regions, and Coffee Ports in Angola", Economic Geography (1961), 339-44.
- Van Dongen, Irene S., "The Port of Luanda in the Economy of Angola", Boletim da Sociedade de Geografia de Lisboa (1960), 3-43.
- Van Dongen, Irene S., "Sea Fisheries and Fish Ports in Angola", Boletim da Sociedade de Geografia de Lisboa (1962), 13-17.
- Van Dongen, Irene S. and W.A. Hance, "The Port of Lobito and the Benguela Railway", The Geographical Review, XLVI, 4 (1956).
- Wallerstein, Immanuel, "Luanda is Madrid", The Nation (Jan. 3-10, 1976), 12-17.
- Wheeler, Douglas, "African Elements in Portugal's Armies in Africa, 1961-74", Armed Forces and Society, II, 2 (1975).
- Wheeler, Douglas, "Portuguese Withdrawal from Africa, 1974-75: The Angolan Case" (unpublished paper, March 1976).