

# Zaire

## A Country Profile



June 1981

Office of Foreign Disaster Assistance  
Agency for International Development  
Washington, D.C. 20523



OFDA COUNTRY PROFILES: JULY 1981

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Island Countries of the  
Indian Ocean

ZAIRE: A COUNTRY PROFILE

prepared for

The Office of U. S. Foreign Disaster Assistance  
Bureau for Private and Development Cooperation  
Agency for International Development  
Department of State  
Washington, D. C. 20523

by

Evaluation Technologies, Inc.  
Arlington, Virginia  
under contract AID/SOD/PDC-C-0283

The profile on Zaire is one in a series designed to provide baseline country data in support of the planning and relief operations of the Office of U. S. Foreign Disaster Assistance (OFDA). The content, scope, and sources have evolved over the course of the last three years, and no doubt will continue to do so. The relatively narrow focus is intentional. To avoid redundancy, some topics one might expect to find in a "country profile" are not covered here.

If the information provided can also be useful to others in the disaster assistance and development communities, so much the better. Every effort is made to obtain current, reliable data; unfortunately it is not possible to issue updates as fast as changes would warrant. A cautionary note, therefore, to the reader: statistics are indicators at best, and if names and numbers matter, the bibliography will point to a current source.

We invite your comments and corrections. Address these and other queries to OFDA, AID, as given above.

July 1981

TO:

COUNTRY PROFILE USER Dear \_\_\_\_\_

Please use this form to note any changes, additions, corrections or suggestions you think would update and improve this country profile. Since our aim is to make these profiles as relevant as possible, your critique is essential and very much wanted. Return comments to Lucy Drobot, OFDA Country Profiles, Room 1262A.

NAME/OFFICE: \_\_\_\_\_ PHONE: \_\_\_\_\_ Date: \_\_\_\_\_

TOPIC

COMMENTS

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TOPIC	COMMENTS

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1. General Information1.1 Geographic Codes

AID standard	660
FIPS	CG
State regional	AF

1.2 Country Names

Official	Republic of Zaire
Local	Republique du Zaire
Short	Zaire

1.3 Official Holidays

New Year's Day	January 1
Commemoration of Martyrs of Independence	January 4
Labor Day	May 1
Anniversary of Movement Populaire de la Revolution	May 20
Anniversary of Zaire Currency, Promulgation of Constitution, and Day of Fishermen	June 24
Independence Day	June 30
Parents' Day	August 1
Army Day	November 17
Anniversary of the Regime	November 24

1.4 Currency

10,000 Sengi = 100 Makuta = 1 Zaire  
Zaires per US Dollar = 3.102 (March 1981)

1.5 Time Zones

Kinshasa: EST + 6; GMT + 1  
 Lubumbashi: EST + 7; GMT + 2

1.6 US Mission and Staff to Zaire (as of January 1981)

Embassy of the United States  
 310 Avenue des Aviateurs, APO NY 09662  
 Kinshasa  
 Tel: 25881-2-3-4-5-6  
 Telex: 386

Ambassador  
 Deputy Chief of Mission  
 Economic Section  
 Commercial Section  
 Political Section  
 Consul, Consular Section  
 Administrative Section  
 Regional Security Officer  
 Agricultural Section

Robert B. Oakley  
 Thomas E. McNamara  
 A. Joseph Williams, Jr.  
 Leonard J. Lange  
 Anthony S. Dalsimer  
 Richard C. Hermann  
 Warren E. Littrel, Jr.  
 Wayne W. Algire  
 Walter A. Stern  
 (resident in Abidjan)  
 Norman L. Sweet  
 Lewis W. Pate

Agency for International Development  
 Public Affairs Officer

Consulates:

Bukavu  
 Mobute Ave., B.P. 3037,  
 APO NY 09662

Principal Officer  
 Administrative Section

Vacancy  
 Larry Kozak

Lubumbashi  
 1029 Boulevard d'Loeac,  
 B.P. 1196,  
 APO NY 09662

Consul General	Lewis R. MacFarlane
Economic/Commerical Section	Godfrey J. Dillard
Consul, Consular Section	John F. McCarthy III
Administrative Section	Jeanette Porpora
Branch Public Affairs Officer (USICA)	Melvyn R. Brokenshire, Jr.

1.7 Host Mission and Staff in the United States (as of February 1981)

Embassy of the Republic of Zaire  
 1800 New Hampshire Avenue, NW  
 Washington, DC 20009  
 Phone: 234-7690, 7691, 7617

Ambassador	Kasongo Mutuale
Minister Counselor	Juma Alfani Mpango
First Secretary	Nsita K. wa Yanga
Second Secretary	Gballi Gia
Attache	Sikyala wa Sikyala
Defense and Armed Forces Attache	Col. Konziase Neto

1.8 Treaties and Agreements

Agricultural Commodities  
 Agricultural Production Project  
 Air Transport  
 Defense  
 Economic and Technical Cooperation  
 Finance  
 Investment Guaranties  
 Military Assistance  
 Military Mission  
 Peace Corps  
 Remote Sensing  
 Taxation

1.9 Travel and Visa Information

Check with Department of State; travel to certain mining areas not feasible for economic reasons. Transit visa, valid up to 8 days, one-way, \$2; roundtrip, \$4. Temporary visa, valid 1-3 months; 1 entry \$4, multiple

entries, \$6; valid 6 months, 1 entry \$6, multiple entries, \$8. Exit and return visa, 1 entry \$5, multiple entries \$8; these 2 visas only granted in Kinshasa. 1 photo required. Apply Embassy, Washington, DC 20009 or permanent Mission to UN of Republic of Zaire, New York 10017. Check with the Embassy or Mission for specific requirements.

Yellow fever immunization required for those 1 year of age or older from infected areas, arriving in or destined for that part of Zaire south of 10°S. GOZ recommends smallpox vaccination. Typhoid also recommended by GOZ. Polio, typhus, and plague recommended by USPHS, as is malaria suppressant.

#### 1.10 Ethnic and Social Groups

Though Zaire's population comprises over 200 tribes, five principal ethnic types, can be identified each physically and culturally distinct: Bantu, Hamite, Sudanese, Nilote, and Pigmy. The 54 Bantu tribes constitute an estimated 60-80% of the population and are distributed throughout the country. Major Savannah groups include the Kongo, Luba, and Lunda; rain-forest people are represented by the Ubangi, Mongo, and Ngala. Bantu (sedentary farmers) were the best positioned to benefit from Belgian contact; predominate in political life and professional classes. Fourteen Sudanese tribes, of which the Zande of the northern Haute-Zaire region are the largest, constitute at most 20% of the population; resident in the north and northwestern Savannahs, they are cattle raising pastoralists. Two smaller pastoral groups, the Nilotes (e.g., Alur) and the Hamites (e.g., Tutsi), occupy the Eastern Highlands. The Aboriginal Pygmies, who inhabit rainforest areas in the northeast and northwest, still practice a hunting-gathering culture.

#### 1.11 Languages

French is the official language, but working knowledge of the language is confined to the educated elite. Because few women have been able to attend school, it is seldom spoken in the home. Even use by men is confined to those who have completed more than two years of primary school and fluency is unlikely to be achieved except by those who complete secondary education. (As of 1974, only 12% of primary students went on to secondary or university levels.) Literacy (in 1 of 4 African languages) estimated at between 40 and 65%.

Over 200 principal African languages, each with as many as 20-30 dialects, are spoken locally. Most belong to the Bantu language family;

some are mutually intelligible. To facilitate inter-tribal contacts four regional lingua francae have evolved: 1) Lingala, spoken from Kisangani to Kinshasa and in the armed forces, is preferred by the present government; 2) Swahili is spoken in the East; 3) Kikongo in Bas-Zaïre, and 4) Tschiluba in the South-Central area. Almost all Zairians are fluent in one or more of the above.

### 1.12 Religions

An estimated 40-50% of the population are Christian, but the majority still follow traditional African religious beliefs (mostly animistic). Official government policy discourages popular interest in organized religion; religious schools and holidays have been abolished. The Roman Catholic Church is the largest of the Christian sects (7.9 million members); the Church of Christ in Zaïre (5 million members claimed) purports to represent all Protestant denominations, though the Kimbangist Church, an independent African sect with between one and three million members, is not included. In the northeast a Muslim minority numbers about 150,000.

## 2. Government

### 2.1 National Government

Zaire is an independent Republic under a one-party system. The 1967 constitution established strong presidential control, which was extensively modified by amendments added in 1974. Though the incumbent, Mobutu Sese Seko, has tenure for life (implicit) future presidents will be limited to a 5-year non-renewable term. Decisions of the Political Bureau of the Popular Movement of the Revolution (MPR) are now binding on both the executive and legislative councils; MPR's president is concurrently president of the Republic. Creation of a National Executive Council, which combines the former cabinet with the Executive Council of the MPR (members now known as state commissioners), further demonstrates fusion of state and party institutions.

The National Legislative Council enacts laws under the guidance of the president and the MPR. Members are elected by direct universal suffrage every five years from a slate drawn up by MPR Political Bureau.

The Judicial system consists of a supreme court, two courts of appeal, and regional tribunals.

### 2.2 Regional Organization

Eight regions\* (formerly known as provinces) and the capital district of Kinshasa constitute the administrative divisions of the Republic; each is headed by a presidentially-appointed regional commissioner. Regions in turn are divided into subregions (former districts) which are made up of localities. Local administrators are essentially synonymous with area leadership of MPR. In rural areas traditional chiefs have added roles of local administrator and MPR branch leader to customary duties.

\* Bandundu, Bas-Zaire, Equateur, Haut-Zaire, Kasai Occidental, Kasai Oriental, Kivu, Shaba.

### 2.3 Recent Events and Current Status (1981)

Potential for national disunity is inherent in the discontinuity between tribal territories and national borders. Several major tribes have members living in two or more contiguous nations: the Kongo span into northwest Angola, Western Zaire, Cabinda, and Southwest Congo-Brazzaville;

the Zande inhabit adjacent areas of Zaire and Sudan; the Bemba are in Zaire and Zambia; the Chokwe are found in Zaire and Angola; and the Alur, in Zaire and Uganda.

Apparently tribal loyalties contributed to the March 1977 invasion of Shaba region by "Katangan" militia. More than 1,500 strong, the self-identified Front for the National Liberation of the Congo (FLNC) occupied several settlements in the Dilolo area along the Kasai River. Many of the insurgents, as members of the Lunda-Chokwe tribe, were able to infiltrate the local population. Their avowed aim of replacing the Mobutu Regime with a "new social order" received Angolan, Cuban, and probably Soviet support. Despite the invaders extensive experience and good supply lines, Mobutu was able, with considerable aid from Morocco, France, Egypt, Sudan, and the US, to contain the FLNC forces. By the end of May 1977, the last of the invaders' strongholds, at Kapanga, had been captured.

In May 1978, a force of several thousand Katangan guerrillas again launched an attack on Shaba from their base in Angola, this time occupying the mining town of Kolwezi, inhabited by both Zairians and foreigners employed by GECAMINES. Through the intervention of French and Belgian paratroopers, the town was recaptured, and a temporary Pan-African peace keeping force was installed in the region. An act of amnesty passed by the GOZ in June 1978, led to the repatriation of some 160,000 Zairians, mostly from Angola; a Zaire-Angola reconciliation was also effected.

President Mobutu's position of power remains firmly entrenched. The hopes of many that an apparent trend toward political liberalization (e.g., the popular election in 1977 of the Legislative Council and part of the Political Bureau) would continue were dashed when, in a major speech before Parliament in February 1980, Mobutu reiterated his ban on the creation of opposition parties during his lifetime. At the same time, he announced that henceforth all members of the Political Bureau would be appointed by him.

Illegal parties include the exiled FLNC (based in Angola), the Parti pour la conscience Nationale (PACONA) (an anti-Mobutist party founded in 1977), and the Marxist Parti Revolutionnaire du Peuple, in eastern Zaire.

#### 2.4 Major Government Figures (as of June 1981)

President.....	Mobutu Sese Seko, Lt. Gen.
1st State Commissioner.....	Nsinga Udjuu
State Commissioner for	
Agricultural & Rural Development.....	Kamitatu Massambwa
State Commissioner for Civil Service.....	Kilolo Musampa Lubemba



### 3. Disaster Preparedness

#### 3.1 Host Disaster Plan

Zaire has neither a national disaster plan nor a permanent disaster agency. Responsibility for handling relief operations is usually assigned to an ad hoc special National Commission, the composition of which depends on the type of disaster. For example, during the 1978 Shaba incursion in Kolwezi, emergency relief activities were largely coordinated by the International Committee of the Red Cross (ICRC) with the participation of the Zairian Red Cross. Responsibility for follow-up assessment of longer term reconstruction needs fell to the Ministry of Planning, assisted by the Ministry of Rural Development. In general, the country's response to disasters is apt to be slow and disorganized at the outset.

#### 3.2 US Mission Plan

The size of the country, poor infrastructure, lack of safe storage facilities, absence of GOZ disaster preparedness agencies, and the sheer variety of potential disaster types, all militate against specific relief/rescue plans. Therefore, the US Mission disaster plan outlines only general guidelines adapted to Zaire from AID Handbook No. 8 on Foreign Disaster Relief. Mission plan is on file at OFDA, State Dept., Washington, D.C.

#### 3.3 US Disaster Teams

Mission Disaster Relief Team (MDRT) is composed of the Mission Disaster Relief Officer (MDRO), the USICA Information Officer, and a director responsible for coordinating all US relief assistance in Zaire. The MDRO is the Assistant Director of USAID; the Deputy MDRO is the USAID Public Health Officer. The MDRO designates survey and assessment teams as required, and keeps the Ambassador informed about relief operations. In addition, the Ambassador may convene the Mission Disaster Relief Committee (MDRC) in exceptional situations to discuss policy issues and other sensitive matters. The MDRC is composed of the Ambassador, and the heads of USAID, Peace Corps, USICA, Zamish, and DAO.

**MDRT Responsibilities:**

**Medical Services:** USAID Public Health Officer (See Section VII of U.S. Mission Plan)

**Procurement, Transportation and Property Accountability:** JAO/GSO (See Section VII)

**Security:** Regional Security Officer

**Clerical and Typing:** USAID Management Officer designate

**Consular Affairs:** Consular Officer

**Public Information:** USICA Information Officer

**Fiscal Matters:** USAID Controller (Section VI)

**Survey and Assessment Operations:** MDRO to designate responsibility as appropriate (Section V)

**3.4 US Contacts**

**MDRO:** Clifford Belcher, Public Health Officer  
**Alternate:** Joseph W. Jacobs, Public Health Office

**3.5 International Organizations**

**CARITAS:** P.O. Box 3176, Kinshasa. Cable: CARITAS ZAIRE.  
No. 203 DIA Kinshasa. Tel: 30082

**Red Cross:** Red Cross Society of the Republic of Zaire, 41 Avenue de la Justice, Kinshasa. Telex: Kinshasa 357. Tel: 31096

**WCC:** Eglise du Chris au Zaire, P.O. Box 3094, Kinshasa  
Cable: PROTESTANT, Kinshasa.

**UNDP:** Boulevard du 30 Juin, Kinshasa. Cable: UNDEVPRO, Kinshasa.  
Telex: 968-267

**International Rescue Committee:** Guest House - Ndola, Avenue Flambeau  
1991. Tel: 23490

UNHCR: Tel 40400, 30555.

WHO: Tel 31063

### 3.6 Host Contacts

	<u>Telephone</u>
Bureau du President	31311 31312
Department of Planning	30521
Department of Agriculture	30144 31157
Department of Public Health Hospital Mama Yemo	30115 26711
Office of Roads Mssr. Deillon Mssr. Baudoin (Dir. Gen.)	32156 31978 30745
Armed forces General Babia	81833 (Home) 22482 (Office)
General Eluki General Kikunda	
Central Depot of Medicines and Pharmaceuticals (DCMP)	25667
Railroads ONATRA SNCZ	25344 22402 26810

### 3.7 Environmental Monitoring

In 1972, the GOZ established within the Office of the Presidency a program for obtaining, processing, and using satellite-derived imagery. NASA's earth resources technology satellite and various meteorological satellites were to be used as sources. Dr. Sendwe Llungu, headed a 10-man team charged with implementing the program, with the assistance of

EarthSAT, a private U.S. firm. - Zairians are being trained in photo-interpretation and cartographic work in conjunction with the GOZ Department of Cartography is underway. Receiving and processing facilities in Kinshasa are planned but, as of early 1976, most aspects of the project were still in the planning stage and much of the work was being done by U.S. consultants.

The basic goal of the program is to provide data for economic development. Priority sectors are agriculture, geology, hydrology, cartography. The central location of facilities in sub-Saharan Africa permits full coverage of 27 African nations and partial coverage of several more.

### 3.8 Host Resources (1977)

- Aircraft:** Zaire Armed Forces has 6 C-130's, four of which are usually operational; 1 buffalo for 3/4 ton trucks, jeeps, etc.; 2 presidential helicopters for 12 personnel. Operational status of Armed Forces aircraft highly variable. Other commercial companies have C-47's, DC-6's, DC-7's which GOZ can requisition, if necessary. Others: Mission aviation fellowships and Catholic Missions have numerous small aircraft (AERO Commander, Cessna 185, Cessna 180, etc.); private companies with single engine and DC-6 aircraft; Dept. of Agriculture has one 4-passenger plane at Kangolo under N. Shaba Agricultural Development Project.
- Ground Transport:** 500 military vehicles (3 metric tons each), 400 jeeps (some with radio), might be available from Armed Forces; may be difficult to mobilize above vehicles for civilian relief activities. Four or five trucking firms with equipment suitable for emergency operations.
- Water Transport:** 12 Naval boats, 45-105 feet, available.
- Heavy Equipment:** Available from ONATRA, one of two railroad administration agencies. Other equipment available from Office of Roads and Armed Forces.
- Communications:** USAID (via USDA) has single sideband HF net running across country from Kinshasa to Bukavu using Motorola equipment. Both Catholic and Protestant missionary groups have well-monitored radio networks. Other organizations provide limited single sideband HF contacts.

Pharmaceuticals: DCMP (Central Depot of Medicines and Pharmaceuticals) is the official GOZ supplier for all health institutions, public or private. However, it is extremely unlikely that DCMP is capable of meeting medical needs in an emergency situation; most private institutions order medicines directly from abroad. DCMP has one light airplane and a fleet of trucks.

### 3.9 Disaster Types and History

Zaire is subject to epidemics, civil strife, border conflicts, earthquakes, and volcanic eruptions. Since 1960, disasters have included civil strife from 1963-66, the Ebola fever epidemic in 1976, the eruption of the Nyiragongo volcano in January 1977, a cholera epidemic in 1978, and drought-famine in 1978-79. In addition, continuous border conflicts/incursions create a virtually permanent refugee problem, especially along the Angola, Burundi, and Uganda borders. The latest incursion of Angolan rebels into Shaba occurred in May 1978. (See also section 4.1 National Population and section 2.3, Recent Events and Current Status 1981.)

#### Summary Disaster History

<u>Disaster</u>	<u>Location</u>	<u>Date</u>	<u>Number Killed</u>	<u>Number Victims</u>
Earthquake	N Kivu Province, Beni	3/20/66	24	3,024
Epidemic	Equator Province	9/00/76	328	357
Volcanic Eruption	Nyarangago Near Goma	12/23/76	38	10,000

### 3.10 US Volags

<u>Agency</u>	<u>Personnel Int'l/Local</u>	<u>Programs</u>
Africa Inland Mission	76/several	Ed; Med & PH; Comm; Women
Africa Inter-Mennonite Mission	37/NA	Comm; Ed; Food Prod & Agr; Med & PH; Equip & Mat Aid; Nutr; Women
Aid for International Medicine	NA	Med & PH

<u>Agency</u>	<u>Personnel Intl/Local</u>	<u>Programs</u>
American Baptist Churches	77/3,752	CD; Ed; Food Prod & Agr; Med & PH; SW; Coops & Loans; Nutr
American Leprosy Missions	1/NA	Med & PH; SW
American ORT Federation	NA	Ed; Ec & Dev PI
Assemblies of God	NA	Med & PH
Baptist World Relief	NA	Equip & Mat Aid; SW
Paul Carlson Medical Program	15/75	Food Prod & Agr; Med & PH; Nutr; Pop & Fam Serv; SW
Catholic Medical Mission Board	NA	Equip & Mat Aid; Med & PH
Catholic Relief Services - USCC	NA	Med & PH; SW
The Christian and Missionary Alliance	1/1	Ed; Equip & Mat Aid; Med & PH; SW; Youth
Christian Church (Disciples of Christ)	35/NA	CHP; Ed; Food Prod & Agr; Med & PH; Women
Church World Service	1/NA	CD; Ec & Dev PI; Equip & Mat Aid; Med & PH; Pop & Fam Serv
Claretian Fathers	13/13	Ed; Equip & Mat Aid; Food Prod & Agr; Med & PH; Nutr; Women
Conservative Baptist Foreign Mission Society	12/20	Ed; Med & PH
Consolata Fathers	26/NA	Ed; Food Prod & Agr; Med & PH
Damion-Dutton Society for Leprosy Aid	NA	Med & PH; SW

<u>Agency</u>	<u>Personnel Intl/Local</u>	<u>Programs</u>
Direct Relief Foundation	NA	Med & PH
The Evangelical Covenant Church of America	26/NA	CHP; Ed; Med & PH
Evangelical Free Church of America	41/26	Ed; Med & PH; SW; Youth
Free Methodist Church of North America	8/NA	Ed; Equip & Mat Aid; Med & PH
General Conference Mennonite Church	26/NA	Ed; Med & PH
Grace Mission, Inc.	11/150	Comm; CHP; Ed; Equip & Mat Aid; Food Prod & Agr; Med & PH; Pop & Fam Serv
International Rescue Committee, Inc.	NA	Med & PH; SW; Women; Youth
MAP International	2/28	Coops & Loans; Equip & Mat Aid; Food Prod & Agr; Med & PH; SW; Women; Youth
Medical Benevolence Foundation	NA	Equip & Mat Aid; Med & PH
Medical Mission Sisters (S.C.M.M.)	81/NA	Med & PH; Women; Youth
Mennonite Central Committee	36/NA	CD; Ed; Equip & Mat Aid; Food Prod & Agr; Ind Dev; SW
Mennonite Economic Development Associates	3/3	Coops & Loans; Ed; Food Prod & Agr; Ind Dev
Mill Hill Missionaries	59/440	CD; Ed; Food Prod & Agr; Med & PH

<u>Agency</u>	<u>Personnel Intl/Local</u>	<u>Programs</u>
Mission Aviation Fellowship	36/15	Comm; CHP; Ed; Equip & Mat Aid
Missionary Sisters of Our Lady of Africa	1/92	CD; Ed; Med & PH
The Pathfinder Fund	NA	Pop & Fam Serv; Women; Youth
Presbyterian Church in the US	71/NA	Ed; Med & PH; Nutr; Pop & Fam Serv
Sons of the Sacred Heart	49/400	Ed; Med & PH; SW
Salesians of St. John Bosco	NA	Ed; Food Prod & Agr; Med & PH; SW; Youth
The Salvation Army	291/NA	Ed; Med & PH; SW; Women; Youth
Seventh Day Adventist World Service	NA	Equip & Mat Aid
United Church Board for World Ministries	2/NA	CHP; SW
The United Methodist Church	48/NA	Comm; CD; Ed; Food Prod & Agr; Med & PH; Nutr; Pop & Fam Serv; SW; Women; Youth
United Methodist Committee on Relief	NA	CHP; Med & PH; Nutr; SW; Youth
United Presbyterian Church in the US	NA	CD; SW
Missionary Sisters of Verona	NA	Ed; Food Prod & Agr; Med & PH; Nutr; SW; Women
White Fathers	240/NA	Ed; Food Prod & Agr; Med & PH; Nutr; Women

<u>Agency</u>	<u>Personnel</u> <u>Int'l/Local</u>	<u>Programs</u>
World Rehabilitation Fund, Inc.	NA	Ed; Equip & Mat Aid; Med & PH
World Relief	NA	CHP; Equip & Mat Aid; Med & PH; SW
World Vision Relief Organization	NA	Equip & Mat Aid; Food Prod & Agr; Med & PH; Nutr; SW
Worldwide Evangelization Crusade	several/NA	Ed; Med & PH; Women
Xaverian Missionary Fathers	37/577	Ed; Med & PH

Key

Comm	Communications
CD	Community Development
CHP	Construction, Housing, Planning
Coop	Cooperatives, Credit Unions, Loans
Ec & Dev Pl	Economic and Development Planning
Ed	Education
Equip & Mat Aid	Equipment and Material Aid
Food Prod & Ag	Food Production and Agriculture
Ind Dev	Industrial Development
Med & PH	Medicine and Public Health
Nutr	Nutrition
Pop & Fam Serv	Population and Family Services
Pub & Bus Adm	Public and Business Administration
SW	Social Welfare
Women	Women
Youth	Youth

#### 4. Population

##### 4.1 National Population

The estimated mid-1978 population was 26.8 million with an annual growth rate (1970-78) of 2.7%. The average density is 8.4 persons per sq. km. and it is expected to rise to 17.7 per sq. km. by the end of the century. In 1974, about 44% of the population was under 15 years of age; 74% of the population lived in rural areas (those with populations under 5,000), 26% in urban areas, but urbanization is increasing at an overall rate of 8.1%, because of high fertility and rural-urban migration. Kinshasa is expected to double its 1974 population (1.7 million) by 1980. Population densities vary considerably: the rainforest and swamps of the central Zaire River Basin are sparsely settled, as are the plateaus and savannahs of the northwest. The Eastern Highlands and the Lake region have the highest densities.

An influx of refugees in 1981 from neighboring countries has added an estimated 400,000 to the national population. Of these, some 215,000 Angolans make up the largest group. Others are Ugandans (100,000), Burundis (11,000), Rwandese (22,000), and Zambians (1,800).

##### 4.2 Regional Distribution

<u>Region</u>	<u>Area</u> (sq. km.)	<u>Population</u> (July 1st, 1976)	<u>Density</u> (per sq. km.)
Bandundu	295,658	2,977,918	10.0
Bas-Zaire	53,920	1,741,080	32.2
Equateur	403,293	2,733,171	6.7
Haute Zaire	503,239	3,629,348	7.2
Kasai Occidental	156,967	2,817,717	17.9
Kasai Oriental	168,216	2,078,403	12.3
Kivu	256,662	3,906,160	15.2
Shaba (formerly Katanga)	496,965	3,239,431	6.5
Kinshasa (city)*	9,965	2,443,876	245.2
Total	2,344,885	25,567,104	10.9

\* Including the commune of Maluku

Source: Institut National de la Statistique as cited in Europa, Africa South of the Sahara, 1980-81.

4.3 Population Density as of 1970

<u>Administrative Division</u>	<u>Number of Inhabitants</u>	<u>% Total Population</u>	<u>Area in km.</u>	<u>Persons/sq. km.</u>
Zaire, Total	21,637,876	100.0	2,344,885	9.2
<u>Kinshasa Region*</u>	1,308,361	6.1	2,016	649.0
<u>Bas Zaire Region</u>	1,519,039	7.0	61,869	24.6
Urban sub-region Matadi	110,436	0.5	110	1,004.0
Sub-region Bas Zaire	522,053	2.4	14,310	36.5
Sub-region Cataractes	886,550*	4.1	47,449	28.7
<u>Bandundu Region</u>	2,600,556	12.0	295,658	8.8
Urban sub-region Bandundu	74,467	0.3	222	335.4
Urban sub-region Kikwit	111,960	0.5	200	559.8
Sub-region Inongo	429,465	2.0	127,243	3.4
Sub-region Kwilu	1,370,454	6.3	78,019	17.6
Sub-region Kwango	614,210	2.8	89,974	6.8
<u>Equateur Region</u>	2,431,812	11.2	403,293	6.0
Urban sub-region Mbandaka	107,910	0.5	460	234.6
Sub-region Equateur	340,823	1.6	103,443	3.3
Sub-region Tshuapa	466,286	2.2	132,957	3.5
Sub-region Mongala	739,813	3.4	101,508	7.3
Sub-region Ubangi	776,980	3.6	64,925	12.0
<u>Haut Zaire Region</u>	3,356,419	15.5	503,239	6.7
Sub-region Kisangani	229,596	1.1	1,910	120.2
Sub-region Haut Zaire	714,545	3.3	197,657	3.6
Sub-region Bas-Uele	588,768	2.7	148,331	3.8
Sub-region Haut-Uele	795,619	3.7	89,683	8.9
Sub-region Ituri	1,027,891	15.7	65,658	15.7
<u>Kivu Region</u>	3,361,883	15.5	256,662	13.1
Urban Sub-region Bukavu	134,861	0.6	60	2,247.7
Sub-region Nord-Kivu	1,473,380	6.8	59,563	24.7
Sub-region Sud-Kivu	1,130,676	5.2	64,789	17.5
Sub-region Maniema	622,966	2.9	132,250	4.7

<u>Administrative Division</u>	<u>Number of Inhabitants</u>	<u>% Total Population</u>	<u>Area in km.</u>	<u>Persons/sq. km.</u>
<u>Shaba Region</u>	2,753,714	12.7	496,965	5.5
Urban sub-region Lubumbashi	318,000	1.5	747	425.7
Urban sub-region Likasi	146,394	0.7	235	623.0
Sub-region Tanganika	696,363	3.2	135,028	5.2
Sub-region Haut-Lomami	602,368	2.8	108,204	5.6
Sub-region Haut-Shaba	394,316	1.8	131,443	3.0
Sub-region Lualaba	596,273	2.8	121,308	4.9
<u>Kasai Oriental Region</u>	1,872,231	8.7	168,216	11.1
Urban sub-region Mbuji-Mayi	256,154	1.2	64	4,002.4
Sub-region Kabinda	1,118,725	5.2	63,821	17.5
Sub-region Sankuru	497,352	2.3	104,331	4.8
<u>Kasai Occidental Region</u>	2,433,861	11.3	156,967	15.5
Urban sub-region Kananga	428,960	2.0	378	1,134.8
Sub-region Kasai	833,468	3.9	95,631	8.7
Sub-region Lulua	1,171,433	5.4	60,958	19.8

\* The area and population of Maluku, Kinshasa's only rural subdivision, were included in the cataractes sub-region of Bas-Zaire.

Source: Administrative Census, 1970.

#### 4.4 Urban Areas

##### Principal Towns

(estimated population at July 1st, 1976)

Kinshasa (capital).....	2,443,876	Bukavu (Costermanville)...	209,051*
Kananga (formerly Luluabourg)...	704,211	Kikwit.....	172,450
Lubumbashi (Elisabethville)....	451,332	Matadi.....	162,396
Mbuji-Mayi.....	382,632	Mbandaka (Coquilhatville)...	149,118
Kisangani (Stanleyville).....	339,210	Likasi (Jadotville).....	146,394*

\* 1970 estimate

Source: Europa, Africa South of the Sahara 1980-81.

## 5. Health, Nutrition, and Housing

### 5.1 Major Diseases

Malaria -- Endemic in lowland areas; occurs in unstable epidemic form in the highlands up to 2,000 m.; virtually the entire population is affected. Repeated cases are common; almost all lowland children have had at least one attack before age 10. Statistical data on prevalence of infection and mortality are lacking; control and treatment programs are fragmented, inadequately funded and staffed. Chemoprophylaxis is confined to diplomatic and expatriate communities.

Trypanosomiasis -- At risk population (Eastern Bas Zaire and Equateur, Haut-Zaire, Kasai, and Northern Shaba provinces) approximately 6 million persons; 20,000 cases were under treatment at the end of 1971. The number of new cases appears to be declining but the area of endemicity is growing. The problem of healthy carriers is increased by migration from rural areas. Treatment is hampered by lack of effective drugs.

Onchocerciasis -- Endemic in many areas; Kasai province most heavily affected with a 100% infection rate in some villages. Government vector eradication program was begun in 1974.

Measles -- One of four major causes of mortality in children under 5 years of age. An inoculation campaign underway in 1974 had reached about 40% of the 0-4 age group in Kinshasa; must extend to rural areas to be effective.

Schistosomiasis -- Prevalent and may be spreading throughout the country; leading cause of mortality among infectious diseases in Bas-Zaire. High infection rates in children. Significant levels of infection are unlikely to decrease because of expense of prevention campaigns and cultural habits which foster infection (swimming and bathing in infested areas).

Tuberculosis -- Prevalent, particularly in overcrowded areas. Mortality estimated at 10%; high reinfection rates recorded.

Skin diseases -- Common throughout the country. Chigger fleas and flies, the prevalent insect parasites (live under or on skin) often serve as entry route for secondary bacterial infection. Cutaneous ulcers, apparently non-contagious, are common in infants and children.

Leprosy -- Common in the Equateur and Oriental regions; mid-1960 infection rate of 1,500-2,000/million population.

Hookworm and other parasitic diseases -- Almost all Zairians have at least one parasitic disease; multiple infections are frequent. A high incidence of anemia is directly related to high hookworm infection levels.

Typhoid -- Endemic with occasional epidemics. Highest levels occur during the dry season.

Yellow Fever -- Rare but, because of vector's presence, threat of outbreak is real.

Dysentery and other diarrheal diseases are common to most of population.

### 5.2 Vital Statistics

Birth rate (1978)	-	46 per 1,000 population
Death rate (1978)	-	19 per 1,000 population
Infant mortality (1978)	-	150 -200*/thousand live births
Life expectancy (1978)	-	46 years

\* 80% of total deaths per year

### 5.3 Health Facilities and Services

#### Medical Facilities, 1974

<u>Type</u>	<u>Protestant</u>	<u>Catholic</u>	<u>Government</u>	<u>Private</u>	<u>Total</u>
Hospitals	64	31	82	27	204
Dispensary/Maternity	74	184	20	*	278
Dispensary	270	38	8	5	341
Sanitarium (TB)	-	2	2	-	4
Leprosarium	9	1	5	-	15
Training Schools	14	20	7	4	45

\* Unknown

The health situation has reportedly deteriorated in recent years, in part because of the general economic crisis affecting Zaire since the mid-1970's. The reasons cited by the Ministry of Health include the scarcity of medical supplies in the interior, the closing down of numerous clinics for lack of medicines and usable equipment, and the fact that a large proportion of products shipped to clinics and training centers in the interior never reach their destination.

Little current information on the status of hospitals is available except for Kinshasa's Mama Yemo Hospital (see below). Data shown above were collected by Protestant Missions in 1974; their reliability is questionable since collection methods are unknown. Descriptive material below was drawn from a number of reports by Zairian and foreign health teams (Synthesis).

The Fonds Medical de Coordination (FOMECCO), a division of the Medical Services Branch of the Office of the President, provides most health care in Kinshasa. Its ultimate objective is the development and implementation of a national health care system, but to date its focus has been urban. It presently operates 2 hospitals, 3 maternal-child health centers, a hospital ship, the Laboratory of the Institute of Tropical Medicine, and a nursing school. The major facility is Mama Yemo, an 1,800-bed "model" hospital with six clinical services (internal medicine, surgery, pediatrics, obstetrics and gynecology, community health, and diagnostics). Associated facilities include an outpatient polyclinic.

FOMECCO's hospital ship, Mama Mobutu, serves villages along the Zaire river and its navigable tributaries. Twenty beds, 2 operating rooms, x-ray facilities, an "excellent radio system hookup," and a helicopter landing pad on the afterdeck are its noteworthy features. FOMECCO also supervises Bolobo hospital (200 km. upriver from Kinshasa), the model for rural community health care and preventive medicine.

The medical department of the Armed Forces administers a system of 144 dispensaries, eight infirmaries with a total of 120 beds, four hospitals with a total of 500 beds, and a health clinic at Camp Kotolo in Kinshasa.

Action Kusala, an independent governmental organization, operates a rural development program in Kivu, concentrating on the Uvirafizi-Baraka area. Facilities include dispensaries at Bukavu and Uvira, hospitals at Kiringi and Fizi, and medical centers at Baraka and Uvira.

#### Other Public Health System Hospitals:

Kisangani Regional Hospital, a 700-bed facility with a separate pavilion for armed forces personnel and dependents, both entirely staffed by Zairians, serves Haut-Zaire. Also in Kisangani, the National University

of Zaire (UNAZA) has a 200-bed hospital and separate laboratory (efficiently run but lacking equipment) that serve university personnel and local residents.

The Regional Hospital and the private Reine Elizabeth Hospital in Lubumbashi are supported by the Department of Public Health Medical Laboratory.

However, most hospitals are plagued by shortages of trained personnel and a lack of pharmaceuticals. The US Mission indicates missionary health facilities are better supplied and staffed. A complete list of hospitals in Zaire by region, subregion, type of facility, and number of beds is on file at OFDA, State Dept., Washington, D.C.

#### 5.4 Drugs

Zaire's pharmaceutical industry comprises the public sector and a strictly delimited private commercial sector. Imports account for 90% of the local market; local production is restricted to 50 basic products manufactured from imported raw materials. Commercial interests are represented by Warner-Lambert's completely integrated system of laboratory and manufacturing plant in Kinshasa, warehouses in Kinshasa and Lubumbashi, and 12 associated pharmacies scattered throughout the country. Public enterprise supplies 25% of the market. DCMP (Depot Centrale de Medicaments Pharmaceutique) purchases drugs abroad, mostly from European (principally Belgian sources) to supply Department of Health, military, and other government and non-profit organizations. Poor organization and corruption limit its effectiveness.

#### 5.5 Health Personnel

Over 50% of the physicians, 75% of the dentists, pharmacists, and laboratory technicians, and about 65% of the medical assistants, trained midwives, and health aides, live and work in Kinshasa.

Kinshasa's ratio of one doctor per 4,045 inhabitants in 1977 compared with 1:52,434 for Kasai Occidental, 1:46,801 for Bandundu, 1:31,252 for Kivu, and 1:22,314 for Shaba. (World Bank, Zaire Economic Memorandum, 1979).

Type	Health Personnel						Total
	Kinshasa		Nation-wide		Nationality		
	Number	%	Number	%	Zairian	Foreign	
Physicians	339	41.4	479	58.6	317	501	818
Medical Assistants	62	66.7	31	33.3	86	7	93
Dentists	21	77.8	6	22.2	4	23	27
Dental Assistants	3	60.0	2	40.0	5	-	5
Trained Midwives	224	64.7	122	35.3	229	117	346
Auxiliary Midwives	205	25.0	685	75.0	889	-	889
Graduate Nurses	574	29.4	1,380	70.6	638	1,316	1,954
Auxiliary Nurses	884	12.1	6,447	87.9	7,192	139	7,331
Pharmacists	95	72.5	36	27.5	*	*	131
Pharmaceutical Preparers	19	46.3	22	53.7	37	4	41
Veterinarians	-	-	30	100.0	*	*	30
Asst. Veterinarians	-	-	108	100.0	*	*	108
Sanitation Technicians	10	100.0	-	0.0	10	-	10
Environmental Engineers	37	34.9	69	65.1	104	2	106
Auxiliary Technicians	2	3.4	57	96.6	59	-	59
Physiotherapists	29	100.0	-	0.0	24	5	29
Laboratory Technicians	54	70.1	23	29.9	55	22	77
Radiological Technicians	30	29.7	81	70.3	*	*	101
Other Specific Specialities	-	-	4	100.0	2	2	2
Other Paramedical Technicians	15	16.5	76	83.5	83	8	91
Health Aides	820	70.1	349	29.9	1,169	-	1,169

\* Nationality Unknown

Note: Figures include all health personnel in both the public and private sectors. Estimated 75% of health care in rural areas provided by missionaries; effect of Zairization may limit this source.

An estimated 75% of the Zairian population remains outside the formal health care delivery system, with access only to traditional medical practitioners, who ascribe illness to supernatural causes or witchcraft and cure with incantations and/or herbal remedies. If illness persists, the healer (guerisseur) seeks out a witch who then places a curse to resolve the underlying social conflicts. GOZ's National Office of Research and Development is studying guerisseurs' methods to arrive at an objective evaluation of their efficiency and to persuade healers to cooperate with health care personnel.

### 5.6 Diet Summary

Southwest: manioc, mainly in the form of flour from fermented and sundried roots, is the dietary staple; corn, roasted or pounded and mixed with manioc flour, is eaten in the rainy season.

Upper north: staples are corn and manioc in mixed flour or rice; plantain in central areas. Upper center and eastern forest: varied staple foods include manioc, plantain, corn, rice. Eastern Highlands: diet is based on sweet potatoes, sorghum, millet, plantains, and yams. South center and southeast savannah: staples are manioc and corn; sweet potatoes and soya are substitutes when manioc is not available.

Urban diets: manioc, sometimes mixed with cornflour, is the basic food; rice when not too expensive; wheat flour is increasingly popular. Special groups: Botwas (pygmies) have diets consisting mainly of plantain, fruits, insects, game meat, honey, some sweet potatoes, and groundnuts.

In most areas, staples are accompanied by palm oil, manioc and other green leaves, fruit, vegetables, and groundnuts. Small amounts of meat and fish are consumed in some regions (Eastern Highlands, south center, and southeast savannah).

### 5.7 Food & Drink

Starches: manioc, sweet potatoes, plantains, rice, corn, millet, and sorghum, yams, cocoyams. Wheat bread in large cities (imported)

Pulses: dry beans (haricot), voandzia peas, groundnuts

Fats: palm oil, groundnut oil

Animal Protein: fish, (locally fresh, otherwise smoked or dried), insects, game, rarely eggs, milk (pastoralists)

Fruit: mangoes, pineapple, sugarcane, papaya, banana

Vegetables: manioc leaves, eggplant, wild mushrooms, tomatoes, onions, cabbage

Condiments: peppers, sesame, salt, pumpkin seeds

Beverages: water, beer (brewed from manioc or grain), palm wine

Child's diet: breast fed until 18 months old, unless birth of younger sibling intervenes; supplementary starchy foods, begun at 6 months, become total diet until age 7 or 8, when more protein is available.

### 5.8 Food Preparation

Most foods are boiled; cooking liquid is thrown away. Most grains are processed into flour or coarse meal, served as porridge or stiffer paste molded into balls, with sauce of vegetables, oil, fish or meat if available. Carbohydrates may be fermented before cooking. Cooking is usually done outdoors or in a separate hut.

### 5.9 Nutritional Deficiencies

Rare before independence, malnutrition had become a serious problem even before the recent economic crisis which further reduced the buying power of much of the population. Growing population pressure in some regions (refugees a major reason) and environmental problems (soil erosion in parts of the country and the 1978 drought in Bas-Zaire) further contributed to the deteriorating nutritional situation.

A World Bank report (Zaire Economic Memorandum, 1979.) cites recent ad hoc studies of three areas as an illustration:

Kivu: malnutrition especially serious in mountainous areas where 10-15% of the population is affected, children 3-4 years of age most seriously (kwashiorkor prevalent). Caloric intake is 80-90% of minimum requirement.

Kinshasa: malnutrition diagnosed in about 30% of hospitalized children. One of every 5 children hospitalized in 1977 died, with malnutrition accounting for 30% of those deaths.

Bas-Zaire: acute malnutrition throughout the region; most severe in zones of Tshela and Lukula where affected population reached 26% and 21.1% of total respectively. Drought in 1978 exacerbated on-going nutritional problems such as chronic food shortages, socio-economic conditions, food habits, and density of population.

#### 5.10 Housing

##### Traditional Housing:

Small poorly ventilated huts of varying size and construction are the norm. Walls may be wood, mud, or reed; floors are usually dirt, though some riverine tribes build houses on sticks or on clay pedestals. Roofs are palm leaf or thatch. When they exist, windows are shuttered and never opened. Water and electric systems do not exist; even communal pit latrines are rare; pollution of floors and yards with human and animal feces is common. Water is usually obtained from nearby natural sources.

Note: In a traditional polygamous household, each wife and her small children have a separate hut; the father and older unmarried sons share a larger hut.

##### Urban Housing:

Urban construction materials: mud or masonry for walls and sheet metal for roofs. The basic housing pattern consists of a central main dwelling and secondary units or storage sheds, all surrounded by a wall. Large-scale rural-urban migration has led to the development of shanty towns without basic services. Public housing benefits middle and upper income groups rather than the poor; a typical squatter house lacks glass windows, plumbing, and electricity. Potential advantages in an urban environment include: relatively low density and sandy soil suited to well-digging and cesspool sanitation. The present organization of Department of Social Affairs does not appear conducive to large-scale improvements in the housing sector.

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## 6. Economy

### 6.1 Overview of Economy

Zaire's economy is based on mining and agriculture; the former sector is generally modernized, capital intensive, and highly productive, though most minerals are processed out of the country; the latter, particularly since independence and the decline of the Belgian plantation and paysannat systems, is largely subsistence oriented. Agricultural growth rates have at best matched population growth rates. The Government has invested heavily in the mining sector, though yields are still below pre-independence production levels. Industry, mostly food and beverage processing, textiles, metal fabricating, and mechanical assembly plants, boomed in the 1960's, aided by GOZ incentives for foreign investment and by the availability of cheap power. Growth in the past 10-12 years has been at an annual rate of less than 3%, with a significant shift away from processing local materials toward industries dependent upon imported goods. Development of tourism, potentially important as a source of foreign exchange and employment, is now under study by the GOZ.

The natural resource base includes extensive forests, fresh water fishing grounds, and approximately 16% of the world's hydropower potential, all still largely untapped. At present, only subsol resources have been developed: copper, zinc, lead, cobalt, cadmium, and manganese are mined in Shaba, diamonds in the Kasai, and scattered deposits of gold and tungsten bearing ores in the Eastern Highlands. Recently, offshore oil resources in the Zaire river estuary have been extensively exploited; deposits of iron ore and methane gas reserves in Lake Kivu are potentially valuable.

The Shaba copper mines are the most important aspect of Zaire's economy, accounting for over 60% of total export value. (Mining supplied 80% export value, 45-50% of government revenues, and 13-23% of GDP in early 1970's.) Mining consumes about 70% of all electricity produced (75% of demand located in Shaba) and the present transportation system was developed largely to transport its products out of the country. The copper industry relies heavily on imported capital, intermediate goods, and on foreign personnel.

Subsistence agriculture, including hunting and fishing, was the basis for the traditional economy of Zaire. Under the Belgian administration, plantation agriculture, producing palm products, rubber, robusta coffee, and cocoa as export crops, was developed; by 1959, 1,500 sq. mi. of cropland and 450 sq. mi. of forest and pasture lands were in use; 300,000 Africans constituted the labor force. Though many plantations were abandoned at independence, most were again under cultivation by 1973, when they

were nationalized by the government. Because the majority of plantations were operated by Europeans, few Africans were equipped to fill managerial and technical roles; export crops declined from 40% of total value in 1959 to about 11% in 1974. As commercial agriculture declined, the economy became increasingly dependent on mineral exports, particularly copper. Fluctuations in copper prices had considerable impact on Zaire's export oriented economy (35% of GNP exported in 1973); falling copper prices, and thus, falling supply of foreign exchange, coincided with an increasing demand for imported food due to a population growth rate higher than agricultural production increases, and a high level of rural to urban migration.

## 6.2 Recent Trends and Future Propects

GDP grew at about 7% annually between 1967 and 1974 but has since been in continuous decline. Although the sharp drop in the international price of copper in 1975, resulting in the deterioration of Zaire's terms of trade, was a major factor in the country's economic crisis, earlier developments contributed significantly. Among these were the heavy emphasis on mining sector development and the relative neglect of agriculture for more than a decade, heavy external borrowing in 1973-74 on terms inconsistent with Zaire's level of development, and experiments in Zairization which undermined private sector confidence and disrupted commerce and transport. The deterioration of economic activity between 1975 and 1978 was evidenced in a 10% drop in GDP, the quadrupling of domestic prices, and large deficits in the budget and balance of payments (the latter averaging US\$ 450 million per year).

A further decline in 1978 was in part attributable to adverse weather conditions and the lowered output of GECAMINES due to the Shaba invasions (see section 2.3, Recent Events and Current Status) and a general lack of rehabilitation. Commercialized GDP fell by 6.8%; the budget deficit reached a record Z 570 million; and the inflation rate soared to 90%. By the end of 1979, the public external debt amounted to approximately US\$ 4.6 billion.

Despite GOZ fiscal corrective policies and Zaire's considerable resource potential, problems remain. Besides the recognized institutional and administrative weaknesses, the World Bank cites the pessimistic outlook for world copper and cobalt prices, the cumulative effect of the lack of maintenance on the productive sectors and infrastructure since the crisis began, and the continuing heavy external debt (without further reschedul-

ing, external debt service ratio could be 32% of projected export earnings in 1981-83).

### 6.3 GNP/GDP

Provisional 1979 GNP at market prices: US million \$7,020; 1979 per capita GNP: \$260; GNP per capita (real) growth rate 1970-78: -2/2%. (Source: 1980 World Bank Atlas.)

#### National Accounts

	Amount (million US\$ at current prices) 1979	Share of GDP at Market Prices (%) (at current prices) 1979
Gross domestic product 1/	6,267.3	100.0
Agriculture	2,023.6	32.3
Industry	1,432.4	22.9
Services	2,659.1	42.4
Consumption	5,798.8 2/	87.9 2/
Gross investment	1,008.0 2/	15.3 2/
Exports of GNFS	1,843.0	29.4
Imports of GNFS	1,685.0	26.9
Gross national savings	1,013.0 2/	16.2

1/ At market prices; components are expressed at factor cost and will not add due to exclusion of net indirect taxes and subsidies.

2/ 1978.

Source: World Bank, Zaire: Kwanga-Kwilu Technical Assistance Project, May 1981.

#### 6.4 Imports

Despite a lack of reliable data on trade, it is evident that the volume of imports dropped sharply between 1974 and 1978 in response to the severe shortage of foreign exchange. A one-third cut in non-essential imports was not sufficient to prevent imports of essential goods from falling below required levels. Lowered production due to shortages of imported inputs in most sectors aggravated the supply situation which further fueled inflation.

An import bill of about US \$1.5 billion in 1979 included food imports valued at \$268 million.

#### Principal Imports (in '000 Zaires)

<u>Imports c.i.f.</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Consumer goods	107,725	98,813	115,620
Food, drink, tobacco	57,665	52,731	68,341
Textiles, clothing	16,212	14,785	12,258
Energy	60,822	104,234	87,467
Primary manufactures & semi-finished products	140,696	128,369	128,263
Capital goods	75,745	60,424	79,998
Others (incl. errors and omissions)	161,590	130,848	156,042
Total	546,577	522,688	567,390

Source: Europa, Africa South of the Sahara 1980-81.

#### 6.6 Exports

Since independence, mineral exports, particularly copper, have dominated the balance of payments situation. The mining and mineral-processing industry accounted for more than two-thirds of export earnings in 1977-79. Because government revenues and investment in transportation, power and other services are dependent on performance of the copper industry, the worldwide fall in copper prices in 1974-75 (from \$3,000 to \$1,000/ton) triggered a slowdown in Zaire's economy and limited the availability of foreign exchange.

Agricultural products, coffee, palm products and rubber, had fallen from 40% of total exports at independence to 10-15% in the early 1970's, due to reduced production capability on plantations and transport difficulties.

Total export earnings in 1979 were about US \$2 billion.

Principal exports  
(In '000 Zaires)

<u>Exports</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Mineral products	654,728	617,077	716,865
Copper	326,511	324,291	322,656
Cobalt	98,622	93,045	180,703
Zinc	40,553	27,814	14,168
Diamonds	47,429	55,173	103,181
Cassiterite	16,701	23,117	23,677
Crude petroleum	92,119	66,700	38,000
Agricultural products	164,614	259,539	198,235
Coffee	103,066	165,538	138,190
Palm oil and kernels	14,956	19,754	9,772
Industrial products	7,849	4,166	5,500
Others	10,709	31,618	10,000*
Total	837,900	912,400	930,600

\* Estimate

Source: Europa, Africa South of the Sahara 1980-81.

EEC countries are the principal trading partners, with the Belgium/Luxembourg economic union accounting for the largest share of imports and exports. USA is an important supplier; both Japan and Italy have been rapidly increasing their purchases from Zaire.

## 7. Agriculture

### 7.1 Overview of Agricultural Sector

Half of Zaire's total area of 235 million hectares is regarded as arable but only 1 to 4% is under cultivation. Agricultural production comprises two sub-sectors: plantation-based commercial monoculture (coffee, rubber, palm products) and small-scale subsistence farming on tribally-owned land. 70-75% of the population is employed in agriculture, the great majority in the subsistence sector. In 1970, plantations employed 397,000 Zairians (1/3 of them part-time workers) on 1,700 farms over 30 hectares in size. Declines in production after independence were extended by Zairization in 1973 but, because almost all export crops are produced on plantations, they continue as an crucial economic component. Subsistence agriculture is overwhelmingly traditional in land tenure and methods of cultivation. Family plots, averaging 0.4 hectares in size, are assigned by tribal chiefs. Since most cultivation is of slash-and-burn type, allocation of plot may change every 3-4 years. Land clearing and soil preparation are done by men; crop cultivation and marketing by women.

In terms of food crops, productivity in the traditional sector has apparently kept pace with population growth (about 2.5% per annum). Generally, however, agricultural production has been adversely affected by government policies of investment, taxation, and commodity pricing. Transport and marketing facilities have been neglected: existing infrastructure is geared to moving export crops and minerals out of the country and not to interconnecting regions; N-S connections are particularly poor. Skilled manpower is scarce; extension service is deficient in technicians and equipment.

### 7.2 Ecotypes

Four ecological zones differ in soils, rainfall, use, and potential productivity.

Rainforest -- Predominates in central cuvette, covering 100 million hectares. Largely untouched, its sandy soils, though generally considered infertile, are in some areas used for subsistence agriculture.

Savannah -- Drier zones N and S of rainforest (1200-1600 mm. rainfall). Present location of most cultivated land; substantial production of subsistence crops; opportunities for grazing now limited by tsetse infestation. Large areas potentially irrigable at low cost.

Highlands -- The country's most productive soils (volcanic origin) are located here, particularly along the eastern border. Intensively farmed, they are best suited to temperate zone crops and stockraising.

River Bottom Lands -- Have high quality soils renewed by deposits of alluvium; can be successfully farmed in permanent culture. Irrigation water is readily available at minimal cost.

### 7.3 Production

#### Crops

Primary subsistence crops include manioc, grown and eaten in most areas and the major source of calories for two-thirds of the population\*; bananas and plantains, corn (the basic crop in the southwest), sorghum and millet, especially in eastern regions, and sweet potatoes, yams, and cocoyams, the staple in North Kivu. Rice is grown in several areas along the major rivers. Dry beans and voandzia peas are grown in many areas and are a staple food for many eastern highland peoples. Groundnuts and oil palms are widely grown as sources of fats.

Coffee, arabica in the eastern highlands and robusta in the wetter savannah areas, is the most important export crop, followed by palm oil products, grown in equatorial and savannah zones, and rubber from central cuvette, especially the northwest. Before independence, cotton was grown on the northern and southern savannahs, and it was a major export; however, 1972 yields were one-third 1959 levels, while exports were less than 10%. Small quantities of sugar, cocoa, tea, and tobacco are grown as cash crops.

\* Manioc production is currently threatened by an epidemic of three plant diseases, especially in Bas-Zaïre and Bandundu. AID "Manioc Outreach" project, described in the 1979 ABS, addresses this problem.

#### Principal Crops ('000 metric tons)

	<u>1976</u>	<u>1977</u>	<u>1978</u>
Wheat	2	3+	5+
Rice (paddy)	212	237	202
Maize	510	515	487+
Oats	12*	12*	12*
Millet	26	26	26*

	<u>1976</u>	<u>1977</u>	<u>1978</u>
Potatoes	33+	33	34*
Sweet potatoes and yams	306	307	313*
Cassava (manioc)	12,130	12,300*	12,512*
Pulses	148	150	153
Groundnuts (in shell)	319	330*	339*
Seasame seed	4	3	3*
Cottonseed	34+	28*	26*
Palm kernels	73.7	72*	72*
Palm oil	178.1	175*	175*
Cabbages	6*	6*	6*
Tomatoes	36*	37*	38*
Onions (dry)	9*	10*	10*
Sugarcane	840	810*	820*
Oranges	147*	150*	154*
Grapefruit	9*	9*	9*
Avocados	23*	23*	24*
Mangoes	160	163*	167*
Pineapples	167	160	165*
Bananas	318	319	321*
Plantains	1,418	1,433	1,465*
Coffee (green)	92	93*	95*
Cocoa beans	5	5+	5*
Tea (made)	7	10+	10*
Tobacco (leaves)	13	13*	10*
Kenaf	13*	13*	13*
Cotton (lint)	12+	9+	8+
Natural rubber (dry weight)	27	27	27*

\* FAO estimate.

+ Unofficial figure.

Source: FAO, Production Yearbook as cited in Europa, Africa South of the Sahara 1980-81.

### Forestry

With over half the country forested, reserves are vast; the timber potential is virtually untapped, however. The principal exploited areas are the Mayombe forest, the Lake Mai-Ndome area, and the forest area in northwestern Equateur between the Zaire and Ubangi rivers. Of the 500,000 cubic meters of wood commercially harvested annually in the late 1970's, about three-quarters was used domestically.

Fisheries

Fish is the most important source of animal protein in the Zairian diet. The annual catch, estimated at 130,000 tons, is well below the country's potential, and over 100,000 tons of fish (mostly salted) are imported annually.

Livestock

The traditional herd is found in the higher eastern regions (Haut-Zaire and Kivu), above the range of the tsetse fly. Commercial operations, largely foreign owned before Zairization, are located principally in Shaba and Kasai-Occidental. Sheep and goats are raised by villagers throughout the country; hogs mainly in Bandundu, Bas-Zaire, Kivu, and Kasai-Oriental.

7.4 Current Status

With the exception of coffee, the volume of export crops has decreased since 1970. Food imports, on the other hand, have risen rapidly. Food shortages, resulting from insufficient imports, low per capita domestic production, and an unreliable distribution system, have contributed to the high rate of inflation and a growing incidence of malnutrition.

Foodcrop production was generally down in 1979 due to uneven weather conditions. However, grain output rose from the 1978 level of 620,000 tons to 641,000 tons, the increase mainly attributable to good corn harvests. Manioc production, reduced in 1978 by drought and mealy bug infestation, recovered in 1979 to its 1977 level of 12 million tons.

7.5 Planting and Harvesting Dates

<u>Crop</u>	<u>Planting</u>	<u>Harvesting</u>
Wheat:		
Kivu Province	March - August	September - October
Shaba Province	June - October	
Millet	Whole year round	February - May
Rice	Whole year round	---
Sugarcane	July - December	---
Sugar	Campaign begins July	
Potatoes	Whole year round	January - February
Sweet potatoes	Whole year round	---

<u>Crop</u>	<u>Planting</u>	<u>Harvesting</u>
Cassava	Whole year round	---
Dry beans	Whole year round	January - March
Voandzou (Voandzeia Subterranea)	Whole year round	May
Bananas	Whole year round	---
Palm kernals	Whole year round	January - March
Groundnuts	Whole year round	February - May
Cotton:		
North area	December - March	---
South area	June - September	---
Sesame seed	---	May
Tung nuts	Whole year round	June
Coffee	Whole year round	December
Cacao	Whole year round	December
Tobacco	April - July	April
Sisal	Whole year round	---

### 7.6 Imports

The \$300 million spent on agricultural imports in 1979 represents about one-third of the country's foreign exchange. Grain imports included 145,000 tons of wheat valued at \$25 million; 35,000 tons of rice worth \$15 million; 130,000 tons of corn at \$13 million. Two-thirds of the rice imports were on concessional terms, just under half from U.S. food aid programs. 65,000 tons of the wheat/flour imports were P.L. 480 Title I supplies. Among other agricultural imports were 60,000 tons of beef and pork worth \$210 million and dairy products valued at \$5 million.

### 7.7 Exports

Coffee exports of approximately 67,000 tons in 1978/79, 9% below the 1977/78 level, brought \$197.6 million in repatriated earnings. This may represent only a portion of the actual coffee trade, however, since smuggling is widespread and even earnings from legitimate exports are not always reported.



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## 8. Physical Geography

### 8.1 Climate

Three climatic zones can be distinguished: equatorial, tropical, and highland.

**Equatorial Zone:** located roughly between 4°N latitude and 4°S latitude, but skewed to the north because of the greater northern land mass. It is characterized by high rainfall, 50-80" (1300-2000mm) annually, distributed over a 10-12 month period, and by year-round warm temperatures, averaging 24°C with about 1°C annual variation. Humidity is always high at 65% or more. Within the equatorial zone, coastal lowlands are somewhat cooler and drier due to prevailing westerly winds off the Atlantic.

**Tropical Areas:** have wider temperature range than the Equatorial Zone. Rainy seasons, November through March south of the equator and April through October north of it, are hot and humid, while dry seasons are cooler with overcast skies but little or no rain. Temperatures range annually between 22-27°C in lowland areas and 24-26°C in the uplands. Rainfall averages between 1000-1600 mm. annually.

**Highland:** climate more nearly approaches temperate range. Temperatures range between 18°C and 24°C; rainfall averages between 1200-1800 mm. annually. Prevailing southwest winds in Shaba region bring greater seasonal variation; frosts may occur during dry season. Highland Lake area has humid mild climate. In general, humidity tends to increase with elevation; constant mist prevails in some mountain and Alpine locations.

### 8.2 Temperatures (° Fahrenheit)

<u>Station</u>	<u>Maximum/Minimum</u>				<u>Extreme</u>
	<u>Jan</u>	<u>Apr</u>	<u>Jul</u>	<u>Oct</u>	
Kalemi	85	83	82	87	92
	66	67	58	67	50
Kananga	85	86	85	85	94
	68	68	63	68	57

<u>Station</u>	<u>Jan</u>	<u>Apr</u>	<u>Jul</u>	<u>Oct</u>	<u>Extreme</u>
Kisangani	88 69	88 70	84 67	86 68	97 61
Kinshasa	87 70	89 71	81 64	88 70	97 58

### 8.3 Rainfall (Inches)

<u>Station</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
Kalemi	4.2	4.7	6.3	8.4	3.3	0.3	0.1	0.3	0.8	2.8	7.9	6.3
Kananga	5.3	5.7	7.7	6.2	0.3	0.1	0.1	0.1	1.2	4.7	8.7	5.6
Kinshasa	5.4	5.6	7.7	7.6	3.3	0.8	0.5	2.3	4.6	6.5	9.1	8.9
Kisangani	2.1	3.3	7.0	6.2	5.4	4.5	5.2	6.5	7.2	8.6	7.8	3.3

### Rainfall in Urban Areas

<u>City</u>	<u>Annual Rainfall (mm.)</u>	<u>Dry Season</u>
Bandundu	1,667	June - August 37 mm.
Bukavu	1,324	May - August 188 mm.
Kananga	1,563	May - August 130 mm.
Kikwit	1,625	June - August 36 mm.
Kinshasa	1,468	June - September 38 mm.
Kisangani	1,790	None
Lubumbashi	1,286	April - October 89 mm.
Matadi	980	May - October 73 mm.
Mbandaka	1,684	None
Mbuji-Mayi	1,476	May - August 120 mm.

### 8.4 Topography

Area: 2,343,950 sq. km.; bounded on the north by the Central African Empire and the Sudan, on the east by Uganda, Rwanda, Burundi, and Tanzania, on the south by Zambia and Angola, and on the west by the Atlantic Ocean, the Angolan Enclave of Cabinda, and the Congo People's Republic.

Located entirely within the tropics (between 4°N latitude and 13°S latitude approximately), Zaire can be considered as having three topographic zones: a central basin formed by the Zaire River and its tributaries, ringed by gradually rising uplands on the north, east, and south, and separated from the north and east African watersheds by mountain ranges along the Rift Valley which constitutes the eastern border. The vast sedimentary basin formed by the river constitutes almost half the area of the country and extends west and north into the Congo People's Republic. The lowest elevations of the basin are occupied by rivers, swamps and, in the northwest marsh lakes, Tumba and Mai-Ndombe. Rainforest covers higher ground; average elevation of this "central cuvette" is 1,300 ft.

Beyond the cuvette, plateaus extend north, south, and east. Generally, elevations are highest in the east, culminating in the mountains of the Eastern Highlands, which stretch almost 1,000 miles N-S along the western arm of the African Rift Valley, the floor of which is occupied by lakes Mobutu Sese Seko (Albert), Idi Amin (Edward), Kivu, Tanganyika, and Mweru. In the north, plateaus reach 2,000-3,000' between Zaire and the Nile watersheds. South of the cuvette, terraced uplands rise to the southwest, reaching 5,000-6,000' in Shaba; in the southwest, the Crystal Mountains, which run from Kinshasa southward into Angola, intervene between the Congo basin and the Atlantic Coastal plain. Savannah vegetation predominates on the plateaus; upper slopes of mountains are forest or heath below the snow line (14,800').

### 8.5 Land Use

Although it is generally believed that about half of Zaire's total area (235,000 hectares) is arable, estimates on the portion actually under cultivation range between 1% and 4%. According to FAO estimates, about 10% is in permanent pastures and slightly over 50% is in forests and woodlands.

#### Land Use, 1977 (1000 hectares)

Arable land	5,630*
Land under permanent crops	550*
Permanent meadows and pastures	24,803+
Forests and woodland	120,000+
Other land	74,877
Inland water	7,781
Total	234,541

- \* FAO estimate
- + Unofficial estimate

Source: FAO, Production Yearbook as cited in Europa, Africa South of the Sahara 1980-81.

See also Agriculture Overview, section 7.1, Ecotypes, section 7.2, and Production section 7.3.

### 8.6 Waterways

The Zaire river system unifies the country geographically. Its central basin, 400,000 sq. miles in area or 44% of Zaire's total, is subdivided by several navigable tributaries. Since the watershed is roughly centered on the equator and thus rainy seasons occur at opposite times in north and south, a relatively even water flow is maintained throughout the year.

Major rivers within the Zaire watershed are:

Zaire: Originates as the Lualaba River in southern Shaba near the Zambia border. Navigable from Bukama in Shaba for 200 km. to Kongolo; from Kindu to Ubundi, from Kisangani to Kinshasa, 1,725 km.; and from Matadi to the Atlantic.

Kasai: Navigable from the juncture with Zaire above Kinshasa to Ilebo; main transport artery for mining region to Kinshasa.

Ubangi: Navigable to Banzyville.

The following rivers are also at least partially navigable: Lulonga, Busira, Tshuapa, Lake-Mai-Ndomde, Lukenie, Sankuru, Kwango, Kwilu.

### 8.7 Mountains

The highest elevations are found in the Eastern Highlands' Ruwenzori mountains between lakes Mobutu Sese Seko and Idi Amin Dada: the lowest passes and saddles are 3,900', several peaks exceed 15,000'. To the south, the Virunga Mountains' highest peak, Mt. Mikeno, reaches 14,587', while the Blue Mountains west of Lake Mobutu Sese Seko and the Kivu Mountains approach 6,500'. Average elevations of the region, which extends 1,000 miles along the eastern border and varies in width from 50 to 350 miles, fall between 3,000 and 7,500'.

The Southern Uplands comprise the gradually rising terraced plateaus south of the Congo basin. The greatest elevations occur in the Mitumbi Mountains in the southeast (4,000').

### 8.8 Volcanism

The Virunga Mountains, which extend 50 mi. E-W across the western branch of the East African rift system (between Lakes Idi Amin Dada and Kivu), contain Zaire's only active volcanoes, Nyamulagira and Nyiragongo, at the western end of the chain. Extensive lava flows have reached as far as Lake Kivu; major eruptions occurred in 1912, 1938, 1948, and 1977; bursts of activity appear to occur at 10-12 year intervals.

### 8.9 Seismicity

Seismic activity is centered in the western area of the Rift Valley, which forms the eastern border with Uganda, Rwanda, Burundi, and Tanzania. Major faults extend westward from the Rift into the Lunda-Katanga tableland. The most recent severe earthquake occurred in Beni, Haut-Zaire region, in March 1966; the strongest tremor registered 6.3 on the Richter scale.

## 9. Transportation and Logistics

### 9.1 Road Network

Zaire's transportation system includes 15,000 km. of waterways; 5,000 km. of railway, most of it complementing waterways or bypassing non-navigable stretches of river; one major port and 70 river ports; and about 145,000 km. of roads, mostly primitive feeders to the rail/water system, except in the northwest, where they function as a trunk route. Thirty-three airports without scheduled services provide the only fast transport across the country.

No comprehensive national inter-urban highway exists. Deterioration of roadways due to neglect since independence has rendered them inadequate for current requirements. 2,000 km. of roads are bitumen paved, the rest gravel or earth. No road inventory is available; information on specific roads is limited. Maintenance is poor; many routes are impassable. 260 ferries (105 motorized, 123 cable, and 32 canoe-rafts), operating out of 224 ferry sites (an additional 86 former sites are to be re-opened), constitute an integral part of the network. 20,000 km. of priority roads connect the main centers of activity. Before 1978, nearly half of all roads (those making up the main network) were designated "roads of general interest"; the remainder were known as "roads of local interest." A 1978 ordinance reclassified the network as follows: 20,000 km. of national roads, 40,000 km. of regional roads, carrying about 90% and 8% of total traffic respectively, and 85,000 km. of local interest roads. The Bureau of Roads, under the Ministry of Public Works, has the responsibility for road planning, construction, and maintenance.

#### Road System

<u>Region</u>	<u>(km. sq.)</u>	<u>General Interest</u>			<u>Total</u>	<u>Local Interest Dirt 1/</u>
		<u>Paved</u>	<u>Gravel</u>	<u>1/ Dirt</u>		
Bas Zaire (including Kinshasa)	64,166	600	400	2,786	3,786	4,200
Bandundu	295,059	220	400	11,684	12,304	13,600
Kasai Oriental	170,642	130	300	3,255	3,685	4,100

<u>Region</u>	<u>General Interest</u>				<u>Total</u>	<u>Local Interest Dirt 1/</u>
	<u>(km. sq.)</u>	<u>Paved</u>	<u>Gravel</u>	<u>1/ Dirt</u>		
Kasai Occidental	153,240	23	100	3,359	3,482	3,800
Equateur	401,342	-	200	12,093	12,293	13,600
Haute Zaire	502,242	101	200	13,261	13,562	14,900
Kivu	258,545	350	300	7,077	7,727	8,400
Shaba	<u>489,639</u>	<u>503</u>	<u>100</u>	<u>11,443</u>	<u>12,046</u>	<u>13,300</u>
Total	2,334,875	1,927	2,000	64,958	68,885	76,000

1/ Rough estimates

Source: Appraisal Report of a Fourth Highway Project, May 3, 1979.

## 9.2 Vehicles

The vehicle fleet in 1975 (last year for which data are available) consisted of 184,000 units: 96,000 passenger cars, 70,000 trucks, 3,000 buses, 15,000 other types. Average vehicle density of about 7:1,000 inhabitants varied considerably between regions: from 68:1,000 people in Kinshasa region to 1.2 in Kasai Occidental. Average annual growth rate of the vehicle fleet was about 9% from 1969 to 1975, an estimated 3% from 1975 to 1978.

The road haulage industry in 1978 comprised one large firm (over 100 vehicles) and numerous small operators (many driver-owners of a single vehicle). In addition, some government agencies operated large transport fleets. Inter-urban traffic is dominated by the large company; small operators handle half of all transport in Kinshasa, virtually all that within rural areas. Transport services deteriorated under "Zairization"; reinstatement of previous owners since 1976 has brought about some improvement.

## 9.3 Railroad Network

Railroads, developed to complement navigable rivers, do not form an interconnected network. The Societe Nationale des Chemins de Fer Zairois

(SNCZ), under the Department of Transport and Communications, was created in 1974 with the merger of five existing railway companies and, in 1979, had responsibility for all but the Kinshasa-Matadi railway. SNCZ operates 4,6274 km. of main line single track and 100 km. of sidings in the following regions:

Southern Region

Sakania-Tenke-Kamina	855 km.
Tenke-Dilolo	522 km.
Total	1,377 km.

Central Region

Kamina-Ilbeo	978 km.
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Eastern Region

Kamina-Kabalo-Kalemi	720 km.
Kabalo-Kindu	406 km.
Ubundu-Kisangani	125 km.
Total	1,251 km.

Northern Region

Mungbere-Bumba	868 km.
Komba-Bondo	121 km.
Andoma-Titule	32 km.
Total	1,021 km.

1,067 mm. gauge is used in all but the Ubundu-Kisanga region (1,000 mm.) and the northern region (600 mm.). Most motive power is diesel though 851 km. of track in the southern mining region is electrified.

There are 3 main axes in the country's rail-river system: 1) the Voie Nationale, carrying about 650,000 tons annually, extending from the economically important Shaba region to the Atlantic by means of rail from Lubumbashi to Ilbo (1,575 km.), the Kasai river from Ilbo to Kinshasa (650 km.), and rail again from Kinshasa to Matadi (366 km.); 2) the north-west axis, carrying 40,000 tons, connecting the Haut Zaire region to Kinshasa and Matadi; and 3) the north-south axis, carrying about 60,000 tons annually, joining the other two networks by way of the Kivu region.

Three external rail routes link the Shaba region to the sea: the Benguela railway through Angola to Lobito; the Zambia-Rhodesia railway to Beira in Mozambique and to South Africa; the Tanzania-Zambia railway to Dar es Salaam. Although these alternate routes add flexibility to the transportation sector, political problems within and between neighboring countries render their use unreliable. The Trans-African Railway will eventually pass across the upper Zaire region.

#### 9.4 Rail Carriers

Societe Nationale des Chemins de Fer Zairois (SNCZ): P.O.B. 297, Lumumbashi (Shaba); and B.P. 10.597 Kinshasa; administers all internal sections, except river transport operated by ONATRA.

#### 9.5 Ports

Matadi, 80 miles up the tidal section of the Zaire River, is the most important maritime port within the national territory, handling about 1.2 million tons annually (1.5 million capacity) in 1979; congestion at Matadi and physical difficulties of the site have resulted in plans for construction of a major deepwater port at Banana on the coast. At present, Boma, the third maritime port and terminus of Matadi-Kinshasa rail line, handles most traffic for lower Zaire. In contrast, most of Matadi's traffic comes from, or is destined for the interior Zaire basin. 95% of cargo handled at Matadi moves over the Matadi-Kinshasa rail line, which provides a portage around the series of rapids between the Malebo pool of the Zaire River at Kinshasa and its tidal portion. Kinshasa is the most important river port, handling more traffic than most ocean terminals in Africa. New facilities are planned at Kimpoko, 21 miles upstream. The most important transshipment points between river, rail, and road transport are Kinshasa on the Zaire river and Ilebo on the Kasai; others include Mbandaka, Kolemie, Ubundu, and Kindu. The Office Nationale des Transportes (ONATRA) is responsible for river transport and port operations.

#### River Ports

ONATRA operates 70 river ports and a river fleet of about 265,000 dead weight tons, carrying about one million tons annually. In the mid-1970's the fleet included over 700 barges, more than 100 tugs, and some 25-30 other powered craft. Though old, the fleet was reasonably well maintained. Operational inefficiency, however, led to the loss of ONATRA's transport service monopoly, and private carriers are giving increasing competition.

Banana

- Coordinates:** Lat. 6° 01' S; long 12° 25' E. At mouth of River Zaire.
- Accommodation:** The River Zaire can be entered directly from the sea without danger, vessels passing through deep water.
- Anchorage:** At low water, 5.5 m. on bar; 5.5 m. at anchorage off Custom House. Caution is advised on entering Banana Creek, which is subject to very strong flood and ebb tides. At entrance of Banana Creek a draft of no more than 5.18 m. is allowed. Tidal range approx. 1.52 m. westerly currents of about 4 to 5 knots depending on season. Tankers discharge at anchor between Buoys No. 12 and 16 in the river. No mooring buoy is available and it is recommended to use both anchors with at least seven shackles of chain on each anchor. Main engine must remain standing by. Depth of Custom House pier, 5.18 m. L.W. Discharging and loading by ship's gear. One wharf length 75 m.
- Storage:** 2,500 sq. m. of warehousing.
- Pilotage:** Compulsory. Ships bound for Boma and Matadi should wire ETA to Government pilot station 24 hours before arrival. Notice of ETA is also to be given to the Harbor Master of Banana. Eight pilots available between Banana and Boma/Matadi and v.v. but no pilots available specifically for the short stretch from the sea buoy to the anchorage for tankers.
- Working Hours:** (Authorities and private companies): Weekdays: 08:00 to 12:00 and 14:30 to 17:00 hours; Saturday; 08:00 to 11:00 hours.
- Discharge and/or loading of tankers will be carried out continuously during day/night and weekends.

Boma

Coordinates: Lat. 5° 51' S; long. 13° 03' E. On the right bank of the Zaire, 74 km. from mouth. River navigable all the way.

Accommodation: Depth in dredged channel below Boma 7.92 m. No bar. Vessels drawing 7.1 m. can navigate channels from 2 hours before to 2 hours after H.W., no restriction on lesser drafts. Navigation limited to daylight hours. Three quays totalling 450 m. length, with 7.92 to 9.14 m. alongside, can accommodate three ships of 128 m.

Storage: 6,000 sq. m. of warehousing, 15,600 sq. m. of open storage.

Cranes: Six 3-6 ton electric cranes.

Bunkers: None.

Shiprepairs: Govt. drydock cap. 1,800 metric tons; Govt. repair shop can deal with minor repairs. Second drydock, also 1,800 tons cap., owned by ONATRA (stevedores).

Pilotage: Compulsory for ships over 500 g.r.t.

Airport: 3.2 km. from Port.

Matadi

Coordinates: Lat. 5° 49' S; long. 13° 31' E. On left bank of the Zaire, 133 km. from the mouth. Terminus for ocean-going steamers; terminus for railway connecting Lower Zaire with Pool Malebo.

Approach: Vessels have to pass the "Devil's Cauldron (5 km. before Matadi) where during the months of November December and January, the Zaire river has a current of 10 1/2 to 11 knots. Minimum speed for the vessels coming to Matadi therefore should be 12 1/2 to 13 knots during these months.

Navigation on the Zaire River between Banana and Matadi is limited to daylight hours; light buoys are placed alongside the river but sometimes adrift. Depth at entrance 9.14 m. Between Banana and Boma the permitted draft is 6.4 m. upstream, 6.7 m. downstream. Largest vessel: Ruys, 14,155 g.r.t.

Accommodation: 10 piers of lengths 128-167 m. each.

Storage: 79,200 sq. m. of warehousing 63,000 sq. m. of open storage.

Cranes: One fixed 50-ton crane, 49 other cranes of 3-10 tons.

Bunkers: None.

Shiprepairs: Railway shop (minor).

Pilotage: Compulsory for ships over 500 g.r.t.

Airport: Tshimpi, 8 km. from Port (Planes DC4 Type).

## 9.6 Shipping

### Inland

Soc. Zairoise des Chemins de Fer des Grandes Lacs: River Lualaba services, Bubundu-Kindu and Kongolo-Malemba B'kula, Lake Tanganyika services, Kamina-Kigoma-Kalundu-Moba-Mpulungu.

Zaire Network: services on the Luapula and Lake Mweru.

East African Railways and Harbors: services on Lake Mobutu Sese Seko.

Office National des Transports au Zaire (ONATRA): 177 Blvd. du 30 Juin, B.P. 98, Kinshasa 1; Regd. Office B.P. 16,691, Kinshasa 1; operates 12,174 km. of waterways, 502 km. of railways and road transport; controls ports of Kinshasa, Matadi, Boma, and Banana.

### Maritime

Compagnie Maritime Zairoise S.A.R.L.: Bldg. U.Z.B., B.P. 9496, Kinshasa; member of UK/West Africa Lines (UKWAL) since January 1978; services to Antwerp, North Continental Range to East Africa, U.S.A., Mediterranean ports to West Africa, Japan, Hong Kong, and Singapore; fleet of 3 vessels of 12,000 d.w.t. and 7 vessels of 15,000 d.w.t.

Compagnie Maritime Belge runs a fortnightly passenger and cargo service from Antwerp to Matadi. Cargo liner services are also operated by Elder Dempster Lines and Palm Line.

### 9.7 Airports

Thirty-three airports are served by scheduled domestic services that link all major towns. Kinshasa, the main international airport, is served by 13 international carriers, Lubumbashi by seven. About 150 minor airfields without scheduled services provide access to remote areas. Runways, buildings, and equipment are often in poor condition; shortages of trained personnel and absence of adequate meteorological and communications facilities limit efficiency of service (as of 1975). Realization of planned improvements should relieve problems. Air Zaire reportedly operates with little regard for schedules.

The two international airports can accommodate long-distance aircraft; four others (Mbandaka, Kananga, and military bases of Kamina and Kitona) are adequate for medium range jet traffic. An airport at Isiro and another at Rutshuro in the Kivu region were under construction in 1978.

### Aerodromes

NB: For up-to-date information consult latest issue of Weekly International Notams, International Flight Information Manual, and/or ICAO's Air Navigation Plan for appropriate region.

## BUKAVU/Micombero

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
03°19'S 28°49'E	1717 22	17/35 N-Instr	0.55	FK27J 1860	B C	FK27J AUW18 SW 13	n.a.

Remarks: Alternate aerodromes: BUJUMBURA/Bujumbura.

Aids: MD, MC. VFR only. No telex.

## BUNIA/Bunia

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
01°34'N 30°13'E	1233 23.4	10/28 Instr	n.a.	FK27J 1830	B C	FK27J AUW 18 SW 13	100

Remarks: Alternate aerodromes: GOMA/Goma.

Aids: L, \*L, MD, MC, MT. VFR only. No telex.

## GOMA/Goma

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
01°40'S 29°14'E	1545 23.4	18/36 N-Instr	n.a.	FK27J 1850 2300	B C	FK27J AUW 18 SW 8	100/JA1

Remarks: Alternate aerodromes: BUJUMBURA/Bujumbura, KIGALI/Kigali.  
2,600 m. runway for SW 25 planned. Completion date: 1978.

Aids: \*L, MD (MC, MT, MS, MFD, MTX, MO planned). VFR only. No telex.

## KINDU/Kindu

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope %</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
02°56'S	497	18/36	n.a.	B707-320C	B	B707-320C	100
25°54'E	26.4	INSTR		2050	C	AUW 115	JA1
		18/36		1900		SW 20	
		INSTR					

Remarks: Alternate aerodromes: BUJUMBURA/Bujumbura; no telex.

Aids: L, LSA (18), LR, LTX, LB, LO, MD, L4, L5 (MC, MT, MS, MFD, MTX, MO planned).

## KINSHASA/N'DJILI

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope %</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
04°23'S	309	07/25	0.127	B747-29	A	DC8-62	100JA1
15°26'E	24	PA-1		3750	A	AUW 145	
		07/25		4700		B747-29	
		PA-1				AUW 327	
						SW 45	

Remarks: Alternate aerodrome: BANGUI/M'Poko, BRAZZAVILLE/Maya Maya, DOUALA/ Douala, KITONA BASE, LIBREVILLE/Leon M'Ba, LUANDA/Luanda.

Aids: ILD (25-1), DME, VOR, L, LPA (07-1; 25-1), LR, LTX, LB, LO, MD, MC, MT, MTD, MS, MTX, MO, L4, L5, L9, (VA, LC, MFD-planned).

## KITONA BASE

Runway Characteristics

<u>Location</u>	<u>Eleva- tion M/</u>		<u>Slope</u>	<u>Aircraft/</u>		<u>Aircraft</u>	
<u>Coordinates</u>	<u>Temp C</u>	<u>NR/Type</u>	<u>%</u>	<u>Length M</u>	<u>CL</u>	<u>Strength</u> <u>(1000 kg)</u>	<u>Fuel/</u> <u>Octane</u>
05°55'S	120	05/23	0.0	B707-300B	B	B707-300B	JA1
12°26'E	24	PA-1		2100	A	AUW 95	
		05/23		2640		SW 45	
		N-INSTR					

Remarks: Alternate aerodromes: KINSHASA/N'DJILI; aerodrome closed to private traffic; no telex.

Aids: LSA (05; 23), LVA (23), LR, LTX, LB, LO, MD, MC, MT, MTX, MO, (MTD, MFD-planned), L4, L5, L9.

## LUBUMBASHI /Luano

Runway Characteristics

<u>Location</u>	<u>Eleva- tion M/</u>		<u>Slope</u>	<u>Aircraft/</u>		<u>Aircraft</u>	
<u>Coordinates</u>	<u>Temp C</u>	<u>NR/Type</u>	<u>%</u>	<u>Length M</u>	<u>CL</u>	<u>Strength</u> <u>(1000 kg)</u>	<u>Fuel/</u> <u>Octane</u>
11°35'S	1307	08/26	0.8	DC8-63CF	A	DC8-63CF	100
27°31'E	25.4	PA-1		2700	A	AUW 140	JA1
		08/26		2750		SW	
		INSTR		(3150-planned)			
				(SW 45 1978)			

Remarks: Alternate aerodromes: DAR-ES-SALAAM/Dar-es-Salaam, LUSAKA/Int'l., NDOLA/Ndola; no telex.

Aids: ILS (08-1), VOR, L, (PA08-11-planned), LSA (08), LVA (08+), (VA26+-planned), LR, (LC, MS, MFD-planned), LTX, LB, LO, MD, MC, MT, MTD, MTX, MO.

## MBANDAKA/Mbandaka

Runway Characteristics

<u>Location</u> <u>Coordinates</u>	<u>Eleva- tion M/ Temp C</u>	<u>NR/Type</u>	<u>Slope</u> <u>%</u>	<u>Aircraft/ Length M</u>	<u>CL</u>	<u>Aircraft Strength (1000 kg)</u>	<u>Fuel/ Octane</u>
01°41'N 18°17'E	317 24.9	18/36 INSTR	0.33	SE210-11R 2045 2200	B B	SE210-11R AUW 48 *SW 17	100 JA1

Remarks: Alternate aerodromes: KINSHASA/N'Djili; no telex.  
\* B707-320C acceptable.

Aids: (ILS 18-1 - to have been completed in 1976), VOR, LSA (18; 36),  
LVA (36), LR, LTX, LB, LO, MD, MC, MT, MS, MFD, MTX, MO, L4, L9.

KeyAbbreviations

INSTR	Instrument Approach Runway
N-INSTR	Non-Instrument Runway
PA I	Precision Approach Runway Category I
PA II	Precision Approach Runway Category II
REG-NS	Intl Non-Scheduled Air Transport, Regular Use
REG-S	International Scheduled Air Transport, Regular Use

Radio Aids

ILS	Instrument Landing System
DME	Distance Measuring Equipment
VOR	VHF Omni-Directional Range
RL	Radio Locator

Lighting Aids

LPA	Precision Approach Lighting System
LSA	Simple Approach Lighting System
LVA	Visual Approach Slope Indicator System
LAV	Abbreviated Approach Slope Indicator System
LR	Runway Edge, Threshold & Runway End Lighting
LC	Runway Center Line Lighting
LTD	Runway Touchdown Zone Lighting
LTX	Taxiway Lighting
LB	Aerodrome or Identification Beacon
LO	Obstruction Lighting

Marking Aids

MD	Runway Designation Markings
MC	Runway Center Line Markings
MT	Runway Threshold Markings
MTD	Runway Touchdown Markings
MS	Runway Sidestripe Markings
MFD	Fixed Distance Markings
MTX	Taxiway Center Line & Holding Position Markings
MO	Obstruction Markings

Runway Surface and Length

H	Hard Surface (numbers = ft. in hundreds)
S	Non-Hard Surface (number = ft. in hundreds)

Additional Lighting

L1	Portable Runway Lights (electrical)
L2	Boundary Lights
L3	Runway Flood Lights
L4	Low Intensity Runway Lights
L5	Low Intensity Approach Lights
L6	High Intensity Runway Lights
L7	High Intensity Approach Lights
L8	Sequenced Flashing Lights
L9	Visual Approach Slope Indicator (VASI)

9.8 Personal Entry Requirements

Passport and visa required. A yellow fever certificate is required from travelers from infected areas, arriving in or destined for that part of Zaire south of 10°S; vaccination for yellow fever as well as for typhoid, is recommended by the GOZ. (See also section 1.9, Travel and Visa Information.)

9.9 Aircraft Entry Requirements

All private and non-scheduled commercial aircraft overflying or landing for commercial or non-commercial purposes must obtain prior permission from the Regie des Voies Aeriennes, B.P. 6574, Kinshasa/N'Dolo, Republic of Zaire (telegraphic address: CIVILAIR KINSHASA/TELEX: 21366) at least 3 working days prior to departure. All requests must include (a) name of aircraft operator, (b) aircraft type, nationality and registration marks, (c) radio identification, (d) complete route of flight including dates and times of arrival and departure, (e) purpose of the

flight, (f) number of passengers and type and amount of cargo, if landing for commercial purposes.

9.10 Air Carriers

Air Zaire: SARL: 4 ave. du Port, Kinshasa, B.P. 8552, Kinshasa, domestic services and international services to Angola, Burundi, Cameroon, the Central African Republic, Chad, Gabon, Guinea, the Ivory Coast, Kenya, Nigeria, Senegal, Togo, Uganda, Belgium, France, Greece, Italy, Spain, the United Kingdom; fleet of 3 DC-8, 2 DC-10, 5 F-27, 3 Boeing 737, 1 Learjet.

Societe Generale d'Alimentation (SGA): Ave. de l'Uganda, B.P. 15-898, Kinshasa; operates cargo charter flights; fleet of 3 Canadair CL 44, DC-4, and 12 YS-11 A.

Zaire Aero Service, s.p.r.l.: Ave. des Batetela 4, B.P. 1445, Kinshasa; operates from N'dolo airport; services throughout Zaire and to Africa and Western Europe; fleet of 2 Piper Cherokee, 1 Cessna 411, 2 Fokker F27, 4 DC-4, 8 Viscount 757, 1 Boeing 707-320C.

The following foreign lines also provide services to Kinshasa:

Aeroflot (U.S.S.R.), Air Afrique (Ivory Coast), Alitalia, British Airways, Ethiopian Airlines, Iberia (Spain), KLM (Netherlands), Lufthansa (Federal Republic of Germany), Sabena (Belgium), Swissair, TAP (Portugal), and UTA (France).

9.11 Air Distances

Bukavu to:	<u>Statute Miles</u>	Bunia to:	<u>Statute Miles</u>
Goma.....	61	Isiro.....	195
Kalima.....	149	Kisangani.....	356
Kigali.....	92		
Kinshasa.....	937	Goma to:	
Kisangani.....	330	Kalemie.....	290
Lubumbashi.....	637	Kananga.....	551
Manono.....	348	Kigali.....	65
Nairobi.....	560	Kindu.....	246
Punja.....	193	Kinshasa.....	969
Tabora.....	326		

Goma to: Statute Miles

Kisangani.....319  
 Lubumbashi.....696  
 Mbandaka.....765  
 Mbuji Mayi.....497

## Kamina to:

Kananga.....262  
 Kinshasa.....719  
 Kolwezi.....177  
 Lubumbashi.....262  
 Manono.....193  
 Mbuji Mayi.....205

## Kinshasa to:

Addis Ababa.....1,853  
 Bujumbura.....961  
 Bukavu.....937  
 Dar-es-Salaam....1,642  
 Goma.....969  
 Kamina.....719  
 Kananga.....494  
 Kigali.....1,026  
 Kindu.....728  
 Kisangani.....752  
 Lagos.....1,182  
 Libenge.....597  
 Libreville.....534  
 Lisala.....616  
 Lodja.....566  
 Luanda.....344  
 Lubumbashi.....963  
 Lusaka.....1,162  
 Matadi.....168  
 Mbandaka.....363  
 Moanda.....237  
 Nairobi.....1,497  
 N'Dola.....1,079  
 Niamey.....1,533  
 Nioki.....192  
 Pointe Noire.....237  
 Port Harcourt.....864  
 Salisbury.....1,411  
 Tshikapa.....392

Kananga to: Statute Miles

Kikwit.....260  
 Kindu.....313  
 Kinshasa.....494  
 Kongolo.....314  
 Lubumbashi.....524  
 M'Bandaka.....502  
 Tshikapa.....121

## Kindu to:

Kinshasa.....728  
 Kisangani.....244  
 Kongolo.....187  
 Lodua.....172  
 Lubumbashi.....608  
 Manono.....318  
 Mbuji Mayi.....272  
 Punia.....112

## Kisangani to:

Entebbe.....504  
 Kongolo.....428  
 Libenge.....500  
 Lisala.....275  
 Lubumbashi.....850  
 Manono.....560  
 Mbandaka.....477  
 Nairobi.....821  
 N'Djamena.....1,064  
 Ngoma.....1,139  
 Punia.....152  
 Tabora.....658

## Lubumbashi to:

Bujumbura.....579  
 Bukavu.....637  
 Dar-es-Salaam....860  
 Entebbe.....871  
 Kisangani.....850  
 Lusaka.....266  
 Manono.....297  
 Mbala.....320  
 N'Dola.....124

Lumumbashi to: Statute Miles

Salisbury.....499  
Tabora.....580  
Tshikapa.....582

Mbandaka to:

Libenge.....250  
Lisala.....266  
Kananga.....502

## 10. Power and Communications

### 10.1 Electric Power

Zaire has the world's largest hydropower potential; known resources are approximately 100,000 MW, 40% of the estimated total for Africa. Hydropower installations have gradually replaced thermal plants. By 1974, 95% of installed generating capacity, 1,100 MW, was hydroelectric. Three turbines, with a combined capacity of 477 MW, were installed in April 1978 as part of the ongoing Inga II project (on Zaire river above Matadi). Most power from this phase will be routed via an 1,800 km. high power transmission line to Shaba for use in the mining sector. (Mining and processing consume about 70% of demand.) The next planned phase, Inga III, could add another 1,700 MW.

Though 22% of Zaire's population lives in urban areas where electricity is available, only 400,000 persons have access to electricity through 70,000 connections. Within the next decade, only 5% of the population can expect to make use of electric power. Demand in many towns has fallen because production facilities are inadequate. Commitment of GOZ investment funds to Inga II leaves few resources available for extension of local power supply. Major operating units are all government-owned.

Societe Nationale D'Electricite (SNEL) is responsible for operating copper mining facilities, Inga hydroelectric project, and all other public power facilities except for 39 towns presently (1976) supplied by REGIDESO, the state organization responsible for urban water and sewerage systems. SNEL is expected to assume REGIDESO's responsibilities in the near future.

Hydroelectric plants are distributed as follows:

Shaba: 2 hydroelectric plants on Lualaba above Luena of 248 and 108 MW, 1 of less than 10,000 kW; 2 plants on Lufira of 69 and 42 MW; 1 plant on Luvua of 10-30,000 kW; 1 plant near Kalemle and one near Kamina of 3-10,000 kW.

Kivu: 5 plants under 3,000 kW each; Bukavu has 1 plant in 10-30,000 kW range.

Haute-Zaire: 1 3-10,000 kW plant and 1 under 3,000 kW plant near Bunia; one plant under 3,000 kW on Uele river. Kisangani has one 10,000-30,000 kW plant.

Kasai East: Mbuji-Mayi has one plant in 3-10,000 kW range.

Bas-Zaire: One 350 MW, one 75 MW, one between 10,000 and 30,000 kW, one under 3,000 kW.

### 10.2 Radio Network

The main radio station is in Kinshasa; regional stations are in Kisangani, Lubumbashi, Bukavu, Bandundu, Kananga, Mbuji-Mayi, Matadi, Mbandaka, and Bunia. 130,000 radio receivers were in use in 1978.

La Voix du Zaire: Station Nationale, B.P. 3171, Kinshasa-Gombe; government-owned; broadcasts a home service in French, Swahili, Lingalo, Tshiluba, Kikongo.

### 10.3 Television Stations

There are television stations in Kinshasa and Lubumbashi; sets numbered approximately 7,500 in 1978.

Zaire Television: B.P. 3171, Kinshasa-Gombe; government commercial station; broadcasts for 5 hours a day on weekdays and 10 hours a day at weekends.

### 10.4 Telecommunications

Postal, telephone, and telegraph services are government-owned; telegraph service is good; telephone barely adequate. An estimated 35,000 telephones (0.1 per 100 population) were in use in 1980. A development program is underway to increase the number of lines to 60,000, half of them to be automatic. High frequency transmitters relay telephone signals between Kinshasa and provincial centers. A ground station at N'Sele is used in international telephone and telegraph services. Public telex facilities are located in the main post offices in Kinshasa and Lubumbashi.

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Bibliography

- Africa Diary. Vol XX, No. 14, April 1-7, 1980. New Delhi: Africa Publications.
- Africa Guide 1979. Graham Hancock, ed. Essex, England: World of Information, 1979.
- Allen, Phillip M. and Segal, Aaron. The Traveler's Africa. New York: Hopkinson and Blake, 1973.
- American Council of Voluntary Agencies in Foreign Service. Technical Assistance Information Clearing House. TAICH Country Report: Zaire. New York: TAICH, November 1979.
- Chi-Bonnardel Regine Van. The Atlas of Africa. New York: Free Press, 1973.
- Europa. Africa South of the Sahara 1980-81. London: Europa Publications Limited, 1980.
- Food and Agriculture Organization. World Crop Harvest Calendar. Rome: FAO, 1958.
- Foreign Affairs: America and the World 1980. Vol. 59, No. 3. New York: Council on Foreign Relations, Inc.
- Hance, William A. The Geography of Modern Africa. 2nd. ed. New York: Columbia University Press, 1975.
- Hull, Galen. "Zaire: Internationalizing the Shaba Conflict." Africa Report, Vol. 22, No. 4, July-August 1977.
- International Air Transport Association. Air Distances Manual. 4th. ed. London: IATA - International Aeradio Ltd., May 1977.
- International Civil Aviation Organization. Air Navigation Plan: Africa-Indian Ocean Region. 20th. ed. Montreal: ICAO, September 1976.
- International Conference on Assistance to Refugees in Africa. Refugees in Africa: A Country by Country Survey, ICARA. Geneva: United Nations, April 9-10, 1981.
- International Financial Statistics. Vol. XXXIV, No. 5. Washington, D.C.: IMF, May 1981.

- 
- LICROSS/Volags Steering Committee for Disasters. Basic Facts on Zaire. Geneva: LICROSS, 1978.
- \_\_\_\_\_. When Disaster Strikes and Help is Needed: A Guide to National Disaster Preparedness in Disaster Prone Areas. Geneva: LICROSS, 1976.
- May, Jacques M., M.D. The Ecology of Malnutrition in Middle Africa. New York: Hafner, 1965.
- New Africa Yearbook 1980. London: IC Magazines, Ltd., 1980.
- Political Handbook of the World. Arthur S. Banks, ed. New York: McGraw-Hill, 1980.
- Ports of the World 1980. John Riethmuller, ed. London: Benn Publications Limited, 1980.
- Agency for International Development. A.I.D. Economic Data Book. Washington, D.C.: AID/SER/FM/SRD, updated as of January 1975.
- \_\_\_\_\_. Annual Budget Submission, FY 1978, FY 1979. Washington, D.C.: A.I.D., 1976, 1977.
- \_\_\_\_\_. Zaire Mission Disaster Relief Plan. Kinshasa, Zaire: USAID, October 1977.
- U.S. Central Intelligence Agency. National Basic Intelligence Factbook. Washington, D.C.: CIA, January 1980.
- \_\_\_\_\_. Chiefs of State and Cabinet Members of Foreign Governments. Washington, D.C.: GPO, May 1981.
- U.S. Department of Agriculture. Economics, Statistics, and Cooperatives Service. Agricultural Situation: Africa and West Asia. Review of 1979 and Outlook for 1980. Washington, D.C.: USDA, August 1980.
- \_\_\_\_\_. Global Food Assessment, 1980. Washington, D.C.: USDA, July 1980.
- U.S. Department of Commerce. Census Bureau. World Population 1975. Washington, D.C.: GPO, 1976.
- \_\_\_\_\_. Environmental Science Services Administration. Climates of the World. Washington, D.C.: GPO, 1972.

\_\_\_\_\_. Zaire Economic Memorandum. The Zairian Economy: Current Situation and Constraints. Washington, D.C.: World Bank, October 19, 1979.

\_\_\_\_\_. Zaire: Kwango-Kwilu Technical Assistance Project. Washington, D.C.: World Bank, 1979.

Worldmark Encyclopedia of Do Not New York: Wiley, 1976.

Zaire: A Country Study. American University FILM Foreign Area Studies. The 1979.

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- 
- U.S. Department of Health, Education and Welfare. Office of International Health. Synchrisis Vol. XIV: Zaire. Washington, D.C.: HEW, 1975.
- U.S. Department of Health and Human Services. Public Health Services. Center for Disease Control. Health Information for International Travel 1980. Washington, D.C.: GPO, 1980.
- U.S. Department of State. Background Notes: Zaire. Washington, D.C.: GPO, June 1978.
- \_\_\_\_\_. Country Fact Sheets. Washington, D.C.: FADRC, 1976.
- \_\_\_\_\_. Diplomatic List. Washington, D.C.: GPO, February 1981.
- \_\_\_\_\_. Key Officers in Foreign Service Posts. Washington, D.C.: GPO, January 1981.
- \_\_\_\_\_. Treaties in Force. Washington, D.C.: GPO, January 1979.
- \_\_\_\_\_. Visa Requirements of Foreign Governments. Washington, D.C.: GPO, January 1978.
- U.S. Department of Transportation. Federal Aviation Administration. International Flight Information Manual. Washington, D.C.: FAA, April 1978.
- World Bank. Eastern Africa Regional Office. The Economy of Zaire. Volumes I, II, III, IV. Washington, D.C.: IBRD, July 23, 1975.
- \_\_\_\_\_. The Manufacturing Sector of Zaire. Washington, D.C.: IBRD, October 29, 1979.
- \_\_\_\_\_. Staff Appraisal Report. Republic of Zaire: Fourth Highway Project. Washington, D.C.: IBRD, May 3, 1979.
- \_\_\_\_\_. Staff Appraisal Report. Zaire Smallholder Maize Project. Washington, D.C.: IBRD, May 2, 1980.
- \_\_\_\_\_. Staff Appraisal Report. Zaire SNCZ Railway Project. Washington, D.C.: IBRD, April 25, 1979.
- \_\_\_\_\_. WHO/IBRD Cooperative Program. Zaire: Water Supply and Sewerage Study. Volumes I and II. Washington, D.C.: IBRD, March 29, 1974.
- \_\_\_\_\_. 1980 World Bank Atlas. Population, Per Capita Product, and Growth Rates. Washington, D.C.: IBRD, 1980.

- \_\_\_\_\_. Zaire Economic Memorandum. The Zairian Economy: Current Situation and Constraints. Washington, D.C.: World Bank, October 19, 1979.
- \_\_\_\_\_. Zaire: Kwango-Kwilu Technical Assistance Project. Washington, D.C.: World Bank, May 6, 1981.
- Worldmark Encyclopedia of Nations. 5th. ed. New York: Wiley, 1976.
- Zaire: A Country Study. Irving Kaplan, ed. Foreign Area Studies. The American University. Washington, D.C.: GPO, 1979.

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