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AGENCY FOR
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DEVELOPMENT

ZAMBIA

COUNTRY DEVELOPMENT STRATEGY STATEMENT

FY 82

BEST AVAILABLE

January 1980

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
WASHINGTON, D.C. 20523

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AID/ZAMBIA

Country Development Strategy Statement

1982 - 1986

March 1980

Prepared by AID/Zambia and REDSO/EA

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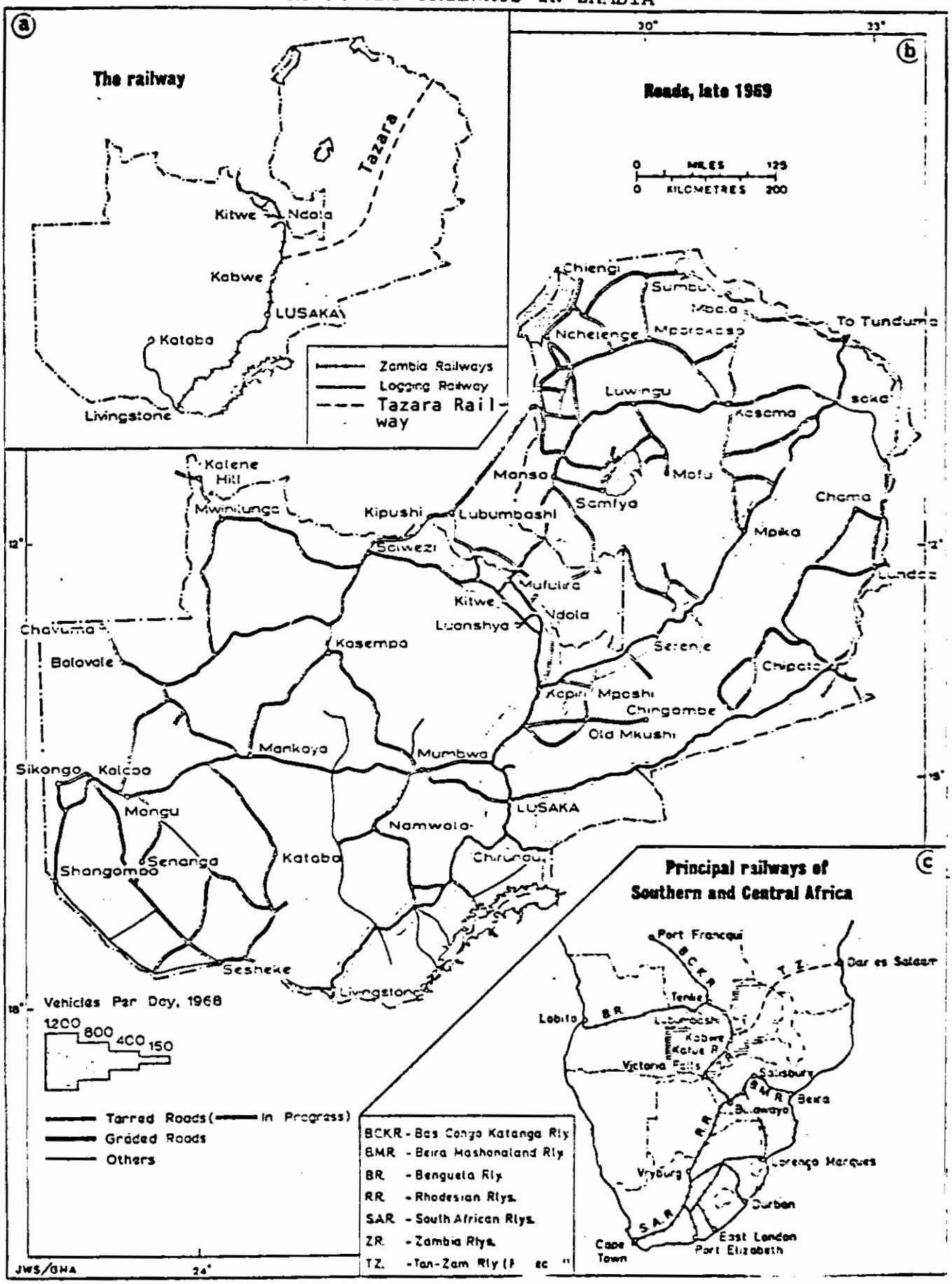
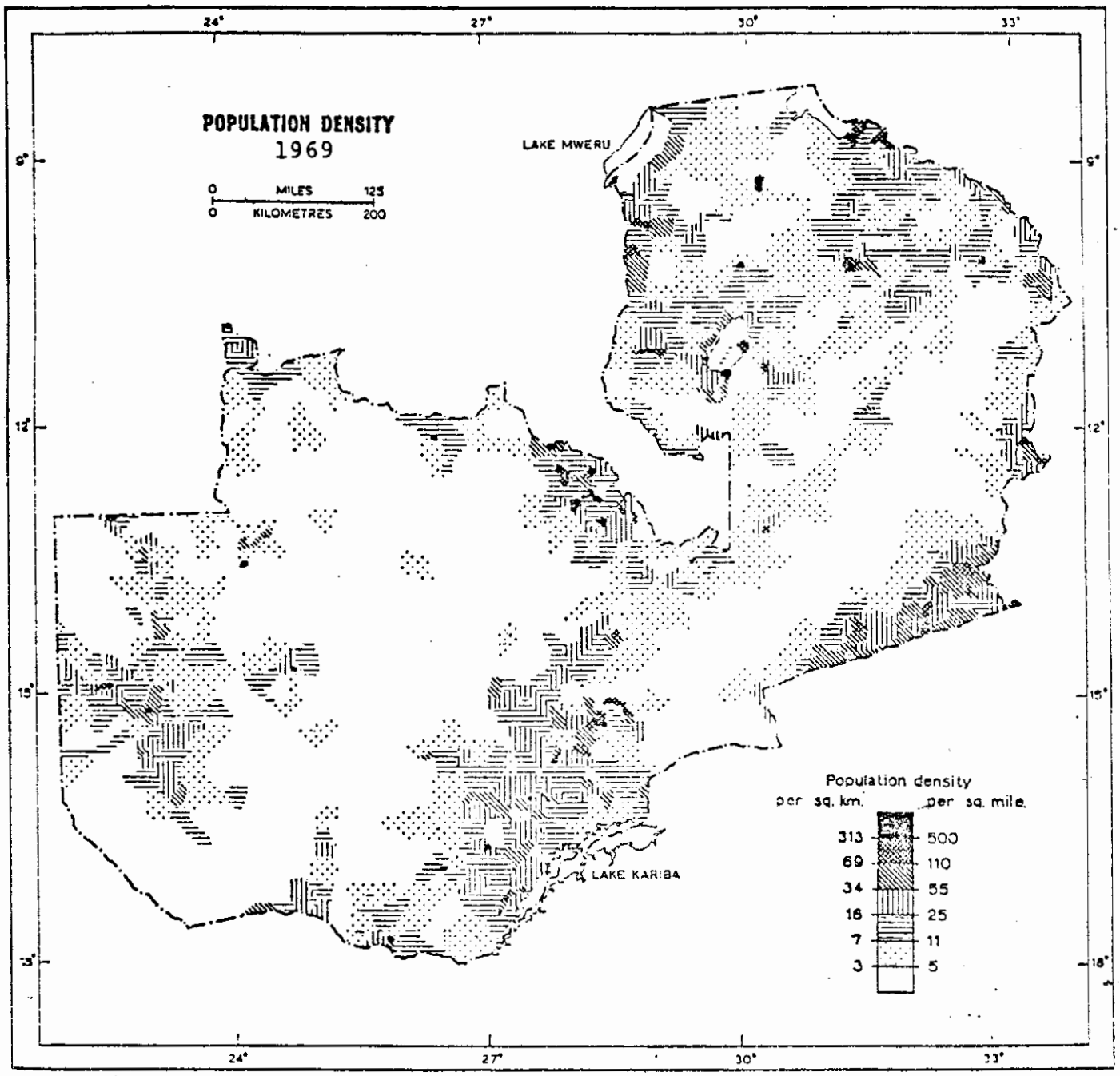
I

ROADS AND RAILWAYS IN ZAMBIA



II

POPULATION DENSITY IN ZAMBIA
1969



ACRONYMS

Line-of-rail	Area of the country serviced by the railroads.
GRZ	Government of the Republic of Zambia
K	Kwacha
Tanzam	Highway from Dar es Salaam
Tazara	The railway linking Dar es Salaam with Zambia Railways at Kapiri Mposhi
TNDP	Third National Development Plan
SNDP	Second National Development Plan
ILO	Internatinal Labor Organization
SADAP	Southern Africa Development Assistance Project
MAWD	Ministry of Agriculture and Water Development
NAMBOARD	National Agricultural Marketing Board
ADB	Agricultural Development Bank
AFC	Agricultural Finance Company
DPB	Dairy Produce Board
SIDA	Swedish International Development Agency
CIDA	Canadian International Development Agency
Exchange Rate	1K = 1.40 pre 1973 1K = 1.55 Feb. 1973 1K = 1.25 July 1976

SELECTED ECONOMIC INDICATORS 1974-1979

INDICATOR	UNIT	1974	1975	1976	1977	1978	1979
GDP Current Prices	K.mil.	1,893	1,583	1,941	2,024	2,251	2,566
GDP Constant 1970 prices. % change in constant GDP	K.mil.	1,474	1,438 -2.4	1,558 +8.3	1,489 -4.4	1,496 +0.5	1,362 -9.0
Per Capita current GDP	Kwacha	392	318	378	382	413	454
Per Capita constant GDP	Kwacha	305	289	303	281	273	241
Copper Production	1000 tons	702	640	713	660	656	595
Copper Prices (electrolytic wire bars, London)	K/Tonne	1,326	794	1,007	1,016	1,084	1,560
Gov't Recurrent Exp.	K.mil.	441	581	609	661	643	726
Gov't Capital Exp.	K.mil.	194	246	172	160	165	123
Gov't Deficit or Surplus	K.mil.	+163	-209	-190	-184	-125	- 74
Exports	K.mil.	898	516	742	708	676	1,073
Imports	K.mil.	-509	-610	-482	-539	-494	-773
Trade Balance	K.mil.	+389	-94	+260	+169	+182	+300
Overall Balance of Payments	K.mil.	- 19	-250	-136	-224	-251	+190

Source; Economic Report 1979 - National Commission for Development Planning, Lusaka

V. Executive Summary

AID assistance to Zambia to date has been balance of payments oriented and composed of commodity loans and P.L. 480 programs. The transition to a development assistance program called for a review of economic trends since Independence in 1965 and was coincident with the preparation of AID's first CDSS. Four major conclusions emerged from this review. First, exceptionally poor Zambian performance with respect to both growth and equity antedates the 1975 drop in copper prices and tends to characterize the entire post-Independence period. Second, this poor performance can be attributed in large part, and perhaps in major part, to inadequate GRZ management of a comparatively complex and centralized economy. Third, despite Zambia's comparatively high rate of urbanization, and despite the growing unemployment in urban areas, the overwhelming majority of the poor are composed of traditional farmer households in the rural areas. Fourth, as well as being a major equity goal, increasing the income and therefore the purchasing power of this poor majority, is a pre-condition of sustained economic growth.

The AID assistance program will be directed towards the achievement of two basic GRZ objectives: (1) to increase the incomes of traditional farmers; and (2) to increase total food production. The analysis which led to the conclusion that considerable improvement in GRZ performance is a sine qua non for achieving sustained growth with equity, served to identify the four principal constraints to attainment of the two selected objectives. These are: (a) an insufficiency of resources allocated to agriculture; (b) misguided policies and inadequate policy-making processes, with particular emphasis on pricing; (c) major knowledge and information gaps, particularly in the areas of agricultural research of relevance to traditional farmers, basic agricultural statistics, and traditional farmer behavior; and (d) poor design and, above all, poor execution of projects meant to benefit the traditional farmer,

particularly at the decentralized level of province, region and locality.

These four constraints are not viewed as comprehensive nor exhaustive. Insufficient resources for agriculture, inadequate agricultural planning and policy-making, data defects and deficiencies in key agricultural areas, and inadequate design and execution of agricultural projects have been identified as major underlying constraints which need to be significantly eased to assure that successful intervention at crop and area-specific levels will have continuing or long-range beneficial effects. For example, a new program of extension that introduces a technology package which is culturally acceptable to a group of traditional farmers will be short-lived if the financing for the program ceases after a given period, or if the producer prices that are fixed for the new cash crops do not provide adequate returns.

Uncertainties regarding the ability of the GRZ to assure continued funding of projects have their origins in defects and deficiencies in analysis and planning and the consequent lack of an agricultural sector strategy (especially with respect to small farmer agriculture) which has matched the resources needed for ongoing and planned projects to estimates of future availabilities.

The proposed AID strategy will attempt to eliminate these deficiencies. It will operate on the policy front and the information front, as well as the action front, and will be aimed at increasing the absorptive capacities of the GRZ. It will help introduce new policy and decision-making processes in the GRZ and, if successful, bring about more effective and efficient utilization of host-country resources, as well as donor resources. Activities on the policy and information fronts will consist primarily of technical assistance of a consultant and short-term nature, training in the U.S., Zambia and third countries. On the action front the AID strategy will be to establish a viable crop or crops specific decentralized program in one or two areas or regions

aimed both at increasing traditional farmer income and at increasing GRZ capacity for managing and replicating such programs. Initially, the action program will concentrate on research and extension, and as the needed policy changes occur and the needed information is obtained consideration will be given to other agricultural sub-sectors in specific zones. Moreover, after tabulation of the 1980 population census, and more careful review of population trends, GRZ policies, and other donor activities, consideration will be given to the possibility of providing assistance to the government in addressing the country's demographic problem.

The proposed AID strategy for Zambia is an evolutionary one. It will involve a transition from economic support programs which have not been characterized by improvement in policy, information or management to a long-range development program which is aimed at strengthening GRZ capabilities in these three basic areas.

I. Economic Situations and Trends

A. Overview

Zambia is a landlocked country whose external boundaries cut across traditional ethnic groupings and natural ecological regions. It covers an area of approximately 758,000 square kilometers and, compared to neighboring countries, is rather sparsely populated.

The estimated 1979 population was 5.6 million; in rural areas there are only about four inhabitants per square kilometer. Three cities have more than 200,000 residents; Lusaka, the largest, has 600,000 inhabitants. The population is growing at about three percent per year and should reach ten million by the turn of the century. Industrialization, the creation of new job opportunities in the copper mines, and possibly the expansion of education have contributed to a high rate of rural-urban migration during the past 20 years, causing a shortage of males in some rural areas and densely populated squatter settlements in several major cities.

The Zambian economy is composed of a comparatively large urban and peri-urban sector, located mainly on the line-of-rail and dominated by mining, and a rural agricultural sector which has about 60% of the population. Both the rural and the urban sector economies are markedly dualistic. The urban economy is split between a fairly modern and capital-intensive formal sector, and an informal sector characterized by relatively low skill levels and activities which are comparatively labor intensive. Sharp wage inequalities also distinguish these sectors. The average wage in the informal sector is estimated to be less than 40% of the average modern sector wage. Formal sector activities did not expand during the 1970s when there was a high rate of rural-to-urban migration and, as a result, there was considerable growth of small-scale service and entrepreneurial activities in the informal sector.

To a certain extent, the rural agricultural economy retains the same dualistic structure it had at independence. On the one hand, there are about 400 comparatively large modern commercial farms located on the line-of-rail and other major arteries. Around 100 of these commercial farms, which were all originally in the hands of white expatriates, are now owned by African Zambians. Commercial farms produce 20-30% of the marketed crop production, and over 40% of the marketed maize crop.

Statistics on the remainder of the agricultural rural economy are highly unreliable. There are reportedly around 600,000 traditional subsistence farmers, widely dispersed on land of varying quality. There is also a rapidly growing

group (estimates range from 60,000 to 120,000) of Zambian emergent farmers[1/] who are providing a significant and increasing percentage of Zambia's marketed production. Emergent and subsistence farmers allegedly account for 85% of all cereals production and 90% of domestic cattle slaughtered.

Income disparities between the rural and urban sectors and between the richest and the poorest groups within the two sectors remain great. According to a 1972/73 survey, average annual household income in urban areas was over four times that in rural areas; in addition, more than 70% of rural households had incomes of less than K360 p.a. as compared to only 14% of households in urban areas. Per capita GDP in 1979 prices was $568.

B. Past and Prospective Macroeconomic Performance

Different kinds of problems have affected the economy of Zambia over the past several years. Traditionally dependent on copper for government revenues and for foreign exchange, Zambia saw world copper prices plummet in 1975 from K1326 per ton to K794. They remained low through 1978 with a recovery to K1560 in 1979. The mining sector's contribution to GDP fell from 33% in 1974 to 12% in 1978.

As a result of the fall in the copper revenues, shortages of foreign exchange and low levels of domestic investment, GDP has been declining since 1976. Real GDP fell 4.4. between 1976 and 1977, remained stagnant the following year and fell by an estimated 9% in 1979. Most importantly, copper production fell to 595,000 tons, down 9.3%. This decline in copper production resulted from insufficient foreign exchange to purchase needed machinery and spare parts, as well as from an exodus of skilled expatriate miners. Marketed maize production fell from 7.3 million bags[2/] to 3.7 million, mainly as a result of drought conditions. There was also a significant drop in the construction sector, due to restrictions on bank credit and to reduced importation of construction equipment and spare parts.

Zambia's terms of trade have also declined. Since 1974, due to escalation in the prices of Zambian imports, the purchasing power of Zambian exports has been cut in half.

Unfortunately, the poor economic performance of 1976-1979 is, in part, the continuation of a fairly long trend. Real income has grown at a lower rate than the population growth rate; and real per capita income was less in 1979 than it was in 1965. Since Zambia had a highly favorable balance of payments situation during the first ten years of this 14-year period, the generally low growth rates and the long-term drop in real per capita income indicate defects which are partly

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1/ Farmers who have less than 20 hectares and sell over 50% of their production.

2/ One bag equals 90 kilos.

the result of uninformed policies and poorly allocated resources.

Zambia has depended almost entirely on copper exports to earn foreign exchange. From independence to the mid-70's the high level of copper production and generally favorable world market prices provided Zambia with enough foreign exchange to expand in various non-agricultural sectors, such as manufacturing (including luxury goods), infrastructure and transport. The expansion, in turn established a need for a high level of imports. With the fall in copper prices of 1975 Zambia experienced its first negative trade balance and its first accumulation of external payment arrears. This shortage of foreign exchange led to an austerity program which severely restricted needed imports. With the recovery of copper prices in 1979, a surplus on the balance of payment accrued for the first time since 1975. This significant achievement with respect to the balance of payments was achieved through continued restrictions on imports. Many input requirements of existing industries could not be met and few additional economic activities could be started. In spite of improvements in copper prices and foreign exchange earnings, the level of economic activity remained depressed and even declined further in 1979.

The amount of domestic government revenue has also been adversely affected by the fall in copper prices. In 1974 mineral revenues accounted for over 50% of government revenues; in 1979 their contribution was practically zero. However, the GRZ had made considerable progress in expanding its tax base. Income taxes and sales and excise taxes have taken over the role played by copper as the main source of government finance, increasing from 25% and 33% of total revenue in 1976 to an estimated 37% and 49% in 1979. Government expenditures as a percentage of GDP have fallen from a high point of 50% in 1975 to 34% in 1978 and 1979, but even at that level they are one of the indicators of the deep involvement of the government in the economy.

In 1978, the Government accepted a stabilization program from the IMF which included balance of payments support of K325 million. The Government agreed to adopt a tight monetary and credit control policy for the two year period 1978-79. The budgetary deficits which had provided the main expansionary impulse earlier were reduced and aggregate money supply declined in 1978. Restrictions on government spending affected both the capital and recurrent budgets with the capital budget reaching an all time low in 1979. In addition to restrictions on government spending, ceilings were placed on domestic credit creation as well. The monetary expansion of the 1970s was accompanied by inflation which continued to rise in 1979, although at a slower rate. The rate of inflation in 1979 may be down to 10-12%.

While the IMF stabilization program has been largely successful, the Zambia economy has a long way to go before it clears its balance of payments arrears. Arrears were K360 million as of December 1979, down from over K500 million in January 1979. Current reports indicate that the government is strongly committed to the stabilization program and that it may renew the IMF standby arrangement when it expires in April 1980. The government hopes to clear its arrears by 1982.

Continued implementation of the IMF stabilization program may hold down growth in the short-run, and present GRZ plans may not be taking this sufficiently into acccount. According to the TNDP, during 1979-83 the GDP growth rate is to increase steadily, reach 6% p.a. in the final year of the plan, and average 4.8% for the entire period. For manufacturing and agriculture, the rates for the five-year period are to be 8% and 5% respectively. Since real domestic product grew at 2.0% p.a. and 2.8% p.a., manufacturing at 11.2% and 4.8% p.a., and agriculture at 1.7% and 3.6% p.a. for the periods 1965-70 and 1970-76, the TNDP annual growth targets specified above would appear to be over-optimistic.

C. The Parastatals

The Zambian economy has been affected by President Kaunda's philosophy of Humanism. Often described as broad based African Socialism, a simple list of the essential characteristics of humanism would include magnanimity, sympathy, goodwill, consideration for the underprivileged, kindness and love, social justice and intense sense of social purpose. In economic terms this led to a mixed socialist-capitalist system which seeks to achieve a more equitable distribution of economic power and improvement in the social and economic welfare of individual citizens.

Zambia inherited a capitalistic economy from the British at Independence. The economic structure has been changed over the years to a mixed economy with heavy emphasis on government participation through parastatal organizations. These parastatals were created in large part through nationalization of existing private firms. Over one-half of the GDP originates in the parastatals and they are predominant in all productive sectors except construction and agriculture. Parastatals contribute 37% of formal sector employment while the government itself accounts for 36%. The private sector accounts for only 27% of total formal sector employment.

The government stated that 1978/1979 was a disasterous year for the parastatals. Losses were explained in terms of uneconomic prices, scarcity of

foreign exchange for the importation of needed equipment and materials, and transportation problems. The main profit makers were companies whose prices were not government controlled while the biggest losers were those companies which produced essential commodities and/or which had not been allowed to charge economic prices. The government has taken some steps to improve the performance of the parastatals, and it has introduced corporate planning during 1979/80. There have been changes in accounting procedures and cost reduction measures have been introduced. It should be noted that the inefficiencies of the parastatals contribute significantly to inequities in the distribution of income: they elevate the prices of manufactured goods and fail to provide adequate amounts of tax revenues needed for investment in productive activities. Though the parastatals are the predominant corporate organizations in Zambia, a recent report indicates that they provide only 20% of company tax revenues.

To increase employment and improve Zambia's balance of payment position there will have to be basic change in policies which have favored the present parastatal structure. Many of the distortions in the economy are the result of government over-reliance on earnings from copper exports. The easy availability of foreign exchange in the past led to the development of a manufacturing sector heavily dependent upon imports and highly capital-intensive. Moreover, the comparatively low duties on intermediate and capital goods continue to afford high protection to investments with high import content.

The depreciation allowances also provide incentives for using more capital-intensive methods and government regulations have led to a distinct bias in industrial development against labor intensive projects in spite of widespread urban unemployment. Under the current structure, the manufacturing sector requires a capital outlay of about K7,900 per job created. Due to the rapid wage increases and high capital costs, Zambia has become a high cost producer of manufactured goods.

The private sector is more responsive to employment needs than the public sector. It is characterized by firms which are more labor intensive, have comparatively smaller economies of scale, and are more efficient. However, both the parastatal and private sectors are adversely affected by GRZ control over pricing decision in a wide area of the economy. The authorities set many of the producer prices of agricultural commodities (though some are floor prices) and their approval, either prior or expost, is needed for changes in the price of all "essential" consumer goods, public utilities

as well as most other commodities produced by parastatal enterprises.

D. Mining

The mining sector is dominated by copper although cobalt is becoming increasingly important. Zambia is the world's second largest producer of cobalt and as such benefitted significantly by the increase in world prices from $6.40 per pound in December 1977 to $25 in February 1979. In 1978 K31 million of cobalt was exported, up 100% from the previous year, and accounting for 5% of Zambia's exports. World supply is significantly less than demand and Zambia can look forward to continued high prices.

Key provisions of the IMF standby agreement included assistance to the two state mining companies in order to make them profitable. After losses of K114 million in 1977 the mines were able to show a profit in 1979. This was achieved through a 10% devaluation of the Kwacha in March 1978, reductions in the labor force, and other cost saving means. The rebound in copper prices has helped the industry but transportation problems resulted in an accumulation of large stocks of refined copper between the minehead and African ports.

The prospects for the copper mining industry's output in the future lie in the ability of the country to resolve the problems of loss of technical knowhow, limited foreign exchange availability, and inadequate transportation routes for export. The economy will remain dependent on the mining industry for foreign exchange but production next year, with the exception of cobalt, is not expected to increase. World prices of copper and cobalt are not expected to change dramatically and as a result the rate of increase in export earnings record in 1979 will probably not be repeated in 1980.

E. Manufacturing

As has been pointed out, the manufacturing sector is dominated by the parastatals. While the sector has been growing recently, its 1978 production levels are still inferior to those of 1974. In general, the expansion of the manufacturing sector continued to be affected adversely by the scarcity of foreign exchange, transportation problems and lack of imported equipment, parts and raw materials. There have been considerable delays in payments for imports. Commercial suppliers to Zambia have been waiting 18 months or longer for remittances in hard currency for goods already delivered to Zambia. The accumulation of payments arrears has increased the cost of imports which have been priced higher and have carried additional interest charges. The cost

positions of many companies were also negatively affected by the March, 1978 devaluation as well as by the tight credit policy of the government. All these problems related to importation of needed inputs will impact on future progress as well since it will be difficult to increase capacity utilization without increased imports of essential input materials. Of course, the foreign assistance commodity loans of recent years have provided badly-needed relief and future commodity loans could help ease future import constraints. Such loans are emergency measures, however, and do not rectify structural imbalances; instead they serve to increase Zambia's debt-servicing burden.

F. Energy

The two main energy resources in Zambia are hydrolectricity and coal which have in recent years satisfied over 70% of total energy needs. Zambia has been a net exporter of hydroelectric power since 1974; in 1979 hydroelectric exports were 39% higher than 1978 exports.

The remaining 30% of Zambia's energy needs is supplied by imported petroleum which is becoming increasingly expensive, and presently accounts for 25% of all foreign exchange expenditures. Zambia's consumption of petroleum has decreased 20% since 1976 due to savings made in fuel used for transport, declines in copper production and lower consumption by industrial users. The high price of imported oil will obviously have negative impacts on Zambian economic growth.

Charcoal and firewood are used for cooking and heating by a large portion of Zambians and their contribution to energy supplies is significant. Due to the low population density it is difficult to access the extent of environmental damage caused by firewood gathering.

G. Regional Tranportation Problems

Landlocked Zambia's transportation problems have aggravated its economic problems for several years. The closure of the border with Rhodesia in 1973 resulted in increased transportation costs and was followed by a switch to less economic sources of supply for everything from wheat to lubricating oils. The transportation problems were, and continue to be, compounded by the closure and uncertain future of the Benguela railroad through Angola. To a lesser but nonetheless significant degree, the closure of the Kenya/Tanzania border in 1977 adversely affected imported imports from Kenya through Tanzania. Thus for over two years Zambia depended almost entirely on the port of Dar es Salaam for both imports and mineral exports. Access to Dar has been via the

Tazara Railway and the Tanzam Highway.

A combination of port congestion at Dar, deficiencies on both Tazara and Zambia Railways, and lack of vehicle capacity led to a transport crisis that climaxed in mid-1978. Zambian copper exports were being delayed to the point where over 100,000 metric tons (representing almost 15% of annual output) was backlogged at the mines, along the lines of rail, or at Dar. Concurrently, massive amounts of fertilizer for the 1978 planting season were being delayed for lack of offloading or transport facilities. A disaster was in the making and to avoid it, Zambia took the politically risky but economically sensible step of opening the "Southern Rail Route" through Rhodesia to South African and Mozambican ports. While the route has contributed to regularizing Zambia's copper exports, reducing the massive stockpiles, and improving the flow of imports, there is still a backlog of cargo at Dar and the Tazara route is still needed. However, these recent developments provide the basis for further improvement.

While the Southern Route remains open and South African assistance in the form of rail wagons and locomotives continues, the pressure on Tazara and Dar will lessen and provide some breathing space. In the meantime, a protocol covering Tazara improvements has been signed between Zambia, Tanzania and China. Much needed equipment repair, and improvement in technical support, management, and traffic control should speed up the dismal turnaround now common on the line.

Attempts to reopen the Benguela Railway have made little progress. The all-weather rail/road linking Zambia to Mozambican ports via Malawi is completed; however, use of this route is complicated by limited rail and port handling capacity.

The most recent transport problem has been the blowing up of eleven road and rail bridges within Zambia by Rhodesian security forces in November 1979. Substantial progress has been made in restoring at least partial traffic but essential imports of maize have been seriously constrained. The major outstanding construction as of May 1980 will be the Chambeshi road and rail bridge on the Tazara route.

Thus, although capacity is expected to increase by the end of 1980, the marginality of transport options represents a critical constraint on all sectors of the Zambian economy.

H. Agriculture

Agriculture contribution to Zambia's economy has increased since Independence. It was 13.7% of GDP in 1965 and has risen to about 18% in 1978. The structured trend in agriculture has been toward satisfying the food requirements of the urban sector at artifically low prices, and at the expense of declining living standards in the rural areas, especially those off the line-of-rail. The primary cause for this rural regression has been the various government pricing policies whose net effect has been to increase income disparities and sub-optimize production with respect to its composition, location, and level. The marketed production of maize as a proportion of total marketed crops has increased from 61% in 1969 to over 76% in 1976, reflecting the relative profitability of growing this crop versus others. Other crops, including export crops (groundnuts and various tobaccos) have declined in total output. Uniform national pricing for many essential commodities such as soap, cooking oil, roller meal, etc., has reduced the presence of these commodities in the rural areas because shopkeepers can not afford to buy and sell at the controlled prices and cover the transportation costs. This artificially reduced demand for rural transport services has led the private transport sector to shift to larger vehicles and to increase the concentration of its services to the line-of-rail region.

A reversal of these trends will require significant changes in government policies and operations. The general lack of substantiated information concerning the rural economy (especially traditional farmers), problems of government coordination among the ministries and parastatals, and limited planning and analysis capacity in the GRZ planning/policy making units, suggest that any significant improvements in this sector will be some time in taking place.

I. Employment

Although reliable statistics are not available, it is clear that unemployment and underemployment are two of Zambia's basic problems. As has been shown previously, the urban formal sector, by its very structure, cannot be responsive to needs of employment creation. Formal sector employment has remained stagnant during the 1970s employing 365,000 in 1979. Wages in this sector have remained high at over K1,000 per year in 1974 and labor unions are strong in the urban formal sector helping to keep the wages high. As with any union, their focus

is on higher wages for their members first and increased employment second. The union recently won a K156 per annum increase in salary at the same time unemployment has been rising and GDP falling.

The urban population is now growing at a rate of about 7% per annum, a decline from a prior level of about 9%, while the rural population has been growing at a rate of about 1%. The urban informal sector has been providing employment to large portions of these new urban job seekers. As compared with the formal sector, the infomal sector is small-scale, labor-intensive, low wage and relatively less skill intensive. Its activities are largely confined to low-income and squatter housing areas where it produces a variety of goods and services purchased by low income families, but it also has connections with formal sector firms. It is estimated that almost 30% of the labor force in the sector are engaged in various types of manufacturing, construction and repairs, the remainder in retailing and other forms of services. World Bank estimates for 1974 suggest employment in the informal sector in 1974 was between 150-175 thousand. It is clear that income per worker in the informal sector is quite low, typically 40% or less of what formal sector employees receive (e.g., while Zambian wages in the urban formal sector averaged K95/mo. in 1974, informal wages were K40/mo. and below).

There are no reliable estimates of how much employment in the informal sector will expand in the short-run and medium-term under present policies, although some increase in employment is inevitable. The demand for informal sector services will expand as the population expands. Employment in this sector could increase markedly if the government were to relax its many rules constraining the sector. Productivity could increase if the government were to provide more basic socio-economic services, suitable workshop services and credit, and if the government significantly increased its purchases of informal sector products. This policy would require a liberalization of present regulations under which government purchases are highly centralized and specifications standardized, and which favor products that are manufactured on a large-scale and that utilize more imported components.

Women are particularly disadvantaged with regard to employment opportunities. Female wage labor participation rates have remained quite low when compared to male labor force participation rates. In 1969, 83% of the male population fifteen years and over was engaged in the wage labor force compared to 30.5% of the female

population in the same age bracket. Data indicated that women are most active wage labor force between 15 and 19, with low rates during the childbearing years, followed by a gradual increase toward the end of the reproductive period (49 years). By 1984, it is projected that only 32.1% of the female working age population will be in the wage labor force. With the high dependency ratio, i.e., 52% of the national population under the age of 14, and with over 25% of all households headed by women as of 1974, it is apparent that there is a need for increasing women's participation in the wage labor force.

Some progress has been made, formal sector employment of women increased 11.2% between mid-1975 and mid-1977 at the same time overall formal sector employment was declining. However, this 11.2% gain only amounted to 2,780 jobs. About half of all women engaged in the formal sector found employment in less remunerative jobs - social, community and personal services (excluding domestic services) activities.

The Third National Development Plan candidly acknowledges the magnitude of the unemployment problem. The Plan estimates that wage employment opportunities likely to be generated during the Plan will absorb only about one-forth of the estimated increase in the labor force during the period with no contribution made to absorbing the existing backlog of unemployed. The practical implication of this is that the country will have to rely heavily on the opportunities of self employment likely to be generated in both the rural and urban areas. To quote the Plan, "the bulk of the unemployed and underemployed labor force will have to be absorbed in increasing agricultural production and in settling people permanently on the land ... The problem, therefore is how to contain the people in rural areas and induce them to take to agriculture and other related activities as their permanent occupation." Thus, the fundamental objective of the government employment policy is to assure continuation of the trend in the reduction of the rural-to-urban migration growth rate.

J. Rural-to-Urban Migration

As elsewhere in Africa, the lure of urban life and wages has drawn many of the most active men and women in the 15-30 age group to try their luck in the city--despite the fact the significant numbers of them fail to find jobs at least in the short term. In fact, migration flows over the 1969-74 period were not as large as over the period 1963-69. The decline is relatively small, 8.9% to 6.8%, levelling off and bringing urban growth rates down in the early seventies, and indicating a decline in the absorptive power of the

mines and main urban areas. (The highest rural-to-urban rates were found in the smaller cities and towns). The rate was still high enough to continue to restrain rural population growth, which was 1% between 1969-1974. (There is a census planned for 1980 which will provide more recent information).

The consequences of rapid urbanization can be most dramatically seen in Lusaka and Kabwe where "squatter" populations (mainly of recent migrants) amount to over 40% of the population of those cities. The GRZ has made efforts in two directions, first, with provision of a site-and-service plots with government building loans and secondly, provision of services to existing squatter settlements (aided by a World Bank Loan). However, even with these efforts, the growth of unserviced, peri-urban settlements continues to present an alarming social problem. In 1980, it is estimated that one million people now reside in "squatter" areas, and only a small percentage are reached by most social services. Unemployment and underemployment are prevalent conditions.

The predominant role played by mineral exploitation in the country's economy has resulted in a spatially lopsided pattern of migration. Most of the economic and social development is concentrated in a narrow corridor along the line-of-rail, which passes through Southern, Central and Copperbelt provinces, while the non-line-of-rail areas are lagging behind in development. In 1978 it was estimated that 95 per cent of the total urban population was in the line-of-rail provinces, with 56.5 per cent in the Copperbelt. In these line-of-rail provinces, 98 percent of the industrial products are manufactured; 84 per cent of the country's wage and salary earners work, drawing 91 per cent of the country's wages and salaries. The major portion of the agricultural production takes place in the central region, where 30 per cent of the rural population live, producing 62 per cent of the total agricultural output (including subsistence output). Most of the commercial farms are located on the line-of-rail. This has given rise to disparities in the level of living between the line-of-rail corridor and the non-line-of-rail areas.

The non-line-of-rail areas are largely represented in the other five provinces. In these the bulk of the population are traditional farmers involved in a number of different types of subsistence activities, using primarily hand methods of cultivation. Only 5% of the country's 200,000 draught animals, for example are located in these 5 provinces. Only 20% of the calories consumed come from marketed produce. The more promising development areas are in the central western area where livestock, fish and mixed

farming based on flood plain cultivation is practiced, and in the eastern plateau area, where the soil fertility is similar to the central and southern line-of-rail plateau soils. In three provinces, the soil is so poor that cassava is the subsistence crop, with millet and sorghum produced in the dryer areas. Fish is an important staple in these areas of poor soil (mostly in the north); one-half of all animal protein in-country comes from fish.

The sharp difference in access to productive activities and social services between the three "line-of-rail" provinces and the other provinces is clearly demonstrated in Table 1. The sharp gaps between well-to-do and poverty stricken households in Zambia, then, have a spatial, as well as urban/rural and high income/low income dimension. It should be mentioned in conclusion, however, that the government clearly recognizes this gap, as it does the others, and in fact an increasingly large percentage of government expenditures has been allocated to the five rural provinces in recent years.

TABLE 1

Provinces	Population 1974 ('000)	Average annual population growth rate 1969-74 - %	% Rural of total provincial population 1978	Formal employment 1974 as % of National Total	Calories from Marketed Foods as % of Total Demand for calories, 1974	Population within 7.5 Km of all-weather road % of total provincial population	% Population living within 15 km of basic health facility	Grade 4-5 progression rate 1975-76 (gov.+aided schools based on No. of classes)	No of participants in Rural Reconstruction Centers 1977	Males/1000 Females
Central + Lusaka	920	5.2	38	30.9	76.6	57.4	63.2	90+	1031	1040
Copperbelt	1046	5.1	7	42.8	94.9	93.5	90.6	97.7	1058	1060
Southern	540	1.7	81	9.9	40.7	23.6	86.5	81.2	1138	966
Eastern	568	2.2	97	3.6	15.4	25.5	88.2	60.3	674	850
Luapula	321	-0.9	96	2.0	17.7	15.9	79.5	63.1	585	866
Northern	580	1.3	93	6.3	18.2	26.8	59.8	63	1164	895
North-Western	256	2.0	97	1.6	14.5	35.8	62	64.7	500	895
Western	463	2.5	97	3.0	20.2	11.0	64.2	70.1	880	803
Total	4695	3.0	61	100.0	50.9	43.0	75.6	77.4	7030	947

Sources: Republic of Zambia 1979, third National Development Plan 1979-83

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II. Examination of the Poor

A. Levels and Distribution of Income

Zambia is relatively unusual in Africa because of its high degree of urbanization (about 40%), its high average 1979 GDP per capita income ($568) and the low extent to which agricultural production contributes to the national economy (approximately 18% of total GDP in 1978). Its similarities to many other African nations include widespread and probably increasing poverty among a large segment of its population, a high, steadily increasing population growth rate (about 3% in 1978), and despite a similar origin, a variety of different tribal groups speaking perhaps as many as 70 different Bantu languages.

The ILO study of Basic Human Needs published in 1977 estimates that over half the households in the country were below the basic minimum income level in 1974; this level (derived by the ILO Team) was a yearly per capita income of 105K, or household income of K480. Similarly, the ILO study finds one-half the population falling below the bare minimum nutrition level (especially caloric intake) established for Zambia. Other statistics further elaborate the poverty of much of the Zambia population. Life expectancy is 42-45 years; infant mortality by age one is 127 per thousand; housing falls below the minimum standard set for 70% of the total households; potable water is available to only 36% of all households; sanitation levels are inadequate in 47% of all households.

Table 1 shows that the extent to which distribution of wealth in the form of incomes derived from cash or other sources (e.g., subsistence crops) is highly skewed in urban, semi-urban and rural areas.

TABLE 2: Distribution of Household Income and Some Indicators of Consumption Patterns in Urban, Semi-Urban and Rural Areas, Zambia - 1972-73

% of Household	Urban Income Share	Semi-Urban Income Share	Rural Income Share	Total Zambia Income Share
0 - 20	4.0	5.2	6.7	3.7
21 - 40	7.7	9.1	10.8	6.3
41 - 60	12.8	13.5	14.5	9.5
61 - 80	17.5	19.2	20.7	18.5
81 - 90	15.0	17.3	12.3	15.5
91 - 95	17.5	14.0	12.5	14.2
96 - 100	25.0	21.7	22.5	32.3
	100.0	100.0	100.0	100.0

Source: Narrowing the Gaps, ILO, Addis Ababa, January, 1977

In percentage terms, the top 10 percent in urban areas claimed over 42% of the total urban income while the bottom 60% received a mere 25%. In the rural areas, the disparity is not so great, but is still extreme, even within the African context. The top 10% of the rural households shared 35% of the rural income, and the bottom 60% claimed 32%.

Just as significant as the differences in income within the urban, semi-urban and rural areas, are the differences between these areas. Table 2 displays these differences in terms of average monthly household income in 1972-73, along with the average household size and the population.

TABLE 3: Average Income and Total Population in Urban, Semi-Urban and Rural Areas - (1972-73)

	Average monthly household income	Average Monthly household expenditure	Average Household size	Population (000's)
Urban	K 120	73	4.9	1,436
Semi-Urban	K 99	66	5.9	244
Rural	K 29	28	4.2	2,742

Source: ILO

Of course, average incomes tell only part of the story. A more complete picture of Zambia's level of poverty and one that shows that it is concentrated in the rural areas is provided by Table 3.

TABLE 4: Percentage of Population Divided by Monthly Income (in cash or in kind) Classes Living in Urban and Rural Areas, 1972-1973

Monthly Income (Kwacha's)

	0-30	30-90	90-150	150+	Total
Rural	47%	13%	4%	1%	65%
Urban	5%	9%	14%	7%	35%
All Zambia	52%	22%	18%	8%	100%

Source: ILO

As can be seen, 52% of the Zambian households in 1972-73 had a monthly income of 0-30 Kwachas, and 9 out of 10 of these households were rural. Although not wholly reliable, other data presented in the ILO study suggests that households with a monthly income of 0-15 Kwacha--the poorest of the poor--

constituted about one-third of the rural households with an income of 0-30 Kwacha per month.

An additional aspect of the economy of Zambia which has ominous implications for trends related to the nature and distribution of poverty is that the pattern of inequality of income has apparently been increasing over time. Table 4 compares estimates of distribution of income for 1959 and the ILO mission computations for Zambia based on the 1972-73 study.

TABLE 5: Distribution of Income for Zambia 1959 and 1972-73

Percentage of households	Zambia 1959 (Baldwin)		Zambia 1972-73 (Mission computations)	
0-20	6.3		3.7	
21-40	9.7	27.2	6.3	19.5
41-60	11.2		9.5	
61-80	16.1		18.5	
81-90	11.5	27.6	15.5	34.0
91-95	7.7		14.2	
96-100	37.5	45.2	32.3	46.5

Given the current relatively high population growth rate, the very slow growth in the traditional agricultural sector, the relatively limited potential for increased formal employment in mining and related areas, and the lack of alternative options for employment, it is highly likely that a widening of the gap between the rich and the poor in Zambia has been a continuing trend. However, this cannot be definitely affirmed due to the lack of appropriate data for the years subsequent to the ILO study. Although it will probably confront serious financial and transportation difficulties, the 1980 census should establish a source of information which GRZ can use to carry out sample household surveys focused on poverty and unemployment on a more frequent and regular basis.

B. Rural Households

There are three kinds of rural households or farmers in Zambia: commercial farmers, emergent farmers, and traditional farmers. The commercial farmers have been predominately white farmers who numbered 1,000 at Independence. The number of commercial farmers is currently down to 400. Of this remaining group, perhaps a ~~third~~ fourth are African Zambians. This group is in the top 5% or so of all income earners in the country.

The emergent farmers have been defined as those who farm less than 20 hectares and sell over 50% of what they produce. They can be viewed as comparatively successful cash crop farmers. They tend to use improved farm technology (ploughs and oxen, fertilizer, insecticides, hybrid seeds) and they have received more government support than the traditional farmers. The emergent farmers have been gradually developing the high potential land on the East, Southern and Central Plateaus. Much of this land has been made available by the departure of the expatriate commercial farmers who began leaving Zambia after Independence. Estimates of the size of the group of emergent farmers vary from 60,000 to 120,000.

It is estimated that there are approximately 600,000 traditional, basically subsistence, farmers--those using a farm technology based on the hoe or axe (for slash and burn cultivation) relying on traditional institutions (not the Ministry of Agriculture) and consuming most of the produce grown, fish caught, livestock raised, etc. An estimated 25% of the traditional farmer household are headed by women; and household size averaged 4.4 persons in 1973. In 1974, subsistence farmers farmed more than 75% of all cropland with hand methods. Of the traditional farmers, about three-fourths farmed less than 1.8 hectares and nearly half, less than one hectare each. Only 40% of these farms sold or bartered any part of their produce in the early 1970s, and less than half (300,000) were believed to have produced any surplus.

Traditional farm families have very poor living conditions, as seen from standards of housing, water and sanitation. According to the 1969 Census, inadequate housing was widespread in the rural areas: 80% of all homes lacked good thatched roofs; 64% lacked adequate sun-dried brick or better quality walls. Regarding adequate water supplies, 13% of rural households in 1974 used tap water; 43% were able to use water from a borehole or well, 38% had to seek water from a river or stream, and 6% found water from some other presumably inadequate source. Sanitation levels are also an indication of low standard of living: 38% of rural households in 1974 had a pit latrine or a more elaborate sewage disposal system; 62% did not have an adequate system .

The loss of population by the rural areas has had severe effects. Village economies have been deprived of their most able-bodied manpower. A 1975 study in seven Zambian provinces showed that the sex ratio of working age adults in rural households was closely related to the general economic conditions of those households. Outmigration of working age men from rural areas has given

rise to a very uneven distribution of wealth among rural households. Approximately 20% of the poorest households did not have adult males. Unlike most developing countries the average size of the rural household is lower than in urban areas, due at least in part to the outmigration.

C. Urban Poor

According to 1972 data there were an estimated 245,000 households in urban low cost and squatter areas and 50,000 families living in high cost urban areas. Average urban household size was estimated to be 4.7--slightly larger than in rural areas.

The rural-to-urban migration flow and the inadequate supply of urban housing have raised the level of congestion of peri-urban settlements, and the standard of living among the poorer households in the urban areas may be declining. Average occupancy per dwelling unit, for example, is believed to have risen in recent years from 4.7 to 6-8 persons per dwelling; there is a shortfall of over 225,000 rooms in urban areas, 18.5% of urban households lacked adequate access to potable water in 1974, and similarly 11% lacked an adequate sewage disposal system. As a result of the increased stress on the urban areas caused by steady rural-urban migration, the quality of urban life and the opportunities for adequate employment are apparently both diminishing. Unquestionably, unemployment is the biggest problem of the urban poor.

III. Agriculture

A. Resources

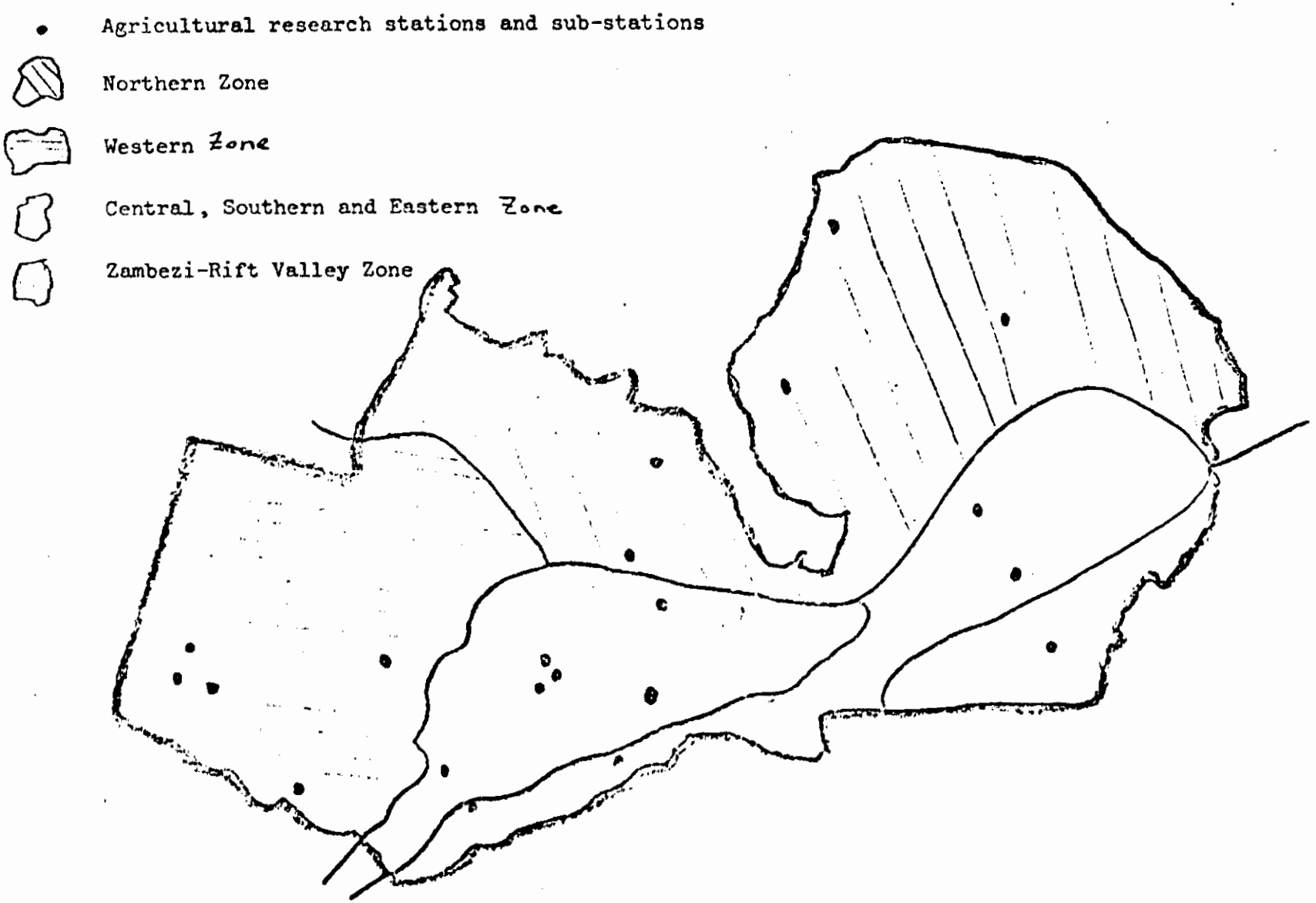
Zambia has a total land area of about 74.3 million hectares, of which 24.5 million hectares are presently suited for agriculture. The other two-thirds are tsetse fly infested, in forests or game preserves, under water, rocky, or otherwise unsuited for agriculture unless substantial investments take place. Of the area suited for agriculture, 12 million hectares are intermittently cropped and 2.1 million hectares are harvested annually. Examining Zambia's four ecological regions helps explain why only 8.6% of the land presently suited for agriculture is continuously cultivated.

The Northern region, comprising major parts of the northern provinces, is characterized by high rainfall (for Zambia 1000-1500 mm), low fertility, leached sandveldt soils, and limited sunshine (see figure 1). Only one percent of the region is estimated to have good soils. This has resulted in various systems of shifting cultivation utilizing the hoe as the main implement. The tsetse fly covers a majority of the area and reduces the potential for cattle production. An assessment of land resources during 1968-72 concluded that this region appears more favorable for the production of timber and perennial tree crops than the types of annual crops grown elsewhere in Zambia. However, there is a potential for irrigated agriculture in selected areas.

The Western region, consisting of the Western Province and a small part of the Northwest Province, has low rainfall (600-1000 mm), a wide range of temperatures, and is exposed to the danger of frost in the cool season. A livestock economy has developed because of the lack of tsetse and the vast areas of infertile Kalahari sands which are suitable for grazing. Any permanent agriculture has been confined to the edges of the plains and is dependent upon the seasonal movements of the water table.

The Central, Southern and Eastern Provinces are characterized by woodland and fertile red loams. As the ecologically most favored area with close proximity to the urban market, it has developed a type of peri-urban agriculture emphasizing horticulture, pigs, poultry, dairying and forestry. It also has significant potential for expanding the continuously cultivated

FIGURE 1. ZAMBIA'S FOUR ECOLOGICAL ZONES AND AGRICULTURAL RESEARCH STATIONS AND SUB-STATIONS, 1979



area by irrigation. The bulks of Zambia's food is grown in this zone (see Annex 1).

The last major agricultural region, formed by the Luangwa-Zambezi Rift Valley along the southeast border, contains extensive broken escarpment hill country effectively isolating it from the rest of Zambia. In isolated pockets of fertile soil, sorghum and bullrush millet are primarily cultivated (rainfall is less than 750 mm). The region is of marginal significance agriculturally.

Although SADAP has assessed 68 million of the 74.3 million hectares in Zambia as potentially arable, there are serious questions about the economic costs and returns of bringing these lands into production. Even though the population to land ratio appears favorable, the generally weak soil structure and current cultivation practices are such that any significant increases in production and acreage will require more complex management techniques and increased inputs to maintain soil productivity. Furthermore, there are indications that soil degradation is increasing due to population pressures.

Rural development in any area off the line-of-rail also depends particularly on the economic consideration of location and access.

B. Distribution of the Rural Population

The rural population has been divided into three broad categories: traditional farmers who use hoe cultivation and, if at all, sell less than 50% of the farm's output; emergent farmers, who use some modern inputs, farm less than 20 hectares, and sell more than 50% of the farms' output; and commercial farmers who use modern technology, farm more than 20 hectares, and sell practically all the farms' output. Estimates of the number of traditional farm families are around 600,000, while the emergent and commercial farmers are 60,000-120,000 and 400, respectively. Approximately 78% of cultivated land is cultivated by the traditional farmers. The emergent farmers account for 18% of the cultivated land and the commercial farmers (including state farms) for the remaining 4%. In terms of marketed production

the commercial farms supply upwards of 60% of the total with the other farm categories supplying the remainder. Total production data are not reliable.

Of the traditional farmers, about three-fourths farm less than 2.0 hectares and nearly half, less than 1 hectare at any one time. Only 40% of these farms sold or bartered any part of their produce in the early 1970s and less than half were believed to have produced any surplus.

The distribution of the rual population reflects the production capacities of Zambia's agricultural areas. The highest density is in the fertile central, southern and eastern region, followed by the northern area, the western plains and lastly the Luangwa-Zambezi Rift Valley zone.

Table 6: Rural Population Densities and Major Agricultural Areas*

	Area in Sq. Km.	'000 Rural Population	Population per Sq. Km.
Central, Southern and Eastern	94	810	8.6
Northern	350	1,220	3.4
Western	308	500	2.4
Luangwa-Zambezi Rift Valley	101	230	2.3
	735	2,760	3.6

The pattern of migration (discussed earlier) has been from the rural outlying provinces to the urban line-of-rail areas. The low (currently estimated to be about 1%) rural population growth rate is probably also a reflection of high infant mortality rates and possibly lower birth rates due to the relative scarcity of young males who have migrated to the urban areas. Indeed, the negative effects of migration on the supply of labor for agriculture is perceived by various sources to be critical in some places at certain times of the year. There are indicators that there are labor shortages for hoeing, preparing the land, and weeding during the growing season, and there is no evidence of migratory labor movements between rural areas which would alleviate the problem. It is evident that there is

* Data from 1969 Census

great need for additional information concerning the precise nature of seasonal agricultural labor shortages on a disaggregate basis.

C. Structural Aspects

A significant factor contributing to rural poverty is the concentration of economic activity along the line-of-rail provinces. With over 85% of GDP, 95% of private sector wage employment, almost 100% of private transport employment, 92% of public corporation employment, and approximately 63% and 55% of central and local government employment located there, not much is left for the huge remaining portions of rural lands and peoples.

1. Roads and Internal Transport. In 1975 the World Bank had assessed Zambia's road network to be one of the most developed in Africa, both in density per inhabitant, and in quality. It comprises about 34,500 km of roads, of which 4,000 km are paved, 7,400 km are gravel all-weather roads, and 7,200 km are classified as earth roads. These roads are maintained by the national government. The other 13,900 km are unclassified and are maintained by Rural Councils. The line-of-rail region had the highest density of roads per km^2 and highest average quality.

Since 1975, despite general awareness of the importance of road maintenance, authorized expenditure for maintenance decreased continuously during the Second National Development Plan (SNDP). The serious shortage of plant and vehicles, intensified by a lack of spare parts hampered all activities, especially rural road maintenance. Though maintenance of roads has been stated as a high priority, in the TNDP regional allocations have not been specified, thus sufficiency and proper distribution of resources cannot be assessed.

In spite of the high ratios of vehicles per inhabitant (3:100), trucks and trailors constitute only 15% of the total fleet and buses less than 1%. The World Bank reports that increasingly the trucks being added to the fleet are larger and less likely to be able to utilize the rural sector's feeder road system. More importantly, new vehicle registrations, which were running at 12% per year (about 15,000) of the fleet, had by 1979 dropped to below

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2,000. Also, since approximately 85% of the registered vehicles are along the line of rail, it implies the rural sectors transport is getting smaller. This decline in registration has, in major part, been due to the foreign private exchange shortage Zambia has faced ever since copper prices fell. Moreover, this problem has significantly reduced the supply of spare parts.

With the quality of rural roads and registrations declining, the rural sector's transportation capacity appears to be decreasing and to be relying increasingly on transport services from the urban areas. Moreover, urban transport services to the rural sector also appears to be decreasing. Rural stores cannot afford to pay the transportation costs, purchase and sell goods at the GRZ set prices, and still make a satisfactory return. In terms of bringing agricultural production out of the rural areas, the transport system appears to be able to cope logistically, while the reverse, distributing imports into the rural areas on a timely basis, seems to be a major problem. Ministry of Agriculture and Water Development (MAWD) officials state that NAMBOARD, the largest government agency concerned, has given a higher priority to bringing out agricultural production, particularly maize, than to distributing inputs. Obviously, these are policy issues.

2. Rural Markets. Rural markets operate on two tiers. The first, collection and distribution of commodities through parastatals, is operating reasonably effectively. The second, private markets for local production and consumption commodities are relatively unstudied. Considerable new information is needed for formulating sound policies in this area. However, general observations point toward a decreasing availability of essential goods such as salt, oil, soap, etc. To a large degree this reflects the effects of the GRZ price structure which is enforced on a uniform nation-wide basis and which makes no distinction between distribution costs.

3. Storage. A preliminary Canadian study on rural storage capacity, particularly for maize, concluded that facilities were marginally adequate at NAMBOARD regional depots and inadequate at the lower levels. The status of storage in rural areas remains essentially unconfirmed.

4. Land Tenure. The land ownership system has been assessed by several studies as adequate in its present form. Although land was nationalized at Independence, in fact only minor changes have taken place.

D. Fertilizer

Fertilizer use in Zambia during 1976-78 averaged around 165,000 metric tons per year. Approximately 60% of the fertilizer consumed is in the form of compounds that include NPK. In the single nutrient category, urea and ammonium nitrate are the two most widely applied. Ammonium nitrate is the only fertilizer produced in the country (by a parastatal) and production currently satisfies the country's needs.

The GRZ is expanding its only fertilizer plant so that compound mixtures can be produced there. The raw inputs will have to be imported since Zambia's present mineral resources for fertilizer are uneconomical to exploit. Zambia will need its present levels of fertilizer imports to maintain production levels. In addition, the country plans to expand fertilizer use by the small farmers, though there are conflicting estimates as to their future needs. In 1978, the U.S. supplied about 33% of Zambia's fertilizer imports under AID's Commodity Import Program (CIP). However, with the Mission's strategy of phasing down the CIP, Zambia will need to reserve a foreign exchange level upwards of $79 million once the program is ended just to meet present consumption levels.

For the foreseeable future Zambia will be dependent on outside sources for almost all of its fertilizer needs.

E. Institutional Problems

The agricultural and rural sector is serviced almost entirely by government (parastatal) organizations, principally the Ministry of Agriculture and Water Development (MAWD) and the National Agricultural Marketing Board (NAMBOARD). Few services remain private except some machinery equipment and agricultural chemical suppliers.

1. Agricultural Research. The MAWD agricultural research division has its main center at Mount Makulu and has 23 other regional stations scattered

throughout Zambia. Currently, there is a lack of continuity in the research program owing to the large number of expatriate professional staff working on short-term contracts. To date, several other problems have hampered research. Although capital funds are being approved for new schemes or buildings, the recurrent budget continues to be cut, and programs underway are seldom fully and effectively completed. Though this is a general trend in government financing, it has particularly serious effects on agricultural research. Furthermore, research is still primarily oriented toward the commercial sector. Research of value to the traditional farmers is sorely lacking--for example, there is almost no research on the intercropping that is practiced by a majority of the rural people, or research on the problems confronted in operating a subsistence plot under sub-optional levels of inputs and management. Furthermore, there is a serious gap between the output of the research unit and extension service needs. Communication of usable advice is minimal and the connections or linkages of the extension branch with research are extremely weak. Very little is known about the environment the traditional farmer operates in, though much of government policy hinges on assumptions made about their behavior.

2. Agricultural Statistics. The TNDP contains two paragraphs on agricultural statistics: "The present state of agricultural statistics in Zambia is very unsatisfactory. This is a serious constraint on proper agricultural planning. It is planned to overhaul this service and make it more effective."

"Considering the present limited resources in terms of manpower and finance as well as poor infrastructure, it may not be feasible to have complete enumeration of area, production and yield. However, it should be possible to introduce some suitable system such as crop cutting surveys, on a sample basis, in the country which may be improved."

Every study of agriculture without exception has called attention to the importance of improving the collection, processing and analysis of agricultural statistics. It is significant that every major study of agriculture has been done by foreign experts who in most cases had to make special arrangements for collecting data. The Central Statistics Office has identified data processing (systems analysts and computer programmers) post-graduate training in specialized statistical fields (including analysis), and improved transport as its highest priorities. There is no doubt that improvements

ir agricultural data and analysis are among the necessary conditions for the development of sound agricultural strategies.

3. Extension. The MAWD extension infrastructure, located on over 450 locations called "village camps", throughout Zambia, has the potential of reaching a large proportion of the traditional sector. In 1975 there was an average of less than one field employer (excluding commodity demonstrators) per village camp resulting in an extension worker per farmer ratio of roughly 1:1380. The TNDP goal is to reduce that ratio to the order of 1:400 by 1983. Several problems confront the service in meeting its optimistic objective. It remains questionable whether the service can reach its goal, though they supposedly hire all agricultural college graduates (2 yr.) and their staffing calculations find the goal attainable. Also, operating funds for visits and transport for both central and provincial staff have been seriously curtailed. One report states that in 1964 the ratio of staff salaries to travel expenses was almost 1:1. By 1969 it rose to 3:1 and by 1974 it had passed 4:1. Low salaries, difficult living conditions, inadequate and inappropriate training, and lack of communications with the provincial leaders have contributed to lowering the service's morale.

Extension training problems stem from trainers not knowing much about the traditional farmers, thus not knowing what to teach. Though 80% of the food grown in the traditional sector is raised by women and over 25% of the households in some areas are headed by women, there are very few women agents and the differential effects that could be had by women agents is not known.

4. NAMBOARD. The most important of the Government owned marketing agencies is the National Agricultural Marketing Board (NAMBOARD). Created in 1969 to take over functions of two disbanded marketing agencies, its functions are: (a) to buy, store, transport and sell at fixed prices a specified group of agricultural commodities; (b) to import and export designated products; and (c) to offer for sale to farmers various farmer inputs. Currently, NAMBOARD is the sole legal buyer of maize and cotton, but the buyer of last resort for sorghum, ground-nuts, sunflower seed, and others. The principal inputs distributed by NAMBOARD are fertilizer and seed, though pesticides, hoes, wheelbarrows, etc. are included. NAMBOARD operates through 800 depots. These are supplemented by various provincial marketing cooperatives and unions. These maintain stations, often meeting spots along the road, throughout their

respective regions. For example, the Northern Province Cooperative Marketing Union has nearly 500 stations in addition to NAMBOARD's. These Unions extend NAMBOARD's services (buying maize and selling inputs) to the small producer levels. The volume of business done by most of these rural depots is small, especially in the non-line-of-rail regions. In 1974, the Northwest Province's depot/stations averaged 405 bags (36 tons) of maize each.

NAMBOARD is reasonably successful in carrying out its major tasks of collecting, storing and transporting maize from grower to miller, but much less successful in supplying seeds and fertilizers to the traditional and emergent farmers. Furthermore, partly due to its poor history of mismanagement and slow reimbursements from other agencies, the Board has developed into a costly administrative system which has increased the delays in making payments to farmers for commodities it receives. Furthermore because of price controls for maize, the Government has been obliged to make regular subsidy payments to offset NAMBOARD losses. More importantly, subsidy payments appear to be made after the fact instead of being agreed upon in advance. As a result, there has been reduction in efficiency and financial discipline. Manpower problems are pervasive at all levels. The World Bank made a study of the operations of the depots which concluded that the inputs were reaching the depots on time, but that many depot managers were not properly prepared and that losses occurred because the managers did not know what to do next. Since NAMBOARD is an implementor and not a maker of government policy, the pricing issues are treated elsewhere. The other marketing boards, Cold Storage, Dairy Produce, etc., major problems are due to pricing policies.

5. Credit. The Agricultural Development Bank (ADB) is to be established during the TNDP. It will replace the Agricultural Finance Company (AFC), the present farm credit organization which replaced a similar organization in 1970. Credit has been channeled mainly to middle-sized farms. Nevertheless, poor repayments and excessive operating costs have led to the last and present organizational changes. Although the number of loans and total value increased from 7,512 and K7.2 million in 1970/71 to 20,243 and K17.9 million in 1976/77, loan repayments declined from almost 90% in the early 1970s to about 40% in 1978. Of AFC's 42 offices, over 90% lost money.

Studies indicate that AFC provided very little service to the traditional farmers, though the institution alone is not singularly responsible for this

problem. There were significant differences in average loan sizes between provinces, the central provinces being the largest and declining for the out-lying provinces. Furthermore it is alleged that a large number of loans were reserved for purchasing inputs for maize production. If so, this constituted another incentive for farmers to produce maize as opposed to other crops.

Capital funds for the newly planned ADB will be sought from external agencies. At present, MAWD is specifying the needed tasks and preparing the job descriptions. Other details of planned operations such as new operating procedures to assure ADB of reaching its target group, inter-agency coordination and responsibility, if specified, have not been made public. Past history suggests substantial improvements need to be forthcoming if there is to be any improvement in agricultural credit delivery to the traditional farmers.

F. Livestock and Dairy

There is a strong domestic demand for both dairy and beef products. In the case of milk, domestic supply is not satisfying the demand. Fresh whole milk sold to the Dairy Produce Board (DPB) has declined from some 18 million litres per year during the mid-sixties to some 12 million litres in 1975, and 7 million litres in 1979. Although demand for milk has increased from 20 million litres in 1966 to approximately 46 million litres in 1975, the gap is being filled by imports of milk powder and butter oil which are reconstituted into fortified milk products.

In 1974, Zambia banned the import of live beef cattle--ostensibly to stimulate domestic production. As a result the number of head slaughtered has dropped from some 105,000 in 1974 to about 78,000 in 1976. Less beef is now being consumed although boxed boneless cuts are flown in from Botswana.

Of the approximately 2 million head of cattle in Zambia, traditional farmers raise some 1.7 million head. Indeed, it is within this group that the potential rests for increased beef and dairy production. The GRZ introduced the National Beef Scheme in 1967 to boost production from traditional farmers. It has some 2,500 farmers as members and involves about 100,000 head of cattle. The GRZ admits that the scheme has not been successful.

The GRZ also has a Rural Milk Production Scheme (some 100 small dairy farmers over the country) and tenant dairy schemes to encourage production and marketing from traditional producers--neither has been successful according to

the Government. Both the National Beef Scheme and the Rural Milk Production Scheme will receive increased emphasis during the TNDP, but with changes designed to improve performance. FAO, SIDA, CIDA, the U.K. and other institutions are assisting Zambia in different areas of the livestock sector, particularly in technical areas like artificial insemination, cross-breeding, veterinary services, forage production, research and extension, and in other technical areas on the state cattle farming units. Pricing policy procedures for milk and beef are different. Whereas government dairy prices are fixed and dairy products must be sole to the DPB, government beef prices are essentially unregulated.

An indication of the importance of milk powder products and the weak domestic fluid production is that in 1978, fortified milk was over 80% of total DPB sales. A substantial increase in producer price ceilings would be required to stimulate domestic production.

G. Fisheries

The FAO reports fish provides about half the animal protein in the diet of the population. Dried Kapenta fish are a popular dietary item, though both urban and rural dwellers enjoy fresh fish when it is available through market channels. Unfortunately production is low and probably relatively stable. The major problem is low statutory fish prices which are strictly enforced by the GRZ. Additional problems are the high cost and lack of availability of basic necessities such as nets, boat engines, etc.

Sources of fish are varied. Lake Tanganyika is the largest single source, Lake Bangweulu and Meru are also important. Three rivers, the Laupula, Rafue and Zambezi are also significant sources. The Zambia Fisheries and Fish Marketing Corporation is responsible for marketing, but has not been very active.

Some fishery research is carried on, and the GRZ plans to encourage private investment in fish ponds. Increased emphasis on fish culture will not become a reality until price restrictions are removed.

H. The Agricultural Budget

The agricultural budget has increased significantly in recent years and peaked in 1979 at 24.6% of the total budget. The proposed share of the agricultural budget for 1980 is 20.4% of the total budget. This is an increase

over the 1977 and 1978 levels of 12.8% and 17.8%, respectively. In 1980, areas which are to receive the largest recurrent budget increases will be training, research, and cooperatives. MAWD headquarters will be the only unit to have a decrease in its recurrent budget. Overall there has only been a 1% increase in the total recurrent budget. The capital budget has essentially remained the same.

The increases in budget allocation over the past several years are small steps towards equalizing the relative neglect this sector has received in the past. To be fair, the actual amount going to the rural sector is larger due to the portions of the budgets of the parastatals and different ministries which are used to finance rural activities. Unfortunately, these amounts are not easily quantified. In any case, much more attention needs to be given to issues involving the content and composition of agricultural expenditures. At present there is considerable uncertainty concerning the major agricultural constraints, their relative priorities and relationships to one another, and what kinds of investments will have the largest payoffs. As understanding of these matters expands, an increase in the levels of investment, as well as changes in the composition of rural investments, is likely to take place.

I. Policy Issues

Zambia has a controlled pricing system of agricultural inputs, products, and selected essential commodities. To calculate the uniform national agricultural commodity prices, the GRZ uses an approximate calculation of the commercial farmers' cost of production data plus a pretax return on capital ranging from 8 to 12 percent.

During the last three years, 1976/77-1978/79, the prices for all commodities have increased, The producer maize price, reflecting GRZ priority for higher output, has increased over 64% while all other crops increased by an average of 26%. The 1979/80 producer maize price was, again, raised another 14.7% to K11.70 per bag. The GRZ's fertilizer subsidy, instituted in 1972, has also increased from an average of K6 per ton in 1973/72 to as much as K102 by 1978/79. At one time it was as high as K256, however, NAMBOARD officials state the GRZ intentions are to substantially reduce fertilizer subsidies in the near future. Economically, the present situation implies the over use of fertilizers, if the total cost to Zambia is considered. In 1979, farmers who received imported fertilizers paid, on average, K170 per ton whereas the GRZ cost was K272, though

the margin is expected to decline by some 30%. An analysis of NAMBOARD data by province shows that over 78% of the fertilizer was distributed into the line-of-rail provinces, where most of the commercial farmers are located.

Government policy is subsidizing commercial farmers, although it does penalize them on other inputs by restricting their availability. Actual usage rates by crop are not known, but NAMBOARD imports fertilizers with a priority for purchasing compounds beneficial for maize production. During 1979, roughly 80% of the fertilizer imported could have been used for maize. MAWD officials believe much of the fertilizer was used for maize production. This is further supported through the agricultural credit programs which has a bias toward approving maize/fertilizer package loans.

In an effort to achieve GRZ equity objectives of increasing production and equalizing regional rural incomes, transportation costs for specified, commodities, primarily maize, have been assumed by the Government. This, in effect, provides an additional subsidy to those farmers using NAMBOARD's transportation network. This is another factor which has increased the attractiveness of growing maize relative to other crops.

The effect of these policies--uniform pricing, preferential maize pricing, fertilizer, and transportation subsidies, has been dramatic. Maize has represented an increasingly larger percentage of Zambia's marketed agricultural production. During 1964/5 - 1968/69 maize represented an average of 61% of the total marketed production; this rose to 67% during 1969/70 - 1972/73 and over 76% during the 1973/74 - 1976/77 period. Also, exports of Virginia and burley tobacco have declined by 40% respectively since 1971/72.

The rural-urban terms of trade appear to be moving still further against the rural sector, with pricing policies constituting a factor of even more importance than structural factors.

An 1979 World Bank analysis by D. Dodge conclude that throughout the post-Independence period, farmers have received prices lower than the world market prices and that the urban consumers have been heavily subsidized. A rough analysis of available data shows that line-of-rail consumers received a per bag of maize subsidy upwards of 60% of the imputed cost to Zambia. Likewise, the out-lying province maize producers were taxed relatively more than those near the line-of-rail, who benefitted from the fertilizer subsidy and credit. It is further alleged that Zambia's uniform pricing policy and

transportation subsidies are prejudicing farmers producing in crop deficit areas where the underlying supply and demand conditions call for higher prices. Though more information is required, all indications are that Zambia's agricultural pricing policy has not led Zambia any closer to an equalization of incomes. On the contrary, the available information indicates that the present policy may be contributing to an increase in income disparities, as well as to sub-optimization of production with respect to its level and its location. For example, though limited, research shows that with marginal pricing changes, alternative crops may be more suitable and profitable for farmers in the outlying provinces. A study on cassava versus maize production in rural areas that are not currently receiving many of the inputs and services required for producing maize effectively concludes that the current price policies and the transportation subsidies that so markedly favor maize, are helping keep total crop production down in these areas. Others have commented on the possibilities of increasing bean and confectionary groundnut production with minimal price changes.

However, given the dearth of information about the various farming systems of the traditional and emergent sector, the national authorities will probably be slow in making many changes in present policies. The GRZ is faced with the difficult task of achieving a balance between providing its urban population with food at reasonable prices, and helping the neglected rural sector obtain regular increases in income--a task that cannot be accomplished without continuing increases in agricultural production and changes in relative prices.

Besides the GRZ's agricultural pricing and subsidy policies, the maintenances of uniform national prices for essential commodities is reducing their distribution into the outlying rural areas. The present system does not account for the substantial transportation costs involved in moving these commodities into the outlying rural areas. Rural shopkeepers' margins are being reduced. Long time observers of the Zambian rural economy and GRZ officials note that there are far fewer shops now than at Independence and that those still operating rarely have vegetable oil, roller meal, soap, and other essential commodities whose prices are controlled.

Since Independence, Zambia has been designing and evaluating development strategies which were presumably aimed at making a reality of the ideals contained in the Humanist philosophy. The Humanist ideals have been translated

into specific social and economic goals and targets, which, by and large, have not been achieved. For major segments of the population the standard of living has been declining, particularly in the rural areas.

As was pointed out in the first section, Zambia's economic difficulties have been caused by a large number of factors. Perhaps the major factors have been the 1975 drop in copper prices, the political strife in Rhodesia, and constraints in regional transportation. However, the declining standards of the small farmers, declining numbers of commercial farmers and poor agricultural performance have characterized Zambia since Independence, and should not be mainly attributed to transportation bottlenecks, border conflicts and closures, and the fall in copper prices--all of which are more recent developments. Apparently, the agricultural policy instruments developed to date have not been satisfactorily formulated due to shortages of substantiated information, limited capacity to analyze problems and impacts, and inadequate coordination among the multitude of government organizations which work in any given sector. Lines of responsibility are unclear, and the kinds of checks and balances within the present system have not led to an effective functioning of this centralized economy. Policy improvements are not the complete answer, but they are very important to increasing adequate food production and small farmer income.

IV. Progress and Commitment

A. Health and Medical Services

Since Independence there has been steady progress in the health sector. The percentage of recurrent expenditures going to health has been 6-7% since Independence. The 10 year health plan called for development expenditures of K 73 million, although only one quarter of this was for projects in rural areas. Per capita costs of the MOH Health Services are about $13--one of the highest in Africa. A budget review, however, reveals that the largest share of expenditures are going to high-cost, curative-oriented fixed health facilities, particularly in towns. Community based systems are in their infancy, and a large share of the recurrent budget will have to continue to support the fixed structures already in place. Doctor per patient ratio vary from 1 to 5,000 in the Central province and 1 to 20,000 in the Northern, Eastern and Western provinces. Staffing of rural health centers remains a problem.

Access to health services has improved since Independence. This is probably reflected in the slight drop in the crude death rate from 20 per 1,000 to 19. The crude birth rate has remained constant over the comparable periods 1969-74 and 1975-79 at 49 per 1,000. Between 1969 and 1977, life expectancy has increased from 41.8 to 44.3 years for males and from 45.0 to 47.5 years for females. Infant mortality rates fell from 141 to 127 per 1,000 during the same period. The MOH has carried out an expanded immunization campaign which has by Government accounts dramatically reduced the number of children afflicted each year.

B. Nutrition

The comparatively low growth in agricultural production that has characterized Zambia since Independence is reflected in the current status of nutrition. Studies have shown that the average annual caloric intake by the poor urban and rural sectors fall below the minimum level regarded by nutritionists as being adequate. High rates of protein-calorie malnutrition are the leading causes of mortality and morbidity in children under five. Moreover, the situation is becoming worse: the 1970/71 Nutrition Survey (UNDP/FAO) found 23% of the children aged 0 to 4 years to be suffering from protein-calorie malnutrition of moderate or severe degree. By 1978, the National Nutrition Commission estimated the proportion had risen to 38%.

C. Population

The GRZ attitude towards population is somewhat ambivalent. The current development plan does not mention family planning although there are persons in the MOH who are interested and active. The biggest single problem hindering expansion

of family planning activity is a law which prohibits the delivery of family planning services except by a physician. However, there is no stated national policy restricting dissemination of family planning information.

Recommendations concerning intensification of family spacing information and services in the future have included the following five proposed strategies:

1. Establishment of more family planning clinics, especially along the 'line of rail'.

2. Increased dissemination of information by the Family Planning and Welfare Association of Zambia through workshops, seminars and conferences.

3. Training of more nurses in family planning management techniques.

4. Promotion of natural methods of family planning which have been part of Zambian tribal and ethnic tradition.

5. Increased dissemination, through the media, of information on the various aspects of family planning.

Major donors involved in family planning activities in Zambia include UNFPA, FPIA, Pathfinder and Planned Parenthood.

D. Education

The situation in the education sector is somewhat analagous to the health sector. There has been a massive expansion of physical facilities and of school enrollment since Independence. Primary school enrollment (concentrated by and large in the urban zone) has increased almost six fold. At the primary level the double-shift is widespread. However, the expansion in trained teaching staff has not kept up with the increases in enrollment: the current deficit in the number of teachers is around a thousand. The GRZ is planning to address this lack by increasing the number of teachers receiving a two year training program, and giving presently untrained teachers (about one-fourth of the teachers) a one year training program. As in the health sector, expenditures in the education sector form a significant share of the budget, 15% of recurrent expenditures in 1978.

Rural schools suffer from supply problems (especially of teaching materials). The professional staff also seems to have low morale. These two problems are shared with health facilities in rural areas. Women suffer from decreasing access to educational services at the secondary level which is attained by less than 15% of the age group. Here boys outnumber girls by two to one.

E. Role of Women

Women's interests are represented by the Women's League of the United National Independency Party. The Women's League is vocal and it keeps women's issues before

the Party and the Government. They have been successful in raising the consciousness of the Government on women's issues.

Overall however, women are still seriously disadvantaged in Zambia, most significantly in the employment field. Remunerative formal sector employment is still considered a male domain while women do a disproportionate share of the agricultural tasks.

Considerable progress has been made in the health and education fields as services for women have been disseminated to the rural areas. Women have reached relative parity in primary school enrollments but they lag far behind in secondary school and higher level enrollment.

F. Human Rights

Zambia is a vocal supporter of human rights internationally. Nonetheless, because of armed conflicts in nearby countries and the continuing state of emergency declared as a result of dangers and conflicts, not only in the south but in Shaba, Nambia and Angola as well, the Government has reserved the right to suspend constitutional guarantees, although it does not often do so in practice. Freedom of thought, religion and expression are generally respected and specific criticisms of government activities are tolerated.

V. Development Plans and Policies

A. Planning Since Independence

After Independence the GRZ adopted a policy of planning for the achievement of its development objectives. Three major plans have been produced since the most recent, the Third National Development Plan, covers the period 1979 to 1983.

Progress towards reaching the basic goals of all three plans has been uneven. The rapid growth of the necessary infrastructure to offer health and educational services in both rural and urban sectors has taken place and provision of health services and primary education are free. Growth has taken place in both electric power and the transport infrastructure which are pre-conditions for future expansion of the industrial sector. However, the continued reliance on copper revenues has led to insufficient revenue to implement many projects.

Progress towards achieving the goals of the previous plans has been slow mainly due to exogenous factors such as: (1) the struggle for majority rule and independence in Southern Africa; (2) the confrontation with Southern Rhodesia and the closing of the border; and (3) the instability of copper prices.

The specific objectives of the Third Plan ara: (a) to raise the general level of social welfare; (b) to diversify the economy to make it less dependent upon

copper; (c) to narrow the gap between urban and rural living standards by increasing the productivity of traditional agriculture and (d) to increase the general level of education and develop a wide range of technical, administrative and managerial expertise to lessen dependence on expatriate skills.

The Third National Plan is a departure from the two previous ones in several respects: (1) it is a comprehensive plan including the Government parastatal and private sectors; and (2) it postulates a major shift in the investment pattern in favor of the productive sectors--agriculture, industry and mining.

Compared with the Second Plan, the balance of fixed investment was shifted markedly in some sectors. Mining dropped from 29% of total investment to 20%, while agriculture increased from 5% to about 17%. Health and education accounted for 6% in the Second Plan and only 4 % in the Third. The value added by agriculture is to grow at 5.5% annually, manufacturing by 8%, electricity by 6%, and mining by 1%. The per capita GDP is estimated to rise at an average annual rate of real increase of 1.5% during the plan.

B. Assessment of TNDP

The Plan articulates laudable goals, goals which development strategists would agree are relevant to the Zambian context. However, the means by which these goals can be attained are less well spelled out. First of all the total investment planned for the 5 years totals the staggering sum of K3,354 million, K114 per capita annually, 43% of which is to come from the Government budget, 32% from the parastatals through internal resources and the remainder through direct inflows of foreign capital and the private sector. The resource gap to be financed by foreign capital inflow is estimated by K1,709 million. Whether or not the parastatals will contribute their assigned share is, of course, an open question. Although 1978 external commitments exceeded $350 million, actual inflows were considerably less as a result of absorptive capacity problems.

The goal of increasing equity is not being adequately addressed by the TNDP. Prior plans have devoted only 15 to 20% of capital expenditures to agriculture and rural development. The TNDP does not propose any marked increase. With 60% of the population and half the work force in this sector it deserves further consideration. Nor does the plan address the serious problems brought about by lack of an appropriate pricing policy for agricultural crops. Specific programs addressing rural sector problems such as cooperatives, credit, marketing institutions or extension have been unsuccessful in the past. The new plan formulates no new strategy to deal with these areas. It is likely that patterns of investment being

suggested in the TNDP will further enlarge the rural-urban income gap and increase unemployment over the present high levels.

VI. Role of Foreign Assistance

A. Donors and Their Roles

It could be said that Zambia is beseiged by donors. Assistance in the form of loans and technical assistance grants come from a host of donors--Arab League, Arab Bank, Canada, China, U.K., U.S., IBRD, UNDP, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Romania, Russia, Sweden, and others. In 1978, the UNDP listed over 50 different institutions giving $56.3 million in technical assistance to Zambia. Aid was concentrated in agriculture, health, education, industry, planning, transport, communications and natural resources. In the agriculture sector alone, there were 108 different projects with more than 200 foreign technicians. It is clear that Zambia cannot provide an equal number of counterparts who could be trained to carry on the projects after the technicians depart.

B. Absorptive Capacity

Both the GRZ and foreign lenders appear to have overestimated Zambia's current absorptive capacity. Loan funds are currently being utilized at a considerably slower rate than planned. For example, the originally estimated transfer of funds from abroad under previously made loan agreements had been set as $110.6 million, $80.0 million, $99.2 million for the years 1976, 1977 and 1978. However, the rate of execution of externally financed projects was slower than expected, and the actual drawings were $52.9 million, $57.8 million and $47.2 million, only 45.5% of the anticipated inflow for the three years in question. According to the 1980 budget speech of the Minister of Finance, disbursements of the foreign assistance agencies during 1979 was $112.1 million, 64% of the anticipated transfers.

C. Donor Coordination

As in practically all developing countries, coordination among donors in Zambia is not satisfactory. Although relationships are friendly and the levels of communications are probably above average, existing coordination does not achieve much more than the avoidance of duplicatory activities in large or significant areas. There is no central place or person within each ministry functioning as a clearinghouse for information on other donor activities. Until such time as the ministries themselves are able to coordinate donor activities, it will be difficult to achieve effective sectoral coordination among donors. Moreover, a piecemeal problem-by-problem approach to macroeconomic and sector development militates

against donor coordination. Without coherent, effective and efficient host country macroeconomic and sector strategies, the possibilities of effective donor coordination are severely limited.

VII. Principal Analytical Conclusions

Although in all countries there are significant gaps between political promises and performance, the stated social and economic goals and the subsequent achievements, in Zambia the gap that has separated official declarations of purpose from actual realizations has been unusually wide. Despite the humanist philosophy professed by President Kuanda, the party and its government, Zambian society is less prosperous and less economically egalitarian today than it was at Independence.

Most of the causes for this state of affairs have their roots in the geographic distribution of natural resources and in economic activities and relationships that were developed prior to Independence. The discovery of rich sources of copper, the development of the railroad, the subsequent selective provision of goods and services to the "line of rail", copper exports, the availability of large amounts of foreign exchange, the establishment of industries that tended to be capital-intensive and that relied excessively on imported materials and equipment, and the general neglect of major segments of the population dedicated by and large to subsistence agriculture in the outlying provinces, were all closely related and mutually reinforcing developments.

The economic structure that has emerged from these developments has not provided the country with the benefits that were expected. Since Independence the overall growth rate has been low--lower than the population growth rate. Per capita income has decreased, and the distribution of income has worsened.

Growth and equity are generally considered desirable ends-in-themselves, with the pursuit of either one of these ends fairly often requiring some sacrifice or trade-off with respect to the other. In Zambia today the two objectives appear to be almost indissolubly linked. Without steady improvements in the standard of living of the traditional farmers that constitute the bulk of the rural population, and without increased production and economic efficiency, it is unlikely that the long-range macroeconomic performance will be satisfactory. And if the Zambian economy's growth rate is not raised above the low level of the post-Independence period, the per capita income will continue to fall, and large investments on behalf of the poor aimed at reducing current income inequalities would be economically as well as politically difficult, if not impossible, to carry out.

Although the GRZ is officially committed to analysis and planning, it cannot yet reach the levels of analytical and planning performance needed for the effective management of this fairly complex and centralized economy. Performance in these two areas is hindered by severe shortages of adequately trained professional manpower. As a result, the momentum of economic forces, and the sudden pressure of economic emergencies, has to a significant degree shaped "economic policy."

Better analysis and planning is needed to better allocate scarce resources. The prospects for future copper earnings, and more generally, the availability of foreign exchange, are not good. The external debt servicing burden is great, and though there has been progress in reducing arrears, they are still running at rather high levels. Moreover, it would be a mistake to assume that greater availability and better use of foreign exchange would assure a high and steady growth rate and the gradual elimination of poverty. To date Zambia's capacity for investment in development projects has been quite limited, and it would also be a mistake to assume that major capital transfers by foreign assistance agencies would be successful in increasing productivity and reducing disparities.

The improvement of analysis, policy-making and implementation of projects in Zambia by Zambians is a sine qua non of an effective development effort. For example, there is an urgent need for a thorough analysis of the actual and potential relations between two such apparently diverse sectors of the economy as the traditional farmer and the parastatals. There is a general recognition of the need to increase parastatal efficiency to the point in which parastatals have been transformed from subsidized recipients of public monies to providers of badly-needed revenue. However, the means of achieving this objective needs to be much better identified and specified than they are at present. Since under-utilization of capacity is an important factor underlying current inefficiencies, and since insufficiency of demand is the main cause of under-utilization, it seems likely that increasing purchasing power in the rural areas will promote growth as well as equity; and this possibility should be thoroughly explored. Of course, there are many more aspects to the problem of parastatal inefficiency, including the need for more trained Zambians, new auditing procedures, and policy changes in areas such as taxes and tarrifs. However, so long as the market for manufactured products is limited to the urban areas, the behavior of labor, management and government will tend to be protective of the status quo, reducing the possibilities of reductions in unit costs and also reducing the possibilities of expansion of a competitive private sector.

Conversely, improving the welfare of traditional farmers is dependent, to a surprising extent, upon greater parastatal efficiency. First, MANDOSRD and other parastatals that serve the agricultural sector need to supply needed inputs and to pay for agricultural purchases on a more regular and timely basis than at present. Second, without a substantial increase in government revenues resulting from significant efficiency increases in the whole parastatal sector, it will not be possible to reach the level of investment in the outlying areas that will be needed to raise the standard of living of more than 600,000 traditional farm families.

Although crucially important technical assistance and training can be provided by foreign assistance agencies, the fundamental changes in policies and procedures must be carried out by Zambians. In this connection, Zambianization, a firm GRZ policy objective, should not be viewed as a mere one-to-one process of replacing expatriate advisors, but as the training and development of a critical mass of Zambian expertise assigned to the key planning and coordinating entities and carrying out priority functions. These trained Zambian officials can then decide what specialized foreign expertise is needed.

At present the GRZ appears to have limited control over the large numbers of foreign or donor-run projects and the larger number of foreign technicians (in 1977 over 200 in agriculture only), not to mention the many foreign advisors that work in the ministries and parastatals. Obviously, financial resources and adequately trained manpower represent two fundamental scarcities which must be gradually eliminated by the GRZ if it is to achieve the goals laid down in the TNDP.

The development of agriculture--of all sectors the most complex and the most difficult one to manage--lies at the center of these goals, and, as was pointed out, the TNDP is long on agricultural objectives and targets, and quite short on the means for achieving them. Although this is a common deficiency in so-called development plans for agriculture, it would be difficult to exaggerate its importance. The selection of ends without identification of the means for achieving them leads to wasteful expenditures and in a situation of scarcity is likely to be a prescription for widespread failure.

Nevertheless, the decision to concentrate resources on agriculture is an important step forward. And it is also important to recognize that Zambia has made considerable progress in extending the organizational structures needed for managing the sector. Admittedly, these organizations are presently concentrating

their services on the more prosperous areas; experiencing difficulties in getting key entities to coordinate, and are suffering from uncertainties concerning the proper means for carrying out decentralization; but the GRZ is aware of these problems and is in search of solutions.

Informational deficiencies and policy defects underlie many of the problems mentioned above. Most of the agricultural data and almost all of the analysis that have been used in this document have been drawn from studies and research that were carried out by foreign assistance agencies or by foreign students and researchers. If Zambian agricultural policy is to improve, and Zambian agricultural resources are to be properly allocated within the sector, more of the analytical work must be carried out by Zambians. Surprisingly little is known about the traditional farmer--the extent and consequences of seasonal labor shortages, the cultural practices utilized, acreage, production and yields, the amount of surplus, if any, the production sold, the extent to which soil degradation is taking place, the potential for increased production, and so on.

Finally, it is equally important to recognize that, as well as an information gap, there is available information--knowledge that can be used now for effective action. Some of this information is constituted by standard world-wide practice in the agricultural sector, with its applicability and relative importance for Zambia to some extent undetermined. Some of this information is Zambia-specific: needed farm-to-market roads can be built; improved seeds can be provided; the use of fertilizer and other inputs by traditional farmers can be tried and their effects measured; storage bins can be built, new extension techniques tested, and so on. In this area of interventions there will be elements of expansion, improvement and experimentation.

To conclude, there are four priority problems which need to be tackled if Zambia is to achieve sustained growth with equity. First, it must raise the general level of economic efficiency (with particular emphasis on the parastatals) in order to augment government revenues and increase the capital and recurrent expenditures in agriculture needed to achieve development goals. Second, it must improve its agricultural policies (with pricing policies receiving the highest priority). Third, it must expand its information base (particularly the information concerning plant varieties appropriate to specific regions and the traditional farmer) and establish a continuous and self-correcting process of data collection, analysis,

planning and resource allocation. Fourth, it must expand and improve the design and implementation of projects in traditional farm areas (with special emphasis on coordination and decentralization).

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VIII. AID and GRZ Objectives

Two basic objectives are proposed for the AID program in Zambia: (1) to increase the incomes of small farmers and (2) to increase the total food production.

There is no intention at this time to give precendence or priority to either of these objectives. Much of the information provided in the preceding sections underscores the importance of the first-mentioned goal. The small farmers constitute the largest and poorest segment of Zambia's population. Raising the standard of living of these 600,000 farm families over time (around 20% of which are households headed by women) would generate the purchasing power needed to help sustain economic growth. A steady increase in the rural standard of living should also contribute to a continuing reduction in the rate of rural-to-urban migration. Indeed, the TNDP acknowledgement that unemployment in the urban areas will increase significantly during the next five years has practically forced the GRZ to adopt a policy that has some promise of making rural life more renumerative and attractive.

The importance of the second-mentioned objective should be equally obvious. The Zambian population is growing at a rate of more than 3%. Increases in total food production are needed to feed this growing population and perhaps over time make Zambia a net exporter of agricultural products. In any case, if over the medium and long-term, food production can be increased at a rate higher than the population growth rate, the urban poor will benefit from an increased supply of food.

Some consideration of these objectives, viewed independently and together, may shed light on the question as to whether these goals are, in the main, complementary or conflicting. Here a question might be posed. Were maximization of food production the only objective, what portions of total and marketed production should be produced by the traditional and emergent farmer, and what portions by the commercial farmer, in the short and medium run and in the longer run?

There are various reasons why a satisfactorily quantified answer cannot be given to this question. First, the most basic agricultural data, such as production, acreage and yield, are not reliable, and conflicting estimates can be found in the different government documents. Second, the other kinds of data required for adequately analyzing the involved problems (for example,

data on inputs and cultural practices which would shed light not only on actual but on potential cost/benefit ratios) are not available. Third, the country's analytical expertise for dealing with this set of problems is presently in short supply.

There is a preliminary effort in the TNDP to grapple with the complex issue of complementarities and trade-offs between efficiency and equity objectives in the agricultural sector in terms of corn or maize--Zambia's principal agricultural product and its most staple food. Production for 1974 is estimated to be 13.4 million bags for the traditional farmer and 2 million for the emergent and commercial farmer. A preliminary estimate suggests that a 2% increase in traditional farmers' maize yields would provide a total of 268,000 additional bags. To get the same increase from the commercial farmers, these farmers would have to increase current yields by about 15% (3.3 bags per hectare) or increase acreage by 15% (12,000 hectares) or some combination of both.

Although crude and preliminary, the estimate can be used to consider some of the linkages between the two goals, and the related policy connection between the small farmers and the commercial farmers. For example, to concentrate resources almost entirely on the small farmer would almost surely result in a lowering of total production, insufficient amounts of food, balance of payments problems, and unrest in the urban areas. On the other hand, continuation of intensification of an agricultural policy which is neglectful of the small farmer and increases resources to the commercial farmer, is likely to raise the level of rural-to-urban migration, increase urban unemployment, exclude the bulk of the rural population, from the cash economy, and contribute to a worsening of the distribution of income--despite the fact that such a policy would probably constitute a viable means for attaining the production targets in short run.

The failure to invest in the infrastructural, technological and human resources of the outlying areas would leave these areas and their populations in their presently disadvantaged position. Any hope or expectation that the commercial farmers would under current conditions subsequently extend their operations to these areas is not realistic and is neither politically nor managerially feasible.

In sum, there are economic reasons, as well as social and political reasons, for pursuing both the objectives laid down in the TNDP, and for providing carefully calculated and balanced support to both the small farm and the commercial farmer sector.

IX. The Major Constraints and the AID Strategy

The constraints to increasing small farmer income and total food production are both deep seated and extensive. Comparatively speaking, the AID resources that can be allocated to Zambia are extremely limited. In order to be manageable and effective the AID strategy must be selective and focused on key problems whose solution would have significant multiplier effects. The concentration of resources required by such a strategy is not one which would consist of activities focused on a single institution or an agricultural subsector, for this would leave some of the major constraints unaddressed. Although the selected activities should operate on two fronts--the information front and the action front--they will be few in number.

This limitation calls for the prioritization of AID assistance. The first priority is in the area of agricultural policy, with particular emphasis on pricing.

The second order of priority is given to agricultural research and extension. The third priority--assigned to storage fisheries, domestic transport, marketing, and livestock--respresents activities in which AID may or may not become involved at some subsequent time.

A proper selection within these priority areas calls for an understanding of the four major Zambian constraints to the achievement of the two selected objectives. These are: (1) insufficient investment and allocation of scarce resources in the agricultural sector; (2) the lack of a coherent and effective agricultural sector strategy; (3) defects and deficiencies in statistical information, and in the other kinds of agricultural information needed for making agricultural policies and decisions, and for monitoring and evaluating agricultural programs (particularly with respect to plant varieties appropriate to specific regions of Zambia and with respect to the cultural practices, technology and other kinds of behavior of the traditional farmer); (4) inadequate design and execution of agricultural projects in traditional farmer areas. AID assistance in addressing the first three constraints will consist mainly of technical assistance and training.

It should be noted that all four of these obstacles or constraints involve activities of the GRZ. As such, they are not descriptive of the more specific kinds of problems and constraints that are hindering farmer income and food

production in any given region or area, or hindering the production, marketing and consumption of any given crop. An accurate priority ranking of existing constraints to the different activities involved in an agricultural system, such as prices, research, credit, extension, cultural practices, marketing, storage, plant protection, etc., must be carried out on a regional and crop-specific basis. Moreover, designation of the four GRZ behavior constraints as the major constraints is tantamount to the judgement that the easing of specific constraints, or the solving of problems, in areas such as extension, credit, agricultural technology, etc., is contingent upon significant improvements in GRZ performance. Consequently, the major purpose of the AID program would be to contribute in selected areas to these needed improvements in GRZ performance.

There are two common factors that underlie each of these four constraints. First, there is the lack of the sequential problem-solving procedures required for generating and allocating resources, developing an agricultural sector strategy, collecting and disseminating information, designing and executing projects in traditional farmer areas. Second, there is a serious shortage of trained Zambian manpower needed for carrying out these four kinds of procedures. Obviously, the two deficiencies are closely related. They are distinguishable, however, and the proposed AID strategy would be aimed at helping the GRZ establish the needed procedures as well as training some of the Zambians who would carry them out.

AID assistance would be provided at two levels: at the national level; and at the level of a selected region or area. Moreover, it would be provided at the national and at the regional level for each of the four kinds of constraints.

The first constraint is insufficient investment and allocation of scarce resources in agriculture. Helping the GRZ overcome the insufficiency would involve AID technical assistance and training in estimation, allocation and, possibly, planning for the generation of funds or revenues. AID would assist the GRZ in developing its capability to estimate the resources and funding levels required for agricultural development and estimating the future capital and recurrent costs involved in alternative agricultural strategies, as well as in different levels and compositions of investment. AID would also help the GRZ in improving current procedures for estimating total future resource avail-

abilities, for analyzing the cost structures (with emphasis on the assessment of subsidies and the identification of inefficiencies) of the major institutions involved in agriculture and for determining feasible levels of allocation to agriculture. In this and in the other constraint areas, AID training and technical assistance will be aimed at increasing those GRZ institutional capacities and capabilities most important for agricultural development.

Technical assistance and training in economics, fiscal and monetary policy, tax administration, budgetting, higher-level accounting, etc., would be provided to selected and key offices and positions within entities such as the National Development Planning Commission, the Ministry of Agriculture, and some selected parastatals working in the agricultural sector, especially NAMBOARD. The technical assistance would be mainly of a short-term, consultative nature. The training would be a continuation of in-country job specific training, and U.S. and third country long and short term technical and academic studies.

The second constraint is the lack of a coherent and effective agricultural sector strategy. Providing a developing country with assistance in carrying out a detailed and comprehensive sector analysis is the best contribution a foreign assistance agency can make towards the development of the host country sector strategy. Unfortunately, Zambia is not ready to undertake such a task, and AID assistance must therefore be selective and focus on major problems and priority sub-sectors or areas. Pricing policy unquestionably qualifies as the first priority. Other high priority policy areas would include decentralization procedures, credit, state marketing procedures, and transportation. Technical assistance and post graduate economics training aimed at improving pricing policies would most probably be directed to the planning unit in the Ministry of Agriculture and Water Development (MAWD)

In the case of credit, the technical assistance would be concentrated on an analysis of the post failure in this area in order to extract the lessons needed for the establishment of appropriate credit policies and procedures for the traditional and emergent farmer. This analysis is a prerequisite for any substantial AID involvement in this area. Finally, technical assistance in state marketing and transportation would begin with analyses of present resources and procedures as a necessary basis for policy recommendations. In all cases, the collaboration of Zambian counterparts who would, in effect, receive on-the-job training would be a condition for providing the technical assistance.

Post-graduate training in agricultural policy would be in different specialized areas of agricultural economics and, to a lesser extent, rural sociology.

The third general constraint consists of the more important agricultural information gaps. Three broad categories are: (1) technical information concerning crops and varieties; (2) data and information concerning small farmer behavior, including such things as multicropping, cultural practices, consumption, sales, nutritional levels, age and sexual composition of the labor force, etc.; (3) nation-wide data about the rural population, acreage, production and yields, and other related data, as needed.

Although some of the agricultural research required under the first area might have general or national applicability, it is likely that it would be concentrated mainly at the selected regional or area-specific level. This would facilitate making the linkages between research and extension required to effectively increase incomes and food production. It is also likely that concentration of data collection, processing and analysis of the second kind--small farmer behavior--would be focused on the selected regional areas. The Central Statistics Office would probably not be ready to carrry out the required surveys on a large scale, and concentration of the observations in the same area in which the action programs are being carried out should provide additional payoffs in increasing the understanding of traditional farmer behavior--an understanding that is essential for augmenting total production, as well as small farmer income.

The third-mentioned informational area faces critical problems in both data collection and data processing, and assistance would be provided in both these areas. Training in statistics, survey management, computer science, and economic analysis would be provided in support of improvements in the second and third area. In the first area of agricultural research, in addition to U.S. training, there would be resident U.S. advisors collaborating with Zambian counterparts.

The fourth general constraint is the inadequate execution of agricultural projects in traditional farmer areas. In addressing this constraint, the main site or locus of actions would be the selected areas or regions. As in the case of actions aimed at easing the other constraints, activities would include observation, data collection, analysis, planning, procedural changes and experimentation; but to a much greater extent they would be combined

as reinforcing activities aimed at increasing the region's incomes and production of food. For example, the results of the agricultural research (in food grain crops other than maize, and not presently being carried by other donors, and in oilseed crops) and the various findings emerging from an analysis of the traditional farmer behavior would be brought together and used as a basis for determining needed and feasible changes, and for designing and testing procedures for bringing about these changes. Among these procedures would be extension procedures. An experimental approach to extension might provide an opportunity to test and compare the costs and benefits or effectiveness of mobile units and residential classes, and radio versus direct contacts. The recurrent costs of extension, including different forms of transportation for sparsely populated areas, would also be assessed.

The collaboration with Zambian officials of resident advisors should also provide the opportunity to make better assessments of the cultural acceptability of change in farming practice, technologies, and crop mixes; to evaluate the possibility of promoting dietary changes which would reduce the consumption of maize, for example, and increase the consumption of beans or legumes with consequent increases in nutritional intake, possible improvement in soil conservation, and/or reduced need for fertilizers. Careful observation and recording should also lead to a more informed assessment than is presently available concerning women as agricultural producers and beneficiaries. Since women head over 20% of the rural households and grow 80% of the food, it would be desirable to further test the use of women as extension agents and as employees of agricultural credit institutions. And, as mentioned previously, the implementation of these activities in one or more outlying provinces will also provide an opportunity to test new decentralization procedures and to assess the accountability and monitoring procedures involved in the transfer of national funds.

For the forseeable future the performance of the Zambian economy and the development of its agricultural sector will depend more on decisions and actions of the GRZ than on any other single factor. It is highly unlikely that AID projects which fail to contribute to the improvement of GRZ policy and GRZ implementation in agriculture and other closely related areas would have a long-range or continuing beneficial impact on the rural poor. By contributing to the improvement of GRZ performance on both the action and

information fronts, the proposed strategy has the best chance of achieving the goals laid down in the Congressional Mandate.

X. AID Strategy Options

Three AID strategy options for increasing traditional farmer income and total food production should be given consideration. Under the first option AID would continue to limit its assistance to commodity import and PL 480 programs, and would make an agreement with the GRZ commiting it to carry out the measures and activities that have been specified as needed for easing the four major constraints. Although this option has the virture of minimizing the AID management workload, it does not provide the GRZ with needed training and technical assistance in areas in which there are significant shortages of trained Zambians. There is less control of final expenditures, and the possibility that smaller portions of the funds would be employed on behalf of the traditional farmer, technical assistance and training. Most importantly, this strategy would be much less likely to strengthen GRZ capabilities in the formulation and implementation of agricultural policies and project. Nevertheless, were it deemed advisable to maintain a low AID profile in Zambia, this first strategy option should be given consideration.

Under the second option AID would make various early starts (more starts and earlier starts than under the third option) in terms of interventions or action programs, reduce the amount of proposed activity of a policy, planning, informational and analytical nature, and take the more typical approach of carrying out interventions such as research and extension, together with other standard interventions, such as storage, fisheries, domestic transport, marketing and livestock. Although this option has the attractiveness of moving more quickly and heavily into various action fronts, it is not recommended. First, it would tend to increase GRZ recurrent costs without significantly increasing knowledge of the relative priorities of these different kinds of interventions. Second, it would not contribute to, and might detract from, efforts to achieve better coordination and decentralization. Third, in view of the major uncertainties concerning actual and potential relationships among key factors affecting the agricultural sector, a strategy dedicated exclusively to interventions would not move Zambia closer to, and might move it further away from, a coherent and effective agricultural sector strategy.

The third option is the one recommended. It calls for activity on two fronts: (1) the information front and (2) the action front. It calls for

interventions in areas where constraints are known and for better information in areas in which they are not known. It concentrates on establishing a better analysis and policy making process in the GRZ and on improving GRZ execution of adopted policies. It has an important disadvantage, however. It is a more difficult kind of strategy to execute. It involves close and continuous coordination with the GRZ on the many problems and issues which the GRZ has already acknowledged are key constraints to Zambian development.

The advantages of the third and recommended strategy option appear to outweigh its disadvantages. Siginificant increases in traditional farmer income and total food production will not be achieved in the absence of a GRZ agricultural sector strategy that is more coherent and effective than the present one; and the realism of the proposed AID strategy option lies in its awareness of fact. Such a gradually evolving strategy, along with improved implementation of agricultural projects, would be the basis for higher levels and more appropriate compositions of future investments, reasonable assurance that future recurrent costs would be met, and better coordination among donors.

XI. PL 480 Title I

Continued PL 480 assistance would be integral to any of the three strategy options discussed above. The existing PL 480 Title I program will provide continued balance of payments relief, a partial solution to the emergency needs of the country, and some support to the agriculture and rural development budgets as well as permit AID/Zambia to exert some influence on GRZ agriculture policy.

PL 480 commodities (some 87.0 million in value thru FY 1986) include maize, rice, wheat and oil. It is anticipated that this activity will continue through, and possibly beyond, 1986.

The GRZ has agreed to use the proceeds from PL 480 commodity sales to finance and support mutually agreed to agriculture measures and activities.

PL 480, Title II

The Mission concluded a Title II agreement with the GRZ for some $6.0 million in food commodities in FY 1979 to compensate for poor production due to adverse weather conditions. USAID may request an additional $6.0 million under Title II during FY 1980 if drought conditions persist.

PL 480 Title III

As the nature of the USAID/Zambia program shifts from general support to

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specific development activities, Title III is envisioned as a means to aid the GRZ in further adopting and implementing policy changes in the agriculture sector. Research and further analysis will lend additional support to various agricultural policy improvements and the loan forgiveness and multi-year commitment advantages of Title III can assist the GRZ in institutionalizing these changes. The program will also provide partial financial support for both capital and recurrent budget expenditures in support of specific AID/GRZ agriculture development activities, and the multi-year commitment feature will allow improved programming of future funds.

XII. Regional Programs

Because of its central location in Southern Africa, over the years (most recently in Arusha and in the context of CADA program) there has been a good deal of discussion concerning Zambia's role in and relationship to regional programs. Attention has centered on transportation schemes, but potential training, trade and other regional activities have been considered.

Zambia's enthusiams for such ventures has diminished almost in direct proportion to the decline in its economy. Not surprisingly the Government has expressed interest in those "regional" projects which primarily benefit Zambia. Lately the Government has stated on more than one occasion that it is important to improve what already exists whether school systems, transport outes, etc.

Nevertheless, two transport schemes are of such obvious benefit that we and the Zambians believe that they should be undertaken as quickly as possible:

-- Rehabilitation and improvement of the road from the Great East Road in Zambia to the Railhead at Moatize in Mozambique. This Road is unimproved and virtually impassible during the rainy season. Paving would provide Zambia with its shortest all weather route to the sea and enhance access to the ports of Beria and Ncala.

-- Road across the Pedicle. Paving this road would open up Zambia's northern province presently isolated to a large degree during the November to April rainly season and provide better access to and from one of the country's most fertile areas.

While regional cooperation is important to solving some of Zambia's problems, especially in the transport sector, the CDSS makes no attempt to associate funding levels with these projects.

XIII - Proposed Assistance Planning Level (PAPL) ($ millions)

	FY 82 G	FY 82 L	FY 83 G	FY 83 L	FY 84 G	FY 84 L	FY 85 G	FY 85 L	FY 86 G	FY 86 L	TOTAL G	TOTAL L
I. Develop Policy, Information, Techniques, Research and Training to link small Farmers to Increased Food Production												
A. Procedures for Ag Analysis, Planning, and Policy Formulation	7	--	6	--	6	--	6	--	5	--	30	--
B. Ag Research, Ag Education and Training, Surveys of Traditional Farmer, Ag Statistics	5	25	5	25	5	20	5	15	5	10	25	95
II. Increased Food Production and Small Farmer Income in Crop Development Zones	3	--	4	5	4	10	9	20	10	30	30	65
TOTAL	15	25	15	30	15	30	20	35	20	40	85	160
III. PL 480 Title 1/III	--	15	15	--	17	00	20	--	20	--	72	15

A PAPL of $245 million for the FY 1982 - FY 1986 period has been proposed. All of it is for agriculture and agriculture related activities. Reflecting Zambia's potential economic resources, 65% of this amount is in the form of loans. The mix between the development of information and initial interventions and larger agricultural programs reflects AID's objectives of increasing small farmer incomes and total food production. It is foreseen that by about 1984 AID's balance of payments support program will have been phased out and AID will have shifted from a Title I to a Title III PL 480 program.

The PAPL does not delineate between Development Assistance or Economic Support Funds (ESF). AID/Zambia was provided with an Indicative Planning Allocation (IPA) for FY 1986 of $23 million and informed that ESF was not considered in establishing IPA Levels. Since an overall level of $23 million would be an astounging downturn in assistance we have developed PAPL amounts that take this anomaly into account.

The PAPL of $245 million between FY 1982 and FY 1986 is appropriate in light of Zambia's economic history and recent events and the diversification of the economy and reorientation of agriculture towards self-sufficiency. The problems are complex and they are long-term. Zambia needs more financial and technical assistance. The country needs to know more about its rural poor yet it needs to get on with a

development program and stick to it over the long haul.

The level of assistance proposed will address these facets of the Zambian scene. It will also stretch the absorptive capacity of the Government, but this is a key element to be addressed by the AID program. The program proposed will also stretch the administrative capacity of the local AID office, but should be handled satisfactorily if the Program Implementation and Staffing Strategy is followed.

XIV. Program Implementation and Staffing

Zambia is one of several field posts in Africa where for political, logistical, environmental and programmatic reasons, fully staffed offices are not in order. Given limited U.S. Direct Hire Staffing (currently two rising to six by 1984) and the fact that Zambia has had the second largest AID program south of the Sahara in recent years, there are four guidelines to be recommended:

1. Once a discrete strategy is developed with a country, AID's program in that country should adhere firmly to it, utilizing the various tools at the Agency's disposal (loans, grants and food) in a coordinated and tight-knit fashion. Virtually all else should be set aside. AID should not be diverted, and should resist all pressures to do so. Time consuming, small projects through PVOs would be undertaken only if they clearly fall within the stated strategy. They must promise a potential payoff either as pilot projects or initial phases leading to larger activities within the agreed strategy. Defining a strategy and sticking to it will minimize the number of people needed to manage AID's program and will ease problems of monitoring, evaluation and accountability.

2. AID field posts should continue to rely on outside resources for critical support activities, for instance, design, contracting, engineering, procurement, and legal services, many of which are not of long duration.

3. The support services should be provided or coordinated largely by the nearby Regional Economic Development Services Office (REDSO). In the case of Zambia, the support from REDSO/EA in Nairobi has been extremely helpful and timely. The proximity of regional services has on more than one occasion allowed us to be responsive to a crisis situation such as the present food emergency in Zambia. Communications with Nairobi are easy, and there are frequent non-stop flights to and from Nairobi.

4. Finally, as the Zambia program has begun to swing away from solely balance of payments supports to development projects, REDSO has and should continue to provide or arrange for the design and technical skills needed to develop projects. In Zambia these are being designed in agricultural research and extension and institutional development and manpower training. The expertise brought to bear from Nairobi is based on area specific knowledge and continuous involvement.

ANNEX I

TABLE 1

Province	Principal Crops (Area in acres) Maize	Groundnuts	Sorghum	Beans	Fertilizer Sales Tons - 1978
Central	203,000	1,000	11,200	1,200	33,083
Copperbelt and Northwestern	43,400	21,700	136,000	2,800	6,074
Eastern	279,300	4,300	2,300	6,500	17,713
Luapula	10,800	10,000	-	1,100	981
Northern	20,200	16,200	14,400	8,100	2,357
Southern	323,600	12,900	41,200	4,200	35,836
Western	124,100	-	10,700	-	1,853
Lusaka	-	-	-	-	12,764
TOTALS	1,022,400	126,200	104,800	24,000	110,661

ANNEX I

TABLE 2

Agricultural Market Production, Selected Crops, 1971/72-1979/80

CROP	UNIT	CROP YEAR 1971/72	1977/78	1978/79	1979/80 (Provisional)
Maize	'000 bags[1]	1,383	7,734	6,439	3,600
Sunflower	'000 bags[2]	N/A	266	151	-
Virginia Flue-cured tobacco	'000 kgs.	6,248	5,588	3,784	-
Burley Tobacco	'000 kgs.	389	312	290	-
Shelled groundnuts	'000 bags[3]	84.7	93	28	-

[1] one bag = 90 kgs.

[2] one bag = 50 kgs.

[3] one bag = 80 kgs.

Source: "Zambia in Figures", CSO, January 1980

ANNEX I

TABLE 3

EXPORTS AND IMPORTS OF PRINCIPAL AGRICULTURAL COMMODITIES, SELECTED YEARS

	1971	1977	1978	1979 (Provisional)
		(ZK ' 000)		
Exports				
Tobacco	3,512	5,783	3,481	4,000
Total exports (FOB)	485,177	708,016	675,314	1,094,000
Imports				
Food	48,193	28,672	31,544	-
Beverages and tobacco	1,417	879	678	-
Oils and fats	4,516	9,108	7,169	-
Total imports	399,282	529,970	493,932	625,000
Unit value exports[1]	116.5	276.5	-	-
Unit value imports[1]	64.2	93.4		

[1] 1963-73 = 100

ANNEX I

TABLE 4

VALUE OF FOOD IMPORTS, AGRICULTURAL EXPORTS

AND DOMESTIC MARKETED AGRICULTURAL PRODUCTION

YEAR	Total Value of Food Imports	Total Value of Agricultural Exports	Estimated Gross Value of Marketed Domestic Production	
			(all)	(maize)
1964	14.3	9.0	21.8	7.6
1965	16.5	9.2	23.8	10.0
1966	19.8	9.4	30.0	14.0
1967	21.4	15.0	30.1	13.0
1968	24.1	8.2	39.0	8.3
1969	30.4	6.0	33.4	9.6
1970	30.4	5.3	31.3	N/A
1971	48.2	3.5	48.2	17.8
1972	37.1	5.4	63.1	29.3
1973	24.9	N/A	54.7	17.6
1974	N/A	N/A	N/A	28.0[1]
1975	N/A	N/A	N/A	31.0[1]
1976	N/A	N/A	N/A	62.0[1]
1977	28.7	6.3	N/A	49.0[1]
1978	31.9	11.3	N/A	N/A
1979	-	-	-	-
1980	-	-	-	-

[1] Estimates from crop year data.

Source: WB reports, CSO reports and staff estimates.

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