

**AGENCY FOR
INTERNATIONAL
DEVELOPMENT**



**COUNTRY DEVELOPMENT
STRATEGY STATEMENT**

FY 1981

SUDAN

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SUDAN

COUNTRY DEVELOPMENT STRATEGY STATEMENT

I. Description of the Poor

With a per capita GNP of about \$300, Sudan ranks among the 25 least developed countries in the world. While this figure, like most available statistical data, is an average for the entire country, it makes abundantly clear that the majority of some 16 million Sudanese are among the poorest of the poor.

Sudan's poor majority appear to fall into four major categories. At the bottom of the scale are the traditional farmers and nomadic groups, accounting for well over half the total population. Migrant agricultural workers, attracted by somewhat higher income away from traditional farming, form another category. Next probably come the urban unskilled whose wages tend to be higher than rural daily scales, and who, in general, have better access to government-provided services. Finally rank the tenant farmers with access to education and medical services, at least in the older schemes, and who tend to hire migrant workers for much of their labor needs.

It is estimated that the top 10% of households account for about a third of total income earned, in contrast to just 3% for the bottom decile, and only one-third for the entire bottom 50% of households. Average incomes in rural areas approximate about one-third those of urban dwellers, underscoring a considerable income disparity and very low standard of living of the Sudanese traditional farmers, but a more even income distribution than found in many countries.

Khartoum, with an estimated population of one million, contains by far the largest number of urban poor, with Port Sudan (population 100,000) next in importance. Tenant farmers and most of the migrant labor force are located primarily on the large irrigation schemes between the Blue and White Nile south of Khartoum. The traditional agriculturist, however, is thinly dispersed over a vast geographic area with minimal access to any but local markets and the lowest kind of health or educational services, if any at all. There is no all-weather road network for most of the country.

Considerable ethnic diversity is found on the newer irrigation schemes, but tenants tend to be Arabic speakers. Migrant agricultural workers, like the traditional agriculture sub-sector, represent many ethnic and linguistic groups. There are over 100 tribal languages in the South alone. In this region, most of the rural poor are settled farmers, while in the North there is a sizeable nomadic and semi-nomadic population in addition to the traditional farmers.

The West (North and South Kordofan, North and South Darfur) and particularly the six provinces in the South are much the poorest of the country. Average incomes in these provinces may be only two-thirds that of the rural areas as a whole and one-fourth that of urban areas. The North and East enroll about three times the proportion of children in schools as the West, and the Southern provinces only about one-sixth as much as the entire country. Female enrollments lag substantially behind those of males, one-third the total at the primary level, one-fourth at the secondary level, and at the tertiary level the proportion falls to one-eighth. These urban/rural and

male/female imbalances are exaggerated as well by the qualitative difference in schools and the hidden subsidies which rise substantially with the level of education. While improving, adult illiteracy of the rural population in these regions must be at least 90%.

Most doctors are located in just two provinces, Khartoum and Gezira, where the population per public health care unit is 3,000 to 4,000. In the West this figure rises to about 15,000 and is even higher in much of the South. Malaria, the single most prevalent communicable disease, is endemic throughout the country, affecting about 20% of the population in Gezira and, at some time in their lives, almost everyone in the South. Gastroenteritis and tuberculosis, the two next most important health problems, are uncommonly high in these outlying regions, as is malnutrition, i.e., anemia and Vitamin A deficiencies.

Despite large pockets of poverty, Sudan, unlike most developing countries, has only negligible open unemployment. It is a country with vast areas suitable for agricultural purposes and open to new population. Sudan also has a relatively large migrant agricultural force, numbering perhaps 1,000,000. A high proportion of these workers move from one area to another from season to season and remain permanently in this employment category. This labor market apparently functions quite well with competitively set wages. In recent years, Saudi Arabia and the Gulf States have offered very attractive employment alternatives to even the unskilled in Sudan. While in part a detriment to domestic development, this flow has enhanced the upward mobility of the unskilled.

TABLE I
ECONOMIC/SOCIAL INDICATORS

	Sudan	
	1960	Most Recent Estimate
GNP PER CAPITA (U.S.\$)	<u>a/</u>	290.0
POPULATION AND VITAL STATISTICS		
Population (midyear, million)	11.2	16.0
Vital Statistics:		
Average Birth Rate (1 thous.)	50.7	47.8
Average Death Rate (1 thous.)	24.7	17.5
Infant Mortality Rate (1 thous.)	159.0	132.0
Life Expectancy at Birth (yrs.)	41.1	48.6
Age Structure (Percent)		
0 to 14 years old	47.0 <u>b/</u>	45.0
Population Growth Rate		2.1%
HEALTH AND NUTRITION		
Population per Physician	27,820 <u>b/</u>	11,580 <u>a/</u>
Population per Nursing Person	3,030 <u>b, c/</u>	1,640 <u>a, b/</u>
Population per Hospital Bed	950 <u>b, f/</u>	----
Per Capita Supply of:		
Calories (% of requirements)	61.0	92.0 <u>c/</u>
Protein (grams per day)	55.0	63.0 <u>c/</u>
EDUCATION		
Adjusted Enrollment Rated		
Primary School	25.0 <u>g/</u>	40.0 <u>a, d/</u>
Secondary School	3.0 <u>g/</u>	8.0 <u>a, d/</u>
Years of Schooling Provided (First and Second Level)	12.0	12.0
Vocational Enrollment (% of Secondary)	3.0	2.0 <u>a, e/</u>
Adult Literacy Rate (%)	---	19.0
CONSUMPTION		
Radio Receiver (per thous. pop.)	1.0	90.0 <u>a/</u>
Passenger Cars (per thous. pop.)	1.0	2.0 <u>a/</u>
Electricity (kw/yr. per cap.)	8.0	19.0
Newsprint (kg/yr. per cap.)	0.1	0.1

TABLE I (continued)

1960:

- a/ Under revision
- b/ 1962
- c/ Including assistant nurses
- f/ Government
- g/ 7-10 and 11-18 years of age, respectively

Most Recent Estimate:

- a/ 1972
- b/ Including assistant nurses
- c/ 1969-71 average
- d/ 7-12 and 13-17 years of age, respectively
- e/ Beginning 1970, the duration of general secondary education was reduced.

II. Causes of Poverty

Like most lesser-developed countries, Sudan has a large poor majority because the country is poor. However, past developmental policies have contributed to the uneven distribution of income. Sudan's vastness and sparse population, and therefore the exceedingly high cost of reaching its population, also act as an important constraint to rapid improvement, as does its ethnic diversity.

Sudan's poverty typically has its basic roots in historical and cultural patterns, not clearly understood. At the crossroads for peoples from many parts of Africa and the Arab world, the Sudanese reflect many ethnic and linguistic groups and subgroups, from nomadic herdsman in the North to the varied black Africa sedentary tribes in the South. Boundaries arbitrarily drawn in the last century encompassed these diverse peoples into a geographic region called the Sudan. For many, the idea of "nationhood" as a concept, with its rights and duties, has little meaning. A sense of obligation and responsibility extends little beyond the family and tribal groupings.

The Sudan furthermore has paid the price of a seventeen-year civil war ending only in 1972. It diverted already scarce resources away from developmental efforts, not to mention the heavy loss of life and physical infrastructure in the South, and of course the resentments which remain.

Sudan's modern economic development began in the latter part of the nineteenth century. Some fifty to eighty years ago the British constructed a port and the basic railroad system in existence today. In the 1920's they also developed the huge Gezira irrigation scheme. Together these investments provided the impetus to Sudan's development and are of major importance even now.

The pattern of proportionately heavy investment in an irrigation and mechanized agricultural scheme prevailed as well after independence in 1956. Without question the scheme benefitted the traditional farmers who became tenants, and to a lesser extent those who work as migrant laborers. Nevertheless, the problems of the traditional agriculturist in his own environment have been largely ignored, and almost no investment in transportation occurred for a period of 30 to 40 years.

Rather inefficient management of the government schemes, together with economically irrational pricing and costing policies, probably have limited growth of tenant and migrant workers' income. Heavy reliance on various import duties and taxes on agricultural exports fall upon the tenant, and to a lesser extent the traditional farmer, acting as a disincentive to more rapid growth. Most observers believe the tax structure and controlled foreign exchange rates favor the commercial/industrial sectors to the detriment of agriculture. They favor as well capital intensive activities at the expense of employment, and import substitution rather than exports.

While huge areas of land suitable for agricultural purposes are available for new populations -- a major economic advantage -- Sudan's vastness also acts as a significant constraint to overall development and more equitable sharing of its benefits. The majority of the 16 million Sudanese are thinly dispersed over an area one-third the size of the U.S., largely cut off from even regional markets, let alone Khartoum and world trade. Most goods and inputs simply are not available. Investment in transportation to reach these people far exceeds even the most ambitious medium-term projections. Investment

and costs of providing services are very high on a per capita basis, thereby greatly lowering benefit/cost ratios. Without access to markets, inputs, education, health and other services, development of the traditional farming sector cannot occur. Obviously the process of change will be slow and large numbers of people will not benefit directly for years to come.

Perhaps of equal importance, the limited knowledge available for improving agricultural techniques, and introducing new crops and income-earning opportunities to the traditional farmers acts as an exceedingly serious constraint. Almost all agricultural research in the past related to the modern irrigated agricultural sector. There simply is no technological package designed for the traditional sector. The difficulty is further complicated by the wide variations in climate, soil, agricultural practices, and cultural traditions found in the Sudan, all requiring particular treatment. There is no short-term solutions to this problem.

Corollarily, a very limited public and private institutional presence exists beyond the provincial capitals. Without counterpart organizations with which to work, donor assistance can have only minimal self-sustaining effects in reaching the rural poor. The professional competence, however, of officials outside Khartoum is better than one would expect, at least in the North. Extending public sector services, nevertheless, to such a widely scattered population is a slow process, and of course costly, thus further straining an already over-extended budget.

The recent deterioration in Sudan's financial situation also poses a serious threat to development and the GOS' ability to address questions of

equity in coming years. An overly ambitious development program (with emphasis on the modern agricultural sector) has resulted in a disastrous balance of payments situation. Donors shifted from program support to project assistance, leaving much of the foreign exchange burden in the agricultural and industrial sectors to the Sudanese. Huge short- and medium-term debts were accrued in both the public and private sector. A sluggish performance of cotton exports also contributed to the debt crisis. Arrearages on foreign debt are estimated at \$1 billion, with additional debts maturing each month. Sudan's foreign exchange is exhausted as is her foreign borrowing capacity. Rising GOS deficit domestic financing is adding inflationary pressure, estimated at 20% to 30% a year.

The GOS is discussing revised development and revised budget levels for the next several years, along with agricultural policy issues preparatory to a standby agreement. An agreement should be reached shortly providing a measure of relief. Even with IMF accords and a scaling back of the development effort, Sudan will need major levels of balance of payments support from donors to avoid economic and political instability. Some reduction in the programs planned for the traditional agriculture sector is inevitable. While long-term economic prospects are quite good, they are not bright at all in the short- to medium-term.

III. Progress and Commitment

At the macro level Sudan's overall economic performance since independence has been reasonably good. No reliable national accounts exist, but the evidence suggests real GNP increased about 4%-5% from the mid-1950's to the early 1970's, with population growing at something over 2% annually. Agriculture particularly has injected a dynamic, if geographically unbalanced element of growth, achieving yearly increases in output in the order of 5%. This sector dominates the economy contributing nearly 50% of the GDP, 95% of exports, 50% of the government revenue, and income and employment for the majority of the population. Services and trade also loom large in the national accounts (40%) with manufacturing and mining representing about 10% of GDP.

There has been improvement in the ratio of capital and intermediate goods imports to total imports, largely due to efforts to improve the transport sector. Consumer items represented well over 60% of the import bill in the late 1960's, but are now less than 40%. Since 1972, however, the payment position has deteriorated markedly, threatening overall developmental efforts.

Government-financed activities expanded very rapidly during the past two decades, approaching 11% a year. Revenue raising performance too was impressive with an annual increase of 9%. Unfortunately, the tax structure tends to be regressive as described earlier. Expenditures (and deficits) by Provincial-level governments too have risen markedly in the last decade or so.

While developmental expenditures about equal central government recurrent expenditures in the early 1960's, as Sudan undertook large investment schemes,

they fell gradually to about 25% in the early 1970's reflecting the rise in security expenditures (associated with the civil war) and public services, largely in the urban areas.

The investment in modern agriculture while proportionately high, created employment for perhaps 1,000,000 seasonal agricultural workers and up to 200,000 tenants. Significant numbers of the poor majority therefore have benefitted.

Industrialization, largely agriculturally related, occurred primarily through the creation of public corporations. They are not efficient and have not contributed optimally to Sudan's development. Sudan's considerable attempt to achieve a balanced geographic industrial balance, however desirable on equity grounds, has not been successful. Plants were located too far from markets and the transportation system is still too rudimentary to support the projects.

In summary then, Sudan's overall economic record has been mixed. Its growth was respectable, particularly considering the political strife. The recent experiment with socialism proved very costly in the short run, in economic terms, but valuable lessons were learned and not likely to be forgotten. Problems generally are approached quite programmatically and the Sudanese now seem prepared to face up to their current financial crisis.

Governmental commitment to a future program is not easily measured, but the Six-Year Development Plan, if anything, is overly ambitious on all counts. It is the first phase of an eighteen-year prospective development plan for the Sudan. During the period 1977 to 1983 an estimated L.S. 1,570

million would be allocated for development in the following shares by sector:

<u>SECTOR</u>	<u>% SHARE</u>
Agriculture and Irrigation	32
Industry, Mining, Power and Tourism	25
Transport and Communications	24
Social Services and Public Administration	19

The objectives of the SYP are to gradually increase the average annual growth rate in GDP to 7.5 percent; raise the contribution to the economy of the non-agricultural sector, such as industry and mining; improve the output of basic social services; and establish the position of the Sudan as a major producer of primary and processed agricultural commodities.

The main elements of the strategy are:

- (1) Improvement of the performance and efficiency of the public sector.
- (2) Expansion in the delivery of productive inputs, marketable commodities and government services through improvements in the transport sector.
- (3) Decentralization of development authority and funding to the province-level, in order to identify and solve their problems locally.
- (4) Adoption of policies and measures to insure closer coordination, liaison and integration among the various sectors of the economy, so as to secure maximum increase in production, productivity and performance, avoiding duplication of effort and waste of resources.
- (5) Transformation of the traditional agricultural sector and its integration with the modern and market sectors. This aim will be in the

direction of eliminating existing dualism and imbalances in the economy.

In summary, the overall strategy aims at showing ways and means (including decentralization of authority) of realizing the national objectives, particularly improving the living standards of all citizens, increasing the growth rate, and achieving social equity and balanced regional growth.

In rhetoric at least it does shift considerable priority to the traditional sector. Its goals will not be achieved for want of commitment, but rather the lack of financial resources, managerial talent, and supporting infrastructure. The establishment of targets in the current IMF discussions should strike a balance between payoff in the modern sector and the longer term interests of the traditional farmers.

The openness of Sudanese society provides reason for some optimism. The elite bear the stamp of rural tradition from which they came very recently. Extended family ties and responsibilities make even the wealthy aware of the needs and aspirations of the poor. While no guarantee of action, awareness is its precondition, and the family connections do provide a kind of pressure to act.

The decision to decentralize governmental functions clearly reflects the government's recognition of diverse regional interests and the need and desire for greater autonomy in solving local problems. Delegation of responsibility and authority requires the transfer of Khartoum-based personnel as well -- not an easy task. The relationship of regional authorities to elected regional councils along with other issues remains unclear. The debate, however, is refreshing and likely to produce beneficial results.

Sudan's human rights record, as evidenced by the most recent report on the subject, has improved markedly in recent years. Virtually all political prisoners have been released, including Communists, and several of the most prominent opposition figures have moved into senior party positions. Parliamentary elections were held with opposition candidates sweeping the elections in the South. Complete freedom does not exist and there is far to go before women or all tribal and ethnic groups have fully equal rights. Poverty itself retards progress. Nevertheless, the current regime is not tyrannical and the rule of law largely prevails.

IV. Other Donor Assistance

The donor community consists of about 60 members, including 25 bilateral donors, 15 non-government organizations, 4 multilateral organizations, as well as 12 agencies of the UN family. The Arab bilateral and multilateral donors provide by far the largest amounts of assistance, probably in the range of several hundred million dollars a year. The World Bank, with an annual program of about \$70 million, is the largest Western donor, with the EEC, Federal Republic of Germany, and the Netherlands all in the \$20 to \$40 million a year range. The UK nearly falls in this category as well. As estimated by the UNDP, technical assistance, as opposed to capital assistance, amounted to about \$50 million in 1977 on an expenditure basis, out of obligations of perhaps over \$100 million. As the A.I.D. program gets underway, we clearly will be one of the major donors and providing an even larger share of all technical assistance.

By and large donor emphasis corresponds closely with Sudanese priorities, with most aid going to agriculture and related infrastructure, then to improvement of human resources (health, education, services, and relief). Most of the donors with whom we have close contact are giving growing emphasis to rural development as opposed to industrial development. They show greater willingness to finance capital projects related to this objective than A.I.D., however. The latest UNDP report on donor assistance indicates that about 40% of the technical assistance supports the agricultural sector with transportation, communications, education and health next in importance. While the proportions differ somewhat, these sectors are the

most important recipients of capital assistance as well. Arab assistance is heavily concentrated in the modern agricultural sector and in food processing.

There are more donors working in the South than in the North. Most of the PVO activity can be found there, largely donors from Christian agencies. The Norwegian Christian Relief, for example, provides about \$5 million a year to this region in support of a rural development project. There are no figures for the distribution of aid to the South, but it probably is at least proportionate to its population.

Donor coordination is accomplished on an ad hoc basis. Like most countries, the Sudanese choose not to bring donors together to discuss matters of common interest (CG meetings are the exception). USAID/S has good working relations with the major Western donors and we meet on many occasions. We are particularly pleased with our improving working relationship with the World Bank, in part resulting from our jointly-funded agriculture research project. Like other donors, we have not been successful in our efforts to coordinate with the Arab donors. In the future, we plan to sponsor perhaps bilateral luncheons of the major Western donors, thereby establishing an informal but regular basis for interchange.

V. Regional Influences

Mideast politics and economics influence the Sudan infinitely more than the African scene. The Nile waters provide the livelihood to both Sudan and Egypt and vitally link these two countries together. As a predominantly Moslem nation, Sudan considers itself part of the Arab world. Arab aid and private investment dominate financial inflows under these headings and Arab demand for labor is a major influence on the Sudanese economy. Conversely, economic relations with the African countries are minimal, as essentially neighboring African economies compete with rather than complement the Sudan. However, a road through Kenya is important to the Southern Sudan, and A.I.D. experiences in the Sahel might prove useful to our program planning given the somewhat similar problems.

We are very limited in our ability to assess the Arab economic influence. Important decisions are made on a bilateral basis, usually with no public announcements. Local embassies know little about economic aid flows and say even less. A.I.D.'s reimbursable program too encounters difficulties. Both the Sudanese and their Arab brothers resent the rather aggressive efforts to further the program. They know what the U.S. has to offer and consider discussions of financing very much a bilateral, not a trilateral matter.

VI. A Growth with Equity Strategy

The Development Plan notwithstanding, there exists no clearly defined strategy for achieving growth with equity in the Sudan, complete with financial and balance of payments analysis, and sector/regional allocations. However, sufficient understanding of some problems exist to describe basic elements of such strategy, thus providing a kind of framework for the much more narrowly focused A.I.D. role discussed in the succeeding sections.

With negligible overt unemployment in Sudan, the thrust of a strategy balancing growth and equity is to increase the productivity of the labor force on an equitable basis. Some redistribution of benefits can be achieved directly through improved health and educational facilities, but a prime purpose for public services should be to give low income producers the opportunity to improve their economic performance. Movement towards this goal could be financed primarily by taxes collected from the modern sector as well as by external donor assistance. With much uncultivated land open to all comers, export markets for agricultural surpluses, and large potential inflows of capital, Sudan enjoys very favorable medium- to long-term developmental with equity prospects.

A. Financial Crisis

Despite bright long-term prospects, the overriding concern of the GOS in the short-run quite rightly will be the resolution of its financial crisis, not growth and equity. Inflation (20% to 30% a year) and a balance of payments gap (ca. \$500 million on current account) not to mention arrearages on foreign debt (ca. \$1 billion) potentially threaten economic stability. The rate of

increase in development expenditures and domestic debt must be reduced, major conditions of a standby agreement now under negotiation with the IMF. The agreement also would modify government policy which favors export crops at the expense of imports. (The signing of this agreement should occur in a few months.) Expected financial support, some of which is contingent on the IMF agreement, together with debt cancellation and rescheduling, will help overcome, but not solve, the crisis.

The GOS recognizes fully that capital assistance provided on a project basis leaves much related costs, foreign and domestic, to the Sudanese, thus adding to the problem. Donors too will have to realize the importance of covering foreign exchange and recurrent budget costs of their projects in the next four years, to buy time for the investment in Sudan's modern agriculture sector to begin to pay off in increased exports and budget revenues. The Sudanese require all assistance on the most concessional of terms.

B. Agriculture

Agriculture will continue as the dominant sector in the Sudan for several decades. Some observers estimate as much as 200 million acres of arable land is available in contrast to 15 million acres now in crops. While the estimate may be optimistic, all agree much usable land is available and in ten years Sudan can be self-sufficient in food. Agriculture offers as well considerable potential over time to expand exports, thereby improving the balance of payments situation, and to generate revenues for development in general.

1. Irrigation

Irrigated agriculture provides the backbone of Sudan's economy. It has Nile waters still available for new irrigation purposes, and more projected as its share from the Jonglei Canal project. Projects currently underway require, however, large public sector investment with a very high imported commodity component. Yields on existing schemes are generally low with some evidence that they may be declining. Absentee tenant/landlordism too is quite common, bringing into question certain social objectives of these schemes. Most observers recommend concentrating on improved administration, some changes in agricultural practices, and a gradual reduction in investment in new projects. Management overhead is very high and decisions tend to be over-centralized. These policy changes could permit the reduction in the size of average holdings, thereby benefitting a greater number of new tenants (i.e., traditional farmers).

Pricing policies too should be changed. A cost system and revenue system that make both management and tenant responsive to financial returns on all crops are badly needed.

2. Mechanized Rainfed Agriculture

About four million acres are included in various mechanized rainfed schemes. Most holdings are 1,000 acres or more. Large areas of rainfed land are too heavy to work by hand and must be farmed with equipment. However, a more effective personal income tax structure is needed vis-a-vis these landholders, and land rent is very low. Of great concern also is the evidence that productivity is declining for the most important crops, with dura

yields, for example, on the average less than for the country as a whole, including the traditional sector. The land tenure system encourages soil mining as the tenant has insufficient long-term commitment to the land.

Sudan probably should rely to the maximum extent possible on the private sector for this subsector. The evidence suggests the private schemes are better managed.

3. Traditional Agriculture

On equity, as well as developmental grounds, a case can be made for increased attention to the needs of the traditional farmer. Mechanized rainfed agriculture creates a small number of high income earners (perhaps \$5,000/year) while irrigation produces middle income tenants (\$3,000/year). Clearly both will attract farmers from the traditional sector, even at the migrant worker wage scale. However, despite the expected expansion, the modern agriculture sector cannot provide employment for the normal rate of increase of the rural population. Some 250,000 new jobs a year would be required.

Further, sample data indicate the rate of return on traditional agriculture and livestock can be quite high -- 12% or more. Direct investment requirements are low although considerable social and economic overhead capital would be needed.

The government will have to reorient its public services (e.g., agriculture research, extension, credit, training, etc.) towards the long neglected subsistence cultivation and livestock producers to overcome the waste of human resources represented by these low levels of productivity.

Physical infrastructure also is needed, particularly in rail transport, and secondary and feeder roads to local markets and the railhead. The local councils and self-help measures should be used to the maximum extent possible.

A program of applied research is essential to identify improvements and inputs needed. Varying ecological conditions require several sub-stations to conduct this research.

An extension system of some sort must be created in these remote areas as an integral part of the developmental process. A relatively small number of extension officers will be needed at first, not so much to teach but to learn from the farmer and feed back information to the research efforts. As research results prove practical, the extension role will change and expand.

Credit and other inputs increasingly will be required, and it will take many years to develop the institutional presence necessary. Governmental effort will be important in the process, but it should rely on private enterprise as well to respond to the growing opportunities. Farmer cooperatives can play a particularly important role in the supply and distribution of goods and services, including credit. Administration of these services should be decentralized to the provincial and local level to make them as responsive as possible to local needs and to maximize local participation and resources.

With development along these lines, some experts believe the growth rate of agriculture could rise to 4%-7% a year by the mid-1980's, with agricultural exports increasing by 8% to 10% a year. Development of

traditional agriculture will not cost as much in public funds as other types of agriculture, but it will take a long time for the full effects to materialize.

C. Industrialization

Despite past difficulties, the groundwork for further industrialization has been accomplished and compares favorably with other countries at a similar stage of development. There is good reason to believe that the processing of agricultural products offers sound industrial prospects, e.g., textiles, sugar and edible oils. Cement capacity too must be expanded. The current import tax and pricing structure favors the commercial sector as against the manufacturing sector. Most experts believe the entire tax and pricing structure is biased in favor of industry at the expense of agriculture. Protective measures should be reduced and applied only in the case of genuine infant industries which can be expected to be viable in time.

Unfortunately, top management in public corporations (which dominate this sector) is assigned with little regard to experience. There is gross overstaffing with little personnel control by plant managers. Some of these operations could in time make a profit, and there is a possibility the government will turn some operations over to private hands. Others will be a drain of public funds for years to come.

Geographic industrial disbursement, a legitimate objective particularly on equity grounds, should not be made, as in the past, without adequate consideration of the financial implications of site selection.

D. Transportation

Any strategy for growth and employment depends in large measure upon developments in the field of rail, highway, and river transport. Studies have been conducted laying out a generally accepted basis for investment decisions. Large sums of financing will be needed, however.

The operational efficiency of the railway simply must be improved. The system is practically at a standstill. Improvement will require better management as well as investment in some double tracking and rolling stock. The country is nearly totally dependent upon the Port Sudan-Khartoum route which has faced serious difficulties in recent years. Current programs in the West cannot proceed without improved rail service. The problem is critical.

Trunk roads and feeder roads, now almost non-existent, will bring subsistence farmers into contact with markets, facilitate migration and government effort to provide service.

Improvement in the river transport system too would greatly benefit the North and the South. Some additional investment would be required, but largely it is a question of better management. Air service, particularly within the country, must also be strengthened, only partially through the purchase of additional aircraft.

E. Education

Sudan has made impressive progress in the field of education since independence, but further improvement will be necessary to meet the challenge of coming decades. However, the central function of primary schooling has

been to prepare students for higher education, through a system of rote memorization. The result was an upward thrust which subordinates the whole system to the interests of a small minority and neglects the vast majority who barely complete the cycle.

The GOS apparently has wisely decided again to attempt to revamp the primary level curriculum with a program to be terminal for most students, with pre-vocational training for those who then wish to attend. No fees would be charged, and promotion probably will be automatic. The plan calls for a large number of one to two-teacher schools. A major teacher re-education effort, however, will be required to carry out this program.

Discussion of changes at the secondary level might result in a somewhat scaled-down system with less emphasis on the requirements for passing to the tertiary level. Vocational training at this level fails to meet the needs of the employee. One would hope an informal training system would be established providing short-term training closely linked to local requirements. Every effort must be made to assure this very costly terminal training is practical and truly related to the requirements of the job market.

The University of Khartoum with its long tradition has served the Sudan very well in the past. The Sudanese believe the rapidly growing drain of academically prepared persons to other Arab states forces the government to expand the higher education system, and two new universities have been opened.

Certainly the philosophy of these institutions can be commended, geared as they are to the U.S. Land Grant approach to the problems of the two

regions being served. If capital costs can be kept to a minimum they have the opportunity to serve Sudan's overall developmental needs perhaps better than the University of Khartoum, with its rather rigid European approach to higher education, and thereby extend higher educational opportunities to the poor.

F. Health

With endemic malaria, tuberculosis and bilharzia, and various gastronomic and nutritional problems, Sudan faces enormous tasks in the health sector, even though its ratio of doctors and other statistical evidence of facilities ranks high by African standards.

The government places highest priority on its anti-malaria program. An eradication program will not be possible for years to come but there is hope to reduce the incidence in rural areas through spraying and other measures. Benefit-cost data suggest such an expenditure is justified on economic as well as social grounds.

Major emphasis also should be given to extending the primary health care programs to rural areas. An excellent plan has been prepared for curative, preventive, and promotional activities with WHO assistance, and it is already being implemented in some regions. Nine months training is provided to locally selected health care workers, who then return to their village or nomadic group with supplies. Sudan is one of the few countries seriously moving forward with this approach so highly recommended by the developmental community. Its experience may provide a real test of an approach useful to other countries.

Financing this program seems feasible since it accounts for only about a quarter of the recurrent expenditures projected for health by the government.

G. Labor and Manpower

With the increased flow of Sudanese to other parts of the Arab world, there is growing evidence of labor shortages of professionals, skilled and semi-skilled most noticeably, and shortages of migrant agriculture workers too are reported.

Restraining the migration of those seeking higher wages is a difficult political problem. Since few Sudanese plan to stay abroad for a career, the return flow may show a marked increase in a few years. While impinging on development generally, the Arab countries require unskilled poor as well, and it has enhanced upward mobility at home. Some persons argue for a more rapid mechanization of the agriculture sector on the grounds of labor shortages. Whether or not slightly higher wages would attract sufficient numbers from the traditional sector with some time lag remains to be tested. It is an issue with very important equity considerations.

Urban sector employment is dominated by the government, both in numbers and its influence on wage scales. It has tended to guarantee university and secondary school graduates a job, a practice "officially" halted. However, a thorough review of the hiring and promotion practices of the civil service and public enterprises is long overdue. The workings of the private sector labor market are not as well understood. It is closely tied to small

family-run operations. Undue weight seems to be given to academic preparation even for unskilled workers in this sector.

H. Problems of the South

The six Southern provinces, with 5-6 million people, together are larger than a great many African countries. Their problems, however, are unique, if not in kind, certainly in degree. Deprivation of facilities, distance and isolation, and the extent of poverty are enormous. Nearly 20 years of civil war destroyed buildings and the road network, and left a generation of people with no formal education, not to mention the loss of life (male 20-30 year olds number only 7% of the female age group).

The region produces virtually no surplus and trades minimally with the outside world. One steamer a month with 3 barges and a total of 10,000 tons of cargo arrive in Juba from the North. Commodities primarily include wheat, soap, and a few hundred tons of fuel. The barges return empty. The railroad brings approximately the same volume perhaps once a week to Wau (approximately 500 miles from Juba) and also returns empty. Small amounts of coffee and tea from Zaire cross the border, some on its way to Khartoum via lorries. During the dry season, a few trucks a week do manage to carry goods between the North and the South. Total volume is insignificant. Trade with Kenya via Uganda moves along the only all-weather laterite road connecting the region to outside markets. This trade essentially consists of donor-financed project commodities. Daily flights are scheduled to Juba, but in fact planes fly only intermittantly and are booked weeks in advance.

Internally provincial capitals are cut off from one another during much of the year, and even when possible, travel is arduous, costly and time-consuming. A few lorries carry goods to various parts of the region. As a whole, however, it probably comes closer to a truly subsistence economy than any other region in Africa. Given these circumstances, only the barest outline of a development strategy emerges. Experts and observers without exception agree that transportation is the single most important constraint to development. Repairing the all-weather laterite road system is essential to tying the region together and linking its population, at least minimally, to the non-local markets and government services. Without improvement in the river transport system, the South will remain isolated from commercial ties to the North, and denied its only market for agricultural crops, a sub-sector of great potential. Concomitant with improvement in the transportation system is the imperative to strengthen the administrative structure. A regional government with complete autonomy was established in 1972 as part of the political settlement, and able persons are found at the top 2-3 positions of most ministries, a very considerable achievement in a few years time. Below this level, however, ministries are staffed with not even minimally trained personnel. The government hired many persons as a form of welfare and most are in their 20's and 30's with long careers ahead of them. It has little alternative but to train and upgrade this existing staff. It can neither afford nor find additional people who are trained in the needed numbers. A program providing general and specific training ranging from administration to vehicle maintenance may be the only hope for

the government carrying out its administrative responsibilities, let alone the development program.

Progress in the education and health sectors will be a staggering task. The government plans to teach in the vernacular for the first four years, requiring the preparation of new materials for the few schools that do exist. Arabic will be the language of instruction for the next four years of primary education, with English at the secondary level. It is an open question whether such a policy can ever be implemented successfully, however necessary on political grounds. The implication for teacher training and the demands on the students are awesome. Perhaps some kind of training program for primary school teachers is the highest priority.

With malaria incidence at nearly 100% for some areas, and very high rates for other diseases as well, the government bases its hopes on a primary health care program similar in nature to the North. Eradication programs are simply out of the question for some time. If the first years prove successful, the cadre of health care workers to be trained in effect will provide the only medical care for most persons for many years to come. The few hospitals must be strengthened but they reach too few beneficiaries to concentrate funds at this level.

The GOS financial crisis also weighs heavily on the South. The regional government generates almost no local currency, relying overwhelmingly on Khartoum for budget support. Funds normally are available to cover recurrent items in the regional budget, but the regional development budget experiences a very substantial shortfall (the projects in the South

financed directly by Khartoum are included in the national as opposed to the regional budget). The large gap between approved expenditures and actual development expenditures stems from inefficiency in Khartoum and Juba, but equally from the shortage of development financing in the country as a whole. The shortage of foreign exchange has debilitating effects on the South. The regional government can barely conduct its normal business for lack of fuel, vehicles and power generation. Spare parts too are virtually non-existent through government channels. In effect, donors finance nearly all development expenditures and inputs essential to their projects. A revenue base will evolve slowly. However, with recurrent costs growing rapidly and staggering development needs, donors should be made to provide some kind of financial support to the regional government.

With no proven technology, minimal institutional presence, a limited marketing system with few storage facilities, rudimentary, if any roads, the odds weigh heavily against development of traditional agriculture. Yet there is no alternative to accepting the challenge.

VII. Program Implications for A.I.D.

The previous sections, together with A.I.D.'s Congressional Mandate, strongly suggests our program primarily should focus on the problems in the traditional agriculture sector. With essentially no unemployment, the urban unskilled can find work, and like the tenant farmer, while poor, is probably better off than most traditional farmers and nomads. Migrant workers too in most instances have been attracted from the traditional sector apparently by better conditions in modern agriculture. Plans to incorporate the traditional agriculturists as tenants into modern agricultural schemes will not even absorb the natural population increase of this sub-sector. The largest and poorest population group in the Sudan will remain essentially outside the economic system unless greater attention is paid to their problems.

While the Sudan's Six-Year Development Plan gives increased emphasis to the traditional farmer, enormous problems stand in the way of progress. The financial crisis, a desperately weak transportation system, and exceedingly limited understanding of the sector act as the major constraints. Our strategy, therefore, is to maximize the balance of payments and local currency content of our program, bringing these resources to bear to the maximum extent possible on improved transportation and rural technology, primarily in the West and the South. In perhaps five years, when the larger development schemes begin to pay off, easing the financial situation, and when we have an appropriate choice of technologies for these rural areas, quite another program focus will be in order.

A. Guidelines for the North

1. Financial Assistance

Unlike many countries, excessive consumer goods imports are not the cause of the financial problem. It stems from an overly ambitious development effort and a shift from program to project assistance by donors. Fuel and spare parts shortages hinder Sudan's capacity to produce and market her exports from existing projects. Without balance of payments support for a few years, Sudan will not be able to absorb substantial amounts of capital assistance nor adequately support the many donor projects, including our own, all of which generate imports at least indirectly. A.I.D.'s tendency to focus attention on technical assistance at the expense of macro-economic issues in part explains why we have been tardy in responding to the Sudanese request for financial assistance earlier. Like A.I.D., donors tend to view the Sudan only in terms of their own projects. This matter should be the thrust of the Consultative Group meeting scheduled for later this year.

Our willingness to consider some form of balance of payments assistance has reassured the Sudan and will enable us to raise the subject with other donors, if desirable. The major responsibility for providing financial assistance must rest with Saudi Arabia and the other Arab donors, but they might be more willing to assist, albeit disproportionately, if they are convinced others too are willing to share the burden.

The HIG program offers a possible source of financial assistance, and a shelter sector survey has just been completed. The report described

housing/shelter as essentially an urban problem with barely 30% of the urban population able to purchase housing at this time, given existing standards of construction and financing of the government's housing program. Nevertheless, it recommends a \$5 million program over several years with projects in Port Sudan and Juba.

The high interest rate greatly concerns the Sudanese. And, extending our program to another economic sector and population growth limits USAID/S enthusiasm, as does the considerable technical assistance requirements and the limited balance of payments benefit in the near term. A final recommendation awaits further discussion with the Sudanese.

We see ample justification, however, for expanding the PL 480 sales/grant in the \$20-\$30 million range annually for the next few years. In addition, we propose a sector assistance grant program between \$10 and \$20 million a year over the same period. The foreign exchange and local currency from these programs in the first instance will be used in direct support of our efforts to alleviate the transportation and knowledge constraints to rural development. Any remaining funds would be programmed for high priority ongoing GOS programs of benefit to the traditional agriculturist also in the West and South.

In this way we can minimize the budgetary cuts to the traditional sector programs that otherwise would occur as a result of the IMF Agreement. The IMF argues correctly that existing projects should be completed before the GOS starts new high investment cost activities, posing a dilemma for the Sudanese in their relations with donors who finance large capital projects.

Will these donors provide future assistance in the form of program, rather than project aid, which the GOS may find impossible to accept? The World Bank at least is planning a program loan. Since A.I.D. does not support high cost irrigation and mechanized farming schemes, or industrial projects, our program largely escapes through the horns of this dilemma.

By providing the foreign exchange from sector assistance programs and the local currency from PL 480 sources to low-cost programs, we can protect an important element of the development budget and minimize the inflationary impact of these expenditures on the domestic economy. Further, because the Sudanese, at least in the North, possess the institutional capacity to absorb sector assistance, we can benefit the traditional sub-sector without the delays, high cost, and manpower commitment of new project development.

A range of sector support strategies were considered: program budgetary support, "projectized" support, systems support, commodity import programs and project incentive support. Each strategy seemed insufficient, and we will have to tailor features of each to the Sudanese situation. For example, special procedures may be necessary to assure that foreign exchange is used to finance the commodities specifically identified. Limited technical assistance too may be needed, but we do not see a requirement for extensive USAID staff to follow in detail the "project" activities supported by our financial assistance.

Broad policy issues will receive less attention than the actual use of the proceeds from our financial assistance programs. The basic policy --

devoting greater attention and resources to the traditional sectors -- already has been accepted by the Sudanese. Our program will help implement the policy. Our financial assistance programs, nevertheless, will support the IMF position on rationalizing prices and tax policy which tend to disadvantage agriculture. Our PL 480 discussions certainly will require that we address Sudan's wheat production policy as well. Some Sudanese and foreign advisors disagree with the IMF stand that wheat should not be grown here at all. We will help the GOS examine this important issue.

In sum, our financial assistance, while not large in comparison with the problem, is important, appreciated, and warranted.

2. Transportation

Without significant improvement in the transportation system, Sudan's entire development program, particularly in the West and South, will grind to a halt. Fortunately, the problem is recognized and considerable effort will be expended in this direction by the Sudanese and donors. USAID/S proposes to help fill the gap with both financial and project assistance.

Sudan has the most extensive (and oldest) railway system in all of Africa. Built by the British beginning in the late 19th century, it connects Khartoum to Egypt, Port Sudan (the only port) and the agricultural heartland (Gezira and neighboring schemes). The line to the West, completed about 20 years ago, provides the lifeline to this vast region some hundreds of miles beyond Khartoum. For all the miles of tracks, the system barely functions. Commodities flow into Port Sudan at about twice the railroad's capacity to move them. Two to four trains per month of 10-15 10-ton cars

roll at speeds barely averaging 20 miles an hour. Largely for financial reasons, little new investment has occurred, maintenance has been ignored, and spare parts not ordered. We understand only six engines now operate in a country one-third the size of the U.S. Insufficient capacity exists to bring donor-financed construction and developmental inputs even to existing rural development projects.

A multimillion dollar World Bank project will provide desperately needed rolling stock, spare parts, some double tracking and management assistance. The project, however, does not finance local cost construction (improved drainage, railway ties replacement, etc.) essential for an adequate connection to the West and onward to the South.

The Railway Corporation finds it difficult to cover these local costs from its own budget. We plan to allocate PL 480 Title III funds for this construction. The World Bank estimates 2-3 years will be required before the railroad again operates at reasonable efficiency.

Important highway construction is underway and/or planned for the near term. Plans call for the completion of the final link of Khartoum-Port Sudan via Gezira. A road south from Wad Medani (Gezira scheme) to Damazin along the Blue Nile, and another route to Kosti on the White Nile also are in progress. When completed paved roads will be increased from about 100 miles to over 2,500 miles with unquantifiable impact in the areas served. Given this commitment, little capacity exists to extend the network to El Obeid and beyond in the West for the next several years.

Project funds will upgrade the road from the Provincial capital (Damazin) to our Blue Nile project site. Without such improvement, the project is cut off from the outside for six months of the year. Also, we plan to use a Kuwaiti-financed study of the feeder road requirements in the West as a guide for possibly linking parts of this region to the railway.

Given the distance and population distribution along the Nile, river transport offers the most logical and least expensive transportation connection between Khartoum and the far reaches of the North and South. Yet almost no new investment in river transportation has occurred in recent years and the system is grossly inefficient. Other donors are looking at both the capital and technical assistance requirements. If their funds prove insufficient, we will consider PL 480 and/or sector assistance in the coming years.

We tentatively plan to use an inexpensive air boat to explore the uncharted river adjacent to our Abyei project to determine if, with dredging, barges could be used in this remote area. The experiment also will demonstrate the possibility of moving at least a few key people in and out of this, and perhaps other equally isolated areas during the six-month rainy season.

By coordinating with other donors, A.I.D. can make an important impact on the transportation constraints with relatively limited funds.

3. Appropriate Technology

With so little previous investigation of the traditional agriculturist, neither the Sudanese nor USAID/S has an adequate understanding of

their agricultural practices, relation to local markets, credit sources, etc. Almost no micro-level socioeconomic information exists. Our goal in coming years is the development of appropriate technology for increased agricultural production, improved health and possibly education. The appropriate choice must be low per capita cost, relatively small-scaled, economically and socially sound, and minimally dependent on institutional support of the government.

a. Agriculture and Environment

A major objective in our agricultural program will be the creation, with World Bank assistance, of a Sudanese capacity to research the problems of the vast and varied traditional agricultural sector on a continuing basis. No such capacity now exists. The Agricultural Research Corporation (an impressive institution with a good record) has devoted nearly its entire attention to the problems of irrigated agriculture. With additional resources, it can be expected to produce equally useful information for the traditional rainfed areas. Of necessity the expansion will take place in the four Western provinces, with GOS plans to extend ARC presence further in the next decade based upon the experiences of our project.

However valuable may be the research results over time, a considerable gestation period will occur before such information is forthcoming. The construction program in this remote region will be difficult, specialists must be trained, extensive baseline data is needed, and research plans must be developed. All these actions take time. We, therefore, will complement this broad institutional approach to research with experimental development projects.

Our Abyei and Blue Nile projects represent two rather different approaches to gain practical experience and knowledge of the traditional sector. Both projects, working through local and provincial authorities, experiment with new agricultural and related practices directly with farmers, as owners, on their own small land holdings. This approach has never been attempted in the Sudan. While some knowledge gained will be project specific, the lessons learned, both technical and institutional, certainly will provide an important foundation for new projects on a wider scale. We hope to develop a kind of rural development model, financially and managerially self-sufficient, worthy of replication in other parts of the country. This approach most interests Sudanese, who find it consistent with plans to decentralize development planning and implementation.

Our proposed rural planning project potentially will add further to our understanding of rural development problems. The Sudanese have undertaken a number of large and small rural development projects with donor assistance in recent years. Thus far, they have not reviewed and compared the various approaches and drawn the lessons from them. The Ministries of Planning and Agriculture, along with the University of Khartoum, and the Economic and Social Research Council have a major role to play in this inquiry, and have asked for A.I.D. assistance. The talent basically exists locally to carry out the review. A.I.D. can provide the catalyst to this effort.

Our substantial program interests in four Western provinces demand an A.I.D. involvement with environmental issues. The desert moves eastward and southward rapidly each year, almost entirely a result of human

action. Each project mentioned above has its environmental objectives, but a greater understanding of the impact of existing agricultural practices on this fragile environment is essential to prevent the destruction of the region. Desert creep will retard the livelihood of people in this vast region, perhaps before new income-raising technologies can be widely introduced.

As a first step, we have approved an agreement between Clark University and the University of Khartoum to help prepare a map and report showing the locations, nature and intensity of environmental problems on a province-by-province basis. Further, the North Kordofan Project will address the environmental issue, again on a pilot project basis. By and large, the Sudanese understand the technical causes of desert creep. Introducing the needed change is another matter. Our project will attempt to gain through actual experience insights into the economic, social and political constraints necessary for an action program. A much larger and longer-range program has been prepared by the Sudanese to be implemented as the lessons from our project are learned.

Finally, in anticipation that our research and pilot project prove successful, we are laying the groundwork for creating a suitable institutional framework to extend this "technology". We plan to link the existing agricultural service personnel at the provincial and district levels to our research efforts, and hope as well to maximize their role in an extension function. A CID team arrives soon to explore further basic elements of this key project.

b. Health

The GOS, with WHO assistance, recently prepared a well-designed strategy for addressing the country's health problems. Since eradication programs (malaria, schistosomiasis, river blindness, etc.) are too costly to be undertaken by the GOS in the near term, A.I.D. can make its most important contribution by supporting the primary health care program.

The primary health care plan calls for training village-selected primary health care workers, normally lower secondary school graduates, who then will return to their village with some supplies and a referral system to support them. The curriculum provides instruction in immunization, malnutrition, maternal and child health care, sanitation, and other aspects of preventive medicine. For years the development community has recommended this approach as the best, if not the only means of reaching substantial numbers of personnel with medical services. With such limited worldwide experience as a guide, careful evaluation of the experience will be necessary before we and the Sudanese consider the next phase of this experimental program.

Our program supports the rural health effort (again in the West and the South), both through our Primary Health Care Project and the Health Sector Assistance Project, which will cover much of the foreign exchange costs of medical supplies. Sector assistance enables us as well to work with the Maternal and Child Health Care Division in the Ministry of Health, making its program an integral part of the rural health care system. The Ministry recognizes the need to bring together these two programs, now administratively separate. Sector assistance makes it easier for us to assist in this process.

Our two health care projects potentially will lead us as well into a practical family planning effort. The Ministry of Health for the first time in our knowledge has expressed some interest in providing limited "family planning services", e.g., family spacing, through the MCH program. Discussions have just begun with assistance of the Population Center at Columbia University, and at most we anticipate only a pilot effort with some research involved in the first year or so. With labor shortages and vast unpopulated areas, Sudanese politicians see little reason to commit themselves on the side of family planning. Nevertheless, this very low key approach may prove important. Whatever services are agreed upon could be easily financed through ongoing projects and extended through an existing health care system, thus avoiding the creation of a competing program.

The reaction to our program of the many AID/W-financed family planning activities in the Sudan funded through private organizations remains a mystery. We assume the offices sponsoring the research, training and other activities periodically assess the results and meaning on a country-by-country basis. USAID/S will be guided by such an evaluation.

Our health program strikes a different balance between experimentation and the delivery of services than our other activities. Nevertheless, the quest for appropriate rural health technology is our major objective.

c. Education

USAID's plans for assistance in the education sector are still in the preliminary stage. The GOS recently acknowledged very importantly that primary schooling is terminal for most students, with important implications for a new curriculum. IDA will provide major financing, as we understand it,

for the construction of a number of small primary schools in rural areas, with emphasis in Western Sudan and the South. Such a project will not completely satisfy the need for schools, but it appears sizeable enough to test the Ministry of Education's absorptive capacity without our help.

We have had inquiries about A.I.D.'s interest in financing integrated technical training institutes in the West, but question this particular approach to the problem. Such institutions require sizeable capital investment with high recurring costs, and when operated by Ministries of Education often bear little relationship to the needs of employees. The primary need in our judgment, is for informal short-term training courses closely linked to market needs.

Teacher training (and retraining) may be the critical constraint in expanding primary and secondary education. We understand some funds from other donors are available for this purpose. In coming months, we will discuss these issues with the Sudanese, with the view to further strengthening our program focus in the Western Sudan and the South.

d. AID/W-Financed Activities

AID/W, often indirectly, funds any number of activities in the Sudan, anthropological to zoological. Many began before the Mission reopened. We recently discovered 15 activities about which we knew nothing. We are in no position at this time to comment on all of them.

With AID/W assistance we should identify and review them all in the coming months. Some, like the AMDP and AFGRAD projects, are exceedingly important from our standpoint. These projects allowed us to begin training programs at a time when project funds were not yet available. In addition to

contributing to our project objectives, we were able to respond to requests related to our broader interests as well. AFR/RA support has been most appreciated by USAID and the GOS. Important targets of opportunity consistently arise and we foresee a continued need for these programs, particularly to address the overwhelming training needs in the South.

B. Guidelines for the South

The Congressional Mandate as well as Sudanese politics compel A.I.D. to mount a program of some significance in the South. With approximately one-third the population, the GOS and the regional government believe roughly the same proportion of aid should be devoted to the region. The greater poverty and need in the area argue for a proportionately larger A.I.D. program, and we will move in this direction, recognizing the political sensitivity of this issue. The difficulties in responding however, cannot be overestimated. The needs are awesome and the remoteness of the South requires a rather different approach than in the North. Opening an office in Juba becomes the highest priority in responding to these needs. We barely can plan a program for the region from Khartoum, but we certainly cannot implement it from here.

With so few people in other groups, our target population, out of necessity, is the traditional rural agriculturalist. Our program will focus on the region's major constraints to growth, about which there is no disagreement among knowledgeable observers, i.e., transportation, inadequately trained government, and insufficient regional government finances. As in the North, virtually no proven technology exists for improved well-being of the traditional agriculture sector. While we cannot ignore this problem, inadequate governmental presence

and capacity limit efforts. A Blue Nile type project in the North will prove difficult to implement. In the South, implementation probably is impossible, at least until we have an office in the region.

1. Financial Assistance

The need in the South for financial assistance, both local currency and foreign exchange, is clear. This form of assistance presents more program difficulties, however, than in the North. It involves us in the allocation of funds between North and South. The GOS, however, readily accepted our proposal to allocate a significant portion of sector assistance and PL 480 Title III funds to support development in the South. The very size of this allocation (one-third or more) creates its own problems, vis-a-vis the regional government. The annual allocation of PL 480 resources alone approximates the actual developmental expenditures of the Southern government. Such large flows involve us intimately in their budgetary process. The prospect of receiving such significant aid levels has delighted government officials, but we must play our role carefully to avoid undue friction. The limited government capacity causes program difficulties as well. The regional government implements practically no development projects solely with its own funds, partly because of financial constraints. Equally restraining are the few people able to plan and implement development projects without help. We propose therefore, to program our assistance in support of other donor projects. This approach assures us that needed technical assistance will be available, minimizing our own management responsibilities. Since the regional government by and large has been unable to meet its financial responsibilities to donor projects, our assistance will not simply replace other funds. We will not be certain of the absorptive capacity of the

development budget, and therefore the financial allocation of financial assistance to the South, without further discussions in Juba.

Funds from our health sector program will directly support our primary health care program in the South without overtaxing the system. Agriculture sector finances will be used to upgrade the Agriculture Research Station at Yambio, adjacent to our Southern Manpower Agricultural Extension Project. We plan to link these key activities together to create an agricultural services program to the traditional agriculture sector. IVS, through an OPG, will provide the technical assistance needed to rehabilitate the research center's buildings and grounds. The IITA has agreed to provide the needed technical personnel to the station.

Admittedly circumstances in the South make it difficult to tightly focus financial assistance on a relatively few key problems. We may need to expand the use of these funds to a broader range of interests than in the North, a problem which does not particularly trouble USAID/S. The needs are so great and financial assistance provides an important means of helping immediately. We doubt seriously our ability to mount a traditional A.I.D. program in the South quickly. Living and working conditions in this remote area are as difficult as any place in the world, greatly restricting our ability to find direct-hire and contract personnel to implement our projects. However, to delay our program and deny this region desperately needed assistance for reasons of program purity seems unreasonable to say the least.

2. Transportation

The UN and other donors are repairing certain stretches of the laterite road system that existed before the Civil War. They prepared a

master plan and provided a certain amount of technical assistance as well. In a few years these projects will link Juba to some, but by no means all, the towns and villages in the region. The master road plan suggests two key sections of interest to A.I.D. Our FY 1979 program proposes upgrading the Mundri/Rumbek/Wau road thereby connecting a densely populated area to Juba. Nearly 90% of the population lives within a mile or so of the road. Another section studied by the Norwegians is now a trail, and if upgraded would connect the South to a laterite, all-weather road approaching the North in Kenya, providing a welcome alternative to the route through Uganda. We will be discussing this study soon with the ECC which also has funds available on a regional basis for a Kenya/Sudan road. With no development budget and no trained staff, the Southern Ministry of Public Works can contribute very little to any road project -- a limitation affecting all projects in the South. Laterite roads besides being essential, add less to future recurrent expenditure budgets than other capital projects, a not inconsiderable matter. Our road projects require a strong training component along the lines used by other donors.

The regional government also has inquired about A.I.D. interest in helping improve river transportation. At one time steamers provided regular, efficient, and cost-covering service for passengers and cargo on the Nile from Juba, through the Sud, up to Kosti and beyond. The Danes and Germans recently expressed interest in providing capital and technical assistance needed to link Khartoum and Juba again with a functioning river transportation system. In addition, several hundred thousand Nilotic people living along the Nile and its tributaries in the Sud, depend totally upon the grossly inadequate river transportation system for goods and services. Steamers providing the

backbone, supplemented by small barges of minimal draft to ply tributary waters could be introduced with little investment. Other donors recognize the problem and seem prepared to deal with it without our help.

The Jonglei Canal, by providing a year-around clear water channel between Malakal and Bor, will add immeasurably to the transportation system. Construction began last year. When completed in about 4 years, it will provide a road foundation as well through an otherwise impenetrable marshland. Some donors already have expressed interest in financing this future road. A.I.D. funds probably will not be needed.

Increased water availability for irrigation in the North, including Egypt, rather than transportation, of course, was the prime reason for canal construction, giving rise to much controversy over the environmental consequences. Earlier plans to drain the Sud added to the confusion and concern. The current project cuts a more shallow channel than considered initially. The debate continues, but most people knowledgeable about the project estimate a reduction of 10%-15% in the Sud's area, with no impact on rainfall which originates almost totally in the highlands to the East and the South. The canal's impact on wildlife is not considered great. Changes within the Sud, however, will affect farming and migratory patterns on a localized basis, and the GOS with UN assistance, has financed a number of studies to deal with this issue. On balance, experts believe the net environmental effects will be positive. The canal will soon be a fait accompli and the environmental impact obvious. USAID/S has discussed the studies and when completed will assess the possible role we might play in assisting this relatively small and remote population adjust to benefits from this change. The possibility of

aiding these Nilotic peoples depends almost totally on improved river transportation without which they inevitably will remain isolated from the outside world.

3. Health

The health sector has the only well developed plan ready for outside support. It is an integral part of the national health plan using the same approach as the North in training village selected primary health care workers. Eradication programs for malaria, river blindness and sleeping sickness are both in budgets of everyone collectively, but working through the African Medical Research Foundation, A.I.D. will make an important contribution over time to a most interesting health program. Financial assistance also will be programmed in support of this activity.

4. Manpower and Education Development

There is a crying need for manpower development. If anything however, it is even more difficult to achieve than improving transportation. With needs so great a strong case can be made that government itself must be strengthened before significant economic development can occur. Donors now function in lieu of the government. There is no alternative if development activities on any scale are to occur, but government capacity simply must be increased to assure medium- and long-term development, not to mention the political implications of the failure of this nascent government to respond to people's needs.

The UN has proposed a training center in Juba for a wide variety of public servants. With UN help as well, the government has defined needs by various employment categories, but a multi-year in-service and pre-service

training plan for the public sector is needed. The Center would provide training to regional, provincial, and perhaps even local level officials, responsible for working with local development councils. (The South quite wisely plans to decentralize much authority and responsibility to the local level and maximize local self-help.) This proposed project bears further consideration, but one wonders if there are alternative approaches. Rather than one center, perhaps training opportunities at several locations should be considered, given the distances involved, boarding problems, etc. Smaller, more specialized centers also might be more easily managed and conceivably more responsive to actual job requirements.

The primary education system was practically destroyed during the civil war. The government seems inclined toward relying on villagers building their own schools with local materials and the government training a locally provided teacher. Although plans are not fully developed, this approach is similar to that of the primary health care program. Our Summer Institute of Linguistics (OPG) by translating teaching materials in the vernacular is a necessary first step. Our manpower and education program specifically includes only this project and the Southern Manpower Development Project due to funding limitations and other high priority needs. However, there may be some opportunity to program our financial assistance for these purposes as well.

C. Future Assistance Levels

With the completion of project design activities contemplated for FY 1979 and FY 1980, USAID/S believes it will have established its basic development program multiple in scope, function, and geographical distribution,

yet leading toward important objectives consistent with the Congressional Mandate. At the end of FY 1980, the program portfolio will include technical assistance, sectoral assistance, food for development and infrastructural assistance.

In the next few years our program should improve slowly, approaching annual levels up to 70 million dollars by 1985. As the program unfolds, new projects will be added largely as (1) old projects are completed, and (2) definitive research findings are available from our pilot activities initiated in FYs 1978, 1979, and 1980. Much of the current effort focuses on developing an informational base and the development of acceptable models replicable on operational basis in the mid to late 1980s. By then the TA program will concentrate on providing services of immediate benefit to the traditional agriculture sector.

The indicative planning figures earmark funds for badly needed infrastructure. Similarly, sector assistance and food for development appear as continuing activities in response to the special need for financial assistance. Addressing this macro-economic problem provides the underpinning for the rest of our program for several years.

The following table presents the general magnitude of funding required through 1985 consistent with this strategy.

	Fiscal Years (\$ Millions)				
	1981	1982	1983	1984	1985
Categories:					
<u>Agriculture</u>					
Sector Grants	5	6	8	8	10
Project Grants	7	10	15	20	20
<u>Health</u>					
Sector Grants	8	8	8	10	10
Project Grants	6	5	10	15	15
<u>Manpower/Human Resources</u>					
Project Grants	--	1	4	4	5
<u>Special Development Activities</u>					
Infrastructure Grants (Transport)	10	10	10	10	10
TOTAL	36	40	55	67	70

PL 480 Title I/III	30	30	25	25	20

D. Summary

In summary, the program in Sudan for the North and the South focuses on some of the most complex economic, social, political, logistical and technical problems imaginable. No one has proven models, approaches, or answers. As such, our progress will be slow and difficult requiring flexibility to adjust as we better understand conditions. Most importantly, A.I.D. should undertake this kind of program here only if we are prepared to commit ourselves for the long haul. The risks are high at best and it will take years before the approach begins to pay off. The next several years will test A.I.D.'s commitment to the Congressional Mandate perhaps as much as it will measure the Sudanese concerns for their rural poor.

VIII. A.I.D. Administrative Implications

To carry out our program plans, A.I.D. has submitted a Staffing Pattern calling for up to 24 American direct-hire positions and 29 FSNs in the next year or so. Only 8 direct-hire positions currently are filled. USAID/S will just manage to design the FY 1979 projects, while the contract selection process proceeds with respect to last year's program. Implementing the FY 1978 projects, beginning in late Spring, together with our new project design responsibilities will stretch our capacity beyond the breaking point. Therefore, several positions must be filled as soon as possible, i.e., the Area Development Officer in Juba, Health Officer, Engineer, Design Officer, Agricultural Development Officer, and Education Officer. As a practical matter, any of the requested positions should be filled whenever suitable people are available. Because this is a most difficult post with a burgeoning program, USAID/S strongly recommends the positions be filled with able and motivated employees still on their way to a successful career, rather than personnel on their way to retirement.

Plans are underway to open an office in Juba, a matter of prime importance. Office and warehouse space as well as housing must be constructed. Like other donors, we have to be completely self-sufficient to operate there. Yet SER/MO recently deleted funds for this construction from our MOB, perhaps with the intent of using 636(c) financing, for we are not aware that anyone questions the need for such an office. This financial issue should be clarified immediately.

636(c) or (d) funds also will be needed to help finance the expansion of the Khartoum American School (KAS). The existing building, a house,

accommodates about 100 students, the current enrollment, in unacceptably crowded conditions. The building cannot be expanded, and there is no playground. Nor is there a suitable building to rent. With direct-hire and contract personnel potentially adding 30-40 students to the school in the next year or so, the school faces a critical situation. Private firms and the international community are also expanding. The GOS seems willing to provide land for a new school and the School Board is preparing plans to construct a new building. The School Board intends to approach A.I.D. along with others to contribute to this project. Since A.I.D.-sponsored children soon will outnumber by far those from any other organization, thus forcing the school to expand, we assume the Agency's response to the school's request will be positive and timely. We doubt the community can raise more than half the estimated cost for construction, leaving a requirement of about \$400,000 for A.I.D., possibly from two separate fiscal years. By making this a kind of pilot project, A.I.D. could demonstrate in a very useful manner new construction and energy-saving techniques to a construction industry here badly in need of new cost-saving approaches. Perhaps R&D money could be used along with 636 funds. In this way, A.I.D. reaps important development benefits as well from the administrative expenditure. USAID/S strongly recommends this approach.