

F Y '80

# memorandum

DATE: May 18, 1978

REPLY TO  
ATTN OF: AFR/EA, John Wooten

SUBJECT: Sudan Country Development Strategy Statement

TO: See Distribution

Forwarded herewith is a copy of the Sudan Country Development Strategy Statement (CDSS) for your review and comments. I have also attached a draft issues paper, the "Congressman Bonker Amendment", and excerpts from several reports which discuss the overall status of the economy and strategies for the development of the traditional agriculture sub-sector. Please contact me should you need additional background information.

The formal review of the CDSS will be held during June in conjunction with the ABS review. A copy of the final CDSS/ABS Issues Paper and the ABS will be forwarded to you for review and comments prior to this meeting.

Your comments are encouraged.

Attachment:a/s

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SUDAN: CDSS Issues Paper

1. How committed is Sudan to a growth with equity strategy?

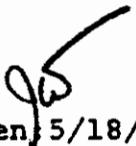
Summary Statement: Recent past experience shows that Sudan focused primarily on growth of the modern sector with some overtures toward equity considerations in context of egalitarian socialism. The current Six Year Development Plan, and more particularly, the Food Investment Strategy demonstrates a significant shift in priority toward the development of the traditional sector. The plan realizes the need for continued growth and recognizes that, in the short-run, the modern sector will continue to make the major contribution to increased growth. There is, however, an awareness of the potential of the traditional sector and an acute awareness of the socio-political implications of continuing past trends of unbalanced growth and development. Thus, the GOS has requested donor assistance in researching and developing appropriate technologies for increasing the productivity of the poor majority in the long-run.

To signal its commitment to a growth with equity strategy and concomitant concerns for greater participatory development, the president recently initiated a significant attempt at decentralization and devolution, providing more authority and technical resources to provincial governments. One can easily question the net effectiveness of this attempt without providing provinces authority to generate necessary revenues that all too often have not been forthcoming from the Central Government. Moreover, one can easily question the net effectiveness of the above reported shift in priorities in view of the overall grave financial problems that now beset the country and its inability or unwillingness to aggressively resolve these problems. The IMF (and reportedly, Arab oil states) have been negotiating a major economic/fiscal reform program with the GOS for several months, with little progress thus far. Whether or not this program is adopted (in one form or another), there are serious concerns as to what implications these problems have on the government's ability to carry out its ambitious development plan and which priorities under this plan will be deleted.

2. Should AID consider providing limited balance of payments assistance to Sudan in the form of (a) increased (possibly trip<sup>led</sup>) PL-480 Title I wheat (or other crops such rice) sales; (b) a sector grant/loan activity; and/or a commodity import program? Should such be linked directly to proposed IMF reforms?
3. In view of the grave financial problems which currently beset the GOS; should AID (a) consider a more modest build-up in our program, and (b) consider funding all development (FX) costs and greater proportions of recurrent (LC) costs for our projects?
4. Is the proposed program indeed spread too thinly over many problem areas instead of focusing on few problems for maximum impact (see pp 8-23)? How is this problem affected by the apparent rapid build-up of PVO projects (six for FY 78)?
5. Is the focus of program in the south too limited? Should AID consider establishing an office in the South? (See Congressman Bonker FAA amendment which directs AID to focus on poorest regions of country).
6. Should AID generally predetermine the proportion of our assistance that should be directed to the South based on the relative distribution of the population (i.e. south with about 1/3 total population receiving 1/3 of AID program dollars)? This should be considered in light of <sup>the</sup> Bonker amendment and in view of <sup>See p. 18</sup>

fact that (a) constraints to development are much more severe in south and may require proportionately greater resources and (b) current population estimates in the south were made before the end of the civil war and do not consider those Sudanese returning from exile in bordering countries nor the recent influx of many refugees from these countries.\*

7. Should AID consider providing (more) assistance to the national (or for the south, regional) level institutions while carrying our pilot programs designed to address the "information gap" referred to on p. 9 ? Would such assistance increase the effectiveness of or attempts to encourage "backward linkages effects" (i.e. linkages between pilot project and national/regional institutions responsible for replication)?

  
Drafted by: AFR/EA:JWooten, 5/18/78

SUDAN

COUNTRY DEVELOPMENT STRATEGY STATEMENT

April 1978  
USAID/SUDAN

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SUDAN

COUNTRY DEVELOPMENT STRATEGY STATEMENT

I. Profile 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.

TABLE I  
ECONOMIC/SOCIAL INDICATORS

	Sudan	
	1960	Most Recent Estimate
GNP PER CAPITA (U.S.\$)	<u>1</u> <sup>a</sup>	290.0
<b>POPULATION AND VITAL STATISTICS</b>		
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 <sup>b</sup>	45.0
Population Growth Rate		2.1%
<b>HEALTH AND NUTRITION</b>		
Population per Physician	27,820 <sup>b</sup>	11,580 <sup>a</sup>
Population per Nursing Person	3,030 <sup>b,c</sup>	1,640 <sup>a,b</sup>
Population per Hospital Bed	950 <sup>b,f</sup>	—
Per Capita Supply of:		
Calories (% of requirements)	61.0	92.0 <sup>c</sup>
Protein (grams per day)	55.0	63.0 <sup>c</sup>

TABLE I (continued)

	Sudan	
	1960	Most Recent Estimate
<b>EDUCATION</b>		
Adjusted Enrollment Ratio		
Primary School	25.0/ <u>E</u>	40.0/ <u>a,d</u>
Secondary School	3.0/ <u>E</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
<b>CONSUMPTION</b>		
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

## 1960:

- /a - Under revision
- /b - 1962
- /c - Including assistant nurses
- /d - Government
- /E - 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 from

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 the very low standard of living of the Sudanese traditional farmers.

By region the West (North and South Kordofan, North and South Darfur) and particularly the six southern provinces 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 in all locations, 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.

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.

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 open to new population. Sudan also has a relatively large migrant agricultural force, numbering perhaps 1,000,000. A high proportion of these workers moves from one area to another from season to season and remains 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 semi-skilled in Sudan. While in part a detriment to domestic development, this flow has enhanced the upward mobility of the unskilled.

In summary, Sudan's poor 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.

## II. Major Factors Contributing to Poverty

Like all lesser-developed countries, Sudan's poverty 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 herdsmen 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 perhaps the majority, however, 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 lack of political and social cohesion is an important constraint to development, as it is in many other newly created nations. 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.

In its vastness and sparse population Sudan resembles several other countries. It is unique however in that huge areas of land suitable for agricultural purposes are available for new populations — a major economic advantage. Conversely, its vastness also acts as a significant constraint to development.

The majority of the 16 million Sudanese are thinly dispersed over an area one-third the size of the U.S., cut off from even regional markets, let alone Khartoum and world trade. Most goods and inputs simply are not available, and government services are almost nonexistent. 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 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 to geographic isolation as a constraint is the limited knowledge available on improving agricultural techniques and introducing new crops and income-earning opportunities to the traditional farmers. Almost all agricultural research in the past has been directed towards the modern irrigated agricultural 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.

As a corollary to the above constraints, 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. Extending public sector services to such widely scattered populations is a slow process, and of course costly, thus further straining an already over-extended budget, another major problem.

Without question, Sudan's financial problems pose a threat to the prospects of development and its ability to address questions of equity in coming years. Short external debts amount to perhaps \$500 million and those of medium and long term maturity also are dangerously high. This condition reflects not only the sluggish performance of cotton exports but primarily the much too rapid expansion of Sudan's developmental efforts in the past few years. Domestic resources cannot satisfy demand, thereby raising imports to levels which have exhausted Sudan's foreign exchange as well as her foreign commercial borrowing capacity. Rising GOS deficit domestic financing is adding to inflationary pressure, estimated at an annual rate of 30%.

Discussions with the IMF and Saudi Arabia have been taking place for many months in an attempt to find a solution to these overriding financial problems. Long term prospects appear quite good. However, without major balance of payment relief from the outside and a scaling back of the development effort, Sudan's economic stability will be threatened. It is not clear what balance these decisions, expected shortly, will strike between growth and equity, but short term and medium term prospects for the Sudan are not at all bright.

### III. Problems of the South

The Southern Region is in need of a separate strategy. Its problems are similar in nature to the north but deprivation of facilities, distance and isolation, and the extent of poverty are much greater. Nearly twenty years of civil war destroyed buildings and the road network and left a generation of persons with no formal education, not to mention the loss of human life (Male twenty to thirty year olds number only 70% of the female age group).

A regional government with considerable autonomy was established in 1972 as part of the political settlement. Since then donors have provided extensive relief assistance in the form of food and medical aid. The need now is for a development strategy of donors working with each other and the Government in a coordinated program. While not yet fully defined, an outline of a strategy does emerge.

Without exception, experts and observers agree that transportation and manpower development are of highest priority. Provincial capitals are cut off from one another during much of the year, and even when possible, travel requires much time and effort. Repairing the all weather laterite road system is essential to tie the region together and link its population at least minimally to non-local influences. Without improvement in the river transport system, the South will be essentially cut off from commercial ties to the north and denied its only market for agricultural crops, of considerable potential. The region remains almost totally dependent upon a laterite road through Uganda from Kenya for its supplies. An alternative route to Kenya is being studied.

Concomitant with transportation is the imperative to strengthen the administrative structure. Very able persons are found in the top two or three 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. Many were hired as a form of welfare and most are in their twenties and thirties with long careers ahead of them. The government has little alternative but to do its best to train and upgrade this existing staff. It can neither afford nor find additional persons who are trained. A program providing general and specific training, ranging from vehicle maintenance to administration, may be the only hope for the government even to carry out its administrative responsibilities let alone a 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, and this will need help in preparing 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 every be implemented successfully, however necessary on political grounds. The implication for teacher training and the demands on the student 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.

With few proven technologies, no institutional presence, almost no supply and market system, no storage facilities, rudimentary if any roads, the odds weigh heavily against development of traditional agriculture. Yet there is no alternative but to attack these problems. The World Bank and others are searching for the badly needed beginning strategy.

The regional government will depend upon subsidies from Khartoum for even its recurrent budget well into the future. Nearly all development funds come from foreign donors and it is doubtful the regional budget can even cover the recurrent costs of the donor projects already underway. A revenue base will evolve slowly but every effort should be made to maximize the self-help contribution of the beneficiaries, in least-cost approaches to problems. Without it, the development program simply cannot grow significantly.

#### IV. GOS Commitment to Development and Equity

Governmental commitment to a future program is not easily measured, although past experience offers the basis for some judgment. Here, as mentioned previously, the record is mixed, with notable achievement in education and health, satisfactory growth, and large numbers of tenants and migrant workers sharing partially in the benefits. The egalitarian rhetoric of socialism is still accepted but few persons seem committed to its means after the experience of the past decade. Past performance argues reasonably well for the future.

The Six-Year Development Plan, if anything, is overly ambitious on all counts. In rhetoric at least it did shift 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 realistic targets in coming months will provide a useful guide to the future. We are informed the new figures will 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. For the most part, the elite are not far removed from rural tradition. 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 a precondition to action, and the family connections do provide a kind of pressure.

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 council remains to be defined along with other issues. Some officials, for example, worry that executive branch authority will be overly diminished. The debate is refreshing and likely to produce beneficial results.

#### V. Implications for AID

The extent of poverty in Sudan and the difficulties in overcoming it are considerable. Given the likely resources available from the U.S. for development purposes we should attempt to concentrate our program on relatively few problems for maximum impact. There seems good reason as well to avoid supporting directly a large number of rather small projects. Our design and approval process is cost ineffective for small projects which also require approximately the same management attention at the implementation stage as larger activities. By encouraging the PVO's to undertake the smaller targets of opportunity, AID can take advantage of its economics of scale in project development. We will be guided by these considerations.

##### A. Guidelines for the North

The earlier discussion clearly suggests a rural development focus for the AID program in the North with high priority given to the problems of the traditional farmer, who represent the largest number and most seriously deprived of the Sudanese. Given the extent and nature of the constraints, a multifaceted approach seems in order, attacking problems at the local, regional, and national level.

## 1. Traditional Farmer

### a. Knowledge and Institutional Presence

In the first year or so of our program development our priority should be on assisting the GOS address the enormous information gap restricting improvement in this subsector. This thrust can be used to create the badly needed GOS institutional presence in the remote areas as well. AID and its contractors are acquiring a rural developing expertise of possible value here, and the Land Grant universities too offer a unique and locally desired resource to address these key constraints.

To gain immediate knowledge and experience, a very limited number of pilot projects directly involving the traditional farmer should be undertaken. In addition to seeking ways to improve existing agricultural practices, our purpose must be to help develop a kind of model institutional framework at the provincial and local level of use to the GOS as it expands its rural development effort. The Sudanese are most interested in this approach, finding it consistent with their desire to decentralize developmental planning and implementation. Given limited AID/GOS experience at this point, the high risk involved, and the complex design as well as the difficult project support problems, such activities must be few indeed for several years.

To provide an adequate framework for reviewing this experience and comparing it with other projects, assistance also will be needed at the macro level. The GOS seeks a well-defined strategy to address outstanding rural development issues. Donors, for example, are currently supporting a growing number of rainfed rural development projects, generally quite large, and with central authorities organized to run them from Khartoum. Such an approach runs counter to the decentralization efforts and weakens regular government structure. The Sudanese recognize the technical, managerial, environmental, and social problems associated with the larger schemes and wish to systematically examine them in the hope of striking a better balance between the modern and traditional sectors. They will need help in this effort.

Thus far then, there has been no attempt to review and compare these various approaches to rural development and draw the lesson 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 AID assistance. The talent basically exists locally to carry out the review. AID can provide the catalyst to an effort with

potentially very important policy and project design implications. It not only will increase understanding of the traditional sector, but will provide needed insight and evaluation as well into modern agriculture and possible ways AID might assist consistent with the Congressional Mandate.

To further lay the foundation for addressing the informational gap over the long run, AID should assist the GOS in its plans to extend its applied agricultural research beyond the irrigated schemes. A thorough Sudanese examination of the practical agricultural problems facing the nomad and traditional farmer is essential to long-range success. The Agriculture Resource Corporation is now ready with help to undertake this task, beginning in the Western Sudan, and U.S. universities are well qualified to assist.

#### b. Transportation

The major road system, financed by other donors, is being extended about as rapidly as is possible, given major contractor capability and cement availabilities. Needed improvements in the rail-road system also have financing. In the coming year, however, we will wish to review the need for key low-cost feeder roads linking isolated areas in the Western Sudan to the railroad and the major highways when completed, to complement our other efforts. Of particular importance will be the criteria for selection of rural roads and evaluation of local contractor capability.

#### c. Financial Constraint and Pricing Policies

There is a considerable misconception concerning Sudan's financial situation. Many view this country as the beneficiary of mammoth flows of assistance as the Arab World attempts to make the Sudan its bread basket. AID's tendency to focus attention on technical assistance rather than macro-economic factors also contributes to this misunderstanding. In fact, Sudan's current financial situation threatens its economic and political stability.

Ironically, the difficulty results from Sudan's ambitious development efforts. Large budget deficits have occurred with inflation now running at an annual rate of 30% as the GOS has attempted to expand public sector investment and services of benefit to its poorer majorities. At the same time the Saudis and others shifted their assistance from direct balance of payment support to project aid. This shift left Sudan with the burden of financing all the importation of intermediary goods associated with development (spare parts, fuel, etc.), not to mention the imports of consumer goods generated as incomes and prices rise. The long gestation

period of these externally financed projects means little in the way of additional foreign exchange has yet to be produced. As a result, Sudan has used up all its foreign exchange, now at negative levels. Its short term foreign debt amounts to perhaps \$500 million, about 2/3 of expected imports, with as much as \$300 million in arrears. Foreign banks no longer honor letters of credit. The country simply is broke.

Unlike many countries, Sudan's difficulties do not stem from excessive imports of consumer goods. Provisional data show imports of consumer goods at only 35% of total imports in 1977. This compares quite favorably with 1972 when imports of textiles and food alone accounted for over 38% of the import bill. While Sudan plans to reduce the relative share of consumer imports, there is little scope for solving the current crisis in this manner.

Table II summarizes the movements of the principal components of Sudan's balance of payments from 1974/75 to 1976/77 and a projection for 1977/78. The data for 1974/75 - 1976/77 tend to conceal as much as they reveal. Imports are shown as declining over the period and exports are shown as increasing, developments which, on the face of things, would tend to suggest an improving balance of payments performance. Looking behind the figures themselves, however, it is seen that exports improved because of growth in the export of oil seeds, better cotton prices, and the sale of accumulated cotton stocks (a cushion that is no longer available to the Sudanese economy). The decline in imports reflects not a smaller requirement but the exhaustion of available credit and the use of "nil value licenses" (persons holding foreign exchange earned outside Sudan finance imports not reflected in the Bank of Sudan's statistics). Inclusion of imports financed in this fashion would probably increase the 1976/77 import figure by LS 60-70 million. Even this expanded level of imports (LS 280-300 million) is insufficient to sustain the economy considering that a figure of LS 372.5 million was originally planned for 1976/77.

The stability of service expenditures and capital payments over the period is also of concern as the growing short-term indebtedness indicates that payments on such imports are not being made. The projections for 1977/78 reveal the crisis more clearly. If the projections for available exports and required imports are reliable, and they do seem in line with past trends, Sudan faces a crunch of considerable magnitude. Having extended its credit to the limit, Sudan can no longer hope to close its balance of payments deficit (LS 111.0 million) by additional short-term borrowings. In the absence of additional balance of payments support, the deficit will have to be closed by a restriction of imports (a process that seems clearly underway) with severe consequences not only for future economic growth but for

TABLE II  
 PRINCIPAL ITEMS IN  
 SUDAN'S BALANCE OF PAYMENTS  
 FY 1974/75, 1975/76, 1976/77  
 LS MILLIONS

	<u>1974/75 1/</u>	<u>1975/76 1/</u>	<u>1976/77 1/</u>	<u>Projected 1977/78 2/</u>
<u>Current Account</u>	<u>(160.3)</u>	<u>(107.6)</u>	<u>(8.8)</u>	<u>(132.9)</u>
Trade Balance	(122.2)	(82.1)	12.9	(101.9)
Exports	157.8	180.4	236.4	270.6
Imports	(280.0)	(262.5)	(223.5)	(372.5)
Services	(38.1)	(25.5)	(21.7)	(31.0)
Receipts	28.9	41.3	49.2	NA
Expenditures	(67.0)	(66.8)	(70.9)	NA
<u>Capital Account</u>	<u>108.6</u>	<u>20.7</u>	<u>7.5</u>	<u>21.9</u>
Official Capital	98.2	19.3	12.9	21.9
Drawings	118.9	46.9	35.9	121.7
Payments	(20.7)	(27.6)	(23.0)	(99.8)
Short Term Capital Movements	10.4	1.4	(5.4)	-
Errors and Omissions	(0.2)	1.4	(0.2)	-
Balance of Current and Capital Accounts	<u>(51.9)</u>	<u>(85.5)</u>	<u>(1.5)</u>	<u>(111.0)</u>
Monetary Movements	51.9	85.5	1.5	NA
IMF Position (Net)	26.3	12.6	(6.4)	NA
Commercial Bank Liabilities	(0.2)	(7.9)	(18.3)	NA
Payment Agreements	3.1	1.3	(1.0)	NA
Convertible Reserves	2.0	3.2	14.6	NA
Central Bank Short Term Liabilities	20.7	76.3	12.6	NA

Source: 1/ Bank of Sudan  
 2/ IMF adjustment of Sudan's Foreign Exchange Budget.  
 LS 1 - \$2.50

the capacity of the economy to function at its present level as well. This is true even though the projections make no allowance for payments of arrearages, accumulation of reserves, or a reduction in short-term liabilities. If these are included, as they must be to some extent, the crisis is even more serious than the projection of Table II would indicate.

Discussion with the IMF and Saudis on a reform package has been continuous for many months, with the expectation that Saudi funds would be forthcoming to see Sudan through this crisis. It now appears Saudi Arabia will not come to the rescue soon and that policy reforms will take considerably more time to resolve.

It should be emphasized that, given the nature of the problem, it cannot be solved by additional project related assistance.<sup>1/</sup> Indeed, the decline in project related assistance over the past two years (due to problems of absorptive capacity) has probably served to limit the problem. The seven billion dollars expected to be made available for agricultural projects (by the Arab Authority for Investment and Agricultural Development and the FAO) over the next few years, while part of the long run solution, could contribute to the short term problem unless adequate arrangements are made to deal with recurrent costs.

The balance of payments crisis has implications not just for longer term economic growth. There is evidence that fuel and spare parts shortages may hinder Sudan's capacity to produce and market her current exports, further exacerbating the crisis.

Without balance of payments assistance for a few years Sudan will not be able to absorb further capital assistance nor adequately support the many donor projects, including our own, all of which generate imports, at least indirectly. Donors are awakening to this fact all too slowly. Like AID, they all view the Sudan in terms of their own projects with little understanding of the broader and, in this case, overriding economic issues. The Germans just agreed to forgive the equivalent of about \$40 million in debt. This action will help, but only at the margin.

The time has arrived for AID to seriously review this problem with the view to providing help in some form. Given its magnitude the U.S. by no means can, nor should, solve it alone. Our willingness to consider such assistance, however, would reassure the Sudanese and, perhaps more importantly, enable us to raise the subject directly with the Saudis and others. The major responsibility for

<sup>1/</sup> Although donors could certainly help via increasingly budgeting for the recurrent foreign exchange costs of their projects in addition to the direct foreign exchange costs.

financial assistance must rest with Saudi Arabia and Kuwait but they might be more willing to assist, albeit disproportionately, if they felt others too had an interest and a share of the burden.

We see ample justification for expanding the PI-480 wheat sales to the \$20 million to \$30 million range in 1979, 1980 and 1981, with the local currency used to support local costs of our bilateral aid and other GOS projects of benefit to the traditional farmer. In addition, the GOS could easily absorb a \$10 million to \$20 million sector grant/loan in 1979 to assure sufficient commodities are available for broader rural development. Consideration of a commodity import program also is in order.

The Ambassador has recently requested a joint State/AID/Treasury team to review this crisis and recommend a course of action. We envisage the study calling for an expanded economic assistance program, with emphasis on balance of payments support in FY 1979 and beyond. Given funding constraints, it might be necessary to delay some of the proposed technical assistance projects until 1980 to accommodate the balance of payments related assistance. See Section V., C.

#### d. Health

The GOS has a well defined strategy for addressing the country's health problems. Since eradication programs are too costly to be undertaken by the GOS, AID can make its most important contribution by supporting the primary health care program. No assistance is needed in the Khartoum, Gezira, and other more wealthy provinces where the program began last year. We should support it in the Western Sudan, however, where local resources are not sufficient to finance its expansion. With such little worldwide experience as a guide, we should begin on a limited, although significant scale, carefully evaluating the experience before we and the Sudanese consider the next phase of an expanded program.

Plans are underway to use Title II resources in support of this health program as well. WFP food aid will be provided to the Primary Health Care workers while they receive their nine month training. We also are considering the possibility of extending the MCE program of CRS to the Western Sudan in coordination with the primary health program. It will take at least a year before this is possible, if at all.

#### e. Education

Except to identify certain of the key problems, plans for assistance in the education sector are still in the preliminary stage. The GOS recognition that primary schooling is

terminal for most students, and that there is a need to modify the curriculum accordingly, is most encouraging. Some curriculum development assistance is being provided through the UN with perhaps little further needed from AID. The IDA is in the throes of designing a major project involving, as we understand it, 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 sizable enough to tax the Ministry of Education's absorptive capacity. There may be technical assistance requirements associated with the project which we should consider (we already have recommended approval of an OPG with the SIL in support to this project).

Teacher training (and retraining) may be the critical constraint in expanding the primary education. We understand some funds for facilities are included in the IDA project but whether the GOS can cope with this training requirement without additional help is an open question. In coming months we will discuss this matter with the Sudanese with the view to further strengthening our program focus in the Western Sudan.

We have had inquiries about AID interest in financing technical training institutes in the West, but question this particular approach to the problem. Such institutions are very capital intensive with high recurrent costs, and when run by Ministries of Education bear too little relationship to the needs of the employer. The priority need, in our judgment, is for informal short term training courses closely linked to market needs. UNESCO is supporting such a program in the Ministry and it bears watching on our part. Similarly, we have supported a request for an OPG from 4-E to strengthen a rather similar training program open to youths and adults of the Ministry of Youth and Sports. This program seems likely to make a more important, long range contribution than the MOE activity, based upon comparative experience thus far. We intend to channel the activities of the 4-E project as well to the areas covered by our other projects to the maximum extent possible.

Rural labor markets apparently function quite effectively in the Sudan. While the role of provincial labor offices could be improved, we do not consider it a high priority activity for AID. Our preference would be to consider further possible ways of strengthening primary education and informal training in the West.

#### f. Science and Technology

In the past two years there have been parallel discussions on a number of activities under the heading Science and Technology Transfer, e. g., energy proposals, various remote sensing

suggestions, aquatic weed control, to mention a few. Our intention now is to consider only those ideas in which the GOS has a serious interest, and those which are realistically applicable here. We then will relate them to the other elements of our program, but do not envisage a Science and Technology project as such at this time.

There is a major fuel problem in the Western Sudan, given the shortages of wood for charcoal. We would like to explore this problem further, in the context of the agriculture research project. Its solution is intimately tied up with other issues. Conceivably, AID/W funded resources could be drawn into the inquiry as well, but it makes sense to have some framework for the inquiry. Windmills too are a possible answer, but here again there must be a Sudanese institutional base from which to address the question, and therefore we envisage them being addressed in close coordination with, if not a part of, the agricultural research project. We see little to be gained now in devoting scarce USAID/GOS resources to the search for practical applications of solar energy. Research is taking place in comparable climatic areas, of possible value here in the future. The results will be followed with interest.

One theme, however, does link several of the Science and Technology activities and relates as well to our other program interests. Sudan has a considerable agricultural potential but it also has the potential for being a major environmental disaster. Problems of over-grazing and desert creep threaten development in Western Sudan if not addressed soon, and the problem will beset other regions as well. The prospects for an AID-assisted program under this heading will be given serious consideration in coming months. As a first step we would approve an agreement between Clark University and the University of Khartoum, as requested by the GOS, to help prepare a map and report showing the location, nature and intensity of environmental problems, on a province by province basis. This work will provide useful background to GOS officials and prospective donors. AID/W funding perhaps is available for this step.

We also have agreed to discuss with the GOS our possible support to their desertification program in the Western Sudan (DECARP). Responsibility for the program now rests with the Ministry of Agriculture which wishes to begin an operational program on a pilot project basis very soon. While related to the Agricultural Research Project, this program in time will be large enough to stand alone. Initially it would include:

- (1) a more precise identification of severe problem areas and areas of varying stages of reduced production;
- (2) monitoring the situation;

- (3) experimental approaches to perimeter control, sand-fixing, and land use organization; and, in time,
- (4) operational extension of the experiments.

We also will wish to raise these questions in considering the North Kordofan project. It is possible this project could be linked not only to the Agricultural Research Project, but to the DECARP effort as well.

The aquatic weed activity initiated by the NAS falls outside the Western Sudan and does not fit well in the above program. The NAS-assisted workshop this fall should proceed as planned, but we prefer to postpone further consideration of this problem, of unquestionable importance, until a later date. We may then wish to expand our environmental focus to the South.

The OST and Africa Bureau assistance in remote sensing may be of future interest here, but until the participants now in training return we cannot be certain. If they return as a working team we will try to interest them in applying these techniques to reconnaissance work in the Western Sudan related to our other interests. A small, but needed, remote sensing center is being funded and assisted by the UN, and training facilities also are available in Cairo and Nairobi. We do not feel it appropriate to consider any further assistance in this field at this time.

## 2. Migrant Agricultural Worker

Our strategy for dealing with the problems of this category of the poor will be developed in the context of the rural planning project and possible assistance included in our higher funding options. It will afford an excellent opportunity to review the equity problems associated with the larger schemes which employ these workers. While the wage scale itself appears to reflect market conditions, one wonders what their opportunities are to become tenants as new schemes appear. Perhaps there are ways to increase their access to the health facilities through an expanded Primary Health Care Project. Conceivably, a second tranche of AID support to Bahad, for example, might be justified specifically in support of social infrastructure to the migrant workers and the tenants themselves. Our upcountry shelter survey also will consider the housing needs of these workers, particularly associated with the larger agricultural schemes.

## 3. Urban Unskilled Workers

Limited staff time has not permitted a carefully thought through strategy for this group of persons. While poor, they are better off than Sudanese traditional farmers, and therefore perhaps of lower priority to our still-evolving program.

We do plan to discuss GOS interest in a shelter sector review and their low-income housing policies. We fear the GOS plans include substantial subsidies to these projects and we will want to review this question very carefully. It will never be feasible for the Government to mount a program affecting significant numbers of poor urban dwellers if major GOS funds are needed. There simply are much higher priority claims for these limited monies. If they are interested in developing sites and services, leaving the house construction to be financed by the occupant, then perhaps the Housing Guarantee program has a role to play. Its interest rates are high, but the length of the loan still makes it rather concessional. Our review of these issues will be completed in time to consider an FY 79 program if justified.

In addition, the Youth and Adult Training Project of the 4-E, if approved, will benefit persons in this labor category in the smaller towns. A more careful examination of the informal training problems and prospects in coming months could lead to broader training programs to reach the urban unskilled.

#### 4. Tenant Farmers

Perhaps tenant farmers are the least disadvantaged of the poor majority. How much assistance AID should provide to this category is not yet clear. The rural planning project again provides a useful basis for making this judgment. While not committed to assisting the newly created University of Gezira, an AID-sponsored team will make an in-depth review of GOS plans to determine what, if any, role exists for us. If construction costs can be kept down, and we can help it carry out its very strong economic and social development objectives, AID would contribute both directly and indirectly to the tenants along with others in the geographic area.

#### B. Guidelines for the South

AID is compelled by the logic of the Congressional Mandate, as well as Sudanese politics, to mount a program of some significance in the South. With approximately 1/3 the population in the South, the GOS and the Regional Government believe roughly the same proportion of the AID should be devoted to the region. Given the political sensitivities associated with the issue, we are prepared to program within the guideline. The difficulties in responding, however, cannot be overestimated. The needs are awesome, and the remoteness of the South requires that we approach the program quite differently from the North. There is virtually no disagreement that the region's major constraints to growth, with or without equity consideration, are an almost nonexistent transportation system and its poorly trained population.

The UN and other donors are repairing certain stretches of the laterite road system that existed before the civil war. They have developed a kind of master plan and provide a certain amount of technical assistance as well. In a few years' time these projects will link Juba with a few of the nearby towns and villages in the region. There are no donors interested yet, however, in reaching the more remote populated areas. A review of the master road plan suggests one or two sections of possible interest to AID. One section now being studied by the Norwegians would upgrade what is now a trail and connect the South to a laterite all-weather road now under construction in Kenya. We will be discussing this study soon with the consultants to determine the number of direct beneficiaries in the area, as well as the broader economic benefits and costs. With no development budget and no trained staff the Southern Ministry of Public Works can contribute almost nothing 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. Any such project would require a strong training component along the lines used by other donors. It seems likely at least one road section will prove feasible and worthy of AID consideration. Certainly the Sudanese would welcome an alternative to the road through Uganda, now their only all-weather connection to the outside, both on economic and political grounds.

The regional government also has inquired about AID interest in helping improve the river transportation. At one time regular, efficient, and cost-covering service was provided for passengers and cargoes on the Nile from Juba, through the Sud, and up to Kosti and beyond. The deterioration in the last twenty years has been so great it now barely functions at all. Thus, the South is cut off from the natural market for its agricultural surplus as well as its Sudanese, as opposed to Kenyan, source of supply.

Some capital would be required in part in the form of barges of minimal draft. A small barge construction facility in Juba, financed and run by Intermediate Technology Associates, has developed a craft which some believe to be the answer. Management, however, probably is the crucial missing ingredient. The Regional Government wishes to capitalize a transportation corporation using these barges and would welcome AID support. The approach is fraught with problems but is worthy of further consideration.

Hundreds of thousands of Nilotic peoples living along the Nile, its tributaries, and in the Sud are totally dependent upon the grossly inadequate river transport system for goods and markets. UN experts will return in a matter of weeks from an extensive stay in the Sud to review possible effects of the Jonglei Canal, about to be

constructed, and to recommend complementary development activities. We will be meeting to discuss these recommendations and will be particularly interested in their assessment of river transport needs through this labyrinth of waters. The possibility of benefiting these exceedingly isolated persons, many of whom will never be served economically by roads, adds further reason to seriously consider ways in which river transport can be improved.

Manpower development, like transportation, is a crying need. If anything, however, it is even more difficult to grapple with. With needs so great, a strong case can be made that government itself must be strengthened before anything significant can occur. Otherwise, donors in effect must function in lieu of the government, and this is what is happening now to a great extent. There is no immediate alternative if development activities on any scale are to occur, but the governmental capacity simply must be increased for medium and long-term development to occur, not to mention the political implications of the failure of the government to respond to people's needs.

The UN has proposed a training center in Juba for a wide variety of public servants. It would provide training as well to 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 modernize the local self-help.) This project bears further consideration, but one wonders if there are not alternative approaches. Rather than one center, perhaps training opportunities at several locations should be considered, given distance, boarding problems, etc. Smaller more specialized centers might also be more easily managed and conceivably be more responsive to actual job requirements. There already exists a Multiple Training Center in Juba providing clerical and vocational training to a very small number of officials. Our proposed project at Yambio to train agricultural extension personnel for the Ministry of Agriculture is another example of what can and should be done. With UN help the government has defined needs rather well by various employment categories. A multi-year in-service and pre-service training plan for the public sector is now needed. The Southern Manpower Project will help us address this problem in cooperation with the several UN technicians now working in related fields.

Perhaps of equal priority to public sector training is the need to strengthen the primary education system, practically destroyed during the civil war. The Government seems to be inclined towards relying on villagers building their own schools with local materials and the Government training a locally provided teacher, an approach similar to the Primary Health Care Program, although plans are not yet fully developed. We will be helping in this process through the

Summer Institute of Languages OPG by translating teaching materials into the vernacular. There may well be a more important role for AID in training of primary teachers and we will be reviewing this matter further through the Southern Manpower Development Project.

The health sector is one of the few areas which has a well developed plan ready for outside support. The philosophy of the plan is sound, maximizing local inputs and minimizing costs. By working through the Africa Medical Research Foundation AID will make an important contribution over time to a most interesting Primary Rural Health Program.

The Regional Government has made it rather clear to USAID that it will not be entirely pleased with a series of small technical assistance projects. They look to us for at least one project of major size and importance. While the link to Kenya would fall in this category, the particular request was for support to a modern agricultural system as is common in the North. With no roads, and at most only small local markets and no government capacity, we are very skeptical. The timing simply does not seem right. However, the World Bank and ODM both have teams investigating in effect this basic proposition and we will have the opportunity to discuss the matter with them. We may wish to consider infrastructure requirements linking markets to production.

The question of project size nevertheless is important and relates to concerns we have in carrying out projects in the South. Even more than in the North, economics of scale are important. Every project must be self sufficient and self contained, requiring practically nothing from the government, both because of government budget limitation and the non-availability of any services and commodities in the market. Administrative costs and personnel will be proportionately very high. Housing and furniture will have to be imported, along with all vehicles and spare parts, office supplies and equipment. Warehousing and fuel storage facilities will be required. In some instances, electrical generators will be needed to support personnel in the South. Operating budgets must cover costs for fuel.

All donors out of necessity operate along these lines, but small projects must be scrutinized carefully for their cost effectiveness and their personnel intensiveness. A large number of small projects would require establishing a USAID/S sub-office in Juba, possibly with its own staff and facilities. Such an approach would be very costly and require a considerable time to establish.

We therefore recommend using the UNDP logistic and administrative support facilities to the maximum extent possible.

USAID/S has worked closely with the rather extensive UN field staff here and in the South. They are quite willing to provide the logistical support to our projects. We could hire this well run service for our own otherwise independently funded projects. We might also want to consider supplementing their staff at a later date. In the short run we have no alternative but to rely on the UN base support.

Another effective approach is to use PVO's when feasible. They can recruit more effectively for the remote regions than many contractors, and at less cost to AID. They can function with less direct USAID/Embassy support and direct supervision. And, too, they can contribute to the design of projects, thereby reducing our time and costs. AID need not lose its identity vis-a-vis such projects if handled properly.

While the overriding constraints to development in the South seem rather clear, we will be working in coming months on a better understanding of the transportation, manpower, and agricultural sectors as a framework for judging the several projects which emerge for AID consideration.

In summary, the program in Sudan, both in the North and South, focuses on some of the most complex economic, social, political, 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 to better understood conditions as we proceed. Most importantly, AID should undertake such a program 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 can begin to pay off. The next several years here will test AID's commitment to the Congressional Mandate perhaps as much as it will the Sudanese concerns for its rural poor.

### C. Future Assistance Levels

The following table summarizes various program levels for the 1978-1982 period. In all years the high figures are the preferred levels.

In FY 1978 all but the Development Assistance is firm. We anticipate obligating funds for five projects (Abyei, Blue Nile, Southern Manpower, and Rural Health (No.), and Agricultural Research) in addition to a small grant to IVS for a community development project. The \$7.5 million figure assumes a centrally-funded OPG for the African Medical Research Foundation health project in the South, and less than a million dollar obligation for the Agricultural Research project. Depending upon final design of three projects, a total of up to \$10 million DA could be needed in FY 78.

Given a "mark" of \$10 million DA in 1979 and a Title I program at 1978 levels, the only new element would be a \$5 million Housing Guarantee. Essentially, we only would be adding second year funding to the 1978 program. This program would ignore the financial problems undermining Sudan's development. As such it would bring into question U.S. political interests as the Sudanese would not consider it either significant or responsive. The lower option, including a reduced Title I program, and short funding of the 1978 DA projects probably would be read as a policy shift by the U.S. to weaken U.S./Sudanese relations, and would run counter to our political objectives in East Africa and the Middle East. Neither the middle or low option would permit us to be responsive to demands of the regional government in the South for more assistance.

The high option in 1979 envisages a \$15 million sector assistance program which, together with Title I/III and an EIG, would provide assistance of about \$45 million pertinent to the balance of payments crisis. Even this figure is small in relation to the GOS problem, but it would demonstrate U.S. concern, and enable us to encourage other donor support as well. Given likely DA funding constraints for the Bureau next year, we would forego essentially all new technical assistance starts in 1979 to accommodate this sector assistance. This means postponing a Gezira University project until 1980, for example. We would have to begin another project in the South, however, to maintain the necessary regional balance to our program. One of several rural roads appears to be the most attractive project at this point.

Again, accepting the "mark" of \$13 million DA and constant PI-480 levels as the middle option in FY 1980 would permit only one or two new projects in 1980, including Gezira University. Having had no new starts in 1979 makes this program barely creditable, and provides the wrong kind of political signals, ignoring as it does the financial crisis likely to continue for several years.

The lower option in 1980 is tantamount to a U.S. AID withdrawal from the Sudan. It would only continue funding the projects begun in FY 1978 along with a reduced Title I program.

Our preferred level is the high option. Given Presidential guidance on future economic assistance levels, we would increase sector assistance to at least \$20 million in 1980 and combine it with a Title I program of perhaps \$25 to \$30 million for a total of \$45 to \$50 million in balance of payments type assistance. The proceeds from these programs as in earlier years would be earmarked to protect AID-supported, and other activities in the rural areas, likely to suffer as the Sudanese are forced to curtail their development efforts. This program also enables us to continue the dialogue with other donors begun in 1979, and further demonstrates U.S. commitment to the moderating influences of the Sudanese on African and Middle Eastern affairs.

In 1981 and 1982 the middle option would permit an expanded technical assistance program, but it would come too late to be politically useful. Without Title I/III and sector assistance proceeds, there also is a question whether the GOS could support the expanded program. Our failure to expand in the South would bring the U.S. into conflict with the regional government, and possibly complicate our relations with the Central Government as well. We would attempt to solve this difficulty by programming Title I generated local currencies for the South.

After three years of holding action the higher figures for the low option in 1981 and 1982 have little meaning. It is doubtful that we would gain enough politically at that point to warrant any increases at all. Our option would be to phase out or make a truly significant contribution to recoup our losses.

The high option clearly is preferable as it continues our useful role vis-a-vis the financial problem, permits a gradual expansion of technical assistance to priority areas, and provides the necessary local currencies to assure that the program can continue. By the end of the five-year period, the worst of the financial crisis should be over and assistance levels could begin to decline with little implication for our political interests in Sudan.

MULTI-YEAR BUDGET PROJECTIONS  
USAID/SUDAN

(\$ millions)

	1978			1979			1980			1981			1982		
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H
<u>1/</u> Development Assistance Grants (DA)	6.0	7.5	10.0	9	10	29	10	13	44	13	26	43	11	26	41
Technical Assistance	6.0	7.5	10.0	9	10	11	10	13	18	13	13	17	11	13	18
Food and Nutrition	4.8	5.3	5.7	6.6	7.0	7.3	8.5	11.5	16.5	10.5	10.5	13	9.7	11.2	14
Health	1.0	2.0	3.5	2.4	2.4	3.0	1.5	1.5	1.5	1.5	1.5	2.5	1.5	1.5	2.5
Education	.2	.2	.8	-	.7	.7	-	-	-	1.0	1.0	1.5	-	.5	1.5
Rural Infrastructure Project (FN)	-	-	-	-	-	3	-	-	6	-	3	6	-	3	3
Sector Support (FN, H, EHR)	-	-	-	-	-	15	-	-	20	-	10	20	-	10	20
P.L. 480, Title I/III	10.3	10.3	10.3	5	11	25	5	11	25	11	15	25	15	20	25
P.L. 480, Title II	.6	.6	.6	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	1	1	1	1	1	1	1	1
Housing Investment Guaranty	-	-	-	-	5	5	-	-	-	-	5	5	-	-	-
Total	16.9	18.4	20.9	14	26	59	15	25	70	25	47	74	27	47	67
Other Sources (centrally funded OPGs, regional funds, local currency support, etc.)	3.6	2.5	1.0	2	2	2	1	1	1	-	-	-	-	-	-
Grand Total	20.5	21	22	16	28	61	16	26	71	25	47	74	27	47	67

1/ Options:

- L - Low
- M - Medium
- H - High

2/ Less than \$1 million

3/ Some figures rounded

## ANNEX I

## PAST OVERALL DEVELOPMENT EXPERIENCE

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 GDP 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 as it does 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 with manufacturing and mining representing about 10% of GDP.

TABLE 1

Composition of GDP by Economic Sectors  
1955/56 - 1973/74  
(Percentages)

Sector	1955/56	1973/74*
GDP, Factor Cost (Ls. Million)	284.2	698.6
Agriculture, Livestock, Forestry and Fishing	61.0	38.2
Mining, Manufacturing and Handicrafts	4.5	8.3
Electricity and Water	4.5	2.7
Construction	5.7	4.1
Commerce and Hotels	6.0	16.6
Transport and Communications	7.5	8.1
Finance, Insurance, Real Estate, etc.	3.7	6.4
Government Services	6.7	14.5
Others	0.4	1.1
Total	100.0	100.0

\* Provisional Figures

In the early 1960's the balance of trade showed large deficits, declining gradually to the early 1970's.

TABLE 2  
ESTIMATED BALANCE OF PAYMENTS (LS. MILLION)

	1969/70	1971/72	1973/74	1974/75
I. CURRENT ACCOUNT	<u>-3.9</u>	<u>-29.2</u>	<u>-30.5</u>	<u>-163.7</u>
1. Exports, f.o.b.	99.0	104.5	142.8	154.6
Cotton	59.5	56.4	73.8	61.6
Others	39.5	48.1	69.0	93.0
2. Imports, c.i.f.	90.7	120.4	145.6	283.4
Government	25.7	36.3	48.1	140.6
Others	65.0	84.1	101.5	142.8
Trade Balance (1-2)	8.3	-15.9	-6.8	-128.8
3. Services, net	-12.2	-13.3	-23.7	-34.9
Receipts	12.9	16.4	17.8	63.8
Payments	25.1	29.7	41.5	28.9
II. OFFICIAL CAPITAL	<u>6.0</u>	<u>4.9</u>	<u>27.3</u>	<u>134.1</u>
Drawings	13.1	20.1	51.8	169.7
Repayments	-7.1	-15.2	-24.5	-35.6
III. NET ERRORS & OMISSIONS INCLUDING MISC. CAPITAL MOVEMENTS	2.7	3.1	-12.0	-11.7
IV. BALANCE OF PAYMENTS DEFICIT/ SURPLUS	<u>4.8</u>	<u>-21.2</u>	<u>-15.2</u>	<u>-41.3</u>
V. MONETARY MOVEMENTS	-4.8	21.2	15.2	41.3

Source: Bank of Sudan

The volume of imports, stagnant in the 1960/67 period, has been rising slightly more rapidly than exports, and there has been a 2% annual deterioration in the terms of trade from 1960 to the early 1970's. 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 annual increase of about 9%. The tax structure however tends to be regressive in its effect, relying heavily on various import duties and taxes on agricultural exports. These latter taxes in effect fall upon the tenant and probably act as a disincentive to more rapid growth in this sector. Most observers believe the tax structure and controlled FX 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 exporting.

TABLE 3  
PUBLIC SECTOR FINANCE (LS. MILLION)

	1955/56	1965/66	1973/74
Central Government Recurrent Revenue	42.3	75.2	209.5
Recurrent Expenditure	32.1	74.3	189.6
Surplus	10.2	0.9	19.9
Local Government Deficit	—	-0.3	-22.6
Public Enterprise Surplus	12.9	3.0	9.6
Development Expenditure	11.4	32.2	41.9
Overall Deficit/Surplus	+11.7	-28.6	-35.0
Financed:			
by external sources	n/a	17.5	32.0
by internal sources	n/a	11.1	3.0

As shown above, deficits at the provincial level too are rising rapidly, adding to the domestic debt burden. These local deficits tend to be proportionately larger in the more wealthy provinces.

While developmental expenditures about equaled central government recurrent expenditure in 1963, as Sudan undertook a number of large investment schemes, they fell gradually to about 20% in the early 1970's

reflecting the use of budget resources for security and public services, the latter largely in urban areas. Investment in the modern agriculture has been proportionately very high. Acreage under irrigation almost tripled since independence, now totaling about four million acres, primarily along the Gezira, Blue Nile and White Nile Provinces. Large mechanized farming schemes located in the rainfed areas of Kassala and Blue Nile Provinces account for perhaps another four million acres. (Only about two-thirds of the above is cultivated in any one year.)\*

Together they have created employment for perhaps 1,000,000 seasonal agricultural workers, about 150,000 to 200,000 tenants and their families who moved out of the traditional agricultural sector. Significant numbers of the poor majority therefore have benefitted from these efforts.

Industrialization largely agriculturally related is still relatively limited. It has occurred primarily through the creation of public corporations which account for about half the total employment (nearly all the union members) in this sector. Unfortunately, these corporations are not efficiently operated and have contributed much less than optimally to Sudan's development. Attempts to achieve a more balanced geographic industrial growth, however desirable on equity grounds, has had limited success. Locations were not always well selected, with plants considerable distance from even domestic markets. The transportation system is still too rudimentary to support some of the sugar refineries and textile related projects, etc. Construction costs have risen rapidly and there is a real risk that public corporation losses will further strain the government budget and discourage private sector activity.

In general then, Sudan's record in managing the economy has been mixed. Its overall growth was respectable, particularly considering the political strife. As shown in Table I, improvements occurred in population per physician, nurse, and hospital beds, as did birth and death rates. Primary school ratios, too, increased importantly and would have been even better had it not been for the closure of schools in the South for almost twenty years. While government services were biased in favor of the urban areas, many traditional farmers did share in the fruits of agricultural development through alternative employment opportunities and improved access to education and health facilities. With unemployment now at negligible levels, significant numbers of the urban poor also found jobs. The experiment with socialism proved very costly in the short run, but valuable lessons were learned, not likely to be forgotten. Problems are approached quite programmatically and the Sudanese now seem prepared to face up to their current financial crisis.

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\* The total area under cultivation approximates 15 million acres.

## ANNEX II

### EQUITY/GROWTH STRATEGY AND ITS CONSTRAINTS

Since overt unemployment in Sudan is negligible, the thrust of a strategy balancing growth and equity is not so much to increase the number as to increase the productivity of the labor force on an equitable basis. Some sections of the community, particularly in the South, do not readily find employment but by and large those who seek work can find it. Some redistribution of income through the fiscal system can bring direct benefits through improved health and educational facilities, but its main purpose would be to provide public services that give low income producers the opportunity to improve the economic performance. Movement towards these goals 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 favorable medium to long term developmental prospects.

#### I. 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.

Unlike other countries in Africa, about one-third of cropped land is in the modern subsector, a figure that will gradually rise in years to come. It offers considerable potential over time to expand exports, thereby improving the balance of payment situation, and to generate revenues for development in general.

#### A. Irrigation

Sudan has about five billion M<sup>3</sup> of Nile waters annually still available for irrigation purposes and another two billion M<sup>3</sup> expected as its share from the Jonglei Canal. There will be ample water for those projects currently underway, and of course they should be completed. They require, however, large public sector investment with a very high imported commodity component. The net improvement in the balance of payment per unit of investment therefore is less than in rainfed schemes. Further, substantial increases in output from existing schemes are possible through improved managerial and agricultural practice. Yields 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 too centralized. These policy changes could permit the reduction of average holdings from 15 acres to perhaps ten acres or so, thereby benefitting a greater number of new tenants.

Pricing policies too should be changed. All costs to the tenant tend to be allocated to the cotton crop, thus greatly distorting the allocation of inputs and incentives. A cost system and revenue system that make both management and tenant responsive to financial return on all crops is badly needed.

#### B. Mechanized Rainfed Agriculture

About four million acres are included in various mechanized rainfed schemes. Most holdings are 1,000 acres or more. Since mechanized farming is a relatively cheap and easy way of increasing grain and oil seeds, there are ambitious plans for its expansion. Large areas of rainfed land are too heavy to work by hand and must be farmed with equipment. However, there are a number of problems to be solved. A more effective personal income tax structure is needed vis-a-vis these landholders, and land rent is very low. Further, better opportunities could be created for individuals on cooperatives to rent farms at about 100 acres. Of great concern also is the evidence that productivity is declining for the most important crops. The yields for dura, for example, on these schemes on the average is 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.

Continued expansion of these schemes undoubtedly is warranted, but these problems must be examined and addressed. Sudan probably should rely to the maximum extent possible on the private sector for this subsector. It would permit the allocation of scarce public sector resources to other areas and all the evidence suggests the private schemes are better managed.

While traditional herding is declining as modern farming expands, the well intended plans for modern ranches are open to question. In many areas this potential cannot be realized until the tsetse fly is controlled. Elsewhere pastures are not suitable for modern ranches. Year-round carrying capacity is low and cost of fencing and water development would make them very expensive. Then there may be a possibility of integrating traditional livestock with mechanized rainfed agriculture by using the residue from these schemes for fodder.

Improvement in transportation, of all modes, is a precondition to continued growth of all these schemes.

### C. Traditional Farming

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 much lower migrant wage scale. However, even with the expected expansion of the modern agriculture sector, it cannot provide employment for even the normal rate of increase of the rural population. Some 250,000 new jobs a year would be required. On equity, as well as developmental grounds, a case can be made for increased attention to the needs of the traditional farmers.

Sample data indicate the rate of return on traditional agriculture and livestock can be quite high - 12% and more. Direct investment requirements are low although considerable social and economic overhead capital would be needed. Expenses for managerial staff however will be less than in irrigated schemes.

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. There also will have to be physical infrastructure, particularly secondary and feeder roads to local markets and the railroad stops. The local councils and self-help measures should be used to the maximum extent possible.

A program of applied research is essential to identify the few essential improvements and inputs needed. This will require additional stations and substations because of the varying ecological conditions. Because of the rather wide range of food and cash crops, tight priorities should be set and research organized on a systems approach. The new package is likely to include improved agricultural and livestock practices and provision of inputs and credits.

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 from the public and private sector 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 as respond to the growing opportunities. One would expect farmer cooperatives to 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. The GOS has moved a considerable distance in this direction.

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. Equally important, agricultural exports could increase 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. A start must be made now if the inequities of the dual system are to be remedied.

## II. Role of 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. A cement capacity, too, must be expanded to eliminate current shortages and delays in capital projects. A number of changes are needed to give greater freedom to this sector. The current import tax and pricing structure very much favor the commercial sector as against the manufacturing sector. On the other hand, most experts believe the entire tax and pricing structure is biased in favor of industry at the expense of agriculture and that protective measures should be reduced and applied only in the case of genuine infant industries which can be expected to be viable in time. Measures along these lines could lessen the need for various licensing and other specific controls which interfere with efficient operation.

Efforts to improve the operation of public sector industry are badly needed. Top management 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 turn a profit, and there is a possibility the government will turn these over to private hands. Others probably will be a drain of public funds for years to come.

Geographic industrial disbursement is a legitimate objective, particularly on equity grounds. However, decisions should not be made, as in the past, without adequate consideration of the financial implications of site selection. Many projects were excessively costly, to the detriment of other developmental objectives and the reduction of public sector savings that would have been available otherwise for rural development purposes.

### III. Transportation

Any strategy for growth and employment depends in large measure upon developments in the field of transport, rail, highway and river. 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 must be improved. This will require better management as well as investment in some double tracking and rolling stock. The country is very dependent upon the Port Sudan-Khartoum route which has had serious difficulties in recent years.

More than half of the investment for the transportation sector is proposed for road building. Trunk roads, feeder roads, paved and unpaved, will bring subsistence farmers into contact with markets, facilitate migration and government effort to provide service. Substantial increases in livestock production cannot be achieved without links to Khartoum and beyond.

Improvement in the river transport system too would greatly benefit the South. Some additional investment would be required but largely it is a question of management. Air service too, particularly within the country, should be strengthened, again only partially through the purchase of additional aircraft. And finally, the proposed new port at Suakin is a sensible project in conjunction with the railway project and the completion of the highway from Khartoum to the Red Sea.

### IV. 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. The curriculum, the examination system, and the attitude of teachers clearly have implied that 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.

While past efforts to change the system have been resisted, the GOS apparently has wisely decided again to attempt to revamp the primary level curriculum with a program to be terminal for most students. It would include literacy, numeracy, national consciousness, and some familiarity with local environment. The primary program would be followed by pre-vocational training for those who 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 scattered more widely rather than the seven to eight-teacher schools in larger towns. These latter changes will also reduce boarding costs borne by the government. A major teacher reeducation effort will be required to carry out this program.

Discussion of changes at the secondary level also is underway. It 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. Both the Ministry of Youth and Sports and the Ministry of Education have programs that are beginning to move in this direction. The Six-Year Plan also calls for a number of rather large technical training institutes in various parts of the country. Every effort must be made to assure this very costly training is practical and truly related to the requirements of the job market.

There is some disagreement among outside observers concerning Sudanese higher education policy. The University of Khartoum with its long tradition has served the Sudan very well in the past and some argue that it can satisfy future needs for some time to come. Others, certainly the Sudanese, believe the rapidly growing drain of academically prepared persons to other Arab states forces the government to expand the higher education system. A recent study by the International Institute for Education supports the Sudanese position of opening a new university this year at Juba, in the south, and the University of Gezira in the center of Sudan's agricultural heartland.

Certainly, the philosophy of these new 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.

The costs of these programs will be great. To a great extent however, improved efficiency, higher student/teacher ratios, reducing the number of boarding schools, charging some fees where they continue,

and reducing the number of dropouts will result in some savings and greater effectiveness. The education system has a major role to play and these kinds of proposals can go far in giving the masses an equitable share in the benefits of development.

#### V. 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 to 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 will be given to extending the primary health care programs to rural areas. An excellent plan has been prepared 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.

The primary health care program will provide preventive care, including inoculations, curative care, and referrals to the dispensary which will serve a group of the PHCU's. Also the program will engage in promotional activities relating to the environment, sanitation, and nutrition, an area where much improvement is possible with little in the way of new foods.

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

#### VI. Labor and Manpower Consideration

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

The public sector appears to be particularly affected. On the one hand both civil service and public corporations are losing personnel, but the tight government situation makes it very difficult for the GOS to raise pay scales. The rapid inflation of the past few years adds to the current problem, with a number of strikes underway or threatened. Scanty evidence suggests low income and some government salaries have not kept pace with inflation.

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

Like other Arab countries, Sudan has been unsuccessful in adjusting local wages to the rising foreign demand. Restraining the migration of those seeking higher wages is a difficult political problem. Some persons argue for a more rapid mechanization of the agriculture sector on the grounds of labor shortage. 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.

Few Sudanese plan to stay abroad for a career. One would hope the return flow would show a marked increase in a few years. If not, the Government will face a very difficult choice between slower development and the political repercussion of restricting out-migration.

95th Congress }  
1st Session }

HOUSE OF REPRESENTATIVES

{ REPORT  
No. 95-240

# INTERNATIONAL DEVELOPMENT AND FOOD ASSISTANCE ACT OF 1977

REPORT

OF THE

COMMITTEE ON INTERNATIONAL  
RELATIONS

TOGETHER WITH

SUPPLEMENTAL VIEWS

[INCLUDING COST ESTIMATE OF THE CONGRESSIONAL BUDGET OFFICE]

ON

H.R. 6714

TO AMEND THE FOREIGN ASSISTANCE ACT OF 1961 TO  
AUTHORIZE DEVELOPMENT ASSISTANCE PROGRAMS FOR  
FISCAL YEAR 1978, TO AMEND THE AGRICULTURAL TRADE  
DEVELOPMENT AND ASSISTANCE ACT OF 1954 TO MAKE  
CERTAIN CHANGES IN THE AUTHORITIES OF THAT ACT,  
AND FOR OTHER PURPOSES



MAY 3, 1977.—Committed to the Committee of the Whole House on the  
State of the Union and ordered to be printed.

U.S. GOVERNMENT PRINTING OFFICE

SS-563 O

WASHINGTON : 1977

Such a new program could concentrate on increasing small-farmer production and income and creating jobs for the rural poor. The ultimate shape of any new program must emerge, however, from a review of the needs and priorities established by the new Indian Government. The committee is hopeful that it will be possible to find substantial areas of agreement between the United States and India with respect to these needs and priorities, and that the United States will be able to reestablish a fruitful and cooperative development relationship with one of the few countries moving from a suppression of political liberty toward democratic freedoms.

With respect to the Sudan, the committee added a total of \$5 million to the authorization in this bill, of which \$2 million is for food and nutrition. The increase was recommended in order to support a special aid program that attempts to indicate clearly what the "new directions" development aid policy (outlined in sections 102(c) and 102(d) and in other sections of chapter 1 of part I of the Foreign Assistance Act) means in operational terms. The idea behind this proposal is that this program for the Sudan can, if successfully implemented, serve as a general model that might be adaptable to rural development programs in many other places.

The amendment reflects the need to deal with the processes and structures that cause and sustain poverty, rather than simply treating the symptoms of poverty. What is required is an overall development strategy that seeks not just to improve the physical means of production at the local level, but also to increase the farmer's incentive to produce and his or her ability to trade or sell surplus production advantageously.

This proposed fiscal year 1978 program for Sudan is aimed at improving the quality of life and the income of people in the poor rural areas of the west and the south. The program seeks to help create relatively self-sufficient regional economies through the integration of four activities: (1) antidesertification measures, including establishment of permanent land tenure where appropriate; (2) region-by-region reconstitution of credit and marketing systems based on the cooperative efforts of producers, government authorities, and others; (3) improvement in agricultural information systems for traditional agriculture, with emphasis on participation by small farmers and others affected and on appropriate technology; and (4) improvement in the local health environment.

Ideally, the program would include support of local light industry to produce technologically appropriate tools or other goods, to provide local employment in slack seasons, to slow current massive migrations, and to provide the kind of consumer goods that encourage farm families to raise their income by producing more.

The economic result of these activities, taken together, would be the creation of a surplus that (net of the amount taken by the government in taxes) could be invested back into the region by the producers, leading to a continuing process of economic growth in the region. Without changes of this sort current patterns of economic activity will continue to drain any surplus out of the region and to impoverish its people.

Contingent on further discussions between AID and the Government of Sudan, the present \$5-\$10 million preliminary AID proposal for fiscal year 1978 may be increased, with funds to be allocated among four project areas, each to be carried out in the usual collaborative fashion with the Government of Sudan. The four areas would be:

- (1) Improving the relationship between the people and their resource and environmental base, with particular attention to the government's antidesertification plan;
- (2) Studying the total marketing environment and technological base of the traditional sector and developing programs and allocating resources to support more equitable credit and marketing structures, secure land tenure, appropriately adapted technologies, and new local light industry;
- (3) Improving agricultural information systems for the traditional farm sector, with special emphasis on appropriate technologies and on improving the links among small farmers, extension efforts, and research activities; and
- (4) Undertaking primary health care programs in the two regions, with emphasis on training local paramedicals and on systems analysis of the local health situation.

Because increased production and a better quality of life in rural areas cannot be achieved without the producers, as willing participants, reaping an equitable measure of the rewards of production, the second area noted above is of primary importance. Therefore, absence of significant progress in this area will mean that the purpose of this amendment will not have been fulfilled.

All activities should stress involvement and training of local people who will remain in the region and who will be the most appropriate teachers of succeeding generations. In addition, a minimum of outside resources should be used in any activity, so that habits of self-sufficiency are fostered and the activity is carried on even when external aid ceases.

Since this proposed program for the Sudan is intended as an example of what might be done to give operational meaning to the "new directions", the committee will expect information on the status of this program to be included in congressional presentation materials for development assistance each year during implementation of the program.

#### *Section 103—Renewable Energy Sources for Rural Areas*

This section earmarks \$10 million of the funds provided for agriculture and rural development in section 103 of the Foreign Assistance Act for programs in research, development, and use of small-scale, decentralized, renewable energy sources for rural areas of less developed countries. These programs should not be undertaken apart from overall rural development efforts, but should be designed and implemented as an integral part of such efforts.

There is little question that some form of energy is needed for rural development—for agriculture, for rural industry, for health and personal comfort, for cooking, in short for the multitude of uses that can enhance both production and the quality of rural life. In some parts of the developing world, electricity can be extended to rural areas not

# EXCERPTS: ILO/UNDP REPORT

## D. A Strategy for Agriculture: Summary

21. We have outlined the nature of the agricultural sector and the major developmental issues in the different modes of production which would require the attention of the government in the next decade and the policies and programs required to deal with them. <sup>19/</sup> In this section we draw together the main elements of the overall strategy that the Mission has proposed, and describe the potential of the strategy in terms of the perspective for growth, employment and equity.

22. In designing a strategy for the agricultural sector, the first consideration is that, a dynamic modern agricultural notwithstanding, most Sudanese find their living in traditional agriculture and livestock, which is characterized by low productivity and incomes, with little or no access to inputs which could change this in the near future. In addition they have very inadequate access--or none at all--to markets, educational and health services, etc. On the other hand, traditional sector has shown remarkable

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<sup>19/</sup> The discussions on traditional agriculture did not explicitly mention the problems and prospects of the livestock sector. The arguments for supporting the development of traditional farming apply equally to the livestock sector. Specific recommendations on policies and programs are dealt with in Technical Paper No. 1, "Animal Husbandry: Migratory and Sedentary Populations."

buoyancy once production opportunities present themselves. In these circumstances, the first priority is to develop traditional agriculture. This requires, first of all, the commitment of considerable public resources for geographically dispersed adaptive research. Secondly, transport and communication, credit networks, improved health services, education and training are all necessary to improve the productivity of those in the traditional rural economy, and to allow them to participate more fully in the development process. Since all this will take time, it is necessary to lay the foundations immediately for traditional sector improvements along the lines indicated above so that a rapid modernization on a country-wide basis can be effected in subsequent decades.

23. While these tasks are being undertaken, the opportunity exists to greatly increase output in the modern sector. Indeed, in the coming decade most of the agricultural growth would have to come from the modern sector. Within this sector, first priority on efficiency grounds is the expansion of mechanized farming. Here adequate price incentives and credit facilities will be important in continuing to attract private Sudanese and foreign investors. And, as long as mechanization remains selective, the increased labor demand for harvesting and weeding would direct purchasing power to the traditional sector inhabitants through employment opportunities.

24. Irrigated agriculture, too has a central role to play in increasing agricultural output. Priority, however, should be given to the increasing yields on existing irrigated lands, especially after the expansion plans of the next five years are implemented. In other words, given the very high capital-intensive nature of such projects and their heavy import content (making them low net foreign exchange earners), for the 1980's, irrigation expansion should be accorded a lower priority compared to investment in other types of agriculture, particularly yield-increasing efforts in existing irrigated lands. Finally any decision, on the mechanization of agricultural operations within irrigation schemes should consider its effect on migrant labor incomes, which has hitherto been an important mechanism for shifting income from high income irrigation to low income rural workers.

25. If the strategy outlined here is adhered to, and provided policies and programs along the lines suggested by the Mission to deal with the issues raised in the previous sections are adopted, the growth rate of agricultural output could rise to 6 to 7 percent in the early 1980's. Equally important, agricultural exports could increase by 8 to 10 percent per year. Thirdly, over 100,000 full-time jobs might be created over the next decade. In addition there could be created a large amount of additional seasonal jobs, say half-a-million people, depending on cropping patterns and mechanization. And, finally, the programs aimed directly at the traditional sector will benefit about 25 percent of the rural population.

26. For these gains to materialize, governmental actions and policies beyond those suggested so far would be needed. In particular, fiscal, pricing and trade policies which facilitate a more efficient allocation of resources, and incentive system consistent with growth strategy based largely on agricultural production and exports would be required. These issues are considered in Section IV. Secondly, all developments in agriculture, as well as other sectors of the economy, require a considerably expanded investment program. Therefore, the performance of public and private savings must improve dramatically if the strategy is to enjoy a considerable chance of success. The role of the Government in resource mobilization is considered in Section V. Finally, there is a need for large scale investment to remove one of the major bottlenecks to economic growth in Sudan--the lack of adequate and efficient transportation system. In particular, there is the need to balance the transport requirements in the central and eastern parts of the country, where a major segment of the agricultural and industrial development program will continue to be concentrated, and the desire to provide better links between these parts of the Western and Southern regions. For the next ten-year period, the Mission feels that the broad strategy of transport in Sudan should include the following: 20/

- (a) strengthening, through the construction of supplementary facilities, the transport network between the country's main port and the hub of agricultural and industrial activities in the central and eastern parts;
- (b) improving the efficiency of railway operations so that existing capacity is better used;
- (c) effecting improvements in trunk roads and river navigation so as to facilitate the economic integration of the Southern and Western provinces with the country's central and Eastern regions;
- (d) initiating a program of construction for regional roads and other modes of transport to help the development efforts in the South and the West; and
- (e) improving the prospects and cost of international access to the South, if necessary through other neighboring countries.

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20/ For further discussions on this, see ILO Report, Vol. I, Chp. III. 3 "Transport and Other Infrastructure".

# EXCERPTS: BANK REPORT

## PART I - THE ECONOMY 1/

2. The Economic Memorandum distributed to the Board in September 1976 (Report No. 1273a-SU) provides an assessment of the economic situation and prospects of the Sudan. Prior to that, Bank staff had participated in the ILO Comprehensive Employment Strategy Mission in 1975 and played a major role in both the conception and execution of the mission's work. Whilst the mission was an employment strategy mission, its focus, as with previous ILO missions, was on the overall problem of income creation for low-income earners in the context of a more rapidly growing economy. The mission's report is comparable to a Bank basic economic report and its analysis and conclusions are the basis both for our developing dialogue on economic policy issues with the Government and for the development of our program of operations. The report has been influential in stimulating discussion of development policy issues in the country. A special government working group reviewed the report and prepared a substantive and lengthy evaluation of its analysis and conclusions. The report also provided a major input into the preparation of the Six Year Plan for 1977-83. An updating economic mission is scheduled for May 1978. Social and economic data on Sudan are attached as Annex I.

3. Sudan, with an area of 2.5 million square kilometers, is the largest country in Africa, with a population of about 15.9 million. Much of the country is unoccupied or very sparsely populated, and in contrast to many developing countries, there is little population pressure on presently developed land. Although a large part of the country consists of desert or

mi-desert, the Sudan nevertheless has great untapped potential for agricultural development. Estimates indicate that about one-third (85 million hectares) of the total land area is suitable for crop or pastoral production, and only a small fraction of this land is under intensive use. In addition, the White Nile and the Blue Nile provide an abundance of water which has enabled the country to develop the largest irrigation system in tropical Africa. The Sudan has increased its use of the Nile water to two thirds of that allocated to it under the Nile Waters Agreement with Egypt, but there remains room for considerable further expansion in irrigation. The proximity of Sudan to markets in the Middle East and Europe places it in a good position for agricultural exports, and oil-producing Arab countries have increasingly come to consider Sudan as a primary future source of agricultural products.

In spite of the large potential for development, the Sudan is still a poor country and is classified by the U.N. as a least developed country. The most recent estimate of per capita GNP of \$290 (1976) is based upon estimates of national accounts of questionable reliability and appears to exaggerate the standards of living of the people of Sudan and the state of development of its economy. Certainly, there are large areas of the country where most of the people have very low incomes. The economy is still heavily dependent on exports of cotton, which is the major commodity produced on irrigated land, and also exports of gum arabic, sesame and groundnuts. Its considerable grazing resources have hardly been tapped. The manufacturing sector is relatively small and, apart from the processing of some agricultural commodities, it is limited to the production of consumer goods and building materials. There have been some exports of chrome ore and further development of these deposits is taking place. The public sector has long been important in the Sudanese economy. It embraces all modern irrigation facilities, the railways and virtually all power and water supply. With the nationalization measures of 1970/71, a significant proportion of industry, commerce and finance was also transferred to the public sector. Although some industrial enterprises have been returned to the private sector, about half of the GDP is still generated within the public sector.

5. While the basic physical and human potential of Sudan is considerable, its economic performance has been disappointing. During the sixties and early seventies, the economy grew by little more than the rate of growth of the population. This was primarily due to the depressed level of investment, both public and private. While the Government was successful in achieving a high growth rate of revenue, the rise in recurrent expenditure absorbed most of it, and development expenditure decreased. The growth of current expenditure was caused by increasing security expenditures, the policy of hiring all post secondary school graduates and converting casual labor on public projects into permanent government employees and rapidly increasing transfers to local government. Further, savings generated by public corporations also declined because of inefficiency and rigid pricing policies. Public sector deficits were increasingly financed through excessive credit expansion. Prices rose steadily, and the external position was under pressure owing to the rapid growth of imports and a stagnation of export volume.

6. The period since 1973 contrasts sharply with the preceding decade in many important respects. First, there has been a sharp increase in investment, especially in the public sector, with expenditures directed at the priority sectors—transportation and other infrastructure, agriculture and agricultural processing industries. Second, there has been a serious concern with developmental issues reflected most prominently in widespread discussion at the political and technocratic level of the problems of economic growth in the Sudan since the ILO issued its report in 1975. Furthermore, the Government has shown a willingness to discuss its economic problems openly. Not only is this reflected in the continuous and serious dialogue on these problems in which the Bank has been engaged with the Government over the past two years but it has been most strongly reflected in the very frank report which the Government prepared for the Consultative Group meeting in November 1976. This report and the Bank's own critical evaluation of Sudanese development performance and prospects were freely discussed by the Government with delegations to the CG meeting. In January 1977, the Government organized an informal meeting of representatives of national and international financial institutions, chaired by President Nimeiry and attended by all the economic ministers at which a frank presentation of the developmental issues was encouraged. Whilst all this increased interest in developmental issues does not substitute for action, it is a necessary precondition for action and certainly represents a marked change from the situation existing a few years ago.

7. This concern over developmental issues is being institutionalized through the development of an effective planning machinery, with the assistance of a UNDP planning project of which the Bank is the executing agency. The Six-Year Plan covering the period 1977-83 launched in July 1977 is the most immediate and important outcome of this effort. A comprehensive education sector review conducted with Bank and UNESCO assistance has also been completed, and an exercise to develop a primary health care program has been completed with the help of WHO.

#### Recent Economic Developments and Issues

8. Over the five year period ended June 1975, it is estimated that GDP in real terms grew at an average annual rate of 4.5 percent—a growth rate consistent with growth trends in the agricultural sector, which accounts for 40 percent of national income, and the spurt in development expenditures in other key sectors of the economy. Public investment, which increased from US\$75 million in 1973 to about US\$300 million per annum in the years 1975-77, has been concentrated on the highest priorities. Sugar imports should be eliminated by 1979 and sugar will be available for export by 1980, reaching an estimated volume of 0.5 million tons in 1987. Textile and sacking imports will be much reduced by 1979. Medium staple cotton, groundnuts and some other commodities will be available for export in larger quantities, an oil pipeline has recently been commissioned, and both road and rail capacity are rising, helping to ease the transport bottleneck. All the data on private investment are poor, but it seems that private investment has expanded rapidly also.

9. While the increased rate of investment on the part of the public sector, which is bringing about significant structural changes in the economy, is in sharp contrast with the relative stagnation of the late sixties and early seventies, in most other respects, the standard of economic management needs improvement. In particular the budgetary situation is a matter of concern. Despite a good record in revenue raising, which is reflected in a revenue/GDP ratio currently about 20%, the public sector continues to be a net dis-saver. As a consequence, public investment has had to be financed entirely through domestic and foreign borrowing. The resulting credit expansion has been an important contributory factor to domestic price increases averaging over 20% per annum in the last three years.

10. Externally, the increased pace of public investment coincided with the higher rates of international inflation, which began in 1973, and the recession in industrialized countries, which adversely affected export earnings. The volume of cotton exports in 1975 was 45% below the average of the preceding three years. A number of domestic factors, including an unfavorable cost-price structure, also contributed to this decline. As a result, the foreign exchange constraint to growth and the budgetary difficulties were exacerbated. A major consequence of these developments was a resort to foreign borrowing to finance development expenditures and to support the balance of payments. From an average of \$50 million per annum in 1971-73 gross disbursements of foreign loans rose to \$450 million in 1974, and in the last three years have been of the order of \$300 million, annually. Excluding 1974 when the severity of the terms of borrowing reduced the grant element of loan commitments by about half, Sudan has managed to borrow on relatively concessionary terms, reflected in average terms of 4% interest rate, 24 years maturity and 6 years grace in the period 1970-75. Nevertheless, the sharply increased borrowing in the last few years, a significant proportion of which was in the form of quick-disbursing cash loans, has resulted in a quadrupling of external public debt between 1972 and 1975 and has imposed a heavy debt servicing burden on the country (see para. 14). Furthermore, the Central Bank has repeatedly had to borrow abroad in order to finance the increasing overall deficit. As a result, Sudan's net international reserve position moved from net liabilities of less than \$45 million at the end of December 1970 to \$525 million in March 1977.

11. Confronted with these problems, the Government of Sudan took a number of measures. So far as internal fiscal management is concerned, consumer subsidies have been sharply reduced, defense expenditure was restrained and railway and utility tariffs increased. Tax measures introduced in the 1977 budget are estimated to have added about 10 percent to Government revenue. In 1977, these measures were supplemented by additional measures designed to increase tariffs and other indirect taxes on luxury consumer goods, while reducing those on essential consumer goods. The net effect of these measures is a small increase in revenues. In any case, with the Government already absorbing about 20 percent of GDP in the form of current receipts, it would be unrealistic in the short run to expect any significant increase in the level of taxation, and essential improvement in Government savings and

reduction in credit expansion will have to come from holding the growth of recurrent expenditures below the growth of revenue. In a significant move in October 1977, the Minister of Finance ordered a 10% cut in recurrent expenditure of Government ministries.

12. So far as the current budget is concerned, an improvement is required in financial control mechanisms to ensure that actual expenditures do not exceed appropriated amounts. Additionally, budgetary transfers from the central to provincial and, through them to local governments need to be placed on a basis which is permanently sustainable. So far as the capital budget is concerned there is a danger of over-commitment with too many projects being started and their completion delayed. In this connection, the recurrent expenditure implication of public investment outlays needs serious consideration.

13. On the revenue side, the main objective of reforms in the tax system should be to make it development-oriented. This requires a reduction in the reliance on foreign trade taxes, development of broad-based consumption taxes and extension of direct taxes, especially to capture the growth in the modern agricultural sector. Another important aspect of resource mobilization is the role of parastatals. While the public sector in Sudan dominates all non-traditional economic activities, public enterprises have failed to generate adequate surpluses to finance development expenditures, and their operational deficits have become a drain on the Government budget. The Government is carrying out a comprehensive review of the operations and performance of parastatal organizations. Bank staff have been assisting in the review.

14. Finally, the recent build up of external public debt and the foreign liabilities of the banking system underscore the need for improved debt management and a further strengthening of the external debt control machinery. In particular, in view of the rapidly rising debt service burden, which reached 24 percent in 1977 and was projected to peak at about 31 percent in 1978, and in order that the debt service ratio falls to more manageable levels in the early 1980's, it is essential for Government to borrow on concessionary terms and to restrict borrowing to that required for priority investments. In addition to factors described above (para. 10) which were responsible for the build up of external public debt, the debt management problem in Sudan is also one of knowledge - the multiplicity of agencies in the Government dealing with some aspects of data collection or debt management makes it difficult to obtain a comprehensive and accurate picture of Sudan's external debt transactions. New procedures to ensure better debt management were introduced by a decree issued in February 1976 which confined the authority to contract foreign loans to the Ministry of Finance, Planning and National Economy. The Bank in July 1976 presented the Sudanese Government with an analysis of Sudan's debt data and made recommendations for the centralization and analysis of such data. Further discussions on this question are planned for May 1978.

#### Short- and Long-Term Prospects

15. The preceding discussion shows the Sudanese economy to be in a transitional situation from a slowly growing economy, heavily dependent

on the fortunes of a single crop (cotton) and hindered by physical bottlenecks, especially in transportation, to a more rapidly growing economy with more diversified production and exports. The process of change is hindered by serious deficiencies in the policy framework and is accompanied by serious financial problems. While the budgetary and balance of payments problems facing the economy are acute and deeply rooted, it is nevertheless imperative for the Government to take steps to improve parastatal efficiency, encourage public sector savings, and maintain more effective balance of payments and debt management policies. The IMF is currently having discussions with the Government on the short-run economic problems.

16. The medium- to long-run objectives of the Sudanese Government, as expressed in the Six-Year Plan, whose implementation began on July 1, 1977, include a rapid increase in the growth of GDP (7.5% per annum in 1977-83), and emphasis on redressing regional inequalities in incomes. During the plan period, development strategy will continue to emphasize agriculture as the leading sector, but its structural interdependence with other sectors, particularly manufacturing will be stressed through agricultural processing, the production of basic agricultural inputs and implements, and the promotion of small scale and cottage industry. Considerable investment will also go into further reduction and removal of critical bottlenecks in physical and institutional infrastructure.

17. Because of the balance of payments and budgetary difficulties, the growth prospects of Sudan depend significantly on foreign capital inflows and on policies to encourage private investment. Indeed, one of the crucial assumptions underlying the Government's plan is the expectation of large inflow of loan and equity capital. The realization of this expectation, in turn, will depend significantly on the role played by the oil-rich Arab countries. In the last few years the Arab countries have emerged as the largest source of capital assistance to Sudan. On a disbursement basis, Arab aid (excluding a \$200 million Euro-dollar loan guaranteed by Saudi Arabia) increased from \$33 million in 1972 to a peak of \$220 million in 1974. Whilst a large proportion of these disbursements has been for balance of payments support, Arab assistance has been vital in such key projects as the Rahad Irrigation Project, the oil-pipeline, the airport at Port Sudan, a number of highway projects, sugar schemes and a microwave project. For the future, of much potential significance is the ten-year Basic Agricultural Development Program for the Sudan, prepared by the Arab Fund for Social and Economic Development. Over the next six years (1977-83) a First Phase Investment Plan, which forms the core of Sudan's Six-Year Development Plan and consists of some 61 projects selected from the basic program, is expected to be implemented at a total cost of about \$2 billion. To help implement the agricultural program, twelve Arab Governments on November 1, 1976 signed an agreement establishing an autonomous body, the Arab Authority for Agricultural Investment and Development (AAAID). The authorized capital for AAAID has been established at US\$510 million, of which 75 percent has been subscribed. The Authority is limited to a debt/equity ratio of 2:1. Ratification of the AAAID agreement is at an advanced stage and steps are being taken to commence operations.

18. To support the directly productive investment envisaged by the Arab Fund's program, large amounts of concessionary loans and grants will be needed to finance infrastructural projects. Official bilateral and multi-lateral agencies, including Arab agencies, are expected to contribute to the program. Several donor agencies which have lent to Sudan in the past are expanding their programs and others are starting programs in Sudan for the first time. Local cost financing is justified in certain cases for projects with a high local cost component and which are designed primarily to benefit the poor. These are likely to be located primarily in Southern and Western Sudan, the least developed areas of the country.

19. In summary, after a number of years of low and fluctuating rates of savings and investments, momentum has been injected into Sudan's economic development by a considerable expansion in domestic investment during the last three years. However, Sudan faces severe balance of payments and domestic resource mobilization problems in the short run. Whilst these are familiar problems in several developing countries, they are especially acute in the Sudan. The country's medium-term prospects, however, look particularly bright. These opportunities derive not only from the availability of foreign capital, but also from the basic agronomic and human potential of the country. However, basic policy decisions, some of which have been outlined in the preceding pages, will have to be made if these prospects are to be realized. The Government has shown its willingness in recent months to discuss openly the economic problems facing the country, and it is our hope that it will follow this up with policy measures to address them. For the immediate future, the Bank can assist the Sudan to maintain the momentum of development by helping channel resources into the priority sectors in our project work, by extending technical assistance to improve project identification, preparation and implementation capacity, and by continuing the dialogue on policy issues.

# EXCERPTS: GOS FOOD STRATEGY

## B. Disparities between the Modern and Traditional Sectors

2.6 The irrigated and mechanized rainfed farming systems together account for about 70 percent of the country's total agriculture production. However, because of the capital intensive nature of these systems and the use of modern technology, they employ only about 20 percent of the rural population. The rest is engaged in traditional farming. So far the major attention and concentration of resources have been given to these capital intensive modern systems of land use through both public and private sector investment in a number of major irrigation and large-scale mechanized rainfed farming schemes.

2.7 The Government is aware of the high level of investment being made in these two farming systems relative to the traditional sector and the consequent imbalance in the allocation of resources, and in the generation of employment and income between modern capital intensive and traditional farming, based on the rural population supported by them. The Government is committed to rectifying this disparity by accompanying the activities in the modern sector with a parallel program, albeit smaller in scope and funding, in support of increased productivity, income generation and nutrition for the traditional sector. However, due to the servicing of the large commitments of public sector funds already made to on-going programs in the intensive farming systems, estimated at close to ES. 80 million for the National Development Plan period, the Government is limited in its possibilities to allocate the required funds from its own resources or to use funds obtained from nonconcessional sources to meet the investment needs of the public sector relative to the traditional farming system. As a result it wishes to make a special appeal for assistance from the International Community in the form of grants and concessional aid to complement nationally financed efforts with regard to the development of the traditional sector.

## E. Increased Productivity

2.17 At present all major efforts to increase food production involve approaches through expansion of the area under cultivation. However, it is apparent that along with this there is the need for the application of measures to induce such increases through improved productivity, especially for the low-yielding traditional farming system. Within the Food Investment Strategy some provision is made for this through activities in research, training and the intensification and modernization of production systems. This has been done either as components of individual projects or in the form of separate programs formulated to cover specific aspects. However, these are limited in scope and represent token efforts relative to the country's needs in these areas.

2.18 The Government has formulated a major program for expanding the country's research capability, with special attention to the traditional farming system, and with its implementation significant benefits should accrue to efforts for increasing food production in all the farming systems. A separate document for the funding of research has been prepared by the Ministry of Agriculture in collaboration with international research organizations for consideration by donors.

2.19 The lack of sufficient trained personnel, particularly in middle-level skilled manpower, could be a serious constraint to the implementation of the Food Investment Strategy. The Government plans to expand its efforts in this area, but would have to depend heavily on donor assistance. The modernization of production systems aimed at increasing productivity, particularly in traditional farming, would be undertaken. A number of pilot projects are underway and others are being formulated in this regard, for which donor financing is being invited. A number of public sector projects relative to the above, but of particular relevance to the traditional sector, have been identified.

## F. Producers' Incentives

2.20 This is considered as an important aspect of the Food Investment Strategy and consideration is being given to various policy approaches in this respect relative to each farming system. One of the primary objectives of the Government in this area is to minimize the fluctuation in farmers' incomes by means of gradual containment of the seasonal and regional price differentials, particularly for coarse grains and livestock. The Government's intervention in this respect will necessarily have to consist of a series of measures adapted to meet specific local conditions. However, the improvement in transportation and in grain storage may be considered as among the main components of developing an integrated national marketing and food distribution system.

2.21 Price support for sorghum and other coarse grains has so far not been necessary. The Government will continue its policy to adjust minimum producers' prices for wheat in accordance with changes in the cost of production. The Government has regularly established minimum prices for groundnuts and sesame but so far it has not entered the market since prices have generally remained above the minimum levels.

2.22 The Government is aware of the lack of incentives and related support services, such as agricultural credit for the traditional sector. However, due to the widespread systems of crop cultivation, and the nomadic and semi-nomadic nature of livestock production under this farming system, it has been found to be impractical so far to initiate nationwide programs in this sector, and thus necessary to supply such services on a project by project basis. In those areas, particularly in the southern region, where some settlement of the rural population already exists, a program is underway for the initiation of a credit program and the formation of cooperatives to encourage and support the development of both food and cash crops among small farmers. Consideration is also being given to the possibility of developing a credit program as an incentive to encourage settlement of some of the semi-nomadic rural population in communities with mixed farming production. A new project to assist with price policy and marketing has been formulated with particular relevance to the traditional sector:

	Costs: £S ('000)		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Agricultural Economics and Marketing	1,406	366	1,772

G. Rural Income and Employment

2.23 Increased income and employment generation are included among the goals of the Food Investment Strategy since they relate to improved nutrition and well-being of the rural population. Also they are significant factors in dealing with the problem of reducing the existing discrepancies between the income of that segment of the rural population engaged in modern farming and those in the traditional sector. The per capita national income of £S97 (1974/75) is projected to increase to £S156 by 1984/85. However, the country's agricultural population estimated at about 11 million, earns an average of about £S45 per capita/annum (1974/75) with a projected increase to about £S66 by 1984/85.

2.24 The present income stream, mainly in the form of wages for seasonal employment, from the modern farming systems back to the traditional sector is modest, adding only an estimated 10 percent to incomes in that sector. As a result, since initially the greater part of direct production-oriented investment will be in the capital intensive farming systems, most of which are concentrated in the central and eastern part of the country, the employment and income effects of these investments would have limited direct impact on the traditional farming areas. In addition irrigated cropping patterns are shifting gradually from cotton towards less labour-intensive crops such as wheat, and with the rapid increase in land being brought under cultivation and reported labor shortages, there is a trend to further substitution of mechanization for labor in the mechanized schemes.

### J. Consumption

2.30 The Government has reasonably effective control over the consumers' prices of wheat, sugar and cotton seed oil, but not for sorghum, millets, nor livestock products which account for a substantial proportion of the consumers' expenditure on food. In the recent past, it has been necessary on occasion to put into effect controlled distribution of some food commodities, e.g. flour, sugar and vegetable oil, but the Government expects that the rapid expansion in production envisaged under the Food Investment Strategy will lead to the elimination of such measures.

2.31 Improvement in transportation and storage facilities should also facilitate availability and bring about a reduction in marketing costs. Since the Government has little or no control over prices of commodities with particularly high income elasticities of demand, such as dairy products, fruits, vegetables and meat, the policy with regard to such food items is to expand the coverage of existing feeding programs to supply the equivalent nutrient content for vulnerable groups who would be particularly affected by price increases of such commodities.

### K. Storage

2.32 A new public sector project to assist in establishing a Storage Corporation has been formulated. The Corporation will be responsible for establishing food storage facilities and the purchase of food stocks. Another project for insect control on stored grain has also been formulated.

	Costs: fS ('000)		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Storage Corporation	2,664	2,304	4,968
Strengthening Section on Stored Grain Pests	1,034	966	2,000
	<u>3,698</u>	<u>3,270</u>	<u>6,968</u>

### L. Nutrition

2.33 Based on numerical aggregates such as national food balances, Sudan's population would appear to be reasonably well-fed with an average per capita intake of 2,200 calories (1974/75) and a projected increase to 2,700 calories by 1985. However, direct estimates and information at the local level such as food consumption survey data, clinical data, and anthropomorphological measurements clearly indicate that malnutrition, primarily protein/calorie malnutrition (PCM) nevertheless does occur, particularly among children in the marginal urban and rural areas.

2.34 Much of the malnutrition in rural areas is a reflection of poverty and income disparities, seasonal deficiencies or low levels of food production in many of the traditional farming areas, and to lack of an effective national food distribution system. The Government's long-term objectives include the gradual improvement of these traditional modes of production. However, since in the short-term, emphasis on developmental activity for this sector would not be solely on direct food production programs, but also on such prerequisite activities as the improvement of the basis infrastructure, the provision of institutional services etc., it would not be realistic to expect a rapid increase in food production or earnings and consequently an immediate improvement in the nutritional status. Thus, until broadly based rural development materializes, resulting in sustained improvement in rural nutrition, specific interim measures would have to be taken. This would involve supplementary feeding programs, especially for the vulnerable population groups. Much of the basic food supplies for such a program are available nationally but some food aid would be required from abroad, as well as assistance with the facilities for food storage and distribution.

2.35 Implementation of the Food Investment Strategy is expected to show an increase in the national per capita intake of calories and protein, but of more significance would be the virtual eradication of malnutrition through nationwide increased food production and improved food quality and its availability. In fact, an improvement in nutritional status and the extent of the elimination of pockets of malnutrition would be two major parameters used for measuring the effectiveness and impact of the Food Investment Strategy in terms of its benefits to the most needy low-income groups. A project in the field of nutrition and a series of programs related to training, the carrying out of surveys, etc., are proposed for implementation under the Food Investment Strategy as complementary activities to food production. These have been presented for consideration to the Food and Agriculture Organization of the United Nations (FAO).

### III. FOOD PRODUCTION SYSTEMS AND THEIR INVESTMENT REQUIREMENTS

3.1 International assistance and public sector funding of the investment requirements for increasing production under each food production system are being sought under different sources of funding and are considered separately. However, efforts will be made wherever possible to forge linkages between the development activities of the other farming systems and the improvement of the traditional farming sector, so that investments in those systems would have some beneficial effects also on traditional farming.

3.2 In the initial phases of the Food Investment Strategy, most of the investment in food production is expected to be made in the irrigated and mechanized rainfed farming systems, and in the establishment of feedlots, intensive poultry farming and other animal production complexes. Growth in agro-industry related to food will be focussed mainly on food preservation, meat processing, the manufacture of vegetable oils, oil cake and animal feed.

3.3 The main investments in the provision of basic institutional and social services and development of the rural infrastructure, as prerequisites to subsequent food production programs, will be directed towards the traditional farming areas in the western and southern regions of the country. The major proportion of direct production-oriented investment will be in the central and eastern regions. The Government is fully aware that the concentration of investment in the central and eastern regions will tend to widen to a greater extent the level of development and the income disparity between them and the rest of the country. However, it is expected that during the course of implementation of the Food Investment Strategy, the major public sector commitments to on-going and new food-related activities in these two regions would be fulfilled, leaving further major investment thereafter mainly to the private sector. This would then allow for a shift in resources to food production-oriented programs, essentially in the traditional sector of the other provinces which should then be in a position to absorb such investment more readily.

3.4 In fact, the Government is considering the possibility of developing as a supplementary or follow-up program to this exercise, a Food Investment Strategy on a region by region basis. The great differences between the four main regions of the country would seem to justify such an approach, in which consideration could be given to the particular problems and constraints to food production in each region, and the investment requirements determined on a more specific basis. A description follows of the investment-related aspects of each farming system.

### C. Traditional Farming System

3.16 The traditional farming system encompasses virtually all small-scale rainfed crop production and rudimentary irrigated farming, both mainly at the subsistence level with limited commercial operation, as well as livestock production under nomadic and semi-nomadic conditions. About 80 percent of the rural population is engaged in traditional farming.

3.17 Several projects involving increased food production under traditional farming, but formulated within the framework of rural development, are included in the Food Investment Strategy. Also a series of activities mainly for the provision of services in crop and livestock production are listed. These services would provide an effective institutional framework through which technical assistance and other inputs could be made available to the traditional farming community. Donor assistance to the Government in improving and strengthening the provision of these services would serve to expedite the development efforts in this sector.

3.18 In addition, within other segments of the agriculture sector as well as in other sectors of the National Development Plan, there are various programs which are geared to the benefit of the traditional farming community. The Government has identified and in some cases formulated more projects and other developmental activities, which with the availability of additional resources could be incorporated into the program for assisting in the development of the traditional farming system.

3.19 Improvement of traditional crop and livestock production will be accorded a much higher priority in the long-term or with the availability of additional resources because of the large percentage of the rural population involved. At present an inadequate transportation system in these areas, the near absence of supporting services, and the limited number of clearly identified or formulated production-oriented investment opportunities in the traditional sector, set severe limits to the achievement of quick and broadly based increases in food production and rural income in this sector. During the short-term, assistance to the traditional sector therefore will be concentrated on the establishment of the basic physical infrastructure and the institutional framework required for the carrying out of an effective long-term development program for this farming system. Concurrently, new approaches and methods for improving production systems will be developed through research and application on pilot projects.

3.20 The thrust of public investment will thus be directed towards gradually removing the major constraints and expediting the formulation of a series of investment projects in directly productive activities. This essentially constitutes a long-term program which cannot be expected to generate much of a measurable impact in the short term. However, it is expected that this approach will lead to a significant expansion of direct food production investment opportunities by 1980.

3.21 The following projects relevant to basic support services and crop production in the traditional farming system, are included in the Food Investment Strategy and have been selected for consideration by donors for concessional financing:

	Costs: £S ('000)		
	<u>Local</u>	<u>Foreign</u>	<u>Total</u>
Jebel Marra Project (modernization of small food-crop farms)	1,855	2,155	4,010
Expansion of Horticultural Crops (establishment of nurseries)	1,000	-	1,000
Sag El Naam Project (settlement, 50,000 acres)	1,182	918	2,100
Agricultural Administration in Provinces	1,095	-	1,095
South Darfur Development	1,509	2,000	3,509
Khashm El Girba Scheme (irrigation services to small holdings)	5,000	3,000	8,000
Traditional farming (rainfed for small holdings)	4,527	3,077	7,604
Survey of Nomads for improvement of nomadic sector, N. Sudan	104	36	140
Land Use Studies for Settled Communities	572	178	750
Total	16,844	11,364	28,208

#### D. Intensive Livestock Production

3.22 In the field of animal production, self-sufficiency in meat with an exportable surplus already exists. However, there is still a high livestock development potential and intensive animal production is an area with ample scope for investment open to the private sector, but also requiring large inputs of public sector financing. Statistical data on livestock production are generally based on approximations, but most estimates point to a population of between 30 to 40 million units, consisting of about 14 million cattle, 13.5 million sheep, 10 million goats and 2.5 million camels. Animal production constitutes about 25 percent of the total production of the agriculture sector, contributes approximately 10 percent to GNP and provides employment for about 1 million persons. Its contribution to total exports is about 7 percent.

3.23 The Food Investment Strategy includes a number of projects with objectives directed to improvement of production in traditional livestock farming, which initially will be the main source of animals for the feedlots. They cover animal health services, better water supply, improved pasture, and institutional support services in the existing production areas as well as other areas of potential. Meat production is projected at 830,000 tons by 1985, an increase of 120 percent over the 1972/73 production; milk production is expected to increase from 1,150,000 tons (1975/76) to 2,000,000 tons by 1985. Meat exports by 1985 are estimated at 100,000 tons.

3.24 The attainment of these targets would call for a high level of investment from the private sector for feedlot and dairy enterprises, and poultry rearing. It would also necessitate the timely and integrated allocation of public sector financing for the intensification of the support services, improvement of the physical infrastructure, and research in animal production, particularly in the traditional sector where the nomadic and semi-nomadic population rear about 90 percent of the country's livestock. However, it is expected that with the implementation of the program there would be a significant increase in livestock production from both the mechanized rainfed and irrigated farming areas.

3.25 The finishing of livestock from the rangelands in feedlots would increase the demand for crop by-products for conversion into animal feeds. Since most of the major crops now being cultivated can, in some form, contribute to the production of animal feeds, an increase in feedlots would stimulate further investment in the cultivation and processing of crops linked to animal feed production.

3.26 Due to the dependence of the feedlot operation for its source of animals on the traditional farming sector, the development of this operation would be heavily dependent on the improvement of production in the traditional livestock producing areas. A number of projects have been identified for animal production for both public sector and private equity funding. These are listed under the Public Sector Livestock sub-sector in Annex I, and under Private Investment. However, the following new public sector projects are considered as being of direct benefit to the stimulation of livestock production in the traditional sector and are presented for donor consideration: