

# **Donor Finances of Agricultural Development in Southern Sudan -- Development or Dependency?**

Jean M. Due  
and  
John F. Due\*

As prices of oil and other imported goods have escalated since the mid 1970's, many non-oil exporting African countries have encountered severe foreign exchange constraints. It is not unusual for more than 50 percent of foreign exchange earnings to be allocated to petroleum product imports alone, leaving insufficient amounts for spare parts, agricultural and industrial machinery, vehicles to carry on agricultural extension and other government activities and so forth. As a result, many of the agricultural research and development projects are now being funded by donor agencies. This study of donor projects in the Southern Region of the Sudan highlights some of the problems many African countries are facing as a result of the foreign exchange crisis.

The World Bank has financed two large loans (one for \$10.7 million in 1974 and the other for \$56 million in 1979) to the Southern Regional of Sudan (SR) for agricultural development; each of the loans was for a four year period. As part of the terms of the second loan agreement, the government of the SR was required to carry out a study of the long term budgetary implications for all on-going agricultural projects in the region. We were asked

\* Professors of Agricultural Economics and Economics, respectively, University of Illinois at Urbana-Champaign. The authors wish to express appreciation to Southern Regional government and donor personnel for their assistance.

to undertake that study--to sum revenue sources (both domestic and foreign) of the SR government and compare them with expenditures to the agricultural sector (both domestic and foreign) to ascertain whether or not the SR government could continue these projects if donor aid was discontinued. This was the first time that we had looked at total donor aid to a region or country in Africa and assessed its implications for the host government.

## Background

The SR of Sudan is not one of the most developed areas of Africa. It suffered significantly from the 17 year war which ended with the Addis Ababa accord in 1972. As part of the settlement, the SR was given much more autonomy than other sections of the Sudan (although five other regional governments have since been established); it has its own Assembly elected by popular vote, its own Cabinet and President, elected by the Assembly, who is also Vice President of the Sudan. The SR has its own taxes and tax administration although it depends heavily on the Central Government for revenues.

The SR is much poorer than the rest of the country; it has a per capita income of \$150 per annum compared with \$450 for the entire Sudan. It is far more dependent on agriculture than the remainder of the country, with little industry and limited commerce. The farms are small with a land tenure system typical of tropical African, shifting cultivation, adequate rainfall for crops, and nomadic herds in some areas. Dura, a type of sorghum, is the most important staple crop with quantities of maize, millet, groundnuts, sesame, cassava and vegetables grown; cotton, coffee and tobacco are grown for export. There is substantial potential for producing lumber but output at present is limited.

The SR is very isolated. Rail and river traffic from Khartoum is slow and undependable. Hence, the SR turns to Kenya more and more for imports, which have to come in over very bad roads taking nine days by truck. Formerly, Uganda was a major outlet but the political disturbances there have made that route unsafe. There are many breakdowns of trucks en route, adding to transport costs. The dependence on Kenya also means that additional foreign exchange is necessary and, since the SR's own generating capacity of foreign exchange is very limited, imports

are severely restricted. There are the usual shortages of petroleum (which is transported in 50 gallon drums), spare parts, simple agricultural implements, vehicles for the extension service and other government departments, to cite only a few examples. Sudan Airways is scheduled to fly from Khartoum to Juba (the SR capitol) daily but it had not flown the route for six weeks before we were there in late August, 1980; it is not dependable. Thus, donors get goods, supplies and personnel flown in by private charter from Nairobi, Kenya. However, the SR government cannot afford such luxuries and long delays and uncertainties result.

Donor agencies have had to spend significant amounts of funds and time constructing housing for their staff. But service in Juba is poor, making it difficult for employees to get to government offices on time; bicycles are expensive and have to be imported. Many factors contribute to inefficient operation of both government and donor programs.

### Agricultural Development in the SR

Agricultural development in the SR is the responsibility of the Ministry of Agriculture and Natural Resources (MOA). MOA had divisions of crops, livestock and forestry. The MOA has severe shortages of trained personnel, transport and motor fuel. The recurrent SR budgeted expenditure for MOA was Ls 4.7 million<sup>1</sup> in 1980-81 exclusive of donor aid. This was 12.6 percent of the recurrent budget. The provinces of the SR budgeted Ls 2.9 million for agriculture (6.7 percent of their total). The SR development budget was Ls 2.9 million but actual expenditures were only Ls 1 million. Thus, total budgeted expenditures for agriculture from domestic sources were Ls 8.6 million in 1980-81. Of the Ls 4.7 million in the SR recurrent budget, Ls 3.5 million or 74 percent came from the sales of lumber and other agricultural products.

Unfortunately, the actual expenditures (contrasted with budgeted expenditures) of the SR government are not broken down by activity; they are segregated only by personnel costs, services and miscellaneous. One cannot determine amounts spent by function--for research, crops, extension, livestock or forestry.

<sup>1</sup> The Sudanese pound was equivalent to \$1.25 at the time.

Such a division would be most helpful to MOA administration and planning. However, the SR development budget is disaggregated by function; these functions closely follow those shown for donor agencies; thus agricultural training institutes and Aweil rice scheme are funded both by the development budget and by donor agencies.

Some development projects also are funded by the Central Government; examples are kenaf processing, a canning factory, a future sugar project and the purchasing and processing of cotton. The cotton project suffered from inadequate funds to pay farmers and other administrative problems and recently was turned over to the SR government.

Donor aid (including loans) has become very important in the SR, especially in the field of agriculture. Currently, donor aid in agriculture is more than four times the sum of domestic agricultural expenditure; moreover, donor aid is increasing much more rapidly than SR government expenditures. Total donor aid is now equal to 69 percent of all SR government recurrent expenditures.

### Donor Projects

What are the major agricultural projects financed by donors in the SR? There are many donor agencies operating in the SR contributing to the rural sector; the work of each of the major donors is summarized briefly and donor contributions to agriculture are shown in Table 1.

It is most difficult to obtain accurate data of actual donor expenditures by year although most proposed budgets are available. There are several reasons for this; funds for technical assistance personnel are often paid by subsidiary or related agencies;<sup>2</sup> planned imported vehicles, spare parts and other materials may not arrive within the planned period; personnel hired arrive late; shortages of fuel do not allow activities to proceed as expected. Thus, we believe that the actual expenditures shown for some of

<sup>2</sup> For example, the Sudan Council of Churches obtains contributions to its budget from many sources; one of these sources may pay the salary of the rural development officer; another may supply a vehicle; it is difficult for the agency to know the exact amount of expenditures which do not flow directly through its budget.

**Table 1**  
**ESTIMATED DONOR AID TO THE SOUTHERN REGION**  
**OF THE SUDAN FOR AGRICULTURE, 1976-77 - 1980-81**  
**(in Sudan Pounds)\***

Donor	1976-77	1977-78	1978-79	1979-80	Planned 1980-81
<b>I. Multinational</b>					
a) World Bank-IDA (1)	591,922	626,741	1,840,000	1,100,000	0
World Bank-IDA (2)	0	0	0	1,520,000	11,200,000
b) UNDP-FAO					
Yambio Institute	293,763	77,009	176,931	204,935	139,670
Agric. training	6,528	52,833	110,460	217,052	135,389
Agric. statistics	118,178	2,098	0	0	0
Economic planning	7,843	24,923	36,552	52,608	576,075
Aweil rice scheme	665,572	187,708	267,635	158,000	0
Poultry & dairy	585,610	25,908	79,874	135,265	179,355
Horticulture	27,103	20,400	50,767	64,000	54,250
Livestock	34,384	12,867	0	0	0
Other	300,797	158,575	237,502	149,250	37,800
Total	2,039,778	562,321	959,721	981,110	1,112,539
c) WHO-UNICEF					
Water development	361,119	177,888	136,000	550,000	450,000
	0	2,058,333	1,341,667	1,770,000	1,220,000
d) World Food					
Total multinational	2,992,819	3,425,283	4,277,388	5,921,110	13,982,539
<b>II. Bilateral</b>					
a) EEC					
Upper Talanga tea	n.a.	3,820,000	1,285,821	99,511	499,294
Aweil rice	0	1,800,000	0	1,072,800	1,445,100
Other agriculture	n.a.	1,712,000	0	0	0
b) Netherlands					
Penykou plains	1,631,250	1,631,250	1,631,250	1,066,800	2,320,000
University farm	0	0	0	38,100	0
c) West Germany					
Livestock (1, 2)	571,353	571,353	1,511,353	563,436	573,853
Forestry	470,000	470,000	595,000	470,000	699,167
d) United Kingdom					
With IDA (1) <sup>c</sup>	453,400	453,400	453,400	151,450	453,400
Imatong forest	n.a.	n.a.	n.a.	652,400	1,707,000

Donor	1976-77	1977-78	1978-79	1979-80	Planned 1980-81
e) United States					
Food relief	n.a.	4,000,000	n.a.	n.a.	n.a.
Yambio-Rumbek	n.a.	n.a.	533,000	533,000	533,000
Manpower development	n.a.	n.a.	567,000	881,000	881,000
f) Denmark					
Total bilateral	7,618	7,618	7,618	7,618	233,333
	3,133,621	14,465,621	6,584,442	5,536,115	9,345,147
III. Voluntary					
Norwegian Church Aid	1,077,735	500,000	792,798	803,600	803,600
Across	n.a.	n.a.	92,000	600,000	1,280,000
Lutheran World Service	7,000	n.a.	72,400	401,672	236,880
Sudan Council Churches	200,000	200,000	200,000	230,000	230,000
Other	500,000 <sup>e</sup>	500,000 <sup>e</sup>	500,000 <sup>e</sup>	500,000 <sup>e</sup>	500,000 <sup>e</sup>
Total voluntary	1,784,735	1,200,000	1,657,198	2,535,272	3,050,480
Total donor	7,911,175	19,000,904	12,519,028	13,992,497	26,378,166

\*Sources: Democratic Republic of the Sudan, Southern Region, Regional Ministry of Finance and Economic Planning, *The Six Year Plan of Economic and Social Development, 1977-78 — 1982-83*, Juba, June 1977, Table 1.  
Democratic Republic of the Sudan, Southern Regional Ministry of Finance and Economic Planning, *Report on External Assistance 1979-80, Annex II*, 1980.

Conversations with donor agency personnel.

Footnotes: (1) First World Bank Loan does not include ODA + West German contributions.

(2) Second World Bank Loan does include ODA, etc.

<sup>e</sup> Estimate

the donor agencies are "best estimate"; however, although the data may not be accurate for one agency, the average for all donor agencies is probably a good approximation from year to year.<sup>3</sup> Note also that estimates often vary widely from year to year as one project is completed and new projects come on stream.

## I. Multinational

(a) *World Bank, International Development Agency (IDA), International Fund for Agricultural Development (IFAD), etc.*

<sup>3</sup> Some agencies failed to respond to repeated requests for data.

The SR Agricultural Rehabilitation Project, estimated to cost \$12.6 million, was funded by IDA (\$10.7 million, Credit No. 476-SU) in 1974. This project was for the four year period 1975-79 with additional parallel funding provided by the British Government Aid Agency (ODA) for technical assistance and feeder road construction. The Federal Republic of Germany financed a companion cattle vaccination program of \$5.1 million.

This first World Bank project was designed to:

"increase smallholder production of food crops, primarily sorghum, maize and groundnuts to improve nutrition and reduce dependence on food imports. Cash incomes were to be increased through the development of cotton and coffee as cash crops, and through the sale of surplus food crops. Production of livestock was to be increased primarily through the cattle vaccination campaign."<sup>4</sup>

The financing of this project was planned to be \$10.7 million as a loan from IDA and \$1.9 million (15%) from the government of the Sudan with planned disbursements by year compared actual disbursements as follows:

	Planned (\$)	Actual (\$)	Ls
1974-75	850,000	0	0
1975-76	3,400,000	400,000	139,276
1976-77	3,900,000	1,700,000	591,922
1977-78	2,200,000	1,800,000	626,741
1978-79	350,000	4,600,000	1,840,000
1979-80	0	2,200,000	1,100,000
Total	10,700,000	10,700,000	4,297,939

In spite of the significant resources and experiences of the World Bank staff in agricultural development projects, there were many problems, a few of which are summarized in this quotation from the World Bank 1979 *Staff Appraisal Report*:<sup>5</sup>

"The project started slowly, due to problems of staff recruitment and the effect of the many constraints discussed in previous paragraphs. However, a sound infrastructure base has been

<sup>4</sup> World Bank, *Sudan, Southern Region Agricultural Project Staff Appraisal Report*, 1979, p. 4

<sup>5</sup> *Ibid.*, pp. 4-6.

established through the project headquarters in Juba, the main crop station at Yei and sub-centers at Maridi, Yambio, Torit and Rumbek. An appropriate program of crop trials has been started and seed production of improved varieties of groundnuts, maize and sorghum is now progressing well with some 175 tons being distributed in 1977-78. Seed production exceeded appraisal estimates for groundnuts by 51% but reached only 22% of sorghum and 45% of maize projections and improved seed is only to have reached 10,000 farmers."

"Distribution of coffee seedlings for rainfed production has been double that of the appraisal estimates and 3,500 feddan involving 3,500 farmers will have been planted by the end of the project instead of the 1,500 estimated at appraisal. This offsets the failure to develop an estimate 1,650 feddan of irrigated coffee. Due to a very weak and understaffed extension service the late arrival of a coffee officer and almost permanent shortage of fuel and spare parts, the irrigated coffee component never started. A cotton spraying program was started in 1977 with good results, but the 2,000 farmers involved have been discouraged by late buying of the crop due to EPAPC's shortage of funds and fuel to transport the crop and to operate the ginnery. No cess has yet been levied on cotton to recover spraying costs, nor has foreign exchange been made available to cover the cost of pesticides for spraying. However, this problem is being addressed under a separate ODM project. Pilot crop marketing which started in the 1978 buying season failed due to a late start and an inflexible price policy; this problem is expected to overcome for the 1979 season. The pilot extension program in Yei and Maridi is developing suitable extension programs for wider replication, but better coordination is required between extension and research. Certificate and in-service training has commenced at the new Yei Agricultural Training Institute, and Stockman Training School is nearing completion at Malakal, with courses due to commence in 1979."

At the conclusion of the first World Bank loan a second loan was negotiated (the SR Agricultural Project) to continue and expand the progress made under the earlier loan. This second loan was for \$56 million over the four years 1979-83; it was designed to:

- 1) continue the momentum established in the first project.
- 2) strengthen the MOA's capacity to develop the SR by drawing up district development plans for each district through a Project Formulation Unit (PFU).
- 3) plan for each district in three phases. There would be a preparatory phase which would include agro-economic surveys, research trials, seed multiplication and distribu-



tion, etc. A development phase of 5 to 8 years in which development plans would be formulated by PFU and would include infrastructure improvement, input supply, marketing, and so forth, and a consolidation phase in which regular MOA services would take over and continue the activities developed in the earlier stages.

- 4) provide considerable international staff recruiting and domestic staff training.

This is the major donor project in the SR; it also has ODA and West German financing; amounts and shares of this ambitious and costly program are as follows:

	Amount (000)		Percent of Total Project Cost
	Ls	US\$ <sup>1</sup>	
IDA	7,500	15,000	27
ODM	9,250	18,500	
IFAD	7,500	15,000	27
Federal Republic of Germany	950	1,900	3
Govt. of Sudan	2,800	5,600	10
TOTAL	28,000	56,000	100

<sup>1</sup>Based on the then prevailing exchange rate of Ls1 = \$US2.

(b) *United Nations Development Program (UNDP), Food and Agriculture Organization (FAO), and International Labor Office (ILO), World Health Organization (WHO), United Nations Children's Fund (UNICEF) and World Food.*

The second most important multinational donor is UNDP and its affiliated organizations; these agencies have contributed more than Ls 2.1 million each year for the last four years. The major categories of assistance are shown in Table 1; items included in the agricultural category are the same as in the MOA budget (which excludes fisheries and cooperatives). Major allocations have gone to the Aweil rice scheme (which was funded by EEC after 1979), poultry and dairy development, agricultural training centers, economic planning, water development and food relief. The Aweil rice scheme is a larger scale irrigated, mechanized rice project which is estimated to increase rice yields from 1 to 3 tons per

hectare; it would also include a rice mill in the future. UNDP has 5,088 feddans<sup>6</sup> of rice planted in 1976 but yields were low; in 1978, 741 hectares were seeded but only 506 harvested; again yields were low.<sup>7</sup> Total multinational assistance was Ls 5.9 million in 1979-80 and would increase to Ls 14 million in 1980-81.

## II. Bilateral

Bilateral aid, like the multinational, varies from year to year and the importance of donors changes over time. Some of the bilateral aid is connected with the World Bank-IDA projects; bilateral aid is the second most important source of donor aid to the SR; like the multinational assistance, most of the totals are loans and must be repaid over time.

### (a) *European Economic Community (EEC)*

EEC assistance has been primarily to the Upper Talanga tea and Aweil rice projects. The Upper Talanga tea project plans to establish 1,000 hectares of tea over a 12 year period; the first phase would establish 125 hectares, tea nurseries and multiplication plots, feeder roads, staff quarters and a tea factory. This is an import substitution project; tea is a very popular beverage in Sudan. The Aweil rice scheme is reported under UNDP.

### (b) *United Kingdom (ODA)*

ODA assistance is primarily through the two IDA projects and the Imatong forest project. The latter plans to rehabilitate existing sawmills, establish reforestation operations, collect data on costs of reforestation and volume of marketable timber and assist with infrastructure development in the forest areas.

### (c) *United Kingdom of the Netherlands*

Netherlands' assistance is primarily to the Penykou plains project which will establish a pilot farm of 1,300 hectares where sugar cane, cotton, rice and other food crops will be grown. Research

<sup>6</sup> One feddan is equivalent to 1.04 acres or 0.42 hectares.

<sup>7</sup> From UNDP reports.

on both rainfed and irrigated crops will be undertaken as well as on animal husbandry.

*(d) Federal Republic of Germany*

West Germany also has been assisting the IDA projects with vaccines, veterinary equipment and laboratory construction for livestock improvement; other assistance has been in forestry and road development.

*(e) United States (USAID)*

U.S. assistance has been for food relief, primary health care and literacy training through voluntary agencies and for agriculture and manpower training. The training provides support for the Yambio and Rumbek training institutes, the College of Adult Education at the University of Juba, research conferences and an assessment of manpower needs. Yambio and Rumbek are supported also by UNDP; they provide training for agricultural extension agents, field assistants and donor agency personnel.

*(f) Denmark*

The Danish government assistance to the Mongalla agro-industrial complex envisioned a wood working factory, slaughter house, fish and poultry projects, grain mills, water purification and power generation. It is the visual example of how *not* to plan for development; the machinery arrived before any of the buildings were constructed and still sites in the open air as a reminder of a large expenditure from which returns flowed to Danish technicians and manufacturers and the costs to Sudan. These amounts are not shown in Table 1 as the loan was a Central Government undertaking. The Danish government has contributed also to Lutheran World Federation for an integrated rural development project (included under voluntary).

*(g) Other and total*

Other countries -- Abu Dhabi, Qatar, Kuwait and Canada have provided assistance to the SR. Total bilateral assistance averaged LS 10.5 million during the four years 1976-80; this amounted to 51 percent of total donor assistance; 71 percent of

bilateral aid was allocated to agriculture.

### III. Voluntary Agencies

Voluntary agencies also provided important assistance to the SR; they provided 21 percent of total donor assistance during the four year period; 41 percent of voluntary aid was for the agricultural sector. Each of the major voluntary agencies are shown in Table I. Norwegian Church Aid gets 80 percent of its funding from the Norwegian government; it is involved in rural and water development, health dispensaries, schools and infrastructure rebuilding. The African Committee for the Rehabilitation of Southern Sudan (ACROSS) is involved in primary health care, ox training, wells, citrus nurseries, a sugar mill using ox power and extension activities. Lutheran World Service conducts rural development, education and primary health care. The Sudan Council of Churches has donations from many religious organizations including the World Council of Churches; it is involved in integrated rural development and women's work, well drilling, ox training and provision of agricultural tools and horticultural seeds on credit. SCC personnel provide training of local pastors and women's group leaders so that many persons benefit; SCC anticipates that projects will be self-generating when their support is withdrawn.

Other voluntary agencies include Sudan Interior Mission, African Medical and Research Foundation, Intermediate Technology Development Group and the Summer Institute of Linguistics.

Total voluntary assistance averaged Ls 4.3 million from 1976-80.

Donor assistance has been an important input into the total resources of the SR in the period under consideration. Total donor assistance amounted to Ls 27 million in 1979-80 and was projected to increase to 47 million in 1980-81; this compares with the SR total recurrent budget of Ls 38 million. Donor assistance to the agricultural sector totaled Ls 14 million in 1979-80; this is 3 times the SR MOA recurrent budget for the same period. In 1980-81 donor assistance for agriculture would increase to Ls 26 million with little opportunity for the SR recurrent budget to in-

crease beyond Ls 4.7 million; thus donor assistance would be 5 times the SR agriculture budget. Given the limited opportunity for the SR budget to increase significantly in the next five years, it is obvious that the SR government could not carry on the donor work if the donor budgets were severely restrained. This raises serious questions about the direction and formulation of policy regarding donor assistance.

In addition, over half the donor assistance to the agricultural sector (especially by UNDP and other bilateral agencies) has been for large capital-intensive schemes; in contrast the voluntary agencies have opted for schemes that benefit the smallholder farmers to a greater degree; the World Bank-IDA second loan emphasizes planning and policy formulation, the benefits of which will take years to accrue to small farmers. How is policy formulated to direct donor assistance?

#### *Policy Formulation Re Donor*

There is within MOA a small unit which reviews donor proposals, compares them with MOA priorities, and makes suggestions for change. The unit has been joined recently by some World Bank staff funded by the Second World Bank loan -- the PFU, Project Formulation Unit. This unit is expected to work with the MOA group in policy formulation and evaluation. However, to date this PFU had to be housed several miles from the MOA group making integration and coordination much more difficult. The PFU also is responsible for preparing the district development plans, conducting baseline surveys and assisting in the training of SR personnel. Due to the small staff at present, the combined units primarily compile possible projects with inadequate overview of planning and comparison of relative benefits.

Projects are then reviewed by the Planning Unit of the SR Ministry of Finance and Economic Planning. This unit has excellent principles for project evaluation -- high priority to agriculture, final decisions made by the Ministry and not donors, completing existing projects before new ones are started, inclusion of training components and selection on the basis of economic and social (not political) consideration. But in spite of the desirable principles, the government has not the personnel and information to be able to implement them adequately. Final review of donor projects is made by the Ministry of National Planning of the

### Central Government in Khartoum.

Thus at present, although an effort is made to formulate policy regarding donor aid, and to evaluate and monitor that aid, in practice personnel have inadequate time and "clout" to influence donor aid so that it makes a maximum contribution to development of the SR.

### *Major Dilemmas in Agricultural Policy in SR*

What are the major dilemmas of agricultural policy in the SR as seen by top MOA officials? MOA personnel found the following issues to be of major concern: relative emphasis on agriculture versus infrastructure, cash versus food crops, small farm versus large scale projects, completion of existing projects versus initiation of new ones and donor versus MOA conduct of extension activity. Each of these issues is expanded upon briefly.

We and MOA personnel have grave doubts that substantial progress can be made on agricultural development of the SR until major improvements have been made on infrastructure. Transport is of utmost importance to get inputs (such as fuel, fertilizer, seeds, tools and personnel) in and marketed crops out. Would the development of the SR be accelerated if all donor assistance for some initial period was allocated to transport and other infrastructure improvements and only later to agricultural development or can both be initiated simultaneously? Obviously, agricultural development projects can be implemented much more effectively once transport and communications networks have been improved. However, SR government personnel believe that increases in agricultural production are needed also in the short run. It would appear, therefore, that donors need to be influenced to devise projects which contribute both to infrastructure and agricultural development.

The SR, despite its great agricultural resources, is currently a net importer of food. Additional production is needed both for domestic consumption and for foreign exchange earnings. Can these increases in production be accomplished best by increased production of food crops for domestic consumption in all of Sudan or of export crops? In the immediate future there is little incentive to produce for either market because of the lack of transport. Farm families will produce a surplus if price and marketing policies are

sufficient to encourage such production. A study of price and marketing policies did not fall within our terms of reference, but at present coffee net returns per hectare are many times that of the major food staples while cotton marketing policies are discouraging production. However, if the majority of small farmers are to benefit from increased incomes, domestic surpluses will have to be encouraged and made available both in the SR and in the North; there is also a good potential market for food crops in the surrounding Arab countries. Thus, both domestic and export crops can be encouraged simultaneously if price and marketing policies are so structured.

The issue of large versus small scale agricultural development is common to many African countries. At present, the MOA articulates a preference for the small farm approach but there are many large scale donor projects. Although we did not have the opportunity (or terms of reference) to evaluate the success of either type of donor project, one can find repeated references in the Budget speeches and elsewhere to the disappointing performances of the large rice and dura schemes. Generally the large schemes are too capital-intensive, and are short of management skills, mechanics and spare parts; costs far exceed revenues. Thus given the infrastructural, foreign exchange and management constraints at this time, priority should be given to small farms. This relates to tea and coffee also; large plantations are not necessary for efficient production.

A major issue is that of completion of existing projects versus initiation of new ones. Donor funding of projects frequently is for four years while projects may not be economically viable and self-sufficient within that time frame. Donors often prefer new projects rather than completion of existing ones. A related issue is that of writing off non-viable projects when the project is hopeless; it is much more efficient in the long run than continuing on a minimal basis "hoping" for some miracle. Thus to minimize costs, completion of viable existing projects should have priority over new projects and non-viable projects should be written off if costs of completion are greater than future benefits.

Several of the existing projects involve extension activity, quite appropriately; thus donor participation in extension is obviously appropriate. At the moment a disproportional share of the extension work is being conducted by donor agencies because of a

shortage of personnel, motor fuel and vehicles by MOA. Over the next several years, it is necessary to integrate donor and MOA provincial extension activity more thoroughly and to establish a policy as to whether or not donor extension personnel are "seconded" from MOA and returned to MOA after training and experience. Donors also should be encouraged to include training components in development proposals.

### *Possible Future Revenue Increases?*

Part of the terms of reference of our study was to provide a review of present revenue sources to the SR government and an assessment of the potential for expansion of those revenues in the future. A summary of the study of present revenue sources will appear in a future journal article; it is sufficient to summarize here that two-thirds of the total SR recurrent budget each year depends on grants from the Central Government and approximately one-third of the recurrent budget is transferred to the provinces for their activities. The tax structure of the SR government is unusually complex due to the interrelationship with the Central Government tax system and the tendency to impose a large number of rather minor taxes. Much of the budgeted revenue is never received; this is graphically illustrated in Figure 1.

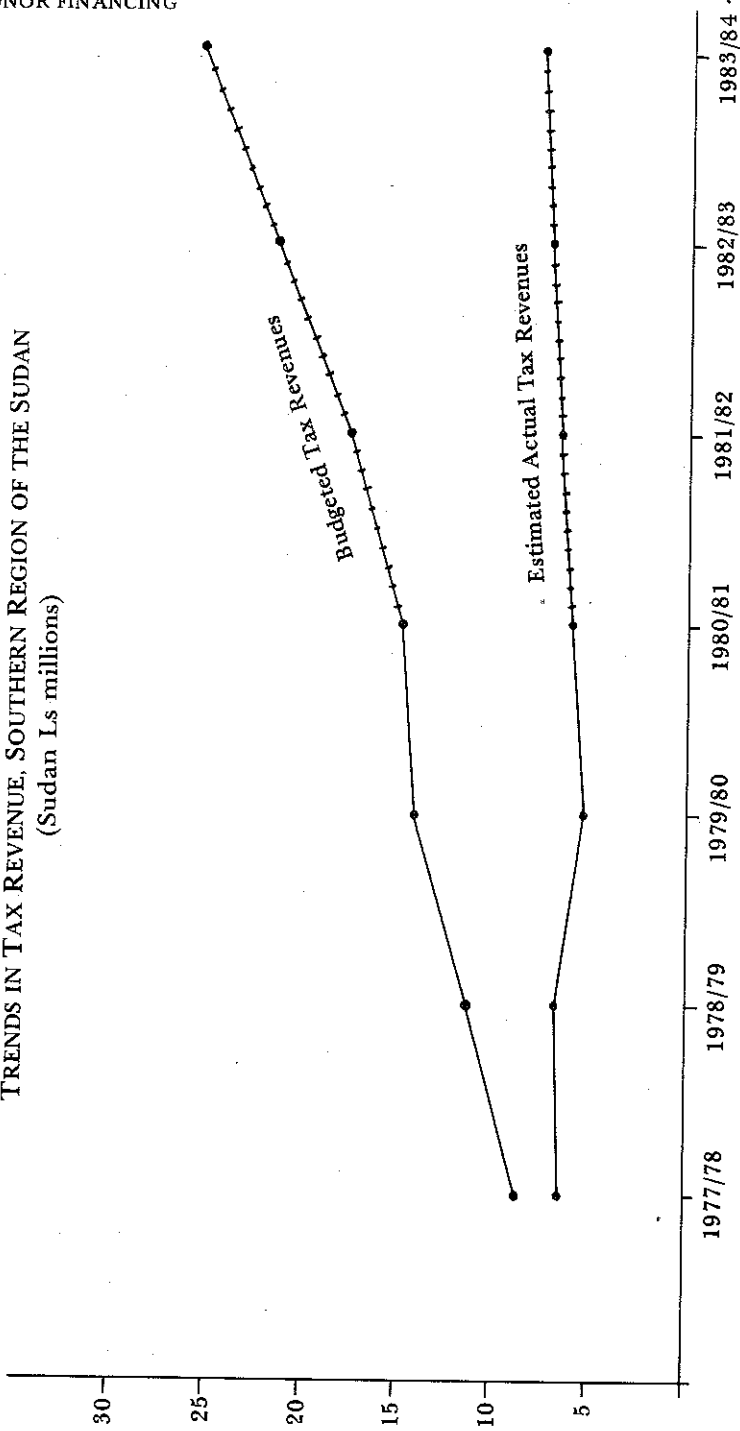
A comparison of SR total government recurrent and development expenditures with total donor assistance and expenditures for agriculture with donor assistance to agriculture is shown in Figure 2. It is obvious that donor assistance is increasing faster than total SR revenues and that the capacity of the SR government to expand revenues in the short run is very limited. In addition, donor assistance in agriculture is now four times the sum of domestic expenditures. Given these factors, what were our recommendations? First, however, it is necessary to summarize our findings.

### *Summary*

Total SR budgeted expenditures in 1980-81 were Ls 38 million, of which Ls 4.7 million was for agriculture; the actual expenditures, however, were only about 70 percent of the budgeted figures and there is no assurance that the current year figure will be any closer to the budgeted figure. Total budgeted recurrent expenditures of the SR, including provinces and local councils, was

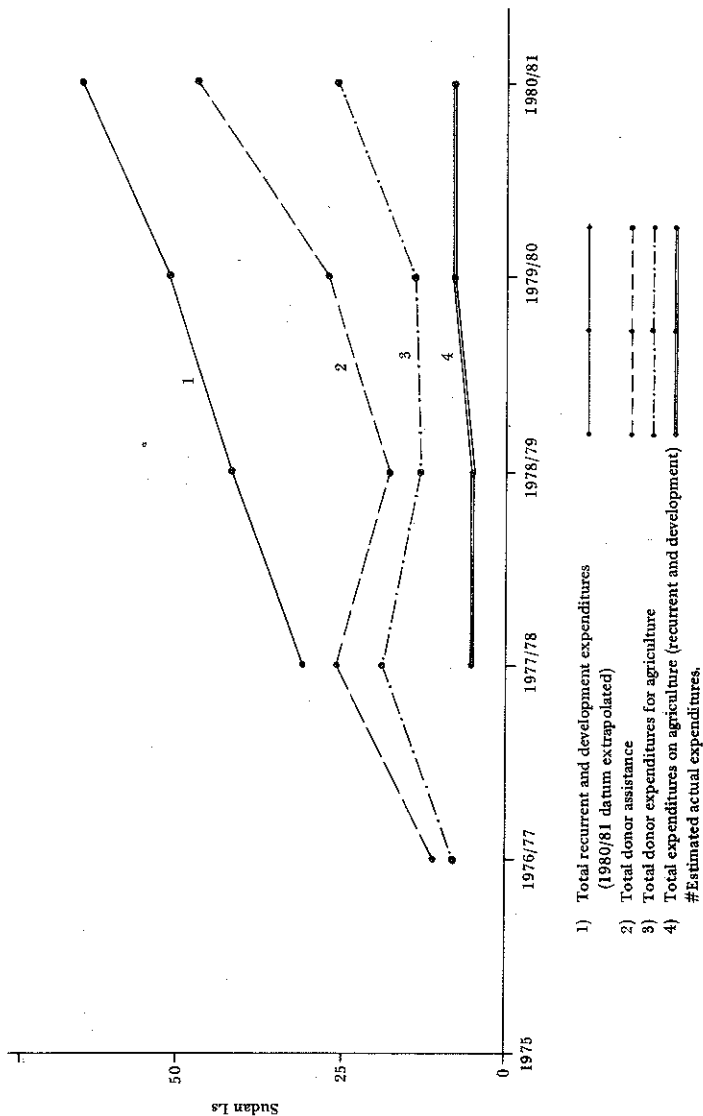


**Figure 1**  
**TRENDS IN TAX REVENUE, SOUTHERN REGION OF THE SUDAN**  
 (Sudan Ls millions)



Source: Data in table III-6.

**Figure 2**  
**COMPARISON OF SUDAN, SOUTHERN REGION GOVERNMENT AND**  
**DONOR EXPENDITURES, 1976/77-1980/81**



Source: Democratic Republic of the Sudan, Southern Region, Annual Budget Speeches.

Ls 68.3 million in 1980-81 and total recurrent plus development budgeted figures totaled Ls 88.7 million, but the actual figures are certain to be very much less.

Donor aid projects in the SR totaled Ls 47 million for 1980-81, of which Ls 26 million or 55 percent was for agriculture. Donor aid is increasing much more rapidly than SR government expenditures; total donor aid is now 69 percent of all SR government recurrent expenditures and there appears to be little opportunity for SR government revenues or Central Government grants to increase significantly in the foreseeable future. Currently, donor aid to agriculture is more than four times the sum of domestic agricultural expenditure.

There are major constraints to successful implementation of agricultural development projects in the SR, the most serious being the isolation, lack of trained personnel and foreign exchange, and above all, the lack of satisfactory transport to and from the North. Among the major consequences are the long delays in implementing projects; the great difficulty in obtaining and keeping expatriate personnel until nationals are trained; the inability to market cash crops (thus discouraging agriculture); and the dependency of the SR on Keyna for imports to the detriment of Sudan as a whole.

There is no possible way in which the SR government can assume the recurrent costs of the agricultural development projects or other development projects now being conducted in the SR with donor aid. Either donors must plan to continue carrying these recurrent costs or the gains from implementation of most of the projects will have contributed little. This may necessitate a reduction in the number of projects undertaken and/or reconsideration of the strategy of development in the SR.

### *Recommendations*

These recommendations are based on the assumption that further integration of the economy of the Sudan has high priority and that the SR's development will be accelerated if it receives more of the benefits of planned integration with other areas of the country. If loan dependency is to be reduced in SR we recommend:

- (1) The strategy of agricultural development in the SR must be

reconsidered. A more balanced strategy needs to be developed between agriculture and infrastructure; large scale projects need re-examination for economic viability and cost efficiency; donor projects need more direction, focus and monitoring by planning units within the Ministries and Project Formulation Unit (PFU). Donor projects can contribute more to the total economic development of the SR if they are well integrated into the new development strategy. More training of nationals (male and female) is needed by both donor and government agencies.

Given the infrastructure and foreign exchange constraints, the shortage of personnel in MOA, and the inability of the SR to expand revenues rapidly in the short run to cover recurrent costs of donor programs as they are phased out, the reconsideration outlined above seems imperative. Donor agencies must be prepared to finance recurrent costs of their projects for longer periods than the usual four years of multinational and bilateral aid. This may lead to a reduction in number of projects by existing donor agencies; it should also lead to a re-orientation of projects which can continue on a viable basis when donor aid expires. If the balance between infrastructure and agriculture is achieved, more agricultural output can flow out to markets and input supplies and extension personnel can reach the farmers.

The increased emphasis on focus, direction and monitoring of donor projects will allow greater integration of these projects into the overall development strategy; increased training of nationals will allow many MOA vacancies to be filled with nationals within five years, thus reducing the number and costs of expatriate personnel.

(2) A brief study of the mechanisms whereby donor assistance can make an increased contribution to the economic development of the SR would be beneficial. Currently, one-half of donor assistance in agriculture is allocated to large scale projects which are heavy users of capital and foreign exchange; the Aweil rice scheme, the Penykou Plains project and the district development plans of the second World Bank-IDA project are good examples. We did not have the opportunity to assess any of these projects but the yields and returns of the Aweil rice scheme appear to have been disappointing. The emphasis on the district development plans appears premature at this stage of development of the SR when infrastructure is in such need of improvement. The projects of the

voluntary agencies typically had a greater direct benefit to small farm families.

Given the foreign exchange constraints of the SR government, could each donor agency be required to import vehicles, spare parts, tools and fuel in equal numbers for the relevant ministries as for their project? Can extension personnel be more effectively trained and given experience by donor agencies and then returned to MOA? Do donor agencies assess the impact of their projects on women? Are projects chosen which have maximum impact on employment and income generation for small farmers and the rural population?

(3) A much greater emphasis on infrastructural development must be initiated in the future. There should be improved road transport within the SR coordinated with Central Government improvements in water and rail transport. Immediate emphasis should be placed on feeder roads. Donors should be encouraged to include infrastructural development in each project.

Although these recommendations are specific to the SR and to Sudan, many African countries are faced with similar dilemmas concerning donor dependency; as foreign exchange and budget constraints become increasingly severe, many non-oil exporting countries have very limited revenues to fund agricultural research, credit and development projects. More and more donors are calling the tune; in a desperate need to have ongoing research, development and credit activities, host governments are becoming more and more dependent on donor priorities, finance and technical assistance. A similar review of agricultural development strategy is imperative in many other African countries.

