SUDAN

FY 1984 PL 480 TITLE III

PROGRAM EVALUATION

USAID/Sudan

November 1983

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SUDAN PROGRAM EVALUATION

by

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Dartmouth Medical College
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Regional Food for Peace Officer
AID/REDSO/ESA
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2

ANNEX A

Scope of Work for Evaluation
of Sudan's PL 480 Title III Program

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Table of Contents

Table of Tables

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Introduction

Overview

In December 1979 the Government of Sudan and AID executed a $ 100 million, five-year PL 480 Title III program. The goal of the Food for Development program was to assist the Government of the Democratic Republic of Sudan (GOS) with its severe economic burden brought on by the Sudan Stabilization Reform Program and to enhance Sudanese commitment to basic human needs by assuring that budget allocations to the nearby rural traditional sector were not disproportionately reduced as a result of Stabilization Reform. This was to be achieved by:

1. reducing the foreign exchange demands placed on Sudan as a result of its efforts to meet increased food needs while efforts were underway to increase local production by providing a long-term US credit of $100 million over the next five years to finance wheat imports;

2. providing local currency for activities designed to assist the poor in the rural sector through activities in agriculture, transportation, health and rural planning; and,

3. supporting the economic stabilization and reform efforts under which the GOS had adopted policy reforms which could improve the structure of incentives in both the rainfed and irrigated sectors in order to increase agricultural production and, consequently, domestic food supplies, agricultural export earnings and rural employment and incomes.

Since that time, three amendments to the basic agreement have been signed which, in total, have provided $80 million of wheat and wheat flour to the Sudan and which have modified some of the local currency projects, self-help measures, and policy studies.

Purpose of the Evaluation

The current evaluation is the fourth in a series of annual evaluations which have been conducted over the life of the Title III agreement, the last one being a mid-term review in October, 1982 conducted by a team consisting of representatives from AID's Africa Bureau and Food for Peace Division, and the US Departments of Agriculture and Treasury.

There are three related objectives of the current evaluation:

1. to assess progress to date, especially since the mid-term evaluation, in implementation of the on-going Title III program;

2. to make recommendations relating to implementation of the remaining period of the on-going Title III program; and,

3. to explore options and make recommendations related to a possible new Title III program to begin in FY 1985.

The evaluation was contracted for the period from September 20 to November 6, 1983. Field work in Sudan began September 30, 1983.

Methodology and Participants

The contractor spent ten days in the States reviewing various materials pertaining to the Sudanese Title III agreement in particular and to other aspects of Title I and Title III agreements in general. He also met with various representatives of the agencies involved in Title I/III programming.

In the field he was joined by a representative of the Regional Food for Peace Office in Nairobi. Team's conclusions are based, in part, on an analysis of the documents listed in the Working Bibliography (see Annex H), a review of Mission program and project documents, the recently held USAID project reviews and Title III project reviews with the GOS, and interviews with USAID and GOS personnel.

Major Conclusion

Despite the past shortcomings in management, the Title III Agreement in Sudan can be deemed a success. Perhaps the success has not been in the areas originally planned when the agreement was first signed, but that does not distract from what has been achieved.

The agreement was originally designed as a "project-oriented" program, with policy impact relegated to support of other donor efforts, most notably the IMF Stabilization Program. However, it has evolved into a major policy reform instrument in its own right. While projects funded may have been implemented at a slower rate than originally planned, currency use has continued to be directed to those areas considered by the USAID and the GOS to be development priorities within the context of a stabilization effort. While implementation of some projects continues to be slow, there is accountability, at least to the point of sub-account deposit. Thus, Sudan's program can, in part, be differentiated from other Title III Agreements, worldwide, which tend to be either policy or project interventions, e.g., Bangladesh primarily focusing on policy reform, and Bolivia and Senegal having a project-oriented program with little policy linkage.

The success of the Sudan Title III Agreement has not been attained easily. The first few years of the program were a difficult and, at times, painful learning experience. The requirements of this type of assistance have taxed an already overburdened GOS and USAID staff as early assumptions about management requirements proved to be grossly underestimated. As a result, it has taken at least three years to understand (a) how a Title III Program should be managed, (b) what is required to accomplish the management task, and (c) perhaps most importantly, the full development potential offered by this type of aid.

Project performance should be viewed as part of the evolving growth of experience of the USAID/Sudan Mission over the last five years. It should not be expected that Title III projects will have any greater degree of success or failure than other USAID-supported projects. At the time of signature of the agreement, USAID/Sudan was just beginning the process of switching from a quick-disbursing to a development project mode. Therefore, project implementation experience in Sudan was sparse, whereas growth in DA resources was rapid and staffing always inadequate. It is not surprising that there have been some problems in implementation, rather it is more surprising that overall achievements have been as good.

The Mission will undoubtedly use its painfully acquired experience to implement a new Title III Agreement to obtain maximum achievement, and thus the major recommendation of this evaluation is that the major share of any future PL 480 assistance be transferred to Sudan under this mechanism.

The Dynamic Context of The PL 480-III Program in the Sudan, 1978-1983

During the five years prior to the development of the PL 480 program (1973-1978) Sudan's real rate of economic growth had averaged nearly 8% per year. This period of relative economic euphoria provided the basis for the country's ambitious six-year development plan (1977/78-1982/83). Shortly thereafter, in 1979, when the PL 480-III was developed, the GOS was signing its first IMF standby agreement which was designed to address the structural adjustment malady which had just been diagnosed. At that point the concept and reality of what was to become generally known in the early 1980's as structural adjustment was in the incipient formulation stages. However, based on the recent past (1973-78) it was clear that it would take some time for the country's leadership as well as the donor community to fully comprehend the full extent of economic changes required to reestablish economic equilibrium and a base from which further economic progress might be sustained.

By 1979, the process of structural adjustment had started. There had been at least two currency devaluations from £S 0.35/$ to £S 0.5/$ (see Table 1, pg. 24, Youngblood, et al., Feb. 1982). Both the GOS and its donors were attempting to ascertain the magnitude of the outstanding debt which, according to the USAID/Khartoum PL 480 Title III program paper supplement, mounted to over $3.5 billion with arrearages in the neighborhood of $900 million and inflation running about 30% per year. Efforts were being started to slow government expenditures and credit expansion.
In addition, the GOS and the donors agreed that it would be important to revitalize the production of export-oriented agriculture to begin to close the trade imbalance which quickly worsened in 1978 after having recorded a

positive balance in 1977. (The many specific actions taken and new policies established to attain a structural adjustment in the Sudanese economy, and achievements obtained are analyzed in the subsequent section.)

The political leadership of Sudan has recently endorsed the process of structural adjustment. In Nimeri's Third Mandate for the Presidency, May 1983 to May 1989, the President points out how the harsh economic environment facing the Sudan has caused difficulties for the country. He has also stressed how:

> ". . . the effect of these negative elements has been multiplied by many policies favoring consumption to the detriment of production, by expanding public expenditure and continued failures in some of the public production units. The unrealistic exchange rates have increased consumption, led to serious losses by producers and exporters. The enormous expansion of social services and inflated government expenditures have created enormous pressures on the national economy which are incommensurate with the productive capacity of the country. It is such a situation and circumstances which compel us to follow an economic strategy governed by the necessity of finding the right balance between Financial Reform and Economic Programme . . . ." (pg. 13, Nimeri, 1983)

This summary statement and the detailed analysis on which it was based, provides a strong mandate for the donor community and the GOS to collaborate in resolving the resource imbalance presently facing the country.

In 1977, USAID/Sudan was reestablished after an absence of about ten years. By FY 1979, the DA program request was $30.0 million, with over two-thirds allocated to agricultural development and an additional $25 million in PL 480 ($20 million to be Title III). Recognizing the political importance of the Sudan to US-Middle East peace efforts and to other regional security affairs, and the degree of support required by Sudan to reestablish its economic equilibrium, the program has expanded to a level approaching $200 million, with $50 million in PL 480 (Title III equaling $20 million), $120 million in CIP, and the remaining $30 million in DA (and additional support for probable refugee programs), with at least 50% to support increases in agricultural production.

This present level of resource commitment and its mix clearly reflects USAID/Sudan's interest in supporting the GOS in their effort to reestablish an equilibrium in the economy and in continuing to develop long-run initiatives consistent with the shorter-run adjustment objective. In this context, the PL 480 Title III program was designed to provide a reasonable medium-term (5 years) guarantee of significant balance of payments support for an imported item of growing importance, while enabling the necessary analytical work to be done to support the GOS in making visible policy changes which would have both direct and indirect payoffs in "reestablishing internal and external economic equilibrium" (Nimeri, 1983; see also pg. 167-168, Eicher, 1982). Further, the local currencies have been channeled to support a portfolio of development activities consistent with the objectives of structural adjustment. (The details of this effort is carefully reviewed in the subsequent sections of this report.)

Policy Reform in the Context of Structural Adjustment and the Role of PL 480 Title III

One of the principal objectives of Sudan's PL 480 Title III program has been to support the Stabilization Reform Program which the GOS and the Consultative Group have jointly developed to restore a balance, or using President Nimeri's words, "reestablish internal and external equilibrium in the economy" (Nimeri, pg. 20, 1983). To accomplish this objective, and at the same time continue to support development activities which are consistent with the requirements of stabilization without abandoning equity considerations, the PL 480 Title III program has also been providing the GOS with local currency for use in activities such as increasing agricultural production in the rainfed sector, improving transportation systems and providing minimum social service support via primary health care.

In order to reestablish internal and external equilibrium by controlling (a) government and parastatal deficits, and (b) the rapid increase in credit, (c) balance of payments deficits, and (d) foreign account payments, especially on arrears, the GOS has been gradually implementing a series of new policies. One policy reform, consistent with the objective of structural adjustment, was announced by the GOS on July 8, 1983. Bread prices were raised by 54%, after having been raised 60% a year earlier. More significant, however, than the previous nine bread price increases which have occurred since 1970 is that the GOS has agreed via the most recent price increase to remove the GOS budget subsidy on bread. This GOS policy reform represents the culmination of two years of background policy study and recent policy dialogue which was led by USAID/Sudan, in part, via studies financed by the PL 480 Title III program.

The PL 480 Title III program in Sudan also represents one of a number of donor efforts to facilitate the process of structural adjustment. Over the life of the program's five-year agreement, from FY 1980-84, this program will have provided $100 million of direct balance of payments support in addition to relieving the government of additional foreign exchange allocations and interest charges if these food imports had been procured commercially. In the following paragraphs, a review is undertaken of how the PL 480 Title III program has contributed to the policy dialogue necessary for Sudan's structural adjustment, provided balance of payments support and contributed to a development program consistent with structural adjustment. First, the data pertaining to structural adjustment is reviewed. Then, the country's three year Public Investment Program (PIP) (1982/83-1984/85) is analyzed in terms of structural adjustment. Finally, an analysis is conducted of the policy changes proposed and made by donors and the GOS pursuant to the process of structural adjustment. The PL 480 Title III program contribution to the country's development program and the process of structural adjustments is incorporated into the above analysis process.

The Process of Structural Adjustment

Table 1 illustrates the trend in Sudan's structural adjustment since 1958. These data show that until the mid-1970's, after the first major oil price increase in 1973, the economy was basically in balance, with aggregate demand (consumption plus investment) being nearly equal to aggregate supply (GDP), and with a corresponding near equilibrium in the trade balance. Beginning in FY 1974, however, the country began to develop a serious resources imbalance, with demand being greater than production (supply) by about 8% of total production (GDP). The trade imbalance manifests this same problem, with fuel imports rising from 4.3% of total imports in 1972 to over 19.2% in FY 1980.

In FY 1981 and FY 1982, the resource imbalance topped out at over 10% and 12% of GDP, respectively. Finally, preliminary figures for 1983 show the glimmer of a new trend toward reaching an equilibrium, with the preliminary resource imbalance being in the neighborhood of 7.5% of GDP. In addition, there has been a narrowing of the balance of trade, with both exports rising and imports declining. These data of key macro-economic parameters suggest that the many policy changes implemented over the 1979-83period are beginning to have a positive impact.

Table 1: Trends in the Composition of Aggregate Demand and Supply in Sudan, 1958 - 1983

(Mill LS., Current £)

Item	Year:	1958	1964	1970	FY 1975	FY 1980	FY 1982	FY 1983
	Private Consumption	276.7	361.4	479.1	1340.6	3367.8	N/A	N/A
	Public Consumption	23.0	47.9	147.1	236.0	459.1	N/A	N/A
I	Consumption - Total	290.7	409.3	626.8	1576.9	3826.9	N/A	N/A
II	Gross Fixed Capital Formation (Public and Private Investment)	43.1	69.5	69.7	427.5	485.7	N/A	N/A
III	Domestic Demand (I&II) (Absorption)	333.8	478.8	696.5	2004.1	4312.6	7596.0	9117.7
IV	GDP (Aggregate Supply)	329.0	464.1	701.5	1848.0	3945.0	6678.0	8500.0
V	Resource Balance (RB) = (IV-III)	- 4.8	- 14.7	5.0	- 156.1	- 367.6	- 818.0	- 617.7
	% of Total GDP	1.5	3.2	0.7	8.4	9.3	12.2	7.3
VI	Exports	64.6	90.3	113.2	206.4	381.8	240.8	356.4
VII	Imports	76.2	104.9	108.2	362.5	749.4	1058.8	974.1
VIII	Trade Balance (VI-VII)	- 11.6	- 14.6	5.0	- 156.1	- 367.6	- 818.0	- 617.7

NOTE: Figures for FY 1982 and 1983 are established from GOS, IMF, and Workd Bank unpublished sources.

SOURCES: 1958-76 - IMF, Int'l, Financial Statistics Yearbook, 1982

1980 - World Bank, Investing for Stabilization and Structural Change, Report #3551a-SU, Feb. 16, 1982

There are other less aggregative data which provide evidence that further structural adjustment's toward equilibrium are underway. The IMF and other major donors, including USAID, have supported a series of policies designed to increase government revenue, reduce government expenditures, reduce the aggregate rate of growth in the money supply, and alter the government's policy of financing budget deficits by domestic borrowing to one which, in the short run, relies heavily on donor support, and,in the longer run,relies on increased domestic taxation.

The data presented in Tables 2 and 3 provide additional evidence that these policies have been working. The circumstances prevailing prior to the late 1970's when dis-equilibrium occurred for such indicators as (a) the ratio of central government revenue to total central government expenditure, (b) ratio of central government revenue to central government recurrent expenditure, (c) the proportion of central government expenditures to GDP, and (d) the proportion of outstanding credit on government vis-a-vis parastatals and the private sector have been altered in the last two fiscal years.

For example, Table 2 data show that central government revenue as a proportion of total central government expenditure has rebounded from a low of 58.0% in 1980/81 to 68.5% in 1982/83. While this latest figure is not as high as the case prevailing in the early 1970's when nearly all government expenditures were covered by government revenue, at least the government has apparently covered all of its recurrent expenditures for 1982/83, which represents a significant improvement. Similarly, the ratio (expressed in percentage terms) of total central government expenditures to GDP has been declining in the last two years, after having reached a peak in 1980/81 of 23.3%. The level prevailing in 1982/83, of 21.2%, represents a return to a level prevailing in the early 1970's. The policy

Table 2: Trends in Government Revenues and Expenditures, Sudan, 1971/72 - 1982/83

Year	% Central Govt. Revenue is of Total Central Govt. Expenditures	% Central Govt. Revenue is of Recurrent Expenditure	% Total Central Govt. Expenditure is of GDP
1971/72	98.3	113.4	20.0
1975/76	81.3	113.8	21.5
1979/80	62.7	90.2	22.9
1980/81	58.0	86.3	23.3
1981/82	59.9	91.3	22.3
1982/83	68.5	104.5	21.2

SOURCES: World Bank, Report #3551a-SU, Feb. 16, 1982 and unpublished GOS and IMF data.

Table 3: Trends in the Domestic Credit Structure in Sudan, 1971/72 - 1982/83

Year	Total Outstanding Credit (Mill.LS) 1/	% Credit Outstanding to Government	Parastatals	Private Sector
1971/72	189.7	37.0	22.7	40.3
1975/76	562.2	38.0	24.3	37.7
1979/80	1955.1	58.3	14.8	26.9
1980/81	2518.6	55.6	16.7	27.7
1981/82	3151.7	50.5	19.8	29.7
1982/83	3714.0	41.6	23.8	34.6

SOURCES: World Bank Report #3551a-SU, Feb. 16, 1982, and unpublished GOS and IMF data.

NOTES : 1/ Figure shown is for June 30 of last year shown. For 1982/83 the Figure is for the end of May 1983.

dialogue achievements obtained via PL 480 Title III on eliminating government subsidies on wheat has contributed to the improvements described above by reducing government expenditures by £S 54 million, which represents 4.6% of total central government recurrent expenditures in 1982/83.

The data in Table 3 on the trends in the structure of domestic credit also show favorable trend. For example, government's share of outstanding credit in 1982/83 has approached the figures recorded in the 1970's. In addition, the share going to the private sector has rebounded from the low in 1979/80 and 1980/81 of around 27%. In the last fiscal year, 1982/83, over 50% of net new credit extended went to the private sector, with only 13.2% going to government. This figure corresponds favorably to the 1979-81 period when over 50% was going to the government and only 35% going to the private sector.

Public Investment Program, 1982/83-1984/85

An analysis of expenditure priorities embodied in the Public Investment Plan (PIP) is provided in Table 4. Table 4 presents information on the total planned expenditures for each sector under the three-year PIP. In addition, it shows the envisioned allocation for FY 1984, the second year of the three year plan, from both the three-year plan and from the annual FY 1984 development budget. The PIP envisioned expenditures of about £S 600 million during FY 1984, with agriculture being the priority sector, receiving about one-third of the allocated funds. The annual FY 1984 budget document shows several significant variations from the envisioned expenditures embodied in the PIP, in part due to domestic political considerations. First, the proposed share going to agriculture dropped from over 33% to less than 25%. The most significant increases were allocated to transport and communications (including Sudan Railways and the port at Port Sudan), up from the plan's 21% to between 25% and 31% in the annual FY 1984 budget. Also, in the

Table 4: Analysis of Planned Allocation for the 3 Year Public Investment Program, 1982/83 - 1984/84 vs. Actual Budget for 1983/84 1/, 2/

(In millions of LS)

Sector	Expected Total Alloct. per 3 yr. Plan 82/83-84/85	% of Total	Expected 83/84 Alloct. per 3 yr. plan	% of Total	Expected 83/84 Alloct. per annual Bud.Doc.1983/84	% of Total	Revised 83/84 Alloct. per annual Bud.Doc. 83/84	% of Total
Agriculture	532.8	32.2	197.2	33.4	140.2	22.3	181.3	24.6
Manufacturing/ Industry	105.5	6.4	40.0	6.8	38.0	6.1	52.3	7.1
Energy/Mining (Power)	180.5	10.9	67.0	10.5	103.2	16.4	88.7	12.1
Water	68.0	4.1	25.0	4.2			30.3	4.1
Transport & Communication	349.4	21.1	123.4	20.9	195.6	31.1	185.8	25.3
Education & Health	167.5	10.1	56.5	9.6	62.5	10.0	22.3	3.0
Other Services	-	-	-	-			50.9	6.9
Regional & Local Dev.	241.0	14.5	81.0	13.7	68.8	10.9	34.3	11.5
Other	11.5	0.7	5.0	0.8	-	-	-	-
General Reserve	-	-	-	-	20.0	3.2	40.0	5.4
Total 3/	1656.2	100.0	590.1	100.0	628.0	100.0	735.9	100.0

SOURCES: (1) Ministry of Finance and Economic Planning, *Prospects, Programmes, and Policies for Economic Development, 1982/83 - 1984/85*, (Khartoum, Sudan, GOS, October 1982)

(2) Ministry of Finance and Economic Planning, *Development Programme Estimates for the Fiscal Year, 1983-1984*, (Khartou, Sudan: GOS, 1983)

Notes 1/ Includes allocations for the Central Government and the Self-Financing Units (Parastatal Corporations).

2/ Figures are all in Sudanese pounds at current prices.

3/ The sum of the percentages may not equal 100.0 due to rounding.

annual plan, other government services were allocated nearly 7% from zero, and there was a general reserve of over 5% which previously did not exist. It should also be noted that the allocation for education and health care services was cut from about 10% to 3%.

Second, while a nominal increase of nearly 25% is shown in the budgeted amount under the FY 1984 annual budget relative to the PIP, real expenditures would be at least 5% less than initially budgeted in FY 1984 due to inflation. In addition, foreign exchange rate changes and domestic credit restrictions will undoubtedly reduce the envisioned nominal expenditures below present budgeted items, thereby restricting investments in the directly productive sectors of the economy even more. These estimates are additionally dubious given that 1982/83 actual expenditure level was about £S 450 million, which was 10% less than envisaged in the 1982/83-84/85 PIP.

In summary, given the changes in the allocation priorities away from agriculture and the fact that the expenditure level in real terms in the annual budget is less than in the PIP, it is unclear whether the envisioned development program can support the rate of progress toward structural adjustment as was planned. One way to help achieve original investment targets may be to use a combination of unprogrammed PL 480 Title III and Title I local currencies in conjunction with some CIP foreign exchange to support programs in key productive sectors such as agriculture. A combination of about LS 65 to 75 million in foreign exchange and local currency in FY 1984 prices is required to achieve the original PIP target for FY 1984.

Policy Context for Future Structural Adjustment Progress

In order to sustain the progress made over the last two years toward structural adjustment equilibrium, it is important to review the policy context and the priorities embodied in the 1982/83-1984/85 PIP to ascertain consistencies between them.

A number of studies have been conducted since the mid-1970's on the negative aspects of various policies (see for example, ILO, 1976; World Bank, Staff Working Paper #367, 1979; World Bank, Report #3551a-SU, Feb. 16, 1982; World Bank, Report #4528-SU, July 1983; Youngblood, et. al., April 1983; various IMF documents in 1983; US Government - GOS PL 480 Title III Agreement, 1983; and Nimeri, 1983). The IMF, for example, has, via the standby agreement of recent years, focused on changing macro-economic policies which encourage structural adjustment by (a) reducing aggregated demand by increasing the exchange rate, reducing domestic credit expansion, increasing government revenues and reducing public expenditures and domestic borrowing, (b) increasing aggregate supply by increasing production, especially in the irrigated agriculture sector, and (c) encouraging increased remittances from Sudanese working in the Gulf in order to reduce the balance of payments deficit and increase investment. The IMF, and other donors, e.g., the World Bank, ILO and AID, have made a number of policy recommendations to increase agricultural output, which started to decline in the late 1970's and which was one of the major factors contributing to the structural disequilibrium. The most significant policy recommendations made include (a) removing export duties which act as a disincentive to production, especially on cotton, (b) the abolition of the joint account system of input pricing to the Gezira tenants, (c) increasing farm gate prices, (d) removing the time delay in paying farmers, (e) removing input subsidies, particularly on water and land preparation, (f) improving input availability, e.g., fertilizer and seeds, and (g) improving marketing channels, e.g., transport for inputs and outputs from both the irrigated and rainfed areas. Other production-related policies have sought to improve the financial and output performance of key import substitution industries such as sugar, textiles, and cement, and to expand and improve the reliability of the power supply, which is heavily dependent on the performance of the Roseries Dam.

The GOS has been increasingly amenable to implementing the necessary policy changes required to sustain the progress made toward achieving structural adjustment. The recent statement by President Nimeri, A Mandate for Progress and Renewal, March 1983, has not only endorsed many of the recommended changes, but also has provided a broad mandate for further adjustments. (For a full accounting of this policy statement, see Annex B.) Besides recognizing the fact that many of Sudan's present (1983) difficulties are the result of policies which favor consumption over production, President Nimeri clearly delineated the economic strategy to be followed over the next six years to reestablish both internal and external financial equilibrium (structural adjustment) as well as progress on developmental programs which are consistent with structural adjustment.

The economic strategy which the President envisions is cast within a very specific socio-political, economic and institutional framework. The principal elements of that framework include: (a) the economy of Sudan will be a mixed economy, (b) the benefits of economic progress will be widely spread throughout the population, (c) the institutions of the socialist democracy will be strengthened, including the party, parastatals, and government, and these institutions will play a "leading role" in the economy, and (d) the economy will be freed from many obsolete and restrictive methods that have failed in Sudan. Nimeri is clear that the parastatals would remain in a dominant position in the economy, but that changes and improved economic performance would also be expected. He also is interested in (a) reviving the cooperative movement on a non-exploitative basis, without vested interests, (b) revising prices and incomes to remove consumption subsidies, increasing agricultural incomes and paying labor on the basis of productivity, and (c) investing in rural development.

In order to achieve the objectives of structural adjustment and development progress within the above described guidelines, Nimeri is prepared to use a number of economic policy tools consistent with the recommendations of the IMF, the World Bank and AID. Areas where basic agreement appear to exist include those with respect to (a) fiscal policy, (b) money supply and credit expansion policy (with the possible exceptions of providing subsidized credit to small producers), (c) exchange rate policy (acknowledging that smuggling represents an important negative by-product of an overvalued exchange rate, (d) domestic price and incomes policies (except strategic food and petroleum reserves), (e) development and investment policy particularly in agriculture, industry, and infrastructure, e.g., transport, storage, communications and power, and (f) remittances policies (with the possible constraint of "Islamic Profit"). Finally, Nimeri is ahead of the donors in defining a rationale for decentralization and addressing some of the financial relationships between the central, regional, and local governmental entities. USAID/Sudan has made an effort to facilitate the decentralization policy via its development assistance portfolio, especially through the Regional Finance and Planning Project as well as other sectoral specific projects such as the Agricultural Planning and Statistics, and the Rural Health Support Project. The Mission, via the above mentioned Regional Finance and Planning Project, has also invested in several informative regional public finance studies conducted by John and Jean Due (see John and Jean Due, 1982 a, b and c) which have been useful in focusing future public finance policy discussion. To date many other donors have variously responded to decentralization by (a) ignoring it, or (b) casting "grave" doubts on the manpower and fiscal costs without considering the benefits (social, political and economic).

USAID/Sudan's policy dialogue which is fostered by the PL 480 Title III negotiations in conjunction with its development assistance portfolio, has faciliated the implementation of several important policy changes consistent with the objectives of structural adjustment and economic development. During the last two years (FY 1982 and FY 1983), the real price of wheat bread was adjusted upwards by 46% and 44.7%, respectively. In FY 1982 bread pricing was changed from solely periodic nominal inflation adjustment (see pg. 15, Youngblood, et. al., April 1983) to one which was based on official exchange rate import parity pricing of wheat and wheat flour. In FY 1983, the innovation in bread pricing was to remove the government budget subsidy in the form of a lower than import parity price for wheat to domestic mills. In addition, the official import parity price for wheat and wheat flour was raised to reflect the most recent devaluation in November 1982.

Given the above two years of bread price change, the process of periodic price policy review on this symbolic consumer item has thus, been initiated. If it is continued further, the process can forge a pattern of institutionalizing bread price policy reform. Negotiating the self-help measures of the final year of the PL 480 Title III agreement and a possible follow-on agreement provides an excellent opportunity to accomplish this institutionalization by addressing a number of remaining price policy issues. For example, as of October 1983, there are still implicit subsidy elements embodied in the price of bread. Wheat is still imported at the official exchange rate of 1.28 £S per $1.00 whereas the parallel or free rate is fluctuating between 1.8 and 2.0 (40-55% higher). In addition, domestic transport costs per MT between Port Sudan and Khartoum are higher than the figure of £S 54.50 which was used in the 1983 price increase calculations. A more realistic figure may approximate £S 80-90

MT, particularly when petroleum foreign exchange subsidies are considered.

To remove these two cost element subsidies, foreign exchange and transportation, without reviewing the clearance charges, milling and baking margins, by-product value, and other costs, implies that the real price of wheat would rise by around 35% in FY 1984. Given that the government is committed to its structural adjustment program and the elimination of consumption subsidies, a continual policy objective of the Title III program should be nonsubsidized bread prices. The high visibility of bread in the consumption patterns of all urban consumers, as well as an increasing proportion of the rural population, provides the government with a symbol to employ in reaffirming its resolve to structural adjustment by institutionalizing such price increases based on real resource costs.

By removing the foreign exchange subsidy and the transport subsidy from the bread price, the government is also addressing other elements of structural adjustment by gradually removing all foreign exchange subsidies on consumption and by initiating an analysis of the appropriate pricing of alternative modes of transport, not only for imported items from port of entry, but also for domestically produced agricultural goods transported from various locations throughout the country to final domestic and international destination points.

However, the design of such a transport pricing study which would address all subsidies and non-competitive forces will not be easy since the degree of subsidy embodied in each transport mode is considerable. In addition, there are significant operational inefficiencies, as well as management and labor relations problems in the railway which compound the problems of doing an analysis of relative economic efficiency of alternative modes of transport. (See Sudanow, August 1983, for additional discussion of the problems facing the railway.)

In addition, by eliminating the government budget subsidy from bread prices in July 1983, the amount of which has been estimated at about £S 82 million in FY 1983, the government has acted to reduce government expenditures which are out of balance with the government's present revenue-generating capacity. By cutting expenditures the GOS is also reducing its demand on the domestic banking system to increase the rate of credit expansion. Thus, by addressing the bread price issue, the GOS has de-facto implemented several complementary policies which coincide with the policy recommendations of the IMF and other donors. (Other self-help measures envisioned for the next round of negotiations for the FY 1984 Title III agreement will also reinforce other bread pricing and equity issues, e.g., composite sorghum and wheat flour, and differential extraction rates.)

Finally, PL 480 Title III has contributed to the financing and implementation of USAID/Sudan development assistance projects via the programming of local currencies, which are beginning to have a development impact in various areas of the country. While there are many implementation problems with the DA portfolio (see section below in which these issues are addressed in detail), nevertheless, the basic policy thrust of the portfolio is both consistent with the development aims of the GOS, and other major donors, and, with the objective of structural adjustment.

The twelve projects listed in Annex B of the FY 1983 Title III Agreement with the GOS will receive approximately £S 83 million in direct local currency support from the sales of the PL 480 Title III wheat. Projects designed to expand agricultural production will use approximately 44% of this resource. The transport sector which is important to the performance of the agricultural sector will use about 28%. It is envisioned that health will receive about 17%, with the remaining 10% going primarily for supporting improvements in planning and financing of local government.

The Market for Food Grains in Sudan: The Role of PL 480 Title III Food Aid

Introduction

There are several basic facts about the good grain supply and demand situation in Sudan which are useful to review in order to ascertain the role of PL 480 Title III food aid in balancing consumption with production throughout the country. First, Sudan has been traditionally self-sufficient in food grain production. It remains the only country amongst the ten most populous sub-saharan African countries, comprising about 70% of the population of sub-saharan Africa, to have increased per capita food production over the decade of the 1970's (World Bank, World Development Report, 1983; and "Berg Report," 1981). 1980 aggregate estimates of daily food supply availability among these ten countries also show that Sudan ranks number two in per capita caloric supply, with about 2450 calories available per day. This level of availability is 101% of daily requirements, which again places Sudan second among the top ten most populous African countries (World Bank, World Development Report, 1983).

Second, Sudan is one of the few African countries which can count amongst its principal export items a food grain. Sudan's official export earnings from sorghum since 1979/80 have ranked second only behind cotton, Sudan's traditional export crop, and in calendar year 1982 it comprised 22.8% of total exports. While it has been suggested that the rapid increases in sorghum production cannot be maintained due to a significant decline in the price at which Saudi Arabia is now willing to purchase sorghum, i.e., from $320 MT in 1981 to $180 MT in October 1983. In addition, the large increases in the production of sorghum were due to factor price distortions resulting from an overvalued exchange rate and artificially low land costs. However, since production increases have occurred and were largely due to private sector investments, it is clear that the agricultural sector in Sudan will respond to appropriate incentives to significantly increase production.

Other evidence to support the responsiveness of Sudanese agriculture is the fact that there is a large amount of smuggling or unofficial trade of dura, sugar, charcoal, and even sheep out of Sudan to Chad, Ethiopia, Uganda, Zaire and Saudi Arabia. Much of the incentive for this trade is due to higher external prices in neighboring countries. For example, in Chad, Sudan dura sells for four times the Sudanese price. The GOS is planning to hold a conference in the near future on the "smuggling problem" to seek solutions and remedies to the situation.

Third, Sudan remains one of the few countries in Africa which still has large tracts of potentially usable lands particularly in the western and southern rainfed areas. While most land is already being used at least as range land for transhumant livestock production, there is not only considerable potential for increasing the productivity of the land (pg. 58, World Bank, Report #3551a, 1982), but also altering the land use patterns to increase total output, assuming that the land is protected from environmental degradation (see Steve Lintner in Peter Bennedict, et. al., 1982, and the UN University Study, 1980).

Fourth, from the point of view of food grain consumption, the Sudanese have traditionally been a sorghum (dura) consuming country. In the southern regions many people primarily eat cassava, with finger millet, groundnuts and other minor vegetables supplementing their diet. However, the Dinka areas of the south consume dura as their primary cereal (M.J. Eaton-Evans, July 1978). Only in the far north along the Nile near Dongola, has there been a history of wheat consumption and local production representing an extension of the Egyptian dietary tradition. Even in the greater Khartoum area, the primary wheat-consuming center in the country, there remains a strong preference for kisra, a form of sorghum bread. However, kisra requires more preparation time, and, wheat bread is not only more convenient, but also has had a lower price in recent years than kisra. Thus, many Khartoum households have substituted bread for kisra. In spite of these pressures to change the diet still 14% of total caloric intake amongst low and middle-income consumers in Khartoum is in the form of kisra (pg. 37, Youngblood, et. al., April 1983).

The above discussion leads one to more carefully consider the rationale for continuing wheat imports via the PL 480 Title III program. In the paragraphs which follow, traditional methods of projecting wheat import "needs" are scrutinized. Following that review, an analysis of the factors affecting the demand and supply of wheat to Sudan is reviewed. The analysis carefully considers the importance of sorghum in determining the market-clearing quantity of wheat from both the supply and the demand side (see paper by Fred Winch, 1983 for a further elaboration of this approach). Further, the analysis reviews the empirical evidence amassed on the factors affecting the demand and supply of wheat, including prices, income, tastes, production responses, technical crop rotation factors, and other input considerations which may constrain domestic wheat productions. This review concludes by summarizing the dynamics of these market forces in the form of a series of alternative scenarios and what they imply about wheat import requirements. The implications for the PL 480 Title III program are reviewed in terms of the government's overriding objective of structural adjustment.

Trend Analysis of Wheat Import Requirements

The PL 480 Title III program paper for Sudan (April 1979) as well as the recent mid-term program evaluation (Tom Cornell, et. al., 1983), provided an analysis of the past trends and future needs for imported wheat. In both cases, recognition was made of the fact that wheat imports were related to the demand and supply of food, particularly food grains, and that rural and urban demand and supply conditions may require a disaggregated analysis. Both analyses reviewed the rapid increase in demand for wheat bread and provide data for the previous five to seven years to document this situation. They also point out in their respective analyses the fact that the government has been subsidizing the price of bread via direct government subsidies which have partly covered the cost of imported wheat as well as transport and storage costs. In addition, in recent years there has been a foreign exchange subsidy on wheat such that today wheat remains one of the few items imported at the official rather than at the parallel rate. (The others include petroleum, pharmaceuticals and sugar.) However, in the projections of future demands for wheat contained in the above mentioned studies, no mention of the direct and indirect (via the relative price of sorghum) price effects on consumption is found. The common assumption made is that, if consumption has been increasing at approximately 10% per year, ergo, it will continue to do so into the future, despite the fact that perhaps the principal policy dialogue rationale for the PL 480 Title III program has been to increase bread prices via the removal of all subsidies in keeping with the larger macro-economic objective of stabilization via structural adjustment (see section III above on Policy Reform). It is noteworthy that more recently these above complexities, e.g., direct and indirect price effects, as well as other important factors, are being more carefully considered both conceptually (Fred Winch, 1983) and empirically (see Youngblood, et. al., April 1983, and Carl Gotsch, October 1983). In addition, these interdependencies are being incorporated into the current PL 480 Title I dialogue, presently underway.

In analyzing the supply side of the market for wheat, the original program paper and mid-term evaluation have taken domestic production of what as a given. Brief reference is made to the fact that the government procurement prices of wheat has been very low since 1977/78 and remain so despite the price increase of about a year ago, December 1982. (See F. Winch Memo to A. Mudge, Dec. 12, 1982.) Also, brief mention is made about the cropping pattern and potential water constraints which presumably may constrain the domestic production of wheat despite the fact that during the era of GOS policy to become self-sufficient in wheat (1974 to 1977) both area under cultivation and output were considerably above projected levels (at the same time that both cotton and groundnut production and the value of exports were at record high levels). The potential for production increases due to technological change, e.g., new varieties, or other farming practices are not considered.

Finally, previous studies recite the comparative advantage litany pronounced by a World Bank Study in the late 1970's which concluded that Sudan didn't have a comparative advantage in growing wheat. While it may be true that Sudan does not have a comparative advantage for growing wheat solely for wheat's sake above certain output levels, given present technology, the policy conclusion, eminating from that study, was incorrect given a lack of knowledge about water availabilities and cropping patterns (for an improved analysis of these issues, see The Sudanese Consultations Bureau, Dec. 1982). Further, analyses of comparative advantage have not considered the possibility that changes in relative producer prices to reflect international market price changes may alter the incentives to produce more efficiently and thereby increase the economic return to both the individual tenant farmer and to the economy as a whole. For example, yield variations among irrigated wheat producers are considerable, which if narrowed closer to the higher figures attained, could significantly alter existing calculations of comparative advantage and the economic return to such production (see Youngblood et. al., 1982 and Abdus Sattar, 1982).

As a consequence of these multiplicity of problems on both the demand and supply side which (a) do not link other food grain production and consumption together, at least via price changes, (b) do not analyze the direct impact of price changes to reflect the macro-economic policy goals of the country, or (c) do not seriously consider the production impact of potential changes in technology, the derived predictions of wheat import requirements for the country have had little theoretical or empirical base. Previous import levels and the resulting "role" for PL 480 Title III remain enmeshed in a poorly conceived conceptual framework. It is encouraging to report, however, that USAID/Sudan has been making progress on these matters. The proposed self-help measures for the current PL 480 Title I agreement, as well as the conceptual paper by Fred Winch (May, 1983), the composite flour study by Gotsch (Oct., 1983) and the paper on wheat production in the Gezira by William Bateson (Oct., 1983) reflect considerable progress in formulating the basic parameters of the analytical problem.

A Note on Wheat Production and Trade Statistics

Before proceeding to a consideration of a revised framework for considering the initial question, i.e., the role of PL 480 Title III in the context of a dynamic food grains market, it is useful to review selected elements of the data base upon which this and other analyses inevitably must be based. In Table 5, data from several different sources on domestic wheat production and imports are provided to indicate the nature and extent of the empirical problem.

While there appears to be general agreement amoungst the various sources of information with respect to area under domestic production of wheat, at least over the year of comparable data, there are several significant variations in the output data, e.g., 1971/72, 1979/80, 1980/81 and 1981/82. More serious, however, is the variance in the figures of total wheat imports. There does not appear to be one data source with systematically higher or lower figures. The variation between the high and low estimates are often as much as 50% of the lowest figure for any given year with comparable data. The differences in this variance could come from multiple sources. An investigation appears warrented.

One possible solution to the problem is to review existing estimates and from them obtain an estimate of the range of plausible figures and develop a range of possible outcomes based on such information. This is the strategy employed by (a) William Bateson and Buraie Adam in their study of the appropriate producer price for wheat in Gezira for FY 1984; and (b) the Sudanese Consultations Bureau in their comparative cost study of Domestic Production vs. Importation of Wheat (see Bateson, Oct. 1983 and Sudanese Consultations Bureau, Dec. 1982). However, it would be preferable over time to reduce the extent of the variation. Perhaps the USAID/Sudan Ag. Planning and Statistics Project and the Macro-economic Policy Project can improve the situation over the next year.

TABLE 5

Estimates of Production and Imports of Wheat in Sudan[1/]

Year	Domestic Production Area Under Production 000's Feddans (1)&(4)	(2)	(3)	Output 000's MT (1)	(2)	(3)	(4)	(5)	Wheat Imports Total 000's MT (1)	(3)	(4)	(6)	(7)	US Concessional via PL480&CIP 000's MT (3)	(7)	US Commercial 000's MT (3)	(7)	Other Sources 000's MT (3)	(7)	Total Non-Concessionary 000's MT (4)
1960/61	39			26					105.3											
1961/62	41			29			28	30	88.2											
1962/63	54			31			31		69.9											
1963/64	56			37			37		67.2											
1964/65	135			56			56		119.7											
1965/66	136			69			69		122.9											
1966/67	173			78			79	78	N/A											
1967/68	264			111			87		86.0											
1968/69	296			132			123		41.5											
1969/70	290			115			115		103.3											74.2
1970/71	294			135			163	124	163.3											134.5
1971/72	235			136			124		158.1		160.7									161.1
1972/73	241			149			152		159.7		158.9									159.2
1973/74	419			235			235		112.9		136.3									136.4
1974/75	598			246			269		140.3		126.4									126.7
1975/76	714			261			255		205.9		172.9									173.3
1976/77	639	639	639	294	294	290	294	302	109.3	229	157.6			59		161		9		157.7
1977/78	[illegible]	602	602	317	317	317	317	276	184.1	161	146.7	293	133	83	85	70	39	8	9	147.6
1978/79	577	577	577	167	177	177	177	130	330.9	293	225.3	212	222	44	121	230	75	19	27	261.3
1979/80	431	448	418	233	219	219	231	206	331.2	306	339.9	330	340	157	217	108	100	41	23	
1980/81	437	446	416	218	228	228	170	120	451.3	323	494.4	421	477	278	161		291	45	24	
1981/82	371	371	371	182	162	163	164	155		427	465.4	500	254	286	73		135	141	46	
1982/83			360			175				602			545	582	304		192	20	49	
1983/84																				

1/ Note: The numbers above each column refer to the data source.

Sources:

(1) Bank of Sudan, Annual Report, various years

(2) Sudanese Consultations Bureau, Comparative study of Cost of Growing Wheat in the Sudan and Importing it from Abroad, Final Report, (Khartoum: Ministry of Finance and Economic Planning, December 1982)

(3) [illegible] Cornell, et. al., Sudan PL 480 Title III Program Mid-Term Evaluation, (Washington, D.C.: AID, May 1983)

(4) Curtis Youngblood, et.al., Consumption Effects of Agricultural Policies: Bread Prices in the Sudan, (Raleigh, North Carolina: Sigma One Corp., April 1983)

(5) Abdus Sattar, "Pricing of Wheat in Sudan", Paper prepared for the Joint Agricultural Price Policy Workshop, sponsored by FAO and GOS, Khartoum, May 31 - June 2, 1983.
(6) Data provided USAID/Sudan by Bank of Sudan, Foreign Trade Statistical Digest and Ministry of Coop., Commerce and Supply, May 24, 1983
(7) USAID/Sudan, "UMR Working Paper", no date, approx. June, 1983

A Market Analysis of Factors Affecting Food Grain Imports

There are a number of factors which affect food grain imports into Sudan and, thus, the role of PL 480 Title III Food Aid in balancing consumption with production throughout the country. These factors can conveniently be disaggregated into domestic demand and supply factors, international demand and supply factors, and other factors.

Domestic Demand Factors

The domestic demand for a particular food grain is largely determined by the following factors: (a) its own money price, (b) the relative money price of a substitute food grain, (c) the time required by the household (usually the wife in Sudan) in procurring and preparing the item, e.g. sorghum, (d) the price of other complementary items in the preparation of the item, e.g., energy for cooking and/or baking, (e) the relative money, time, and complementary item prices, (f) income, (g) population size, and (h) tastes, preferences and other factors as can be determined by such indicators as (i) the proportion of the population which is urban, (ii) education, (iii) family size, (iv) traditional diet patterns, and (v) the regularity of supply availability.

In Sudan, several studies have been recently completed in which the relationship between some of the above mentioned factors and the consumption of a particular food grain, e.g., wheat, has been empirically investigated. This evidence is summarized in Table 6. Emprical evidence of variable quality has become recently available on the relationship between the demand for wheat (possibly for wheat flour and/or bread) and (a) its own money price, (b) the money price of a close domestically produced substitute grain - sorghum, and (c) income/expenditure. At present, however, empirical

TABLE 6

Summary of Evidence on Domestic

Factors Affecting the Demand for Wheat in Sudan

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH DEMAND	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
(1) Own Money Price	Negative	-0.39 Price elasticity of demand (real price, per cap. wheat flour consumption)	1	(a) Statistically significant at 0.15 level. (b) Other econometric probs: e.g. what functional form? (c) Few obs (11) (d) Time series. (e) No control variables except income & price of sorghum. (f) basically an urban estimate.
		-0.73 Price elasticity of demand (nominal price, expenditure on wheat)	2	(a) More econometric problems than in (1) above. A clear over-estimate given equation specification. (b) No info. on number of observa-tions. (c) No control variables. (d) No presentation equation statistics. (e) No data set presented.
		-0.35 Price elasticity of demand	3	(a) Reported in source #2: as a World Bank estimate. (b) Unknown statistical procedures.
		-0.39 Own price elasticity of demand for wheat bread (-0.28 to -0.45)	1	(a) 1978/79 household expenditure survey data. (b) The estimate increases in absolute value as one moves from the lowest to the highest expan-diture stratum. (c) Linear equation estimates.
		-0.39 Own price elasticity of demand for wheat bread (-0.23 to -0.43)	1	(a) 1982 urban household expenditures survey (b) See (b) and (c) immediately above.

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH DEMAND	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
(2) Own Time Price of Preparation (from acquisition to serving)	Negative	None available.		(a) Requires study. Can be part of a household time allocation study. (b) Labor force participation by women increased demand by 10% (Source #1).
(3) Price of other complementary preparation items, e.g., energy for cooking	Negative	None available.		Info can be obtained in household survey.
(4) Relative prices to other cereal grains, e.g., sorghum				
(a) Money Price	Positive	+0.47 Real price of sorghum grain, per capita wheat flour consumption.	1	(a) Statistically significant at 0.05 level. (b) See comments above under variable #1. (c) In Egypt the estimated maize relative price elasticity is +0.2. See Source #4, pg. 60.
(b) Time Price from acquisition to serving.	Positive Relative to Sorghum	None available.		(a) See comment above under Variable #2. (b) May change if research break through occurs to extend shelf life of kisra.
(c) Price of Complementary Preparation of items; e.g., energy	Positive Relative to Sorghum	None available.		(a) See comment above under variable #3. (b) May change if research break through occurs to extend shelf life of kisra.
(5) Income	Positive	+0.18 Income elasticity per capita, real GNP, GDP	1	(a) Not stat. significant. (b) See comments above regarding estimation equation under variable #1. (c) Aggregate data used.

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH DEMAND	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
		+0.97 Expenditures elasticity (1.21 to 0.88) depending on income evaluation.	1	(a) Cross sectional data 1982, Urban mini-household survey. (b) Declining figure based on expenditure stratum.
		+0.45 Expenditure elasticity depending on income/exp. level (0.59 to 0.38).	1	(a) Cross sectional data 1978/79 household budget survey. (b) Size of estimate declining as expenditure stratum rises.
		+1.17 Urban area wheat expenditure elasticity.	2	(a) See comments above under variable #1, source #2 above.
		+1.39 Rural areas wheat expenditure elasticity.		(a) See comments above under variable #1, source #2 above.
(6) Population	Positive	No estimate available which separately estimates this relationship, especially between urban & rural areas and disaggregating between absolute magnitudes and rates of growth.		
(7) Other factors, incl. tastes and preferences.				
(a) Education	Unclear, likely to be highly colinear w/income	None available.	-	Should be included in a more complete study.
(b) Proportion of population urban	Unclear, likely to be highly colinear w/income & time prices	None available.	-	See comments under (7)(a) above.

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH DEMAND	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
(c) Family Size	Unclear, likely to be colinear with per capita inc.	See comments under income variable for source #1.	-	See comments under (7)(a) above.
(d) Practice traditional dietary patterns.	Negative; may be related to religious group & age	None available.	-	See comment under (7)(a) above.
(e) Availability of wheat supply (% of time available).	Positive	None available.	-	See comment under (7)(a) above.

Sources:

1. Youngblood, Curtis, et. al., Consumption Effects of Agricultural Policies, Bread Prices in the Sudan, (Raleigh, North Carolina: Sigma One Corp., April 1983).

2. The Sudanese Consultations Bureau, Comparative Study of Cost of Growing Wheat in Sudan and Importing it from Abroad, (Khartoum: Ministry of Finance and Economic Planning), December 1982.

3. World Bank, Price Prospects for Major Primary Commodities, (Washington, D.C.: World Bank, 1980).

4. Pg. 60, Derek Byerlee, "The Increasing Role of Wheat Consumption and Imports in the Developing World," Draft Report of CIMMYT Economics Program, Mexico City, Mexico, February 1983.

evidence has not been compiled and analyzed with respect to the other factors affecting demand. However, the national household expenditure surveys conducted in 1967/68 and 1978/79 and the mini household expenditure survey conducted in Khartoum area in 1981/82 may be analyzed more completely as a first step in resolving the present lack of knowledge. Perhaps of most concern is the general lack of knowledge about relative time and complementary input prices which affect consumption choices. A more carefully constructed national household expenditure survey which also monitors time use patterns is required. Such a survey would also yield information for many other purposes, including updating the country's national accounts.

Given the present available estimates of the factors affecting demand presented in Table 6, it appears reasonable to conclude that the own money price elasticity of demand for wheat and related products in Sudan is about -0.4. The cross money price elasticity of demand for wheat with respect to sorghum appears to be in the neighborhood of 0.5.

Finally the expenditure (cum income) elasticity of demand for wheat via bread for at least urban dwellers appears to have significantly increased from about 0.5 to perhaps 1.0 between 1978 and1982, largely due to the decline in real income over the period. It is estimated that average monthly real household expenditures fell by about 15.4% during the period (using mean figures from both surveys) and, taking into consideration per capita differences between the two periods (households in the 1978/79 survey averaged 6.6 persons, whereas in 1982 they averaged 7.5 persons), per capita real household expenditures may have dropped by as much as 31.3%. Given the large remaining macro-economic resource gap of about 7.5% of total real GDP, it is likely that real income expenditures will continue to drop even further over the next several years, although perhaps not as much as has occurred since 1978/79. This would be particularly true if aggregate production were to increase significantly in the next several years.

The remaining factors listed in Table 6 for which empirical evidence is presently unavailable, appear to be mixed in their impact on the overall demand for wheat. There are some factors which may be increasing or decreasing demand. Perhaps the two most important forces presently operating on the domestic economy to increase the demand for wheat bread, particularly in urban areas, are the relative price differential between wheat bread and kisra, in terms of preparation time,and the price of complementary preparation inputs, e.g., energy. The country's population has been increasing at about 2.6% per year whereas the urban growth rate in Sudan has been about 6.8% per year (World Bank, Feb. 1982). Similarly, there has been a secular increase in female labor force participation which tends to reduce the time available for food preparation. Similarly, energy prices and the price of other items used in kisra preparation has also increased relative to bread since bread is increasingly produced in quantities which can obtain scale economies relative to kisra (under present technology). If there is a technical breakthrough in increasing the shelf-life of both dura and kisra, as may be the case soon in Senegal, this factor will of course work in the other direction to reduce the demand for wheat, assuming that taste and preferences remain as they are currently.

Domestic Supply Factors

The domestic supply of food grains (sorghum and wheat) and its mix are similarly defined by a number of factors. For an item like wheat, domestic production is a function of (a) the producer price of wheat, (b) the relative price to the producer of alternative crop production, (c) the prices and availability of complementary inputs; and, (d) a number of other technical factors such as (i) water availability, (ii) seed technology, (iii) farming practices, (iv) crop rotation schedules, as is the case in irrigated agriculture, e.g., the Gezira, and (v) the weather.

The mid-term evaluation and the original PL 480 Title III program paper has reviewed the historical production of wheat in Sudan, which originated in the northern areas around Dongola (see Tom Cornell, et. al., 1983 and USAID/Sudan, April 1979). Thus, this section is devoted to a review of the factors affecting the supply of domestically produced wheat, with the focus of the analysis being directed towards recent empirical studies.

Since domestic production is primarily produced in the irrigated areas of the country, and particularly in the Gezira for off-farm consumption purposes, much of the economic analysis regarding the factors affecting the domestically marketed supply of wheat has centered on the factors affecting the production and marketing of wheat in the Gezira. The available evidence on these factors is summarized in Table 7.

Basically, this evidence shows that,over the relevant range of production,the amount of wheat produced and marketed from the Gezira is probably price inelastic. Total output elasticity of supply with respect to price is around 0.5 - 0.7 and the marketed elasticity with respect to price is probably between 0.7 and 1.0. Unfortunately, no studies have yet been conducted on the relationship between wheat yields and producer prices. In addition, little analysis has been conducted to ascertain whether crops such as cotton, dura, and groundnuts (summer crops) are in fact complements or substitutes with respect to wheat (winter crop) in the Gezira, even though data on relative producer prices between all of these crops, area under cultivation, and yields are available over a reasonable period of time given some effort on the part of the analyst to obtain it. Unfortunately.

TABLE 7

A Summary of the Empirical Evidence on the Factors

Affecting the Domestic Produced Supply of Wheat in Sudan

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH SUPPLY	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
(1) Producer price of wheat	Positive	+0.4 to 0.75 Output supply elasticity with respect to economic import parity price(EIPP)over relevant level of pdtn.	1	(a) Supply function based on 1980/81 cost and yield data presented in Source #3, and adjusted "upward" on basis of input price increases since that date. (b) 1980/81 generally a poor year, yield wise, thus costs per unit of output "higher" than "normal" years. (c) Data from Gezira tenant farmers.
		+0.75 to 1.0 Market supply elasticity with respect to EIPP over relevant level of pdtn.	1	(a) See immediately above. (b) The difference between output and market supply elasticity is due to the fact that a certain %, approx. 20-40% of total output is consumed on the farm, thereby moving the point on the aggregate supply curve closer to the origin where the established function is more elastic.
		+0.95 Wheat acreage elasticity with respect to lagged world wheat price.	4	(a) Aggregate area response function. (b) Time series, 18 obs. (c) All variables stat. significant. (d) Estimate at the mean values of area =300,000 fed, and $225/MT.
(2) Relative producer price of substitute crops, e.g., cotton, groundnuts	Negative	None available.		Substitute crops for wheat is based on assumption that cropping patterns on present irrigated land (Gezira) cannot be altered to reduce competition for water between winter wheat and summer crops (see #(4)(b) below.

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH SUPPLY	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
(3) Input Prices	Negative	None Available.	-	Cost of production data and input price data only available for one year, 1980/81, and is found in Source #3.
(4) Other Technical Factors.				
(a) Improved Technological Inputs Package	Positive	Output could increase by 3 to 4 times on Gezira based on research trials.	2	(a) With a concentrated effort of improving the use of existing technology, including timing of input application, e.g., seeds, fertilizer, water, land prep., etc. output could expand from an average of 350-400 kg/fed to 1,400 kg/fed. (b) Within five years, e.g., 1986/87. it is estimated that output could be approx. 60% of potential, i.e., 840 kg/fed. (c) The potential yields obtained in the Gezira of 1.4 MT/fed = ave. yield in Egypt. (d) The ave. yield for all non-major developing country wheat producers is about 500 kg/fed. (see source #6)
(b) Cropping Pattern and Water Availability	Lead to Maximum Production	(a) Historical data does not imply a constraint in Gezira.	1	(a) Implies that FY84 Gezira planting would equal approx. 300,000 fed.
		(b) Maximum potential area in Gezira is 300,000 based on water crop rotation constraints.	2	(a) Provides evidence on water flow at key Oct.-Nov. wheat planting time and at end of growing season for cotton, groundnuts and dura. (b) Provides no rationale for why crop rotation schedule for non-wheat crops can't move forward to remove presumed water constraints. (c) Mid-1970's production area data in Gezira for all crops incl. wheat do not imply a constraint.

VARIABLE NAME	THEORETICAL RELATIONSHIP WITH SUPPLY	EMPIRICAL EVIDENCE	SOURCE	COMMENTS
		(c) Historical data analyzed show no area constraint in Gezira	4	(a) Estimates on area response function with 18 years of time series data.
		(d) Provides evidence to show that there is no water or cropping pattern constraint.	5	(a) Pg. 14 reviews the cropping pattern & water availability in Gezira and concludes no substitutability among present crops. Points out that there is enough water to plant 1.0 million fed. of wheat.
(c) Weather	Positive (If better weather, then better output)	No direct quantitative evidence available for wheat.	-	(a) Existing production data could be linked with weather info. (b) This link is found in rainfed sorghum. (See Ahmed & Selan 1983 on Bibliography.)

Sources:

1. William Bateson and Buraie Adam, "Considerations on the Establishment of a Producer Price for Wheat at Gezira, 1983/84," Draft Paper, Planning and Agricultural Economics Administration, Ministry of Agriculture, Khartoum, October 1983.

2. The Sudanese Consultations Bureau, Comparative Study of Cost of Growing Wheat in Sudan and Importing it from Abroad, (Khartoum: Ministry of Finance and Economic Planning, December 1982).

3. Abdus Sattar, Study of Cost of Production and Comparative Advantage of Crops Under Different Farming Systems in Sudan, 1980/81, (Khartoum: Ministry of Finance and Economic Planning, May 1982).

4. Curtis Youngblood, et. al., Consumption Effects of Agricultural Policies: Bread Prices in the Sudan, (Raleigh, North Carolina: Sigma One Corp., April 1983).

5. Abdus Sattar, "Pricing of Wheat in Sudan," Paper Prepared for the "Agricultural Price Policy" Workshop Jointly Sponsored by the FAO and GOS, Khartoum, May 31 - June 2, 1983.

6. Derek Byerlee, "The Increasing Role of Wheat Consumption and Imports in the Developing World," Draft Report Prepared by the CIMMYT Economics Program, Mexico City, Mexico, February 1983.

most of the analysis pursuant to the possibility that wheat and other crops are substitutes,has been conducted on technical, i.e., water constraint, rather than behavioral grounds. To make matters worse, inconclusive results remain, even from a technical point of view.

Some have suggested that wheat should not be grown in Sudan on grounds that wheat does not have a comparative advantage (see World Bank, 1978. The Bank no longer holds to its earlier perspective). For this agreement to hold, other crops must in fact be an economic substitute, not just a potentially technical one. Further, more recent analysis of farm management data on whether wheat has a comparative advantage or not suggests that one's conclusion is highly dependent on yield levels and what is counted as a cost and a benefit (see Abdus Sattar, May 1982). For example, on the cost side, the amount of labor time counted is subject to many difficulties. Further, on the benefit side, the value of the straw from wheat is greatly undervalued given the many uses to which it is put in the household. (For an elaboration of these points see Appendix G in Richard Blue and David Dunlop, et. al., June 1983).

To summarize, it is unclear whether there are technical or behavioral reasons for the domestic production of wheat to be constrained to 300,000 feddans. Historical evidence does not support this view. Existing technical studies are conflicting. Finally existing economic analysis either has not been done (see two paragraphs above) or a plausible mechanism (excise tax) has not yet been considered feasible for present implementation so that it might capture enough of the potential producer surplus which may occur, given an increase in producer wheat prices, to not only make domestic production of wheat attractive to the tenant producer, but also attractive to the GOS as well.

Other Issues in
the Wheat Market

There are three other relevant aspects for consideration in an analysis of Sudan's wheat market and the role of PL 480 Title III. These items include (a) the impact of an international market for Sudan's food grains on Sudan's wheat market; (b) the role of potential and actual storage of wheat in Sudan on wheat import requirements, and (c) the distributional equity of the available supply of wheat, including that provided on concessionary terms.

The first item mentioned, i.e., the impact of international markets for Sudan's food grains on the Sudan market for wheat, has not been empirically analyzed. However, to the extent that sorghum and wheat are substitutes, which appears to be the case given that the estimated cross price elasticity of demand between wheat and sorghum was significantly positive (see Table 6 above), sorghum export demand will affect the demand for wheat via the cross price elasticity effect.

As was briefly discussed at the outset of this section, Saudi Arabia, as well as Chad and Ethiopia, represent significant export markets for various dura producers. Exactly how changes in these markets will affect wheat demand over time is unclear at present. However, the fact that Saudi Arabia cut its price for Sudanese dura from $ 340 MT in FY 1981 to $ 180 in September 1983, and that they may reduce it further to the international price for sorghum which is presently about $ 135 F.O.B., is not inconsequential and it certainly could have significant implications for wheat consumption and domestic production. A more complete investigation of sorghum flows out of the Sudan including relative price incentives on both sides of borders, as well as a more complete analysis of the relationships between the two food grain markets is certainly warranted.

It is unknown how wheat stocks in Sudan affect domestic producer wheat and bread price decisions and their timing. However, it is non-theless useful to review the available evidence on available storage capacity for wheat in Sudan. The mid-term evaluation (Table 11.5, Cornell, et. al., 1982), found that the ten presently operational mills have a combined storage capacity of 268 thousand MT, which approximates between 40 and 50% of annual consumption at 1982/83 rates. In addition, there presently exists 40 to 50 thousand MT of storage at the docks in Port Sudan and the potential for storing up to 200,000 MT of wheat and wheat flour in that city. In early October there was about 100,000 MT in storage there due to off-loading in September of about 150,000 MT.

Within Khartoum, USAID has estimated that there are about 250 to 275 bakeries. Perhaps an equal number exist in other parts of the country. It is normal for the bakeries to receive a delivery from one of the mills on a weekly basis. Thus, at the bakery point in the wheat production system in Sudan, there is perhaps 5 to 10,000 MT of flour in storage at any given time.

At any given time there is wheat or flour being transported by rail, truck and barge. It is not clear what the transport system moving and storage capacity is at any given time. Finally, the military has been enjoined by the government to become more actively involved in nation building. It has established a corporation to further involve them in commercial ventures in agriculture (see Democratic Republic of the Sudan, Military Economic Board, Khartoum, Military Economic Board, 1982). Its exact status is presently unclear with respect to wheat storage and baking of wheat bread and how it might affect the market.

To summarize, information on domestic storage capacity is as follows, as of October 1983:

Table 8: Wheat Storage Capacity in Sudan, October, 1983

Port Sudan (Port and related wharehouses)	200,000 MT
10 Mills	268,000 MT
Bakeries (at any given time)	10,000 MT
Transport System	N/A
Military	N/A
ESTIMATED MINIMUM STORAGE CAPACITY	478,000 MT

This estimated minimum storage capacity is more than estimated total consumption of wheat flour of 468.9 thousand MT in 1981/82. No information exists as to how much wheat or flour is in storage at any given time despite the constant referrals to the fact that the country is on the verge of running out of wheat. Certainly the annual variance in wheat imports, irrespective of which series of numbers is correct (see Table 5), imply considerable domestic storage capacity. Of policy relevance is to ascertain how, and to what extent the nation's wheat stock affect bread price policy decisions and their timing.

While distributional equity concerns are not generally accorded the priority today (1983) as was true in the mid-1970's, particularly when an economy is undergoing structural adjustment as is the case in Sudan, the issue warrents a brief review. It is noteworthy that the PL 480 Title III program paper (USAID/Sudan, April 1979) pointed out the fact that both the GOS and AID regarded equity as an important goal. It is stated that "equity is clearly the central focus of [GOS] development plans" (pg. 3 of program paper) and that "....the purpose of the U.S. development program is to contribute to this undertaking [i.e., the GOS development program] and to promote broadly shared development" (pg. 4 of program paper)*.

*Bracketed items included for clarification purposes only.

Subsequent sections of this evaluation reviews the progress being made to achieve certain elements of the goal of equity via the development projects supported via the generated local currency from the sale of PL 480-III wheat. In this section, however, the limited information available on the distribution of wheat and other important foodstuffs within the country over the last several years is reviewed.

In Table 9, the limited data on distribution to the Southern part of the country for selected years from FY 1977 to FY 1983. While it is difficult to ascertain the relative "food needs" and the food demand and supply conditions throughout the country, it is known that: (a) the south has per capita income levels approximating one-third that of the north; (b) nutritional status in the south has been exacerbated since the civil war which ended in 1972; and (c) limited food production has occurred in the south since that time. The south probably has about 20% of the population of the country (World Bank, Report #3551a, February 1982). It grows no wheat. It receives not more than 1% of all wheat imported into the country since 1977. Also, the proportion of domestic dura production distributed to the south via GOS has also not exceeded 3% during this period with the more common figure being close to 1 or 1.5% (calculated from Table 9 and total production data). Perhaps there is only a very "limited" market in the technical sense for such items in the south. Nevertheless, there are lots of poor undernourished people residing in that area.

Conclusions About the Role of PL 480 Title III in Sudan's Wheat Market

The most honest answer to this very fundamental question re: the role of PL 480 Title III in "filling the gap" in Sudan's wheat market is that it is very uncertain what the role is, and, perhaps, more important,

TABLE 9:

Selected Foods Distributed to the Southern Regional
Area Via Ministry of Cooperatives, Commerce, and Supply FY 1977 to 1983

YEAR	COMMODITY (IN 000's MT)			
	DURA (Sorghum)	WHEAT FLOUR	SUGAR	EDIBLE OIL
FY 1977 1/	54.1	4.6	3.7	1.4 2/
FY 1980 3/	8.7	3.0	1.8	14,251 (tins)
FY 1981 3/	12.5	1.6	1.2	45,503 (tins)
FY 1983 4/	39.4	NA	NA	NA

NOTES:

1/ Total imports into Southern region.
2/ Excludes Malakal imports.
3/ Imports via river only. It is estimated that the river carries the bulk of the items entering the southern region, perhaps 60-70%.
4/ Total non-dura foodstuffs equaled 24.6 MT.

SOURCES:

1. Pg. 8, Appendix 4, M.J. Eaton-Evans, Report of the Nutrition Section, 1976-1978, Regional Ministry of Ag., Animal Resources and Irrigation, Yei, Southern Sudan, July 1978.
2. Pg. 8, USAID/Sudan, "Short and Intermediate Measures for USAID Assistance to Alleviate River Transport Bottlenecks," Draft Paper, USAID/Sudan, Khartoum, May 5, 1982.
3. RRI - GOPA - Land P, Study of River Transport in the Sudan, Final Draft Report, Vol. III, Annexes, Ministry of Finance and Economic Planning, Khartoum, July 1983.

what it should be. Three studies have previously reviewed this issue and the range of estimates of the "import gap" have varied from a low of 46.5 thousand MT (Youngblood, et. al., April 1983) to as high as 404.3 thousand MT (The Sudanese Consultations Bureau, December 1982) in 1982/83, with the mid-term PL 480 Title III program evaluation estimated gap, as of 1981/82, being between a low of 298 and 415 thousand MT. The variance in these estimates is considerable and each is based on its own set of assumptions which have been discussed at length throughout this review.

The above discussions have suggested great caution about projecting "import" requirements without a fully articulated analytical system. As has been discussed above, not all the important relationships have received empirical attention, even in a partial equilibrium context. Perhaps more importantly, the market for food grains in Sudan have, and will continue to undergo major shocks, e.g., the equivalent of a 90% real bread price increase over a three-year period beginning in FY 1982, a 60% real price decline in the international price for sorghum over a three year period, the possible introduction of a twenty to thirty percent composite wheat/sorghum flour, the possible technological breakthrough within the next few years of a longer shelf-life kisra, and the potential of significant yield increases of up to 100% within five years, with or without a water cum land constraint in wheat production. Over the next several years it is also conceivable that sorghum yields may increase by at least 25 to 30% as well, given recent field trial research findings in Kadugli and Wad Medani (discussions with USAID/Sudan, Food and Agriculture Office officials). It is clear that these, and possibly other changes will certainly alter the market equilibrium conditions in Sudan's food grain sector.

In spite of these above mentioned important reasons for not making projections, nevertheless it remains seductive to use whatever meager information is available and come up with perhaps a "third-best" idea of what some of all the changes occurring in the Sudan might imply with respect to wheat import requirements and, thus, the role of PL 480 Title III. The results of this effort are summarized in Table 10. The Table presents five alternative projections of the demand for wheat and four alternative projections of domestic production of wheat based on various price, income, yield, and new product changes which may be affecting or will have affected the market for wheat over the 1981/82 to 1985/87 period. As one will immediately note by turning to the "bottom lines", the range of import requirement estimates varies considerably. Furthermore, when taking into consideration the UMR (usual marketing requirements) of PL 480 agreements, the potential size of the presently contemplated US concessional food aid program may encounter some difficulties if the effects of those items considered in this "mechanical" exercise approximate reality in any way.

It should be stated that at least one very important item has been excluded from the empirical analysis embodied in the set of projections found in Table 10. This factor is the convenience and related preparation cost impact on demand (The Youngblood et. al. study, April, 1983 recognized the importance of this factor as did Fred Winch, May 1983, however, empirically. its importance remains unknown). The importance of this factor in understanding market behavior cannot be underestimated, even in low-income countries. It is probably a universal maxim that all people hate to wait. Nearly everyone places a high value on their own time and, if there is a way to save it, and if people have a choice, they

TABLE 10

Alternative Projections of the Demand, Domestic Supply, and Import Requirements in the Sudan, FY 1981/82 to 1986/87 (in 000's MT)

	Base Year 1981/82	1982/83	End of PL480-III 1983/84	1984/85	1985/86	1986/87	Comments
DEMAND							
(1) Wheat consumption no price changes or income changes considered.	539	630	675	723	774	829	Increase based solely on rate of urban population growth of 7.1% pa.
(2) #1, adjusted for per capita income changes.	589	599	635	673	713	764	The estimate of income elasticity of demand used in this projection = 1.1. See Table 6 for source of estimate. Real per capita income changes are based on macro-economic estimates of GDP growth.
(3) #2, adjusted for real bread price increases.	589	487	434	394	418	447	Own price elasticity of demand = 0.4. See Table 6. No adjustments are included for possible oil price increases
(4) #3 adjusted for real sorghum price changes.	589	472	431	368	414	443	Cross price elasticity of demand = 0.47. See Table 6.
(5) #4 adjusted for introduction of 20% sorghum composite flour in FY 1985	589	472	431	353	331	354	42.7% of 41 composite flour phased in 20% of market in FY 1985 and 100% by FY 1986.
DOMESTIC PRODUCTION							
(1) Baseline production--no price, area or yield changes.	162	162	162	162	162	162	A static projection.
(2) #1 plus area expansion to water constraint max in Gezira and New Halfa, no price or yield changes.	162	176	176	176	176	176	This projection allows area expansion for all present wheat growing areas to expand production to what some consider the maximum possible, i.e., 300,000 fed. in Gezira, 50,000 fed. in New Halfa, and 30,000 fed. in the north.
(3) #2 plus yield increases assume water and area constraint. No price changes.	162	176	213	276	302	329	Yield increases assumed in this calculation are based on the Sudanese Consultations Bureau Report (Dec. 1982), pg. 15-2

	Base Year 1981/82	1982/83	End of PL480-III 1983/84	1984/85	1985/86	1986/87	Comments
(4) #3, adjusted for real producer price increases and water may extend on Gezira to 500 rather than 300,000 fed.	162	200	244	321	339	349	This projection allows for price responses. An elasticity estimate of 1.0 was used based on Bateson and Youngblood analyses, reported in Table 7. Area expansion beyond the above considered maximums were never greater than 10-15% on any growing region.
IMPORT REQUIREMENTS							
High Range (D.1-S.1)	427	468	513	562	612	567	
Low Range (D.5-S.4)	427	272	187	32	- 8	5	
UMR REQUIREMENT	159	159	159	159	159	159	UMR = Usual Marketing Requirement - A part of all PL 480 agreements to "guarantee" additionality.
POTENTIAL CONCESSIONARY IMPORTS (IMP-UMR)							
High Range	268	309	354	403	453	508	
Low Range	268	113	32	- 127	- 157	- 154	

NOTES: (1) This Table does not account for a possible requirement that might be implemented whereby the Ministry of Cooperatives, Commerce, and Supply would distribute wheat to each region according to a formula based on population.

(2) The Figure shown represents USDA's figure for FY 1982. It also represents an approximate mean between two estimates of the UMR for FY 1984 which can be calculated from the data presented in Table 5.

will exercise their option. There are very few studies in any country about the direct and cross time price elasticities of demand for any item. The health field has begun to recognize its importance but the empirical literature remains meager there as well. The several studies presently available tend to show the importance of time use on consumption utilization decisions. AID's and GOS's understanding of the market for food grains and especially wheat from both the demand as well as the supply side (see Blue, Dunlop et. al., June 1983 for an illustration of the supply side importance in a not too dissimilar place north of Sudan), would be greatly improved by analyzing the role of time in affecting consumer and producer choices. Actually, it is possible to analyze the inaccuracies of the present available projections embodied in Table 10 compared with actual demand/consumption to ascertain a type of "residual elasticity", much of which could be interpreted as a composite estimate of a time or convenience elasticity.

Program Administration and Project Performance

The third-year evaluation of Sudan's Title III Agreement found that overall progress had been satisfactory, that policy reforms called for under Item II of Annex B had been basically met and that the agreed-upon policy studies had been or were nearing completion. However the evaluation also pointed out weaknesses in program implementation, management/administration and GOS/Mission reporting. It was noted that progress under individual projects varied, but that major delays in individual projects were due, in the main, to slowness in securing related, DA funded technical asssitance, rather than to lack of GOS commitment or performance. The following section examines some of the causes for past deficiencies in program management and project performance, describes steps taken since the last evaluation to address these weaknesses, makes some projections/assumptions about the final two years of implementation, and recommends further actions which could improve performance.

Program Administration

At the time the PL 480 Title III Agreement was negotiated and signed, the current U.S. Aid program was only a few years old. The bilateral relationship between the United States and Sudan was in its infancy and not sufficiently developed to allow meaningful policy dialogue. Title III was also an unknown quantity - the first Title III Agreement, with Bolivia, was signed in May of 1978, and the management burdens, complexity, requirements and opportunities of this type of development assistance were not clearly understood. The Mission opted for a "project-oriented" approach to the Title III Agreement in Sudan, somewhat along the lines of the Bolivia model. To avoid further demands on the GOS budget which would be made by new projects, the Mission sought to identify local currency costs of on-going and/or DA funded activities which could be funded from local currency proceeds. In many instances these were recurrent costs which it was deemed essential to provide (at least for the period of Sudan's financial crisis), because of the perceived importance of the development activities which they supported. There are major differences however, between project implementation in a country like Bolivia with a relatively sophisticated, established infrastructure and a country like Sudan which has experienced considerable out migration of its most able officials to the Gulf since the mid-1970's. The bulk of U.S. assistance to Sudan prior to the Title III Agreement had been quick-disbursing and the build-up of development assistance projects gradual. As a consequence, Mission experience with project implementation in Sudan was thin. The Mission historically has been understaffed, whereas the DA budget has continued to grow, more than doubling over the past five years (projects have nearly tripled). Demands for Title III management and implementation occurred simultaneously with this rapid growth in requirements for increased DA project oversight. On the GOS side there was, and continues to be, a severe shortage of trained staff at all levels with very limited logistical support. Given these circumstances, the Title III program has done surprisingly well in some areas, i.e., policy objectives have been met and surpassed, currency deposits are up to date, disbursements to project sub-accounts while slower than envisioned have been made as required and the GOS has earned some $30 million in offset. Other areas have been less than satisfactory - i.e., Mission/GOS administration monitoring and reporting, aspects of project performance, and a loss of maximum offset potential. An examination of some of the specific management areas of the program follows.

Financial Overview

The PL 480 Agreement provides financing for $100 million worth of U.S. commodities to be disbursed over a five-year period. The local currency proceeds from the sale of these commodities are to be deposited in a special account for use on specified development activities. Before taking possession of the PL 480 commodities at Port Sudan, private purchasers from local mills must have certification by the GOS that they have deposited with the Ministry of Cooperation, Commerce and Supply (MCCS) the local currency equivalent of the dollar value of the wheat. The MCCS, in turn, deposits these local currencies into the PL 480 Special Account maintained by the Ministry of Finance and Economic Planning (MFEP). The MFEP, after collaboration with USAID on programming, deposits pounds into specifically designated sub-accounts opened in the name of individual project activities, or into the USAID-Administered Trust Fund Account. GOS eligibility for offset is triggered when funds are transferred from the Special Account to the project sub-accounts or the Trust Fund. Table 11 lists activities of the Special Account from the first deposit up to June 30, 1983, the last date for which the GOS has provided a quarterly report (The team was advised that reports through September 30 would be submitted within a week).

In addition to the project sub-accounts, a Trust Fund in the name of the U.S. was established into which some CIP and some PL 480 Title III local currencies are deposited. Disbursements cover local currency costs of the U.S. assistance program in Sudan including local currency costs of USAID contractors, local currency costs of operating the U.S. Mission and program development, design, and evaluation activities. Title III funds deposited in this account are for contractor support costs of specifically

Table 11: Status of Special Account as of 6/30/83

	Disbursements £S	Disbursements U.S. $ Equivalent	Deposits £S	Deposits U.S. $ Equivalent
First Deposit at .5 exchange rate			£S 9,972,130.843	$19,944,261.69
Disbursements at .5 exchange rate				
River transport	750,000.000	1,500,000.00		
Railway Rehabilitation	4,400,000.000	9,200,000.00		
Abeyi Rural Development	300,000.000	600,000.00		
Western Sudan Ag. Research	688,122.000	1,376,244.00		
Trust Fund Transfer	1,230,000.000	2,460,000.00		
SUB-TOTAL	£S 7,568,122.000	$15,136,244.00		
Second Deposit at .5 exchange rate			£S 9,958,176,102	$19,916,352.20
Disbursements at .9 exchange rate				
Western Sudan Ag. Research	4,394,215.000	4,882,461.00		
Rural Health Support	874,000.000	971,111.11		
Trust Fund Transfers	2,072,000.000	2,302,222.22		
Rural Development Planning	640,000.000	711,111.11		
Wheat Studies	195,000.000	216,666.66		
Railway Rehabilitation	3,233,000.000	3,592,222.22		
SUB-TOTAL	£S11,408,215.000	$12,675,794.32		
Third Deposit at 1.3 exchange rate			£S27,754,372.726	$21,349,517.48
Disbursements at 1.3 exchange rate				
Balance from Wheat Studies Unused	76,347.391)	58,728.76)		
Trust Fund Transfers	1,813,000.000	1,394,615.38		
River Transport	1,000,000.000	769,230.77		
Blue Nile Int. Development	670,000.000	515,384.62		
Rural Health Support	202,000.000	155,384.62		
Rural Renewable Energy	592,000.000	455,384.62		
1 Southern Region Ag. Development	50,000.000	38,461.54		
SUB-TOTAL	£S 4,250,652.609	$ 3,269,732.79		
TOTAL DEPOSITS			£S47,684,679.671	$61,210,131.37
TOTAL DISBURSEMENTS	£S23,226,989.609	$31,081,771.11		
BALANCE AS OF 6/30/83	£S24,457,690.062	$30,128,360.26		

SOURCE: USAID/Sudan, Controller's Office designated projects[1/]. To get a clear picture of Title III currency support and disbursements to specific projects, trust fund transfers as well as project fund transfers should be taken into account. Requirements for these costs are determined yearly and have changed over the term of the Title III Agreement. Table 12 shows Trust Fund Title III activity as of June 30, 1983, according to the GOS.

It is evident that contractor requirements on most projects are running well ahead of project costs due in large part to the fact that budgets were originally drawn up at least two years before project implementation and that inflation has been running at 30% per year for the last four years. It is expected that requests to increase this funding will be made. Currently about one-quarter of Title III disbursements are being used for U.S. contractors support to implement the projects agreed upon in Annex B of the Title III Agreement.

Rate of disbursement over the first two years of implementation (second and third years of the Agreement) was quite good, considering the implementation problems of some of the projects. The Agreement was signed December 22, 1979 and commodities arrived between March and May of 1980. As a consequence, first deposits were not made until U.S. fiscal year 1981. As a rule of thumb, it appears that no project activity will occur in the first year of a Title III Agreement unless there is an agreement made to forward fund approved, ready-to-implement projects.The disbursement rate in FY 1981 was 63 percent of account balance and 44 percent in FY 1982. As balances are brought forward, without accelerated project implementation or alternative local currency uses, disbursement percentage will continue to fall.As of March 31, the FY 1983 disbursement rate was 15 percent of the account balance.

1/ Annex B budget amounts include these costs

Table 12: Title III Trust Fund Activity as of 6/30/83

Project	£S Budgeted	Deposited
Western Sudan Ag. Research	1,370,000	1,370,000
Regional Finance and Planning	755,000	755,000
Rural Health Support	4,681,000	3,974,000
Ag. Policy Studies	5,000	5,000
Southern Region Ag. Development	1,000,000	1,000,000
Ag. Planning and Statistics	1,441,000	500,000
Rural Renewable Energy	156,000	156,000
TOTALS	£S9,408,000	£S7,760,000

SOURCE: USAID/Sudan, Controller's Office

Fluctuating exchange rates and the lag time between deposits and disbursements have had a negative impact on the debt forgiveness earned. Table 13 shows that Sudan has already lost $11,314,910 in potential offset (See Annex D for additional information regarding the issue of currency offset in Sudan). If further exchange rate adjustments occur prior to full dusbursement, the amount of lost offset will be even greater. Project specific financial disbursements against FY 1983 Annex B are shown in Table 14.

Even assuming that projects fully use currently budgeted funds, there would be a balance of over 16,000,000 pounds unspent. It is conceivable that inflation costs could use up this balance, but, on the other hand, given project performance to date, it is unlikely that projects will utilize all their budgeted accounts over the next two-three years, thus having the potential of further penalizing the GOS by loss of offset in the event of further devaluation of the pound. In the future, even if exchange rates at disbursement from the special account match the rate at time of deposit into the special account, devaluation will mean even larger amounts of local currency will be available for disbursement. Subsequent sections will address in more detail the probability of projects utilizing currently budgeted local currency.

A legal determination has been made that at the time of disbursement of all local currencies from the special account, full forgiveness of all payment obligations for principal and interest of the Title III Agreement occurs regardless of the fluctuation in exchange rate over the life of the agreement. However, as the team currently interprets the language, this would not pertain if the GOS chooses to apply excess forgiveness credits in any given year against other Title I debt due and payable that

Table 13: Currency Offset Lost by Fluctuations in Sudanese Pound Exchange Rate As of October 1, 1983

Deposit Number	Sudan Deposits to Special Account £	Deposits Exchange Rate	Potential Offset $	
(1)	LS 9,972,131	.5	$ 19,944,262	
(2)	9,958,176	.5	19,916,352	
(3)	27,754,373	1.3	21,349,514	
	Total Potential Offset		$61,210,128	$61,210,128
	Sudan Disbursements to Sub-Accounts LS		**Offset Earned $**	
(1)	LS 7,568,122	.5	$ 15,136,044	
(2)	11,408,215	.9	12,675,794	
(3)	3,406,653	1.3	2,620,340	
	Total Offset Earned		$30,432,340	
	Balance of Account	1.3	19,462,838	
			$ 49,895,178	- 49,895,178
	Offset Lost			$11,314,950

If Balance of Account has to be disbursed at £S1.8/$, offset loss would climb to:

Potential Offset	$ 61,210,128
Offset Earned	30,432,340
Offset at 1.8 on Balance of Account at $19,462,838	10,812,687
Offset Lost at 1.8	$19,965,101

Table 14: Actual Disbursements to Project Accounts vs. Annex B Budget as of 6/30/85

£S

Project	Budget	Disbursments	Balance	% Rate of Disbursement
1. Wheat Policy Studies	200,000	118,653	-0-	100% completed
2. Western Sudan Ag. Research*	20,140,000	6,452,337	13,687,663	37%
Project Account		5,082,337		
Trust Fund		1,370,000		
3. Railway Rehabilitation	12,900,000	7,833,000	5,067,000	61%
4. Rural Health Support	14,132,000	5,050,000	9,084,000	36%
Project Account		1,076,000		
Trust Fund		3,974,000		
5. Regional Finance	7,800,000	1,395,000	6,405,000	18%
Project Account		640,000		
Trust Fund		755,000		
6. River Transport	10,174,646	1,750,000	8,424,646	17%
7. Ag. Planning	2,150,000	500,000	1,650,000	23%
Project Account		-0-		
Trust Fund		500,000		

(cont.)

*Subject to final agreement between GOS and USAID/Sudan

Project	Budget	Disbursements	Balance	% Rate of Disbursement
8. Blue Nile	2,040,000	670,000	1,370,000	33%
9. Southern Region	5,500,000	1,050,000	4,450,000	19%
Project Account		50,000		
Trust Fund		1,000,000		
10. Rural Renewable Energy	2,068,000	748,000	1,320,000	36%
Project Account		592,000		
Trust Fund		156,000		
11. Abeyi Rural Development	300,000	300,000	-0-	100% completed
12. Ag. Production & Market.	6,000,000	-0-	6,000,000	0%
TOTAL	£S83,406,646	£S25,866,990	£S56,539,656	31%

Projecting future year's deposits at 1.3	52,000,000
Balance of Special Account	24,457,690
	76,457,690
Currently Budgeted	56,539,656
Unprogrammed	£S19,918,034

year. It is therefore incumbent that a careful financial analysis be done on the implications to the GOS budget if currency offset is applied to current Title I debt rather than being wholly reserved for application against the Title III repayment schedule. It is currently estimated that interest on the Title III Agreement will be around $65 million. Thus, if all credits are used for Title III offset, $165 million of debt will be forgiven. If some credit is used at this point for Title I repayment obligations, some $90 million in debt will be forgiven (see Annex C for the present value of existing PL 480 debt through the year 2000).

There have been improvements in financial reporting and monitoring since the last evaluation, but more needs to be done. U.S.A.I.D. now clearly understands the offset mechanism, has informed the GOS of its responsibilities and is submitting quarterly offset reports to Washington on a regular basis. Records on the special account are now meticulously kept by the Controller's office, but are dependent on the information received from the GOS. Unfortunately, GOS financial reporting is still lagging; they are now one quarters behind in special fund activity reporting. Moreover, reporting in disbursements from the sub-accounts is deficient or non-existent and most project managers still do not understand the necessity or procedure for yearly project budgeting and reporting. Thus, end-use monitoring of sub-account disbursements is extremely difficult to perform.

Recurrent cost financing is a fundamental GOS problem. AID is increasingly aware of the problem and is concerned about how its portfolio is contributing to it. Agency policy on payment of recurrent costs agrees that in certain areas the payment of these costs over a certain time period may be justified on development grounds, e.g., the maintenance of the government's institutional capability to coordinate the development activities occurring in the country public and private entities. However, conditions for agreement to pay these costs include a policy dialogue on ways and means to increase country revenues in order to meet these costs, e.g., tax reform, and a phased plan for shifting the burden to the host government. A period of ten years is allowed for such phase-over. The recurrent cost problem has direct connection to some of the Title III projects, e.g., in the case of the Western Sudan Agricultural Research Project where Title III generations fund 70% of the salary costs. At the end of FY 1987 the entire burden will shift to the GOS. No provision for meeting these costs has been made, although the Mission has suggested a phase-over plan to the GOS.

There are a number of ways AID can address this problem: (a) tie continuing payment of recurrent costs to tax reform and/or income generating measures; (b) agree to make quarterly recurrent cost deposits to sub-accounts contingent on increasing deposits by the GOS over a specified time frame, which could extend beyond the end of the project; (c) establish a policy of "matching grants" for recurrent costs based on increased revenue generations by the GOS. The Mission has three more years of Title III implementation to address this problem, and potentially up to another five years after that if a new Title III Agreement of a five year duration is signed. The team suggests the USAID and GOS begin to address this problem during the coming year for those projects which contain a large recurrent cost element. There is little point in developing projects that call for host government resources to be successful, if those resources are not likely to be available.

Summary and Recommendations
Re: Financial Overview

1) Part of the $11 million potential loss of offset can be attributed to slow program implementation. If funds had been fully disbursed the first

year, almost $5 million in potential lost offset would have been saved. To guard against further penalties of this type it is recommended that all project managers be asked to carefully review the local currency budgets of their projects and to make realistic projections of budget requirements and disbursement rates over the next two years and that funds now programmed against unrealistic budgets and slow moving projects be released for other uses. Some suggestions on potential uses are included throughout this paper. In this case, it would be better to have to apply for additional local currency allotments if disbursements move more rapidly than anticipated, than to hold large unspent earmarkings of the funds. It should be remembered that there are other sources of local currency, i.e., CIP and Title I, which do not have the programming time constraints and potential detrimental effect on the GOS budget of Title III.

2) The GOS has indicated they prefer to use Title III currency offset for Title I repayment obligations. No one has analyzed the long-term budget implications of such an option. It is recommended that such an analysis be done and transmitted to the GOS before a final decision on currency offset use is made. This should be done quickly as the GOS will suffer interest penalties soon if current debt is not met. (See Annex C).

3) The mission should cooperate with the GOS in improving financial management of the Title III projects. One suggestion is that the Regional Finance and Planning Project be used to provide training in budget preparation and financial record-keeping for all Title III Sudanese project managers. Courses should be designed to provide basic skills which have generic applicability, and not be tailored to AID-specific requirements alone. It should again be explained to the GOS that it is important to keep financial reporting up-to-date to maximize offset impact.

4) The question of recurrent costs of projects funded via Title III requires a re-examination. The GOS and USAID should develop a plan during the coming year as to how Title III funded projects will address the problem of recurrent costs after the life of the project.

Program Management/
Administration

The last evaluation was extremely critical of Mission/GOS management of the program. These deficiencies resulted from: (a) an imprecise conception of the management requirements of a Title III Agreement by both the Mission and the GOS; and (b) insufficient staff on both sides to perform the oversight required. As a result, there was a lack of an agreed-upon system for program and project review, monitoring and approval. However, since the last evaluation, great strides have been made in all areas of management, and the outlook is for even more progress over the remainder of the agreement implementation period.

All U.S. (including PL 480) and other bilateral assistance is coordinated by the Assistant Undersecretary for Planning of the Ministry of Finance and Economic Planning (MFEP). He is also responsible for most of the AID reporting requirements related to the PL 480 Title III Agreement. Project design and implementation rest with the various implementation agencies/ministries. The MFEP's chief accountant maintains records on the deposits into the Special Account and transfers from the Special Account into the implementing ministry's sub-project accounts and supplies information, as required, on fund disbursements.

In the USAID Mission, coordination of PL 480 Title I/III program administration rests with the Project Operations Support Staff Office. This entails coordination responsibility from initial planning through drafting agreements/amendments, monitoring/reporting and all implementation action. To accomplish the above, implies that there is joint responsibility with the Program Office for programming/reprogramming of local currency proceeds from the Title III program for various Mission and GOS development activities. Fiscal aspects of the program are the responsibility of the USAID/Controller and technical supervision is the responsibility of the various USAID project officers.

Up to the time of the mid-term evaluation the Title III coordinator was the Chief of Project Operations. Management responsibility for the large DA portfolio of 34 projects left little time available to coordinate the various aspects of the Title III program.

USAID has been extremely fortunate that the Assistant Undersecretary for Planning of the MFEP who is responsible for managing the PL 480 program on the GOS side is an energetic and talented professional who is dedicated to the Title III concept. However, he has virtually no staff or support facilities to assist him.

Since the time of the last evaluation certain steps have been, or will be, taken to correct these deficiencies. A full-time direct-hire GDO came on board in August of this year to assume the responsibilities of PL 480 Title I and III Coordinator. A full-time Sudanese employee was hired whose primary responsibilities include the monitoring of the purchase, shipment, receipt, and handling of PL 480 commodities, including continual updating of Bellmon data and coordination with the GOS on submission of reporting requirements for both the Title I and Title III Agreements. In addition, the Project Operations staff has recently been augmented by an agricultural economist PSC who will act as an assistant to the PL 480 Coordinator.

In January 1983, and again in July, the Mission sought guidance on Title III systems and reporting from the GDO in Tanzania, who had management responsibility for the Title III Agreement in Bolivia. A new reporting format has been designed for the Title III project reviews and is currently being tested as the GOS and USAID conduct a series of semi-annual Title III project reviews. Reports submitted have ranged from excellent to deficient (Only three had the required bank statements attached; only two had prepared budgets for the next year's operation). In most cases, physical benchmark progress was missing or not sufficient. So, while progress has been made, much more needs to be done to improve the project reporting and review process.

The new Title III Coordinator is determined "to make the system work". He and the Assistant Undersecretary for Planning are using the semi-annual reviews as a forum for educating GOS project directors and USAID project managers on the importance of accurate reporting on project performance and forward planning. Reporting formats are being redesigned for clarity and completeness. On the Mission side, the Title III Coordinator is convening a meeting of all USAID project managers to discuss last year's Annex B progress to date and next year's targets. He has assigned his assistant the task of compiling resource flow status and projections which will be continually modified.

While the Assistant Secretary in the Ministry of Finance and Economic Planning (MFEP) is committed to this task, it is obvious he will need an expanded staff to do the job. He and the Title III Coordinator have discussed the problem and are suggesting the establishment of a Title III Secretariat in the MFEP which would have overall GOS responsiblity for programming and managing PL 480 local currency. Such a secretariat would also be responsible for the programming of CIP local currency. An implementation letter has been drafted outlining the structure and responsibilities of such a secretariat. The implementation of the secretariat has been written into the FY 1984 CIP Agreement as a covenent, which must be satisfied within 90 days of signing.

As outlined, the secretariat would: (a) provide overall management for GOS local currency generated by PL 480 Title III and CIP programs; (b) serve as liaison office between the GOS and USAID in all matters pertaining to PL 480 Title III and the CIP programs; (c) prepare semi-annual and annual progress reports; (d) maintain up-to-date records of deposits to and expenditures from the Title III and CIP accounts; (e) assist in designing project profiles, implementing project activities, and reporting and evaluating project progress (including on-site inspections); (f) make recommendations on budget levels on all projects; and (g) advise and assist in evaluations, audits and information gathering. Staff would consist of a Director, five technicians, two secretaries and two drivers. Funding for this secretariat will come from the CIP account.

Summary and Recommendations
Re: Management and Administration

1. After three year's experience, the Mission and the GOS have a much better understanding of the type of system and manpower requirements needed to successfully manage a Title III Agreement. They have taken some important steps to improve this management, but more needs to be done. The lesson learned from the Sudan is that whenever a Title III Agreement is contemplated, a management system supported by adequate personnel and resources should be identified and established prior to signing. The Mission and GOS appear to have started in the right direction and they are encouraged to continue their efforts.

2. One of the elements left out of current management plans are DA and PL 480 Title III funded project Contractors. It was evident from the project reviews that many contractors had no idea of how the PL 480 Title III local currency

system worked. They were unaware that they also had a responsibility for coordinating local currency budgets, that annual progress reports and plans were required, and that targets and allocations were flexible and should be revised periodically to reflect the realities of the project. It is suggested that a briefing sheet be drafted explaining the process and contractor responsibilities and, a meeting of all Title III project contractors be convened to discuss local currency budgeting.

Project Performance.

Annex B states that local currencies generated by the sales of Title III commodities will be used inter alia to cover the local costs of ongoing and specifically approved new development projects in the rural areas that otherwise would suffer delay or elimination due to the austere development budget promulgated as part of the Sudan Stabilization Reform Program. The three criteria which have been used for selecting projects for local currency allocations include: (1) they fit within the USAID Country Development Strategy, which focuses on traditional rainfed agriculture in the west and south; (2) they fit in the GOS three-year public investment plan; and (3) other donor or GOS budget funds are allocated for these proposals. Project selection has been consistent with these objectives and criteria and most Title III local currency to date has been programmed for support of USAID projects.

Following are summaries of individual project performance to date.

Western Sudan Agricultural Research Project

Project Profile

The Western Sudan Agricultural Research Project supports an applied agricultural research program for western Sudan. The project has as its objectives to strengthen national agricultural research efforts by the Agricultural Research Corporation and to establish or expand research activities at Kadugli, El Obeid, El Fasher, and Ghazala Gawazat on integrated livestock-crop production.

Project Implementation

The Western Sudan Agricultural Research Project is considered one of the better conceived and executed of the Title III portfolio. However, performance toward attainment of benchmarks continues to be mixed, again illustrating the difficulty of project execution according to predetermined benchmarks in a country like Sudan. The major facilities at Kadugli have been completed. It is now estimated that completion of construction of the three unfinished research stations originally planned for completion in 1980/81, later retargeted for February 1984, will be further delayed until June 1984. Construction at Shambat is 70 percent complete, at El Obeid 65 percent, and at El Fasher and Ghazala Gawazet 60 percent. Twenty kilometers of fencing has been completed; 5 wells dug (not all of which were productive); the airstrip at Ghazala has been cleared for dry season use, but a contractor has still not been located for construction of a permanent runway. Repair of the Kadugli road has been completed. Local currency currently pays 70 percent of salary costs of 23 GOS scientists (1983 target 27), 23 technicians (target 76), 20 support personnel (target 152). Other benchmarks have been met.

The four principal causes for delay of construction this year were transportation difficulties; a regional ban on cutting of trees delaying the firing of brick; a regional water shortage slowing the mixing of cement and curing of brick; and delays by the contractor in ordering materials. Not all personnel have been hired because centers are not complete. In order to recruit and retain staff the GOS recently approved a 25 percent salary incentive for all scientific, technical and administrative personnel. The GOS project director still believes this may not be sufficient to compete with salaries offered in the Gulf, particularly in the case of Ghazala Gawazat, the most remote station. This project again brings into focus the recurrent cost problem. Title III generations pay 70 percent of salary costs. At the completion of the project local currency costs are expected to be triple present (1983) levels which the GOS must finance. While the provision of local currency for salary costs (and recently incentive pay) has done much to attract and retain qualified professionals in development work, sooner or later the issue of how these costs will be met in the future must be faced. USAID has proposed to the GOS that it assume an increasing share of these costs over the next few years, but to date the GOS has not responded to this proposal.

Railway Rehabilitation Project.

Project Profile

Under the PL 480 Title III Agreement with Sudan, a five-year program, valued at £S 120 million was initiated in FY 1981 with the Sudan Railway Corporation (SRC) to rehabilitate the western and southern line. The PL 480 Title III funds were to be concentrated in these areas since other donors were involved to some degree with other segments of the rail system. At the time of inauguration of the Title III Agreement, rehabilitation of the railroad was viewed as a first priority because lack of adequate rail transport was considered a major constraint to agricultural marketing. In the absence of an analysis of the entire Sudanese transport system, this judgment can still be considered valid.

While expenditures have been constant, progress toward meeting benchmarks has been mixed. The last report received from the GOS on June 30, 1983 indicated that while 91 percent of the allocated funds have been spent (they have incurred a £S 3,937,321 overrun) only 11 wells have been dug versus a target of 50 (22% completion), 109 km of communication line, versus a target of 671 (16%), and 222 km of ties laid versus 260 (85%). The SRC claims budget overruns are due to inflation over the life of the project, e.g., the originally budgeted cost for ties was £S 6 each, while they cost £S 32 today. Without a detailed record of expenditures, however, it is difficult to assess the inflationary effect. The SRC has promised such a detailed budget by November 1, 1983.

Last year's evaluation recommended that further expenditures on this project be delayed until an economic viability assessment of the Babonousa line was done. A study of managerial, institutional and financial constraints to improving the efficiency and financial viability of Sudan's railway system was also included as part of the self-help measures of the FY 1983 Title III amendment. The World Bank financed a managerial, institutional and financial constraints study which is presently being conducted. USAID/Sudan was prepared to immediately finance the economic viability assessment. However, contracting difficulties were encountered in procuring a suitable local or international contractor. The consultant who is to do this work will arrive November,1983, over a year since the question of providing further funds to this project was raised. USAID has asked the MFEP to delay meeting the budget overrun of £S 3,937,321 until the economic study is completed. While agreeing with the importance of such a study, it would seem that the appropriate timing would have been prior to commitment of funds rather than in the last year of implementation. Since the study is unlikely to be completed until well into the fiscal year, The team suggests that if the SRC is able to justify and account for funds spent to date the overrun be met.

Rural Health Support Project

<u>Project Profile</u>

The objectives of the project are to improve the capabilities of the

Ministry of Health to deliver primary health care to the rural population of Sudan, with special emphasis on management and on maternal and child health. The initial design envisioned the use of local currency from Title III to finance construction of warehouses, dispensaries, training centers and staff houses, logistical support for US contractors, and training health workers.

Project Progress

This project is two years behind schedule, as there was a twenty four month delay in project implementation before securing a U.S. technical assistance contractor. The southern component contract with AMREF was signed in April 1982 and the northern component with One America Inc. in December 1982. The PL 480 mid-term evaluation raised a number of issues regarding this project and its inclusion in the Title III portfolio. Specifically, it questioned the priority of primary health services in the USAID/GOS development strategies and the recurrent cost burdens.

In light of the evaluation's concerns, a "revalidation" of the project was performed in May/June of this year. A primary focus of the revalidation was the recurrent cost question, i.e., can the GOS sustain the health care activities initiated by USAID following termination of project funding? Several conclusions were reached by the revalidation team. First, it concluded that there are a number of initiatives underway to increase revenues to the GOS at all levels and thereby reduce the revived cost burden. Secondly, there is little evidence that the GOS can provide the logistical or supervisory support necessary for a further expansion of the primary health care system at this time. Third, construction of additional training facilities and an increase in the numbers of front-line PHC workers have significant recurrent cost implications which have not been considered to date by the GOS. Fourth, strengthening the logistics and supply system with additional warehouses will be far less effective than investments in strengthening the management capability within the system, unless a strong case can be developed to show that warehouse space is the constraint to improvements being made in the logistics and supply system. The revalidation also surfaced a number of other issues which will have to be addressed before the GOS proceeds with an expansion of the PHC system, including problems in management, planning, budgeting, and statistical analysis. As a result of the revalidation effort, the Rural Health Support project work plans for the next year show an increased emphasis on building the infrastructure for improved management, planning and budgeting at the regional level via special analysis and training. Further training of health workers will focus on upgrading the existing cadre's capabilities, particularly in MCH, and retraining the tutors. The revised implementation plan for the remaining life of the project for both contractors will reflect the findings and conclusions of the revalidation report.

Regional Finance and Planning Project

Project Profile

Originally the project was designed to strengthen the capacity of local government institutions to plan and implement development projects. In response to GOS regionalization initiatives, the project was amended in September, 1982 to add a finance component, which reflected the difficult revenue generation and revenue management situations at all levels of government. The new project course is to: (1) increase the capacity of the Kordofan and southern regional governments to fund their own activities by improving their revenuw generating, budgeting, financial management and project development capabilities; and (2) support a continuing GOS effort to promote decentralized government and decentralization of services. Title III local currencies are programmed to: (1) support formal in-country training in finance, budgeting and planning; (2) sponsor workshops for staff involved in planning and budgeting functions; (3) upgrade training institutes; (4) sponsor research and studies on finance and revenue issues; and (5) support a regional model projects fund. No model projects are presently considered an adjunct of regional training operations in project appraisal, design and implementation, not as a resource transfer mechanism to the regions. Given the consistent underfunding of regional development budgets, the possibility that the model projects fund could evolve into a projectized allocation to regional development budgets has aroused considerable interest within the GOS.

within the system. The revalidation also surfaced a number of other issues which will have to be addressed before proceeding with expansion of the PHC system, including problems in management, planning, budgeting and statistical analysis. If the recommendations of the revalidation are accepted, the project will require major redeging which the Mission is planning for FY 1984.

Regional Finance and Planning Project

Project Profile

Originally the project was designed to strengthen the capacity of local government institutions to plan and implement development projects. In response to GOS regionalization initiatives, the project was amended in September, 1982 to add a finance component, which reflected the difficult revenue generation and revenue management situations at all levels of government. The new project purpose is to: (1) increase the capacity of the Kordofan and southern regional governments to fund their own activities by improving their revenue generating, budgeting, financial management and project development capabilities; and (2) support a continuing GOS effort to promote decentralized government and decentralization of services. Title III local currencies are programmed to: (1) support formal in-country training in finance, budgeting and planning; (2) sponsor workshops for staff involved in planning and budgeting functions; (3) upgrade training institutes; (4) sponsor research and studies on finance and revenue issues; and (5) support a regional model projects fund. Model projects are presently considered an adjunct of regional training operations in project appraisal, design and implementation, not as a resource transfer mechanism to the regions. Given the consistent underfunding of regional development budgets, the possibility that the model projects fund could evolve into a projectized allocation to regional development budgets has aroused considerable interest within the GOS.

Project Progress

This project has also developed slowly. Contractor personnel did not arrive until December,1981. The two key personnel in the original four person team were removed and a new Chief of Party recruited. More recently the GOS Project Director has been replaced and implementation of the planning component has advanced. Progress toward benchmarks as of September 30,1983 is shown in Table 15 below.

As initially conceived, the model projects component had difficulty in devising an effective system for project submission and approval. To date, only one project has been approved. While some training has occured, during the course of the Mission project reviews held during the first week of October, 1983, questions were raised regarding the project's focus, objectives and strategy. Support to central and regional planning is considered important and an area in which AID could appropriately become involved. But the project, as currently structured is inadequate to provide the interv- entions needed to make a major impact in this area. The failure of the model projects fund activity to get off the ground may be the result of a project submission, review and approval process that is not clearly understood by possible applicants and that is too bureaucratically constrained. The opinion was voiced that if regional governments are to gain experience in project development and implementation, they need to learn by doing, i.e., adequate resources should be available, the screening process should be simplified and the major responsibility for project successes or failure should rest with the project implementors. USAID will be examining the project to determine whether additional resources should be committed to an expanded intervention in the area of finance and planning.

Table 15: Regional Finance and Planning* Implementation Targets (Physical Benchmarks)

	Actual		Planned		Total
US FY**	82	83	84	85	
Planning Component					
Workshops and Courses conducted	1	3	4	4	12
GOS Personnel Trained (Project Initiated Activities)	30	80	45	45	200
(Other Institutions: Degrees, Diplomas, Certificates)	-	6	5	10	21
Training Institute up-graded	-	-	3	-	3
Supplies and Equipment	x	x	x	x	x
Planning Research	-	x	x	x	x
Model Projects Submitted	-	5	10	15	30
Model Projects Funded	-	1	6	8	15
Finance Component					
Workshops and Courses conducted			5	8	13
GOS Personnel Trained (Project Initiated Activities)			75	150	225
(Other Institutions: Degrees, Diplomas, Certificates)			2	8	10
Training Institutes up-graded (2 institutes)			x	x	x
Supplies and Equipment			x	x	x
Consultancies to Ministries			1	3	4
Studies/Research		2	3	4	9

* Revised 9/83
**US FY = 10/1-9/30
GOSFY = 7/1-6/30

River Transport Project

Project Profile

The strategy for improving the river transport system has been to assist the River Transport Corporation (RTC) to alleviate physical infrastructure constraints to the river channel of the While Nile between Kosti and Juba, while encouraging private sector entry into the actual transport of goods and passengers. The Title III local currency program is concentrated on the former objective.

Project Progress

Title III local currency was used in the past to purchase four cranes and construct two warehouses. New local currency activities proposed are rehabilitation of docks and quays, warehouse construction, procurement and installation of channel and distance markers, and dredging of the channel between Juba and Mongalla. Decisions on these interventions await the recommendations of a river transport team currently in country assessing the river transport system and what options might be considered feasible. Subsequent to this assessment, the Mission plans to redesign the project later in FY 1984.

Agricultural Planning and Statistics Project

Project Profile

The project is explicitly designed to undertake policy analysis leading to reform measures which will improve the structure of incentives in the agricultural sector, thereby increasing reliable food supplies and increasing the production of agricultural commodities for domestic consumption and processing, as well as increased export earnings. The project is also designed to follow up policy analysis with improved project/program planning activities designed to increase both agricultural production and rural incomes. In the future all policy studies related to Title III objectives will be implemented in coordination with this project.

The project was amended July 31, 1983 for the sum of $2.4 million bringing life of project funding to $7.3 million. The major provisions of the amendment were the addition of a Production Economist to the advisory team within the Planning Administration and the provision of two (2) Visiting Professors for the Department of Rural Economy, University of Khartoum to train 25 to 30 agricultural economists from the Ministry of Agriculture over the next four years.

Project Progress

The manager of this project feels it is underfunded and would like the local currency budget increased to £S 4.2 million, as budgeted in the Project Paper and the Project Paper Supplement. Some of the studies planned for funding under this project are:

a) The impact of alternative effective exchange rates for selected commodity exports with implications for farm income, government revenue, domestic prices and capital formation in the agricultural sector;

b) an analysis of marketing margins and constraints for major commodities produced within the rainfed sector;

c) a time series analysis of market price and quantity movements for selected domestic commodity markets.;

d) costs of production and supply elasticities for major commodities produced within the rainfed sector;

e) Sudan's present and projected competitiveness in major oil seeds, sorghum, livestock and gum arabic export markets; and,

f) a study of the effect of credit, import, exchange rate, and taxation policies on the financial viability and long-term growth propects within the rainfed sector.

The team feels this is a highly appropriate use for Title III local currency as it has a direct linkage to efforts to increase agricultural production. Moreover, results of these studies will indicate areas of reform which should be addressed in the USAID/GOS policy dialogue.

Blue Nile Integrated Agricultural Development Project

Project Profile

The purpose of this project is to develop an integrated delivery system for farmers and herders which is suitable for replication in the rain-fed agricultural subsector. Local currency support is targeted to small interventions such as beekeeping, animal traction, co-op support, well drilling, veterinary services and metal workshops.

Project Progress

The project has just received the first allotment of the Title III bunds budgeted in FY 1983 Annex B so no new progress on benchmark achievement can be reported to date. Activities planned for the next 180 days include development of extension programs, plans for five wells, establishment of a credit program, workshops and the maintenance of roads. The GOS has make significant commitment to large-scale mechanization schemes and now would like to evaluate several of the implemented alternative technologies for their potential use by traditional farmers and herders. They have allocated £S 3 million of development budget funds to support these activities.

Southern Region Agricultural Development Project

Project Profile

This project is aimed at relieving key policy, production, marketing and institutional constraints which stimy private sector agricultural production, processing and marketing in the south. Local currencies will be used to cover local staff costs of technical assistance and for specific support to activities related to agricultural marketing, farming systems research, budget and financial planning, and, manpower and area development.

Some of the specific activities will include construction of feeder roads, recurrent budget support, credit and infrastructure support for rural enterprises, and village market development.

Project Progress

Implementation of some project components is three to six months behind schedule because of delays in contractor procurement, so no new progress can be reported to date. However, a contracthas recently been signed and, in the next 180 days, completion of two T2-type project houses and office complex improvement in Juba is planned,and further progress is expected throughout FY 1984.

Rural Renewable Energy Project

Project Profile

The project is designed to assist the GOS develop an applied research and dissemination capacity in Rural Renewable Energy Technology (RET). It is anticipated that the research findings will lead to the widespread use of inexpensive renewable energy technologies which are economically, socially and environmentally sound, thereby conserving energy resources and improving the standard of living of the rural poor majority in Sudan.

Project Progress

Title III local currency proceeds were only made available to this project in May, 1983. Since then, two sub-projects have been implemented - one on training and the other on charcoal stoves; others are under study. During the project review the likelihood of this project reaching its goal, i.e., "widespread use" was questioned. The outputs of this project are unlikely to have a major impact on Sudan's massive energy problems. The Mission will be examining this project via a mid-term evaluation during the second quarter of FY 1984 and will be seeking ideas about how to refocus it.

Agricultural Production and Marketing Project

Project Profile

This project is still in the process of design. The purpose of the project is to address the issue of technology transfer and other production and marketing constraints affecting farmers in the rainfed sector, e.g., roads, extension, and credit.

Summary and Recommendations

1) USAID and the GOS have now had a full two years of experience in implementing projects under the Title III framework. Although during those years the focus of the Sudan Title III Agreement has shifted to the achievement of major policy reforms, the project approach for the use of local currency is still considered valid and developmentally important from the perspective of the GOS. The appropriateness of the projects, has been consistent with the USAID/GOS development strategies at the time of selection but, in turn, priorities and validity have changed as a reflection of evolution of these strategies. Progress on most projects has been much slower than anticipated. One of the major causes for delay has been the AID contracting process. The second most important cause include factors that could not be forecast when the original projects were designed. Also a source of delay were difficulties in transport and procurement, inadequacy of the Sudanese trained manpower pool from which to draw and retain project staff, and the need to redesign and amend projects to adapt to the changing realities of the Sudanese milieu.

Surprisingly, the GOS has expressed no impatience with the slowness of project implementation. The Assistant Undersecretary for Planning of the MFEP is committed to the project approach as a mechanism for achieving maximum development impact. He has no problem with project selection to date and has the patience to wait for the projects to develop and to transfer funds as needed. He stated that Title III projects still moved faster than Central Government projects. His only criticism of the Title III process is its "rigidity", particularly the necessity of having to wait for Washington approval of project and budget amendments which has taken up to a year, before being able to adopt, modify, add or delete projects. However, he does not fully understand that under the Title III mechanism, patience and prudent budget management may be penalized by loss of potential currency use offset.

2) There are two factors that urge quick disbursement of Title III local currency proceeds: (a) the potential loss of offset due to fluctuating exchange rates; and, (b) the possible requirement that funds disbursed within two years of deposit. There are a number of recommendations the team would like to make related to the issue of local currency proceeds disbursement.

First, while there has been inadequate management staff in the Mission, thus necessitating rigid Washington oversight of the Title III projects, this situation has changed and will continue to improve. As a consequence, decisions on reprogramming during the year should be left to the field, who, in the final analysis, are responsible for overall program strategy and project implementation. It is still the responsibility of the USAID and the GOS to explain last year's program progress and changes and FY 1984's revised targets in the Annual Progress Report and Annex B. However, except in the case of glaring deviations from program requirements or regulations, decisions and approval on project implementation should be left to the field once the strategy for currency use has been established by the recently enacted USAID/Sudan local currency committee. Thus if a project falters during the course of implementation, or new knowledge suggests alternative uses of budget funds, the Mission and GOS should have full authority to reprogram currency within established criteria.

Second, if it is decided that the current portfolio of projects should remain unchanged, and special account funds retained until project completion, full forgiveness should be tied to policy reform performance. The Mission may wish to consider the option in any case.

Third, if quicker disbursement is desired, special program accounts could be established, using unprogrammed funds, which would have more flexibility of disbursement, e.g., specified amounts could be set aside for such areas as: (a) support to the extension service for more outreach, i.e., vehicles, fuel, and other imputs; (b) credit, either through the private sector or possibly agricultur.l banks; (c) a special development projects fund for use by the MFEP to support small-scale project proposals seeking additional funding; and, (d) transfers to regional governments to support their development activities, perhaps as a "matching grant" based on increased revenue generation funds to support policy initiatives, e.g., the testing of composite flour.

Fourth, no matter which option(s) are considered, current projects should be prioritized and budgets examined for validity. The Annex B review being convened by the Title III Coordinator should provide an excellent forum for the exercise. Following this review, options for alternative uses of special account funds should be examined.

The above list of suggested recommendations is merely indicative and the Mission should not feel constrained in suggesting alternative uses to Washington. In fact, the team fully supports the Mission's present examination of how to use these local currencies in the most efficient manner.

3) The team is not making recomm .tions on each project funded via Title

III local currencies since judgments on some await the project manager's review. The team understands that the Mission will conduct indepth reviews of each project in the Mission portfolio during November, 1984. A few specific recommendations, however, are listed below.

First, if SRC can justify expenditures to date, agree to meet the present cost overrun. Suspend any additional assistance until study of the railway system is complete.

Second, examine the appropriateness/feasibility of expanding the model project component of the Regional Finance and Planning Project to allow more flexible project submission and approval. In this instance, work with the GOS regional governments in setting criteria for project approval, disseminating information of project submission and budgeting formats and on establishment of reporting system on project performance.

Third, increase the funding for the Agricultural Planning and Statistics Project. To achieve quick disbursements, transfer funds for these studies to sub-accounts reserved for such use.

Fourth, eliminate earmarking for Agricultural Production and Marketing Project until project is approved. Funds can be reallocated when project is ready to "start". As a general rule, unless full forgiveness is tied to policy reform, it is not recommended to budget for any project which is not ready for implementation.

Recommendations for Fifth Year of PL480 Title III Agreement

Policy and Market for Wheat

1) The thrust and direction of the current policy dialogue, the aim of which is to continue to support the achievement of structural adjustment agreement upon by GOS and the major donors should be continued. GOS, with the assistance of the PL 480 Title III Program, has made considerable progress via several interventions in eliminating an important budget subsidy on wheat bread which is fully consistent with the above objective. The team fully supports the Mission's ideas to further improve the economic efficiency of the markets for wheat and related food grains, including: (a) economic import parity pricing of wheat, (b) introduction of a composite sorghum and wheat flour, (c) the possibility of establishing a multiple quality and price structure in the market for bread by allowing mills to set several different qualities of flour based on extraction rate, and (d) engaging the government in a joint program designed to reduce its considerable intervention into the growing, procuring, storing, and distributing of wheat. The team fully supports the Mission in conducting the necessary policy relevant studies and analyses to successfully implement these and other related policy changes on the important food grain sub-sector of the Sudanese economy. The Mission can provide considerable insight and guidance to other relevant donors about the implications of the policy choices being considered by the GOS in this sector.

2) The team would like to urge the Mission to work with others concerned about the short and long-term fiscal implications of the development projects funded (via generated local currency under PL 480 Title III, as well as Title I and CIP) on the (a) central, and (b) regional and (c) local governments, in light of the overriding structural adjustment and policy objectives being implemented by GOS with the assistance of many donors. The country remains in a difficult macro-economic situation, despite recent improvements. Thus, it is essential that considerable attention be focused on this issue. The Mission is presently taking a hard look at the way in which generated local currencies can be programmed in a more flexible manner,

particularly to support some of the current costs of regional and local governments to sustain developmentally sound government activities in a number of sectors, including agriculture, road maintenance, health, water supplies, and education, in part originally implemented via donor assistance, including AID. Investments in institutional development, including the institution of government to maintain its capacity to implement, represents a fundamentally sound and developmentally appropriate use of these currencies. To the extent that the disbursement of these currencies (including a part of those generated via Title III) can be based on increased local government revenue generation, it will facilitate an ever greater degree of self-reliance at the local level. By so doing, it will gradually reduce over all government budget deficits which are being monitored at the macro level as one of several important measures of progress toward structural adjustment.

3) The IMF has begun to work on the fiscal implications of GOS special accounts established by donors in order to establish a greater understanding about their impact on fiscal policy. USAID probably represents the single largest donor with such accounts, particularly for PL 480 Title III and CIP. The present efforts by the GOS and USAID to establish programming flexibility of these program's local currency can become an important vehicle to achieve greater coordination between the GOS and the major donors and obtain additional policy reforms in the fiscal policy arena necessary to achieve structural adjustment.

4) The team agrees with the importance of the studies planned for the Agricultural Planning and Statistics Project. It feels that the funding for this project should be increased in order to fully support the many envisioned studies. In addition, there are other issues requiring attention as well. These study topics are listed below:

(a) While progress has been made to conceptualize Sudan's food grain market, it is necessary to develop a completely articulated food grain demand and supply systems model to improve the projections of wheat imports into Sudan. The analysis contained in Section III of the report contains a number of factors which must be explicitly included in such a model. It is recognized that many empirical problems exist in fully implementing such a model. Nevertheless, the development process will force both analysts and policy makers to systematically address and resolve important systemic and dynamic issues.

(b) The team finds that there is considerable variance in estimates of consumption, production and imports of wheat. The basis for planning and analysis of the market must be improved.

(c) While some information has been accumulated on the milling industry via the composite flour study, little is generally known about the industrial organization of the storage, transporting, milling, and baking industries and how incentives on both the demand and supply side of each affect the market for wheat. Information on the actual storage of wheat at any given time is presently unavailable although some information is available on potential storage capacity at various points in the wheat system (see table 8 in text). Thus, its impact on price stabilization as well as import requirements and their timing is unknown. Before entering the sorghum price stabilization arena, it would be useful to review the role of storage in the wheat market, particularly since U.S. commodities are involved.

(d) The GOS is considering a proposal to more equitably distribute wheat flour available from all domestic and international sources to all regions, particularly in their urban areas. It is unclear what the wheat demand implications of implementing such a policy might be. The Mission is urged to allocate some resources to investigate what the short and medium term implications might be, given various prices and availabilities of wheat and sorghum.

(e) Finally, the team would like to bring to your attention the excellent set of policy relevant analytical study suggestions contained in William Bateson's recent draft paper, entitled "Considerations on the Establishment of Producer Price for Wheat at Gezira, 1983/84", October 1983, (see annex F). These ideas are currently being reviewed with the objective of establishing short and long term policy agenda for the Agricultural Planning and Statistics Project.

5) A recent review of existing literature funded by AID had concluded that the only evidence presently available which supports the health-labor productivity linkage is via nutrition. Policy relevant food intake and nutritional status information is presently meager outside of Khartoum. (One should not conclude that Khartoum is well endowed as a consequence

of the above remark). Without information on this aspect of the food grain market, particularly in rural areas, policy makers in Sudan will not have a good idea about the quantitative nutritional impacts of the market for good grains in general and wheat specifically.

It is generally presumed that the policies being implemented, in part via the dialogue on PL 480 Title III (e.g. wheat bread price increases, composite flour, higher extraction rate for flour, the promotion of a longer shelf life for kisra, and the possibility of a regional distribution of imported wheat) are nutritionally superior than the situation which exists at present. However, the quantitative impact in nutritional terms of these policies are unknown. A final assessment of this present PL 480 Title III program would be remiss in not addressing this issue in some quantitative way. Thus, it is recommended that the mission consider ways to begin to provide such information during FY 1984.

6) A principal objective of any PL 480 agreement (Title I and III) is to increase domestic agricultural production. In this context the team feels it is vitally important to make a concerted effort to increase wheat yields Appropriate technology to achieve increases in production appears to be available (see Sudanese Consultations Bureau December 1982). The team recognizes the lead taken by the World Bank to expand the use of the available technology. Where appropriate, however, CIP and Title III currencies, and CIP imports should be targeted to this effort..

Administration

1) The mission is encouraged to continue its efforts to improve the administration of the Title III agreement through (a) the establishment and the provision of budgetary support of a PL 480/CIP Secretariat in the MFEP which will be responsible for programming and managing PL 480 local currency; and (b) training of Sudanese project directors in project design, implementation, and budgetary skills. The aim of the above will be to improve the "audit trail" between initial deposite through final end-use disbursement of Title III generations. USAID/Sudan contractors should also be included in these training exercises.

2) (a) The team has been encouraged by the Mission's efforts to strengthen its capability to manage the PL 480 program. Once an administration system has b en fully established in the Ministry of Finance and Economic Planning (planning) to complement the mission's staff, the day-to-day implementation and decision making should be delegated to the field, with AID/Washington's role being one of general oversight to assure adherement to overall objectives and regulations of the Title III agreement.

2) (b) Given the improved management capability within the GOS and USAID/Sudan, the present system of requiring AID/W approval of Title III local currency projects seriously inhibits the ability to maintain flexibility in programming. USAID/Sudan should be redelegated authority to program all local currency projects without prior AID/W approval, including addition or deletion of projects based on performance or lack thereof. Should the Mission and the GOS identify a worthy activity requiring local currency, which clearly falls within Title III objectives, they should have the authority to include it within the context of Annex B without prior Washington approval which is a lengthy process and which discourages USAID/Sudan from taking advantage of targets of opportunity. Also Washington should not require that further disbursements of Title III local currencies under approval Annex B projects be deferred until Washington has evaluated the "success" of particular projects, such as it requested for the Rural Health Support Project.

2) (c) Finally, the Mission and AID/W should not continue to measure the success of a project on the basis of physical benchmarks such as "20 km of the cable laid" but on progress made toward achieving the development objectives of the project, e.g. more dissimination of research, technology, stronger financial infrastructure, more users of improved agricultural techniques. It is recognized that these outputs are harder to measure and some may require longer-term monitoring to ascertain impact. However, without continued management focus on these items, projects will continue to be monitored according to relatively inflexible and potentially irrelevant indicators. The recently established GOS-AID project evaluation process can provide the mechanism through which progress can be obtained.

3) Since the focus of the Title III program has shifted over the past few years to one of policy reform, the team recommends that the Mission develop benchmarks for forgiveness on the basis of GOS implementation of

specific policy steps to increase agricultural production and reduce imports, particularly in the food grain sector.

4) A portion of local currency should be used to directly support agreed policy reforms. For example, if introduction of composite flour is a major policy reform, Title III local currency should be used to implement the reform. As another example, if greater extension is needed to increase wheat production, Title III currency should be used to possibly pay for more extension workers, for the dissemination of necessary inputs, and for other developmentally appropriate activities consistent with GOS and AID's objectives.

5) Currently the GOS has lost $ 11,314,950 in potential offset (see table 14). If all offset is credited against the Title III debt obligation loss of currency offset is not a problem since full Title III debt will be forgiven at the time of full disbursement of the Title III Special Account. However, if the GOS opts to apply unused credit in any given year against other Title I debt, potential loss of offset may be a problem. Until such time as a full analysis of the GOS budget and Foreign Exchange implication is done the team recommends that no currency offsett be used to meet Title I repayment obligations. Possible implications to the Sudanese budget of currency offset application to Title I debt should be carefully explained to the Sudanese Government. The team has done a partial analysis of the debt structure through the year 2000, (see Annex C) but it requires a more careful analysis over the entire life of the debt, with several discount rates being applied. The USDA has been requested to conduct this analysis, however, the Mission may be required to conduct the analysis on its own in Sudan.

Project Performance

1) The team supports the Mission's intention to conduct a thorough evaluation of all ongoing projects. Following this review a revision of Annex B should be conducted to reflect the results of this evaluation particularly with respect to local currency cost requirements, projected rates of disbursement, and continued relevance to Mission strategy and

Title III objectives. It is the team's understanding that an analysis of the magnitude and implications of the recurrent costs of activities currently supported by USAID funding will be incorporated into this review. This analysis is a vital first step in addressing this issue. Once the parameters of the problem are known, an attempt can be made to answer the questions: (a) how and whether these costs should continue to be met, (b) by what reçource source if donor supported, (c) for how long, and (d) what are the options for locating and/or increasing GOS resources to meet these expenses?

2) If SRC can justify expenditure levels incurred to date, agree to meet the cost overrun. Delay any further investment in the transport sector until relevant studies are completed (see page for details).

3) Eliminate from the Title III local currency budget all projects that are unlikely to start disbursements in the coming year. Revise other budgets to reflect realities of rates of progress.

4) As noted in the text, the rate of expenditure from the Trust Fund pursuant to the PL 480 Title III projects has increased relative to other expenditures. The team recognizes that some of these expenditures may relate to inflation and the delay between initial budget development and project implementation,. However, it would be important to review these expenditures to fully understand the reasons for the increases.

5) Finally the team recommends that the mission assess the feasibility of using Title III local currencies to support the local currency costs of a Title II program when it may be implemented.

Recommendations on Future PL480 Title III Program

1) The Sudan Title III program has proved to be a success in meeting the objectives of this form of assistance, particularly with respect to policy reform. Therefore, the team strongly recommends that future PL480 assistance be programmed for Sudan under this mechanism.

2) Data on supply and demand of wheat in Sudan are so unreliable and variant, and, a number of policy changes are being implemented which can dramatically alter projections, that the team found it almost impossible to project how much wheat Sudan will need to import over the FY 1985-90 period. Therefore, the team recommends that (a) Title III be the "core" program for the importation of PL 480 wheat to Sudan, with Title I being used only when a margin of safety is required, e.g. in the event of poor weather or production.

3) While recommending continuation of a title III agreement in Sudan, recommended commodity level and length of agreement should await the development of a food grain demand and supply systems model which can be used to more accurately project wheat imports, consumption and production, and determine the length of time needed to achieve the policy agenda of a new agreement. Given the (a) wheat policy studies completed to date, (b) food grain systems framework paper by F. Winch, 1983, (c) analytical work which has been recently conducted by W. Bateson, 1983 and C. Gotsch, 1983, and (d) other more general systems analysis literature, an improved model could be developed in the near future.

4) It is quite conceivable to develop a case for a phase out type of funding level strategy, where a higher level of funding via Title III is provided in the first year and then lesser amounts provided in subsequent years of the program. (This programming would obviously be coordinated into a consistent Title I and III package). This type of programming also appears consistent with the likely food grain market scenarios which the team has reviewed (refer to table 10).

5) Given the policy dialogue achievements of the PL 480 Title III program, it is difficult to envision a more appropriate mechanism for making future progress in the food and agricultural policy areas, especially in comparison with Title I. The recently-held AID conference on Title I in Washington D.C., found that there was little world wide evidence of significant policy reform implementation via Title I, although many suggestions were made. On balance, the team would conclude that the policy dialogue implemented via Sudan's Title III program has been noteworthy and should continue. Thus the agreement should be primarily policy-oriented, with benchmarks based on specified policy reform measures to be taken over a designated time frame. Local currency generations should be used to support these reforms.

Statement of work follows:

Background: In December of 1979, the Government of Sudan and AID executed a 100 million, five-year PL 480 Title III program. The goal of this Food-for-Development Program is to assist the Government of the Democratic Republic of the Sudan (GOS) with its severe economic burden brought on by the stringent Sudan Stabilization Reform program and to enhance Sudanese commitment to basic human needs by assuring that budget allocations to the needy rural traditional sector are not disproportionally reduced as a result of the Sudan Stabilization Reform. This will be achieved by:

a) reducing the foreign exchange demands placed on Sudan as a result of its efforts to meet increased food needs while efforts are underway to increase local production by providing a long-term U.S. credit of 100 million over the next five years to finance commercial wheat imports;

b) providing local currency for activities designed to assist the poor in the rural sector through activities in agriculture, transportation, health and rural planning; and

c) supporting the economic stabilization and reform efforts in which the GOS has adopted policy reforms which will improve the structure of incentives in both the rainfed and irrigated sectors in order to increase agricultural production, and consequently domestic food supplies, agricultural export earnings and rural incomes.

Since that time, three amendments to the basic agreement have been signed which in total have provided 80 million of wheat and wheat flour to the Sudan and modified some of the local currency projects, self-help measures and policy studies. In addition, there have been annual evaluations, the last one being the mid-term review in October of 1982, conducted by a team of AFR Bureau, FVA/FFP, USDA and Dept. of Treasury representatives from Washington.

This will be the fourth PL 480 Title III annual evaluation. Based on the results of this review, the fifth and final tranche of Title III wheat and flour will be provided to the Government of Sudan in FY 1984. A two-person team will assist the mission and the GOS with the preparation of this report: these include an economist and a field food-for-peace officer.

Objectives of evaluation: there are 3 related objectives of this study:

a) to assess progress to date, especially since the mid-term evaluation in implementation of this food-for-development program;

b) to make recommendations related to implementation of the remaining period of the on-going Title III program; and

c) to explore options and make recommendations related to a possible new Title III program to begin in FY 1985.

Scope of work:

1. For a period not to exceed ten days in the U.S., the consultant will review the following materials: GOS food-for-development PL 48 Title III FY 79-83 and supplement of April 1979; PL 480 Title III agreement and amendments; first, second and third AID evaluations based on the annual progress reports; policy studies undertaken under the PL 480 Title III agreement: program papers and evaluations of other PL 480 Title III programs executed in other host countries; AID policy papers and guidelines related to PL 480 Title I and III programs and uses of local currency proceeds: and other pertinent communications and papers. The consultant will also meet with and interview representatives of AID/W (PPC, FVA/FFP and AFR), U.S. Dept. of Agriculture, U.S. Dept. of Treasury and OMB with responsibilities for Sudan's PL 480 Title III program to

ascertain their views related to the execution of this program and recommendations/possibilities for future direction.

2. The USAID agricultural economist will make available to the consultant recent reports and information on production consumption and trade of wheat, wheat flour and sorghum over the past five (5) years as well as projections for these parameters. In addition, preliminary results of the current sorghum/wheat composite flour study, which are expected to be in draft form 1st October, 1983, will be made available to the consultant. This information will be used by the consultant to estimate future needs of PL 480 wheat and wheat flour in the Sudan.

3. The consultant will be expected to access the appropriateness of continued PL 480 Title III imports in light of present and future domestic production, consumption and international trade in food grains (sorghum and wheat). Since Sudan's food grain economy is not expected to remain static over the intermediate term and since relative commodity prices are expected to change even in the short-term, the demand for wheat should not be viewed in isolation of its close substitute sorghum. The mission agricultural economist will provide the consultant with up-to-date information which will help in this assessment.

4. Assess the degree to which PL 480 Title III objectives have been satisfied.

5. Assess the degree to which progress has been made in macroeconomic policy reforms basic to increased agricultural production.

6. Review progress to date on all local currency projects and determine the degree to which physical and financial benchmarks have been met. Based on these reviews, suggest modifications to targets if necessary. Estimate local currency disbursements for the remainder of the program.

Revalidate the appropriateness of all local currency projects within the objectives of the overall Title III program.

7. Review and assess GOS/Mission management, monitoring and evaluation cpapbilities and improvements, including financial reporting. Suggest further organizational and system improvements to improve program management.

8. Review all recommendations emanating from the mid-term evaluation and determine status and progress of satisfying these recommendations.

9. Based on the above, make recommendations for improvements in the policy agenda and studies, local currency projects, financial and physical management/monitoring/reporting systems, and overall administration of the program for its remaining period. Specifically address the issue of how should the GOS and USAID approach the completion of the program once the fifth and final tranche of Title III wheat/flour is procured.

10. Investigate the pros and cons of initiating a new Title III program in FY 1985 as opposed to a pure Title I program of food aid. What are the benefits and costs perceived by the GOS and USAID related to continuing a Title III program? Is Title III a better vechicle for policy dialogue and reform than Title I? What development objectives and policy agenda might be pursued in a renewed Title III program? What would be an appropriate design and level of funding for a renewed Title III program? Make recommendations for the design and development of such a program if deemed that USAID and GOS should go forward. Develop scope of work for consultants to help with this process.

11. The consultant is responsible for the preparation of a complete and detailed final report on all of the above, including inputs from the field food-for-peace officer prior to departing from the Sudan.

ANNEX B

Donors and GOS Policy Recommendations To Achieve Structural Adjustment and Economic Improvement in Sudan

Growth, Employment and Equity, 1975
Recommendations

I. Employment

A) Urban Khartoum - Not a lot of Unemployment. Approximately 5%. alternatives in Gulf and on irrigation schemes.

B) Lots of under employment, especially in agriculture during main peak demand for labor times.

C) To improve employment must increase output!

II. Agriculture and Agro-industry

A) Develop a decentralized institutional Framework Rural Development Centres at district level. Need about 200.

B) To increase yields in irrigated agriculture, must have research and new technology package.

C) Increase small scale industry serving agriculture on input and output side.

III. Transport

A) Reduce dependance on rail.

B) Expand road and water transport based on agricultural returns in various areas of country.

IV. Labor Migration

A) Go slow on agricultural mechanization especially in cotton picking

B) Perhaps subsidize transport for labor to agricultural areas.

V. Urban Labor Markets

A) Minimum wage. OK

B) Not OK. Wage structure being affected by minimum wages. Determine other wages on basis of market forces within collective bargaining where it exists.

C) Uncouple education and wages.

VI. Education and Training

A) Expand primary education

B) Reduce secondary education especially theoretical training. Use in-service and on the job methods

VII. Public Administration

A) Endorse devolving administration responsibility to the lowest level of government possible.

B) Encourage management skill urgrading for local officials especially planning, budgeting, provincial management.

C) Use in service training approaches.

VIII. Trade, Fiscal, Price Policies

A) Encourage agriculture by revising export duties, import duties and excise taxes.

B) No quotas or licences.

IX. Domestic Savings

A) Reduce deficit financing by reducing rate of expenditure.

B) Improve tax administration leading to increased public service

C) Increase private Sector

X. Foreign Aid and Investment

A) No specific ideas

XI. Regional Disparity.

A) Expand investment in the south

XII. Implementation Problems

A) Must be programatically addressed.

S. Asharaya Incentives for Resource Allocation

A Case Study of Sudan, World Bank 1979

I. Policy Components of the incentive structure

A) Explicit taxes/subsidy on international transactions

B) Exchange rate policy

C) Import licensing/foreign exchange allocation

D) Export licensing/export marketing systems

E) Explicit non-trade taxes and subsidies

F) Domestic price control policies

G) Domestic project licensing policies

H) Pricing/administrative allocation of publically provided infra-structural services

I) Domestic credit and interest rate policies

J) Wage policies

II. Reforms should

A) Reduce taxes against agriculture

B) Reduce anti-export bias

C) Reduce multiplicity of effective protection rates within industrial sector

D) Increase flexibility within alternative agricultural activities to take advantage of changes in market trade opportunities

E) Reduce burden of detailed economic management by the administrative structure

F) Reduce profitability of commerce sector

III. How to attain above goals

A) Foreign trade/payments policies

i- reduce reliance on export dutues

ii- exempt exports from development tax

iii- integrate import duties structure with domestic excise system

iv- devalue

v- Do not use export bans

B) Domestic fiscal policy

i- integrate domestic excise structures with import duty structure ii- develop income tax for modern agriculture sector

iii- move from commodity based tax (ushur) to/and tax for local revenue

C) Intra-Sectoral Policies, Industry

i- do not use quota restrictions for protective purposes - use tarrifs if one must

ii- use rigorous project appraisal criteria for industrial licensing

iii- do not grant so many fiscal concessions, especially import duty exemptions on raw materials

iv- use economic criteria for allocating foreign exchange

D) Intra-Sectoral Policies, Agriculture

i- get output prices in line and pay more attention to international relative price norms

ii- get agricultural parastatals (Gezira) to be flexible in determining arrival cropping patterns.

World Bank Investive for Economic Stabilization
And Structural Change
Report Number 3551a-SU, February 1982

I. Issues

A. Balance of Payments Issues
   i- export volume declining
   ii- imports at twice the level of exports
   iii- heavy debt service burden
   iv- external debt management needs improvement

B. Domestic Finance Issues
   i- revenues declining relative to GDP bouyancy
   ii- rapid expansion of expenditures
   iii- regionalization will have major manpower and fiscal costs
   iv- administrative and budgeting procedures need improvement

C. General Sectoral Issues
   i- public project implementation is slow
   ii- parastatal losses

D. Agricultural Issues
   i- declining cotton production
   ii- inadequate provision of agricultural services
   iii- future use of Nile waters
   iv- agricultural sector planning
   v- agricultural labor shortages
   vi- use of rain fed areas

E. Agro-industrial Issues
   i- sugar factories not working to capacity

F. Industrial Issues
   i- low capacity utilization
   ii- power shortages
   iii- inadequate water supplies
   iv- potential for petroleum self-sufficiency jeopardized by shortage of funds

G. Transportation Problems
   i- rail system operating far below capacity
   ii- road user changes not adequate
   iii- river transport potential vastly under-utilized
   iv- air transport given disproportionately large plan allocation
   v- port facility requirements unclear

H. Population and Labor Issues

i- high rate of population growth

ii- shortage of skilled labor (Gulf)

II. Policy Recommendations re: Issues

A. Balance of Payments

i- increase agricultural producer prices

ii- increase bread prices

iii- increase cost recovery on agricultural inputs, eg. water, fertilizer, marketing services

iv- adjust the foreign exchange rate upward

v- reduce export duties

vi- restrict import of consumption items, especially luxuries

vii- get grant assistance rather than pay a positive rate of interest

viii-get both sides of the MFEP to work together

B. Domestic Finance

i- eliminate bread price subsidy

ii- increase import duties

iii- cut government employment

iv- increase wages of management personnel

C. General Sectoral Issues

i- imports are constrained, losen selectively

ii- address parastatal pricing and cost and marketing services

iii- improve management wages

iv- expand management skills

D. Agricultural Issues

i- increase yields via improved technical packages

ii- increase producer prices

iii- increase input cost recovery

iv- rehabilitate equipment via CIP

v- do not expand irrigated agriculture until cost of irrigation has been fully analyzed

vi- increase agricultural wages

vii- use more mechanization to remove labor bottlenecks

viii-make inputs more available

ix- expand research knowledge

E. Agro-Industrial Issues

i- improve pricing

ii- encourage more private sector activity

F. Industrial Issues

i- improve availability of necessary inputs

ii- improve transport

iii- improve flexibility of wages especially of management

iv- improve power supply consistency

v- price imported petroleum at "street" rate

G. Transport Issues

i- increase rail tarrifs

ii- reduce public sector involvement where there are no attributes of a public goal to the service

iii- increase petroleum tax to maintain roads

iv- increase vehicle and license fees

v- do not build new airport in Khartoum

G. Population and Labor Issues

i- have a presentation on long run impact of rapid population growth

ii- must develop MCH

iii- reduce subsidy of education especially for housing and food at boarding schools

iv- increase wages for skills in short supply

v- review emigrating policy for those in whom the governm. and society have invested

IMF, GOS Standby Arrangement, 1983

Core of program:
1) provide encouragement to exports
2) discourage less-essential imports
3) increase incentives to remittances

I. Production Policies

A. Agricultural Production reinforced by efforts to increase output and marketing of agricultural commodities

i- increase cotton production by increasing prices to lead to increased yields

ii- improve groundnut and sorghum marketing by:

(a) improving [1] rail transport [2] processing

(b) rehabilitation of irrigated agriculture to increase area and yields

iii- increase returns to cotton by:

(a) reducing export taxes

(b) reducing exchange rate of Sudanese pound which leads to increased domestic procurement price

(c) prompt payment for farmers upon crop delivery

(d) individual metering of water and land preparation user costs

iv- increase sorghum water and land preparation fees. Bring more land into production by increasing equipment available, new and repairs.

v- groundnuts and sorghum investment. Improve efficiency of railroad via spares/parts.

B. Manufacturing Sector

Improve performance of import substitution industries

i- management strengthening

ii- output prices increase

iii- import shortages

iv- customs duty waivers on fuel especially in sugar textiles

v- new capital for plant modernization

C. Power Sector

i- increase power supply generators at Roseiris

ii- Also develop petroleum export up to 100,000 bbl/day

II. Domestic Financial Policies

Objectives to reduce rate of inflation to 25%/year. Therefore hold rates of money supply growth to 27% and gradually reduce it. Develop targets for government borrowing to finance deficit and targets for parastatal borrowing. Hard to know what is happening since data gathering is not taking place - being reorganized.

A. Credit to public entities only to sugar, rail, electricity.

irrigate agriculture especially cotton has first crack at credit. Then sugar plants, then railways and electric corporation. Last two dependent on tariff changes.

B. Credit should be allocated to expanding private sector but only for direct production not for commodity hording. Interest rates are still negative given high inflation rates are 17-20% at the lending rate and 13% at the saving rate.

III. Fiscal Policy and Borrowing by Central Government.

A. Reduce budget subsidies for consumption

B. Get development expenditures to a level consistent with achievement of PIP

C. Ensure recurrent expenditures allow for capital stock maintenance.

D. Constrain public borrowing

E. Increase excise taxes on import eg. cigarettes

F. Change the valuation rate for customs duties

G. Increase other fees

H. Raising consumer petroleum prices

I. Reduce subsidy on milk powder by importing at "street" rate

J. No new budget subsidies should be introduced due to international price changes leading to foreign exchange subsidies.

IV. <u>External Financial Policies</u>

A. Exchange rate policy, go for the free market rate on all imports.

B. Encourage exports as above

C. Discourage imports

i- increase customs valuation for duty levyin

ii- restrict imports via no/import licenses especially for consumption items. Only capital goods

D. Stimulate private expatriate remittances. Have private foreign currency denominated savings accounts yielding international rates of interest

E. Balance of payments has past the peak; cotton increase and others increase

F. Reschedule external debt services.

V. <u>Performance</u>

A. Put ceilings on expansion in net domestic credit and credit to government

B. Prohibit contracting new public or publically guaranteed foreign debt at commercial rates maturing within ten years. Expect rescheduling existing debt.

C. Do not put on more intensified import restrictions

D. Eliminate wheat and pharmaceutical subsidies

E. Collect minimum charges on water and land in irrigated schemes

U.S Government, Government of Sudan
PL 480 Title III Agreements
Self-Helping Measures-FY 1983

I. GOS will support and implement those agricultural policies within the stabilization program which will increase agricultural pattern, export earnings and rural income, eg:

A. Reduce export taxes
B. Change water prices
C. Increase producer prices
D. Increase agricultural services credit, marketing, research.

II. Support agricultural research to increase yields, eg:

A. Agricultural Research Corporation. Increase production, marketing and improve storage
B. Yambio Agricultural Research Station.

III. Improve services and incentives for livestock herders and food producers, i.e.:

A. Improve agricultural extension
B. Increase agricultural credit facilities
C. Provide funds for Ministry of Agriculture, Livestock and Meat Marketing Corporation veterinary program
D. Southern livestock program of Ministry of Agriculture
E. Provide funds to the Rural Water Corporation
F. South Rural Water Development Department

IV. Increase research and develop program to reduce desertification of soil erosion. Integrate with GOS Desert Encroachment Control and Rehabilitation Program

V. Decentralization: support develop, implement and evaluate development projects of local and regional entities.

A. Funds to decentralized rural planning program for capital and operating funds
B. Provincial Development Fund. Self-held at local level on agricultural production, health and social services, credit conservation.
C. Training for mid-level management in government

VI. Health support, the Rural Health Support Project.

VII. Agricultural Planning and Statistics Project to determine demand and supply for wheat.

Nimeiri, Mandate for Progress and Renewal, 1983

I. Background

A. Want to have a mixed economy

B. Want to achieve equity - all must benefit

C. Difficulties of Sudan are:

i- historical structural colonial legacy

ii- harsh international situation oil prices, international recession, interest rate increase

iii- (a) policies favoring consumption vs. production

(b) expand public expenditure and poor parastatal performance

(c) exchange rates favoring imports

(d) social service expansion leading to an increased recurrent cost which cannot be borne by the production capacity without user charges

D. Now will follow an economic strategy balanced between financial reform and economic improvement.

II. Precepts and Assumptions

A. Benefits must have a socialist renewal especially of publicizing:

i- public corporations must have control of economy

ii- public control, 100% petroleum

iii- irrigated agriculture

iv- basic industries sugar, cement, textiles

v- tourism

vi- banking

vii- services - social and cultural (police, etc)

B. Profit is not the only yardstick for evaluating returns of public property, but institutions cannot continue to lose money and be managed poorly.

C. Reform Program

i- financial structures of public corporations must have increased capabilities

ii- give more decision making flexibility to managers, prices, etc.

iii- rehabilitation and maintain machinery etc.

iv- manpower training in science, administration. Strengthen training and research institutions v- profit sharing and other incentives methods for good management especially parastatals.

vi- minimize feather bedding etc. which increases cost of public entities

vii- will liquidate public entities only as a last resort.

viii-Banking - Central Bank:

(a) it will tighten control on domestic credit and ease on foreign exchange

(b) control commercial bank policies

(c) develop specialized banks to play a role in increasing production in rural, small scale agricultural and industrial activities

(d) free national banking system of usury operations.

D. Must revive the Cooperative movement

E. Must protect major industrial ventures from adverse effects of devaluation, must recapitalize.

F. Prices and incomes

i- There is a detrimental effect in subsidizing consumption at the expense of production

(a) must protect agricultural income develop a stabilization fund for international price fluctuations

(b) labor income must be linked to production-wages cannot lead to inflation.

ii- Inflation to be controlled by using following methods

(a) expand the CIP to allow for support of strategic items necessary for production and consumption

(b) must have a realistic and flexible costing of goods and services and abandon unfair methods of control

(c) increase cooperatives in external and internal trade (eg. peoples pharmacies)

(d) use threat of government intervention as competitor if private market is out of line on terms of process or quantity produced.

G. Rural Development

i- invest in water, soils, forests, pastures, seeds, extension, agricultural technology, veterinary.

ii- low cost building and construction models improve economic social and administrative structures to provide basic social services, eg. water, electricity, health and popular culture.

III. Objectives of Strategy

A. Reestablish internal financial equilibrium by controlling government deficits and public corporations deficits and use of credit

B. Reestablish external financial equilibrium

i- get balance of payments in line

ii- manage foreign account payments and especially arrears.

C. Remove all economic distortions

D. Accelerate economic and social development program which are consistent with requirements of stabilization and reestablishment of equilibrium without abandoning equity and other social renewal institutions.

E. be flexible to face emergencies and unforeseen shortages

IV. Methods and Tools of Economic Strategy

1. Fiscal Policy
2. Credit Policy
3. Exchange rate Policy
4. Internal and External Trade Policy
5. Short-Term Programme for Emergency Situations
6. International Cooperation Policy
7. Development and Investment Policy
8. Policy toward Sudanese Nationals Working Abroad
9. Decentralization.

A. Fiscal Policy

i- do not deficit finance, especially in parastatals.This leads to price increases

ii- customs policy should encourage exports and reduce luxury imports and promot productive capacity of economy

iii- tax policy should be based on equity and should encourage saving and investment

iv- expenditures - promote public services and expand production

v- budget policy create surplus for investment and renewal. reduce todays consumption so can consume tomorrow

B. Credit Policy

i- do not expand money supply too fast which leads to inflation

ii- limit borrowing for productive section and deny it to speculators

iii- provide soft term credit to small scale farming industry and craftsmen.

C. Exchange Rate Policy

i- do not have an overvalued exchange rate

ii- leads to smuggling

iii- no repatriation of earnings

D. Internal and External Trade Policy

i- increase the return to farmers. Stabilize international prices

ii- do not have export taxes

iii- remove pricing controls internally

iv- get rid of monopoly especially in external trade. Substitute an open licenses system

v- expand CIP in international economic cooperation

vi- maintain a strategic reserve of basic food crops as a means of price control to guarantee provision of basic needs and have a petroleum reserve

vii- parastatals must be used efficiently but also to control prices via competition with private producers

viii-establish an export promotion committee (national council) to develop international marketing channels

E. Short-Term Programme for Emergency Situations

Disasters - take deliberate thoughful steps

F. International Cooperation Policy

i- get as much balance of payment support as possible and get grant aid to do any development activities

ii- get CIP support, PL 480 - III and other forms of self-financing external trade

iii- strengthen policies of financing development which will increase production efficiency

iv- concentrate on public infrastructure and rehabilitate public utilities and maintain them

v- look for best and safest foreign financing terms

vi- the loyal sons and daughters of Sudan should repatriate

G. Development and Investment Policy - 3 year PIP seeks restructural change.

i- explore for oil and implement production

ii- agricultural sector and rual development

(a) remove distortions

(b) invest in new packages and marketing infra-structure, irrigation and roads

(c) expand exports of meat, fruits and vegetables, tobacco, fodder, tropical crops, and other diversified crops.

iii- rural development by:

(a) reducing distortions between rural and urban income

(b) establish regional planning organs

(c) create central organ, for assisting regional organs.

(d) encourage adaptive research on integrated farming systems

(e) training to do rural planning

iv- industrial sector

(a) correct financial structure of public corporations

(b) inter-industry linkages especially important to reduce imported raw materials

(c) protect infant of industries against dumping

(d) promote small scale

(e) create new industrial activity to remove existing bottlenecks - import substitution

(f) develop export promoting industries based on comparative advantage

(g) training, especially in management and promote consulting groups

v. Infrastructure - expand

(a) transport, storage, communications, alternative energy and economic and social structures.

vi- Social development other economic development should ultimately lead to improved housing, medical care, education, and cultural amenetics

H. Policy toward Sudanese Nationals Working Abroad - Remittances

A. Consolidate policy of free entry and exit of foreign exchange

B. Adopt realistic rate of exchange for such transfers

C. Guarantee realization profitable earnings of deposits and savings on basis of Islamic Bank.

ANNEX C

An Analysis of Sudan's PL 480 Debt Structure

An Analysis of Sudan's PL480 Title I and III Debt Structure From FY 1983 to FY 2000

Table I summarizes Sudan's debt structure from 1980 through the year 2000. Table I shows the amount of principal and interest owed each year for all Title I, III and Rescheduled debt outstanding. The total amounts owed for each year through 2000 are also presented. This table does not include the debt which will be incurred by Sudan in FY 1984 for approximately $ 30 million under Title I and $ 20 million under Title III. For FY 1984 Sudan will owe about $2.0 million under Title I, $ 1.6 million under Title III and about $0.2 million under rescheduled debt, which totals to about $3.8 million.

At the present time there is a question about how the GOS should utilize its currency offset provision under Title III. If they use it to fully offset Title III debt, they will obtain over the 40 plus years of the agreement the equivalent of $ 100 million of principal offset, plus $ 65 million of interest offset. However, since they have a serious foreign exchange constraint today the issue is whether it makes more economic sense to use the currency offset provisions against Title I, III and rescheduled debt repayments due in FY 1983, 1984 and over the immediate future, rather than to remove debt that will become due in ten, twenty and even more years into the future.

Tables 2 and 3 were prepared to begin to address this issue. These two tables show the principal, interest, and total amount owed each year from 1983 to 2000 for Title I, rescheduled Title I, and Title III, and the present value of the totals for each program as of December 31, 1983 for three discount rates, 6, 10, and 20 percent. These three alternative interest rates were chosen to be representative of what might be considered to be various opinions about what the opportunity cost of foreign exchange might be to Sudan. The 6% rate is the rate at which the Commodity Credit Corporation of the U.S. has rescheduled past due payments by Sudan since 1980. The 10% rate represents a standard project appraisal discount rate which must be met before most international donors will approve a project. The 20% rate is the present rate of interest which Sudanese banks pay on savings accounts, especially those denominated in foreign currency. Private credit transactions in rural areas commonly return to the creditor rates of between 50% and 200%. Thus, from my personal perspective, the twenty percent rate is a more realistic rate to ascertain the present opportunity cost of foreign exchange than the other two.

Tables 2 and 3 show that the present value of the Title I and III debt through 2000 varies from a high of about 57% of the total amount owed through 2000 at 6%, to as low as 21% at the 20% rate. Over the entire life of the Title I and III agreements the present value of the amounts owed as of December 1983 would probably be about 25% of the total amount owed at a 6% discount rate, 17% at 10%, and about 8% at 20%.

Given this preliminary analysis, without going through all of the potential options, I would be seriously considering recommending to the GOS that they use their currency offset provisions against all present outstanding debt, regardless of Title and figure out later how they will repay the debt due in later years. With the potential of obtaining about $ 85 million dollars of offset from Title III (less the amount lost via devaluations, see Table 13 in the text), GOS would be able to remove all payments on present PL 480 debt until at least 1995. Given Sudan's economic situation that is a considerable period.

Annex Table 1

Sudan PL 480 Titles I and III

Debt Structure as of December 31, 1983 (*)

Calendar Year	Title I P	Title I I	Title I Total	Title III P	Title III I	Title III Total	Debt Rescheduled P	Debt Rescheduled I	Debt Rescheduled Total	TOTAL P	TOTAL I	TOTAL Total
1980	-	796.5	796.5	-	-	0.0	29.6	30.9	60.5	29.6	827.4	857.0
1981	-	868.1	868.1	-	422.8	422.8	29.6	78.1	107.1	29.6	1,369.0	1,398.6
1982	-	1,110.6	1,110.6	-	817.6	817.6	59.0	54.8	114.8	59.0	1,983.0	2,042.0
1983	67.8	1,240.9	1,308.6	-	1,196.9	1,196.9	93.7	50.9	144.6	161.5	2,946.8	3,108.3
1984	150.3	1,855.5	2,005.8	-	1,596.9	1,596.9	152.5	45.0	197.5	302.8	3,497.4	3,800.2
1985	150.3	1,876.7	2,027.0	-	1,596.9	1,596.9	165.1	36.2	201.3	315.4	3,509.8	3,825.2
1986	150.3	1,872.1	2,022.4	-	1,596.9	1,596.9	169.3	26.1	195.4	319.6	3,495.1	3,814.7
1987	296.3	1,867.6	2,163.9	-	1,596.9	1,596.9	80.7	17.4	98.1	377.0	3,481.9	3,858.9
1988	611.3	1,904.0	2,515.3	-	1,596.9	1,596.9	80.7	12.4	93.1	692.0	3,513.3	4,205.3
1989	1,220.9	1,983.3	3,204.2	-	1,596.9	1,596.9	80.7	7.6	88.3	1,301.6	3,587.8	4,889.4
1990	1,411.6	2,135.6	3,547.2	642.4	1,596.9	2,239.3	46.0	3.0	49.0	2,100.0	3,735.5	5,835.5
1991	1,733.3	2,153.4	3,886.7	1,285.2	1,776.8	3,062.0		0.3	0.3	3,018.5	3,930.5	6,949.0
1992	1,994.8	2,201.1	4,195.9	1,930.4	1,937.5	3,867.9				3,925.2	4,138.6	8,063.8
1993	2,924.8	2,205.5	5,130.3	2,575.6	2,098.9	4,674.5				5,500.4	4,304.4	9,804.8
1994	2,924.8	2,465.4	5,390.2	2,575.6	2,240.9	4,816.5				5,500.4	4,706.3	10,206.7
1995	2,924.8	2,377.7	5,302.5	2,575.6	2,163.6	4,739.2				5,500.4	4,541.3	10,041.7
1996	2,924.8	2,290.0	5,214.8	2,575.6	2,086.2	4,661.8				5,500.4	4,376.2	9,876.6
1997	2,924.8	2,202.4	5,127.2	2,575.6	2,008.8	4,584.4				5,500.4	4,211.2	9,711.6
1998	2,924.8	2,114.5	5,039.3	2,575.6	1,931.5	4,507.1				5,500.4	4,046.0	9,546.4
1999	2,924.8	2,026.6	4,951.4	2,575.6	1,854.2	4,429.8				5,500.4	3,880.8	9,381.2
2000	2,924.8	1,938.8	4,863.6	2,575.6	1,776.8	4,352.4				5,500.4	3,715.6	9,216.0

(*) Note: These calculations are approximate and should not be construed as representing any official debt calculation

Annex Table 2 The Present Value of PL 480 Title I and Rescheduled Title I Debt as of December 31, 1983 through Year 2000 (*)

Calendar Year	Title I Outstanding Debt Principal	Interest	Total	Present Value of Total at 6%	at 10%	at 20%	Rescheduled Title I Debt Principal	Interest	Total	Present Value of Total at 6%	at 10%	at 20%
1983	67.8	1,240.9	1,308.6	1,308.6	1,308.6	1,308.6	93.7	50.9	144.6	144.6	144.6	144.6
1984	150.3	1,855.5	2,006.8	1,891.5	1,823.3	1,670.8	152.5	45.0	197.5	186.2	179.5	164.5
1985	150.3	1,876.7	2,027.0	1,804.0	1,674.3	1,406.7	165.1	36.2	201.3	179.2	166.3	139.7
1986	150.3	1,872.1	2,022.4	1,698.8	1,518.8	1,171.0	169.3	26.1	195.4	164.1	146.7	113.1
1987	296.3	1,867.6	2,163.9	1,713.8	1,477.9	1,043.0	80.7	17.4	98.1	77.7	67.0	47.3
1988	611.3	1,904.0	2,515.3	1,878.9	1,562.0	1,011.2	80.7	12.4	93.1	69.5	57.8	37.4
1989	1,220.9	1,983.3	3,204.2	2,258.9	1,807.2	1,073.4	80.7	7.6	88.3	62.2	49.8	29.6
1990	1,411.6	2,135.6	3,547.2	2,358.9	1,819.7	989.7	46.0	3.0	49.0	32.6	25.1	13.7
1991	1,733.3	2,153.4	3,886.7	2,437.0	1,815.1	905.6		0.3	0.3	0.2	0.1	0.1
1992	1,994.8	2,201.1	4,195.9	2,484.0	1,779.1	814.0						
1993	2,924.8	2,205.5	5,130.3	2,862.7	1,980.3	831.1						
1994	2,924.8	2,465.4	5,390.2	2.840.6	1,886.6	727.7						
1995	2.924.8	2,377.7	5,302.5	2,635.3	1,691.5	593.9						
1996	2,924.8	2,290.0	5,214.8	2,445.7	1,512.3	485.0						
1997	2,924.8	2,202.4	5,127.2	2,266.2	1,348.5	400.0						
1998	2,924.8	2,114.5	5,039.3	2,101.4	1,204.4	327.6						
1999	2,924.8	2,026.6	4,951.1	1,950.7	1,079.3	267.4						
2000	2,924.8	1,938.8	4,863.6	1,804.4	963.0	218.9						
Total to 2000			67,896.0	38,741.4	28,251.9	15,245.6			1,067.6	916.3	836.9	690.0

(*) Note: These calculations are approximate and should not be construed as representing any official debt calculation.

Annex Table 3

The Present Value of PL 480 Title III Debt as of December 31, 1983 through year 2000 (*)

Calendar Year	Title III Outstanding Debt Principal	Interest	Total	Present Value of Total at 6%	at 10%	at 20%
1983	-	1,196.9	1,196.9	1,196.9	1,196.9	1,196.9
1984	-	1,596.9	1,596.9	1,505.9	1,451.6	1,330.2
1985	-	1,596.9	1,596.9	1,421.2	1,319.0	1,108.2
1986	-	1,596.9	1,596.9	1,341.4	1,199.3	924.6
1987	-	1,596.9	1,596.9	1,264.7	1,090.7	769.7
1988	-	1,596.9	1,596.9	1,192.9	991.7	642.0
1989	-	1,596.9	1,596.9	1,125.8	900.7	535.0
1990	642.4	1,596.9	2,239.2	1,489.1	1,148.7	624.7
1991	1,285.2	1,776.8	3,062.0	1,919.9	1,430.0	713.4
1992	1,930.4	1,937.5	3,867.9	2,289.8	1,640.0	750.4
1993	2,575.6	2,098.9	4,674.5	2,608.4	1,804.4	757.3
1994	2,575.6	2,240.9	4,816.5	2,538.3	1,685.8	650.2
1995	2,575.6	2,163.6	4,739.2	2,355.4	1,511.8	530.8
1996	2,575.6	2,086.2	4,661.8	2,186.4	1,351.9	433.5
1997	2,575.6	2,008.8	4,584.4	2,026.3	1,205.7	357.6
1998	2,575.6	1,931.5	4,507.1	1,879.5	1,077.2	293.0
1999	2,575.6	1,854.2	4,429.8	1,745.3	965.7	239.2
2000	2,575.6	1,776.8	4,352.4	1,614.7	861.8	195.9
Total to 2000			56,713.1	31,701.9	22,832.9	12,052.6

(*) Note: These calculations are approximate and should not be construed as representing any official debt calculation

ANNEX D

Memorandum by Nancy Metcalf on Currency Use Offset

on Sudan's PL 480 Title III Agreement

Date : October 21, 1983

Reply to
Attn of : Nancy Metcalf, REDSO/ESA/RFFPO

Subject : Currency Use Offset Under Sudan's Title III Agreement

To : Robert Craig, GDO
Steve Mintz, ADPO

During a recent meeting with Victor Wahba on the Title III evaluation, he asked if someone could clearly explain how the currency use offset mechanism worked so that he could respond to questions from his Minister. The following is an attempt to do just that.

Title III of Public Law 480 authorizes multiyear agreements for the purchase of a specific value of agricultural commodities to be delivered over a period of years.

In the case of Sudan the U.S. has agreed to extend credit for $100 million over a five-year period ($20 million a year) for the purchase of U.S. commodities.

Title III permits local currency proceeds from the sale of such commodities which are used for agreed development purposes to be credited against dollar repayment obligations. Such proceeds must be deposited in a special account and must be equal to the dollar value of the credit extended by the U.S. Department of Agriculture for the purchase of the commodities.

That is, each year, no later than six months after the commodities have arrived in Sudan the GOS must deposit the proceeds from the sale of such commodities into a special account. If the proceeds do not equal the dollar value of the credit extended by USDA (in this case around $20 million) the GOS must make up the difference when depositing the local currency. The rate of exchange prevailing on the date of deposit is used to calculate the dollar value of the local currency.

As proceeds are spent for agreed purposes, the GOS is credited with the dollar value of such disbursement. The rate of exchange prevailing on the date of disbursement is used to calculate the dollar value of the credit earned. These credits "forgive" the Title III repayments obligations as they come due. After using accumulated credit for Title III repayment obligations the GOS may use any remaining credit for other Title I debt due that year.

Exchange rate fluctuations may mean that at the end of the agreement local currency disbursed may not equal the dollar value of the credit extended. However, it has been agreed that when all disbursements are made, all debt, including interest, for the Title III Agreement is wiped out. However this "full forgiveness" does not occur if credit has been used to pay other debt. In that case total credit earned will equal the dollar value of disbursements made, calculated using exchange rate in force at the time of disbursement.

Sudan's current currency offset situation to date is shown on the attached table.

If all credit earned is used to pay the Title III debt the whole $100 million plus interest will be forgiven. If it is used partially to pay other Title I debt it is estimated currently that Sudan will earn credit of around $90 million. This would leave a balance of approximately $10 million plus interest to be paid on the Title III Agreement. Interest on the Title III Agreement will run somewhere around $65 million. Thus, if the GOS uses all credit earned to repay Title III debt only, after full disbursement of the funds they will have earned $165 million in debt forgiveness. If used to partially pay Title I debt, forgiveness will equal approximately $90 million.

Sudan Title I and Title III Debt
U.S Fiscal Year 1983/84

FY 1983

Title III

4/10/83	$ 398,287.80
5/21/83	398,561,75
	796,849.55

Title I

10/ 1/82	7,307.97
10/ 1/82	9,690.52
10/ 1/82	39,552.82
10/ 4/82	99,619.56
4/ 1/83	38,666.36
4/ 1/83	7,268.00
4/ 1/83	9,637.57
6/ 5/83	195,289.16
6/ 8/83	90,514.70
6/30/83	17,352.38
7/ 3/83	51,152.90
7/28/83	109,808.16
8/17/83	377,938.76
9/26/83	199,615.87
	$ 1,253,414.73

FY 1984

Title III

4/10/84	$ 398,561.75
5/21/84	398,287.80
	796,849.75

Title I

10/ 1/83	7,042.69
10/ 1/83	9,690.52
10/ 1/83	37,779.91
10/ 4/83	99,619.56

(cont.)

12/31/83	17,352.38
4/ 1/84	43,225.27
4/ 1/84	6,489.31
4/ 1/84	9,637.57
6/ 5/84	195,289.16
6/ 8/84	90,514.70
6/30/84	23,009.63
7/ 3/84	133,657.58
7/28/84	128,787.34
8/17/84	377,938.76
9/26/84	199,615.87
	$ 1,353,777.22

ANNEX E

Draft Scope of Work for the
PID Design of PL480 Title III
Program to Begin in FY 1985

Draft Scope of Work
for the PID Design of PL480 Title III Program
to Begin in FY 1985

Terms of Reference

PL 480 Title III, authorizes concessional food sales to eligible recipient countries over a multi-year period, with provision for forgiveness of the repayment obligations as agreements on local currency uses for the approved development program are satisfied. Title III is geared to assist low-income (under $795 per capita income in 1981 terms), food-deficit countries which have the potential to significantly raise agricultural production and are committed to stimulating rural growth. Consistent with this commitment, Title III's multi year commodity supply assurance and the potential for forgiveness of loan repayments should provide incentives for recipient to agree to significant policy and institutional reforms and development program improvements.

In December 1979 the Government of Sudan and AID executed a $ 100 million five-year PL 480 Title III program. The final year of the agreement is U.S. FY 1984. The last evaluation of the program in October/November 1983, recommended continuation of PL 480 assistance under this mechanism. It is now necessary to develop a Project Identification Document (PID) requesting a new Title III agreement for Sudan.

Scope of Work

1) The PID should discuss the relationship of the Title III proposed program to the overall Mission CDSS as well as to the administration's foreign policy and market development objectives. The findings and recommendations of any agricultural or food sector studies should form part of the justification for the program.

2) The PID should present in outline form, information on the food gap production and consumption policies, the marketing and distribution

problems, and the major elements of the overall program and its sub-activities. In essence, the PID should summarize the analysis of the food and agriculture sector (focussing on constraints) which justify the program. The primary focus of the program should be on (a) improving food supply through activities funded in part via the generated local currencies and (b) implementing policy and institutional reforms necessary to ensure the successful completion of those activities. The PID will indicate how the mission will measure program accomplishment toward the attainment of the above goals.

3) The PID will explain who will benefit from the envisioned program. This analysis will define the commodity beneficiaries and their needs, as well as the beneficiaries from the use of the local currency proceeds and the policy reforms envisioned. It should indicate why the target group(s) or institutions have been selected and how the program benefits are expected to flow.

4) The PID will present an estimate of program costs and projections of annual commodity tonnage requirements, local currency contributions, and the other resource contributions - human and financial - required of the US via all funding sources, the recipient country (Sudan), and other donors.

5) The PID will review the management and administrative requirements of the Title III program. It will delineate recommended ways to improve these essential activities from both the GOS and USAID perspective.

6) Finally, the PID will incorporate a time table and scope of work for the Title III program paper. It will delineate the necessary technical assistance required to accomplish that task.

Skills Required and Time Requirements: In the context of Sudan it is vital that both the skills of an economist or agricultural economist, and a food for peace or general development officer with Title III food aid experience be employed in the development of this PID. The mission may or will have one, or both, of these skills on its staff. With respect to time requirements, the PID design should not require more than 3 weeks, particularly given the previous annual evaluations. However, the design cannot occur until the mission has completed a more thorough analysis of the food grain market in Sudan and developed more complete projections of the demand and supply of wheat within that context. Given the time constraints on developing the PP and obtaining AID/W approval of both the PID and PP, prior to the end of FY 1984, the key constraint is to obtain an improved set of projections of the market for wheat.

ANNEX F

William Bateson's suggested Policy Relevant Research Agenda re: Sudan's Wheat Market per his and Buraie Adam's draft paper, entitled, "Consideration on the Establishment of a Producer Price for Wheat at Gezira, 1983/84", prepared for the Ministry of Agriculture, Khartoum, October, 1983

Preparing for the 1984/85 Season

The issue of a producer price for wheat will arise again in 1984. Since conditions will have changed, the 1983/84 price will no longer be appropriate. We suggest that the Planning and Agricultural Economics Administration of the Ministry of Agriculture initiate a program which will resolve many of the uncertainities and "guestimates" which are an unavoidable part of this paper. At a minimum, the following research topics should be considered:

1) An improved understanding of the relationship between U.S. wheat future's prices, FOB (U.S. Gulf Ports) prices and the CIF (Port Sudan) price. This might be done by the Ministry of Commerce, Cooperation and Supply in cooperation with international consultants. The output of this task could be in terms of a simple model by which U.S. (future's market) prices are used to estimate an FOB price and a published schedule of shipping rates is used to compjte estimated shipping costs.

2) An improved budget of the economic and financial costs of handling wheat at Port Sudan. This might be part of a larger study on the costs of handling agricultural commodities including inputs at Port Sudan.

3) A study of the economic and financial costs of transporting wheat from Port Sudan to several final destinations. This might be part of a larger research effort to discover more about transportation costs in general, including the cost of transporting agricultural inputs.

4) A study of the extent of input subsidization in the production of wheat. This study could be part of a larger study of the cost of production of wheat (see 6 below) and of the existence of input subsidies to the agricultural sector in general.

5) A study of the milling industry and of the elements which make up the wheat-to-bread conversion coefficient in Sudan. Some work on this has been

funded and will soon be available in preliminary form. Options for flour blending, the introduction of a sorghum-wheat composite flour and the manufacture of different qualities of bread should be considered.

6) A re-evaluation of cost of production studies for wheat and the re-design of future studies to generate farm supply functions. This study can begin with data already collected by personnel at Gezira and New Halfa. It should include assistance to research units at those schemes in terms of both improved commutational capacity and analytical skills. This study will be important in the continuing controversy over Sudan's comparative advantage in wheat production and in developing a strategy to replace imports with domestic production from Gezira and elsewhere.

7) A study of the marketing behavior of Gezira, New Halfa and Northern wheat producers. This study should be directed towards answering the question of what supply elasticity to use in producer price policy considerations. It will necessarily build on other studies mentioned above.

8) An improved study of the consumption effects of bread pricing policies. The potential for analysis of consumer income effects arising from bread pricing policies has not been fully explored by Sudanese researchers. Steps are now being taken to make the household consumption surveys fully available to Sudanese researchers.

9) An improved understanding of savings and capital formation behavior of wheat farmers in particular and tenants in the irrigated schemes in general. The value of marginal net farm income relative to the benefits of lower domestic bread prices which arises from a producer price below the economic import parity price is, in part, a function of the uses to which wheat farmers put their marginal income. If it is a source of potential savings and capital formation, it is obviously worth more than if it is used exclusively for consumption expenditures. A study of the savings behavior

of wheat farmers will be useful to policymakers in their considerations.
10) A better understanding of economic value of the Sudanese pound. This topic is placed last in this list not because it is the least important but because it is the most difficult, both analytically and conceptually. Further, we presume that there are strongly held views about what the value is and what it ought to be. Any study on this topic must involve agriculture because agriculture is the principal earner of commercial foreign exchange. Given the sensitivity we perceive on this subject, this study must be done very carefully and must be solidly documented.

Persons Interviewed

US Based

1) Robert Bostick, OMB, Washington, D.C.
2) Tom Cornell, Africa Bureau, AID, Sudan Desk Officer, Washington, D.C.
3) Michael Crosswell, Economist, PPC (now in Asia Bureau), AID, Washington, D.C.
4) James Durden, FVA, Latin America, AID, Washington, D.C.
5) Hunter Farnham, AFR/TR/ARD, AID, Washington, D.C.
6) David Franklin, President, Sigma One Corp., Raleigh, N.C.
7) Gladys Frazier, FVA, Africa, AID, Washington, D.C.
8) Rick Gold, AFR/TR/ARD, AID, Washington, D.C.
9) Michael Goldman, Bureau of Economic & Business Affairs, US Department of State, Washington, D.C.
10) Carl Gotch, Professor, Food Research Institute, Stanford University, Stanford, California.
11) Lew Gulick, Staff, House Foreign Affairs Committee, US Congress, Washington, D.C.
12) Barbara Huddleston, Economist, International Food Policy Research Institute, Washington, D.C.
13) Besa Kotati, FAS/USDA, Washington, D.C.
14) Robin Kibuka, IMF, Washington, D.C.
15) Patty Kiefer, Title III, USDA, Washington, D.C.
16) Virginia O'Donnell, Title II, USDA, Washington, D.C.
17) William T. Oliver, A/AID, Washington, D.C.
18) John Patrick, FAS/USDA, Washington, D.C.
19) William Rhodes, FVA/FPP, AID, Washington, D.C.
20) Susan Schayes, FAS/USDA, Washington, D.C.
21) Steve Smallworth, Sudan Desk, AF/EA, AID, Washington, D.C
22) Phil Steffan, AFR/TR/ARD, Washington, D.C.
23) Reny Yates, US Treasury Dept., Washington, D.C.

ANNEX H

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1) William Bateson, Agricultural Economist, Ministry of Agriculture, GOS, Khartoum

2) Robert Brown, Director, USAID/Sudan, Khartoum

3) Robert Craig, General Development Officer, USAID/Sudan, Khartoum

4) Mohammed Fadl, PL 480 Office, USAID/Sudan, Khartoum

5) Thomas Maar, Auditor, IG/Nairobi, AID, Nairobi, Kenya

6) David Martella, Agricultural Economist, USAID/Sudan, Khartoum

7) Steve Mintz, Program Officer, USAID/Sudan, Khartoum

8) Keith Sherper, Deputy Director, USAID/Sudan, Khartoum

9) Mel Van Dorn, Comptroller, USAID/Sudan, Khartoum

10) Victor Wahba, Undersecretary for Foreign Aid, Ministry of Finance and Economic Planning (Planning), GOS, Khartoum

11) Fred Winch, Associate Director, Economic Policy Program, USAID/Sudan, Khartoum

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