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## IFAD INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT

 ${\bf Executive\ Board-Seventieth\ Session}$ 

Rome, 13-14 September 2000

#### REPORT AND RECOMMENDATION OF THE PRESIDENT

TO THE EXECUTIVE BOARD ON A PROPOSED FINANCIAL ASSISTANCE TO THE

#### REPUBLIC OF THE SUDAN

FOR THE

SOUTH KORDOFAN RURAL DEVELOPMENT PROGRAMME



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#### **CURRENCY EQUIVALENTS**

Currency Unit = Sudanese Dinar (SDD)

USD 1.00 = SDD 258 SDD 1.00 = USD 0.004

(Note: The original Sudanese Pound, SDP or LS, of which there are ten to the Dinar, is gradually being phased out of the monetary system, although still legal tender).

#### WEIGHTS AND MEASURES

 $\begin{array}{lll} 1 \text{ kilogram (kg)} & = & 2.204 \text{ pounds (lb)} \\ 1 000 \text{ kg} & = & 1 \text{ metric tonne (t)} \\ 1 \text{ kilometre (km)} & = & 0.62 \text{ miles (mi)} \\ 1 \text{ metre (m)} & = & 1.09 \text{ yards (yd)} \\ 1 \text{ square metre (m}^2) & = & 10.76 \text{ square feet (ft}^2) \end{array}$ 

1 acre (ac) = 0.405 ha 1 hectare (ha) = 2.47 acres

#### ABBREVIATIONS AND ACRONYMS

ABS	Agricultural Bank of Sudan
AWPB	Annual Work Plan and Budget
IsDB	Islamic Development Bank
M&E	Monitoring and Evaluation
NGO	Non-governmental organization
PMU	Programme Management Unit

UN United Nations

UNICEF United Nations Children's Fund

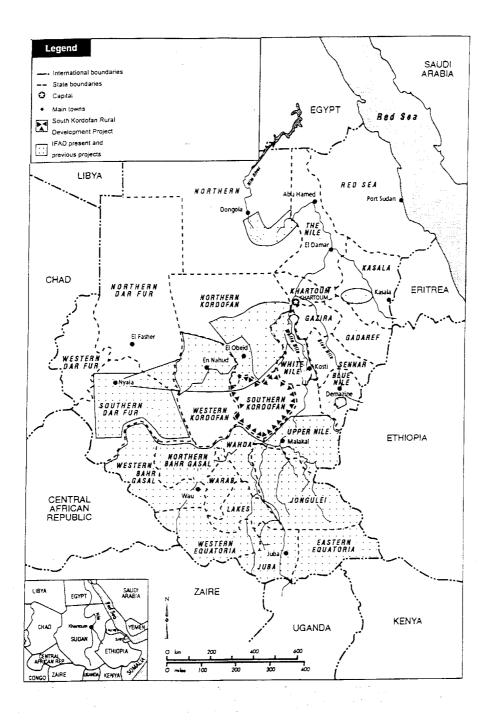
#### GOVERNMENT OF THE REPUBLIC OF THE SUDAN

#### Fiscal Year

1 January - 31 December



#### MAP OF THE PROGRAMME AREA



#### **Source**: IFAD

The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

#### REPUBLIC OF THE SUDAN

## SOUTH KORDOFAN RURAL DEVELOPMENT PROGRAMME FINANCING SUMMARY

**IFAD INITIATING INSTITUTION:** 

**RECIPIENT:** Republic of The Sudan

South Kordofan State Government **EXECUTING AGENCY:** 

**TOTAL PROGRAMME COST:** USD 39.62 million

SDR 13.3 million (equivalent to AMOUNT OF IFAD LOAN:

approximately USD 17.87 million)

40 years, including a grace period of ten TERMS OF IFAD LOAN:

> years, with a service charge of three fourths of one per cent (0.75%) per

annum

SDR 115 000 (equivalent to AMOUNT OF IFAD GRANT:

approximately USD 150 000)

Islamic Development Bank (IsDB) **COFINANCIERS:** 

(to be confirmed)

USD 16.10 million AMOUNT OF COFINANCING:

To be determined **TERMS OF COFINANCING:** 

CONTRIBUTION OF AGRICULTURAL BANK

OF SUDAN (ABS):

USD 0.40 million

USD 4.20 million **CONTRIBUTION OF RECIPIENT:** 

USD 0.90 million **CONTRIBUTION OF BENEFICIARIES:** 

**IFAD** APPRAISING INSTITUTION:

**COOPERATING INSTITUTION:** United Nations Office for Project

Services (UNOPS)



#### PROGRAMME BRIEF

Beneficiaries and Target Group. The programme will be located in the State of South Kordofan, which makes up the transitional zone between the semi-arid and subhumid southern part of central Sudan. It will cover the entire rural domain, comprising about 1 500 villages or village clusters, principally in relation to the greatest need, but in such a way as to ensure the greatest opportunity for successfully achieving targets and safeguarding the assets of communities and their locality councils. Beneficiaries will be the men and women smallholder farmers, pastoralists and displaced landless people that make up more than 95% of the rural population. They comprise a total number of 84 900 households or 840 000 people, with annual incomes on average of USD 145, compared with a GDP of USD 290 per capita. The programme will directly benefit about 30% of rural households, or 260 000 people in over 260 communities, giving them a two and a half to fourfold increase in their family incomes. The majority of the rural population will gain from community, social and infrastructure investments, and sustained financial and local government services in the 30 State localities.

Reasons for Deprivation. By far the most important factor has been the civil strife that has plagued the State since the mid-1980s, although it has abated considerably over the last two years. It has led to widespread disruption of communities, with some 200 000 people living under conditions of uncertain security; between 33 000 to 66 000 people suffer from abject poverty in areas that are currently inaccessible to government services. The major rural occupations of farming and livestock husbandry have been severely affected by a contraction in cultivated areas and a decline in crop yields and animal offtake. In addition to the effects civil strife causes, the limiting factors to productivity are a insufficient knowledge of appropriate technical packages, scarcity of inputs and the limited capacity of farmers to save and finance their enterprises.

**Programme Effects.** The programme will establish locality and State institutions that have the resources and cost-effective systems to be able to assist rural communities in improving their livelihoods. It will provide targeted smallholder and pastoral families, including women-headed households, with the technical and input support and community-based extension services required for productive enterprise and adequate social services; it will also foster equitable communal range and farmland management and put in place sustainable rural financial services. Above all, it will impart to the men and women in the rural communities the capability of planning, implementing and managing their own development activities, and resolving group conflicts through specialist assistance, training and practical experience.

Mode of Participation and Partnerships. Beneficiary participation and the creation of partnerships are fundamental to programme implementation. Once specific target communities are identified, awareness of the programme will be created. Mobilization will be based on a participatory rural appraisal undertaken by programme and locality extension staff. Community-development committees will be the vehicle for the participation of beneficiaries. Special interest groups will be formed, and within each group, initial implementation will involve intensive training and simple interventions for the most severely disadvantaged people. The second step will involve the rehabilitation of the existing community infrastructure, which the communities will undertake. Financial services involving formal and participatory informal savings and credit provision will be established for food production, the rehabilitation of productive agricultural and livestock enterprise and women's initiatives. The third step will encompass the lessons learned from initial programme implementation, with emphasis on sustainable partnerships encompassing self-supporting mechanisms at the community level, enhanced locality services based on improved revenue collections, the private sector and basic economic infrastructure rehabilitation.

# REPORT AND RECOMMENDATION OF THE PRESIDENT OF IFAD TO THE EXECUTIVE BOARD ON A PROPOSED FINANCIAL ASSISTANCE TO THE REPUBLIC OF THE SUDAN

#### FOR THE

#### SOUTH KORDOFAN RURAL DEVELOPMENT PROGRAMME

I submit the following Report and Recommendation on a proposed financial assistance, comprising a loan for SDR 13.3 million (equivalent to approximately USD 17.87 million) on highly concessional terms and a grant of SDR 115 000 (equivalent to approximately USD 150 000) to help finance the South Kordofan Rural Development Programme. The loan will have a term of 40 years, including a grace period of ten years, with a service charge of three fourths of one per cent (0.75%) per annum. The financial assistance will be administered by the United Nations Office for Project Services (UNOPS).

#### PART I - THE ECONOMY, SECTORAL CONTEXT AND IFAD STRATEGY<sup>1</sup>

#### A. The Economy and Agricultural Sector

- 1. The Sudan is the largest country in Africa with a total area of more than 2.4 million km², of which 78 000 km² is cultivated. More than 70% of population of about 30 million is rural. The economy is based chiefly on agriculture and the manufacturing sector is relatively small. The export base is highly dependent on primary agricultural commodities, although the discovery of oil and its extraction has sparked optimism for diversification. Infrastructure, especially that of rural transportation routes and basic social services, is underdeveloped and deteriorating. GDP per capita in 1998 was estimated at about USD 290.
- 2. Over the last decade the Government has embarked on a structural reform programme without external assistance. This reform process has resulted in serious economic problems. An inadequate revenue base resulted in large financial deficits. Inflation remained on the order of 100% until 1998; it is estimated to have fallen sharply to less than 17% since then. Export performance is one of the worst in the world, while there is an increased demand for imports. This situation led to the current account deficit, averaging around 30% of GDP in recent years. External debt grew to USD 22 billion in 1998 (USD 730 per capita), a substantial part of which is due to arrears. The Government installed a federal system and withdrew from non-strategic interests, with public expenditure being reduced in real terms. Private-sector initiative and investment is encouraged with little success.
- 3. The agricultural sector accounts for some 33% of GDP, over 80% of foreign exchange earnings and 70% of employment. Within the sector, crop production accounts for 53% of the agricultural output, livestock 38% and forestry and fisheries 9%. About 63% of all crop production is irrigated, 9% comes from mechanized farming and 28% from the traditional rainfed sector. Exports of cotton have declined in importance: it is now second in value to oilseeds, followed by livestock products. The sector produces most of The Sudan's food, and its performance has improved steadily over the last ten years, with a particularly strong performance in traditional rainfed cropping and livestock

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<sup>&</sup>lt;sup>1</sup> See Appendix I for additional information.



production. Both favourable seasons and improved policies are responsible. Now that markets have been liberalized, the climate for farmer response to increasing productivity is more favourable.

4. Most of the rural population of The Sudan is demonstrably poor, with a per capita income of USD 145. Socio-economic indicators, such as the daily supply of calories, life expectancy, infant mortality and access to safe water, health and education facilities place The Sudan well below the countries of sub-Saharan Africa. The condition of the population in the rural south and central regions of the country is even more serious, as drought and war have displaced many. In rural areas affected by civil strife, a large number of people have become chronically and severely poor over the last 15 years. In the worst cases the level of deprivation often borders on simple survival, with the need for emergency food relief. A United Nations Development Programme (UNDP) strategy note in 1991 estimated that 85% of the rural population was living in absolute poverty. With the economic decline over recent years and deterioration of social services, the present incidence of absolute rural poverty is likely to be over 18 million, or more than 40% of the total in the Near East and North Africa region.

#### **B.** Lessons Learned from Previous IFAD Experience

- 5. The economic and institutional constraints to project implementation in The Sudan are numerous. The larger and more complex the project, the greater their effect. The principle obstacles to smooth and effective execution of IFAD projects in the past have included: (i) poor remuneration and high turnover of staff; (ii) inadequate counterpart funding; (iii) scarcity of foreign exchange; (iv) poor line-agency performance; (v) procurement problems; (vi) questions of land tenure and use; and (vii) lack of support for beneficiary participation.
- 6. A 1994 IFAD country portfolio evaluation highlighted and emphasized several of these lessons that were found to remain largely valid in the country portfolio review undertaken in 1998. Of particular relevance to South Kordofan were the following: the greatest impact on IFAD's target group can be effected by geographic concentration on the rainfed sector; beneficiary participation is necessary; proper dialogue and analysis of the real needs and aspirations of smallholders is important; the effectiveness of community-selected and well-supported village-based extension agents must be greater; and competent and reliable financial services are necessary.

#### C. IFAD's Strategy for Collaboration with The Sudan

#### The Sudan's Policy of Poverty Eradication

7. Government policies for alleviating poverty focus on food security and include the following: utilization of *Zakat* taxes on a local basis; minimum wage legislation; provision of emergency minimum food supplies and subsidized staples; and grant and credit schemes for productive and poor families. The impact of these policies tends to be concentrated in the urban areas where the consequences of migration are most marked. Rural outreach is acknowledged as limited, mainly because efforts are severely circumscribed by fiscal stringency. The result has been the devolution of authority without adequate central financial support or local revenue base.

#### The Poverty Eradication Activities of other Major Donors

8. IFAD and other United Nations (UN) agencies are among the few international donors still operating in The Sudan: the Islamic Development Bank (IsDB), which expressed interest in cofinancing the rural road component of the programme, is another. The activities of Operation Lifeline Sudan (OLS), World Food Programme (WFP), United Nations Children's Fund (UNICEF), United Nations High Commission for Refugees (UNHCR) and the principal non-governmental organizations (NGOs) present, i.e., Save the Children Fund and the Co-operative for Assistance and Relief Everywhere (United States) (CARE), are geared to emergency relief and the welfare aspects of displacement and resettlement. All of these programmes are constrained in their ambit by the



availability of funds. Although providing useful lessons over programme execution, they have had only limited impact on the national poverty pattern.

#### IFAD's Strategy in The Sudan

- 9. IFAD's interventions are guided by the following: vertical expansion of the rainfed sector, through provision of technical packages, farmer-services, credit, research and environmental protection; improved livestock health and marketing; and irrigation rehabilitation and development for small farmers. In credit and financial services, the IFAD approach has been to work closely with the Agricultural Bank of Sudan (ABS) to develop practical lending systems to meet small farmer and community needs. IFAD projects have initially had a wide geographical spread, covering both high potential and marginal areas, and have progressively emphasized the latter where the target group is concentrated. In 1995, the Government and IFAD agreed that future rural development initiatives financed by the Fund will be focused on the central semi-arid and savannah zones, as well as southern Sudan when the civil strife will have ended.
- 10. The communities targeted by IFAD operations in The Sudan are poor and lack the capacity required for determining their own socio-economic future and well-being. The key to developing such a capacity within these communities and the capability of improving and sustaining their livelihoods is the development of their awareness of opportunities, and appreciation of group socio-economic interaction. At both the community and locality level, there is a need to understand the basic principles of decentralization; this requires the development of self-reliance and the awareness that the responsibility for locality and community services involves a real commitment from householders. Simple and cost-effective linkages, therefore, need to be established and developed between householders, their communities and the locality council and the State. In order to achieve this sustainable partnership, IFAD operations will emphasize: (i) self-supporting mechanisms at the Community level; (ii) enhanced locality services financed through improved local revenues raised from increased agricultural productivity; (iii) private-sector involvement; and (iv) basic economic infrastructure rehabilitation.

#### **PART II - THE PROGRAMME**

#### A. Programme Area and Target Group

- 11. The programme area consists of the State of South Kordofan and covers an area of approximately 88 000 km<sup>2</sup>, which is dominated by isolated ranges of rocky hills that make up the Nuba Mountains, interspersed by large plains. It covers the 30 locality councils that comprise the State. The soil in the area is mainly of three types: (i) vertisols or cracking clays that make up more than 50% of the area and have high potential productivity; (ii) gardoud or non-cracking clay and clay loam soils; and (iii) *qoz* or sandy soils that have limited fertility and cover areas in the north and north-west of the State. Vegetation is predominantly acacia, typical of the sub-Sahel and tall grass savannah. Environmental degradation is not typical except around waterpoints and settlements.
- 12. The programme area is characterized by a climate that ranges from semi-arid to semi-humid, with highly seasonal rainfall, decreasing from more than 750 mm in the south to 350 mm in the north. There are no perennial watercourses, although there are permanent natural water poundages in the south. Groundwater resources are significant: good-quality, deep aquifers underlie the north-west of the area; shallow aquifers are widespread throughout the State and are used for domestic water supply and irrigation. Most of the area lies within the rainfed cotton zone. The State was a major source of short staple cotton in the past.

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- 13. Rainfed crop production and livestock rearing are the principal activities, but productivity is low and has fallen considerably over the last 15 years. The vast majority of rainfed farming is done on vertisol soils by manual means, although there is a significant mechanized sector. Principal crops grown are sorghum and millet, with smaller areas of sesame, cotton, groundnut, *karkadi* and watermelon. Subsistence farming systems are of three types: (i) fields that are located on the hill foot-slopes of the Nuba Mountains; (ii) fields that are located on the vertisols plains with sorghum as the dominant crop; and (iii) fields that are located on the *qoz* with millet as the dominant crop. Most settled families have kept a few cattle, sheep and goats for the production of milk and meat, but the numbers of animals have been depleted by civil strife. There is a significant number of cattle and camels that belong to transhumant pastoralists, which migrate to the area from the north of the State in the dry season.
- 14. The total population of the programme area is estimated at 1 096 000 in about 115 000 households. There are about 1 500 villages or village clusters, which range in size from less than 50 to more than 500 households. Approximately 77.5% of the population, comprised of about 84 000 households of 10 persons, is rural. Of these, some 200 000 people are currently affected by civil strife and insecurity; there are reportedly between 33 000 to 66 000 people living in abject poverty in isolated villages in the inaccessible areas. The primary target groups will be the traditional male and women smallholder farmer communities that make up around 60% of the rural population; and transhumant pastoralists. Targeting will be based on villages and localities selected on the basis of the extent of rural poverty, the degree of civil strife-inflicted damage and the potential for demonstrating positive economic results from agricultural production for replication. Some 260 communities will participate in a major way; approximately one third of these will be in the areas that are currently insecure. Of these, approximately 26 200 households are expected to take up the full range of programme technical interventions to realize programme technical benefits in full.
- 15. Women already participate fully in a wide range of farming and other income-generating activities. They practice food and cash crop cultivation and livestock-raising, and can own animals. Women are involved in market-trading of agricultural produce, fuelwood and wild fruits collection, milk and milk products, and their handicrafts. However, they are constrained in taking new opportunities as they do arise, and the effects of civil strife on social services have been particularly difficult for women. For these reasons, the activities and interventions for women have been mainstreamed into all the components to ensure an equal proportion of involvement and benefit from the programme.
- 16. The negative effects of recurrent civil strife on agricultural production are obvious. Apart from these, the principle limiting factors to improved crop and livestock production (and associated range management) have been: the lack of knowledge within the communities of the correct technical packages; the absence of coverage and impact of the extension services and applied research; the lack of inputs; and, because of low yields and low incomes, the limited capacity of farmers to save and finance their enterprises. The major concerns of livestock owners are high rates of animal morbidity because of the unavailability of veterinary services and drugs, access to adequate water supplies and poor breed productivity. For farmers, the major concerns are access to agricultural land, shortage of certified seeds and the incidence of pests and lack of finance. These are exacerbated by the scarcity of drinking water and other social services in settled communities, which inhibit the ability of people to take up development opportunities, especially women. Their health and well-being are of prime importance to household stability and family income.

#### **B.** Objectives and Scope

17. The programme's overall goal is to improve and sustain the living standards of the target group by assuring their food security and providing them with social services in a secure environment in which they can manage their own community affairs. Under the flexible lending mechanism, the



specific objectives to achieve the goal are encompassed in each of the programme's two five-year phases. The first phase aims to: (i) establish locality councils as well as State institutions with the resources and cost-effective systems to assist rural communities in improving their livelihoods; (ii) enhance the productivity and incomes of individuals and groups from crop and livestock enterprises through the provision of a community-based extension service, and technical and input support; (iii) reduce the incidence of disease and mortality by establishing community-owned and managed water supply and basic health facilities; and (iv) improve and maintain the rural road network so that communities have access to markets and public services.

- 18. The second phase aims to: (i) foster equitable communal range and farm-land management, which reduces conflict, through changes in government land-use policy and agreements between all groups involved and the locality councils; (ii) develop sustainable rural credit services with participatory informal financial institutions for savings and credit, linked with the formal financial system; and (iii) impart to the men and women in rural communities, the capabilities for planning, implementing and managing their own development activities and resolving group conflicts.
- 19. The programme will rely heavily on State and locality authorities, whose institutional capacity will be built up within their existing structure to minimize the accumulation of additional costs that they will not be able to bear in the future. Strong emphasis will be placed on beneficiary participation through their spontaneous development committees where they do exist, or through the formation of apex community-based institutions at the village level. They will be supported by a small but strong programme management unit (PMU) that will have a high degree of autonomy in coordinating the implementation of the programme's activities. This will include the readjustment and strengthening of the systems of delivery of integrated community-driven services.
- 20. Programme components are simple and will be vested in the beneficiaries, with specific criteria for participation of the target groups and their locality councils. Implementation will be the responsibility of the locality councils supported by the established cadre of the relevant State ministries and agencies currently operating in South Kordofan. This will be done in close cooperation with the target groups. With respect to social services, the programme will not establish separate activities in primary healthcare and potable water supply, but rather form partnerships to enhance the interventions already being undertaken by UNICEF, NGOs and the State Ministry of Engineering Affairs at the locality and community levels.
- 21. The programme's strategy for women's development is founded on: (i) ensuring that women are brought into the mainstream of all programme activities; (ii) building their capacity as productive household members; (iii) assisting them in raising the standard of living of their families by gaining access to opportunities for microenterprise and both formal and informal financial credit; (iv) providing them with the basic community facilities that they need; and (iv) empowering them so that they can be fully involved in household and community decision-making and conflict resolution.
- 22. The programme's global strategy develops temporally and geographically. The selection of localities for the introduction of the complete package of programme interventions will be made in such a way as to ensure the greatest opportunity for the successful achievement of targets and the safeguarding of assets. This will mean that the programme will commence in secure areas in the northern, north-western and eastern parts of the State (with the exception of basic assistance). The security risks and issues related to decentralization policy, good governance and financial services must be assessed as satisfactory before proceeding to the programme's second phase. Other triggers for the second phase are the following: the degree to which the authorities have applied the programme's rationale and approach; the relevance of the strategy; progress on key policy issues and feasibility studies; and an effective functioning of the monitoring and evaluation (M&E) system. By these means, a successful framework will evolve for replication in other areas.



#### C. Components

- 23. Programme components are listed and briefly defined below:
- (i) Agricultural extension and smallholder services will establish a community-based, participatory extension service at village level founded on men and women contact farmers and village extension agents, and extension officers at the locality and State levels; supply improved crop seed and agricultural inputs; and provide appropriate technical packages and implements. Commercial initiatives will establish appropriate agricultural-implement manufacturing and produce-processing enterprises within the private sector where proven to be financially viable.
- (ii) Livestock production and range management will improve animal health services on a cost-recovery basis; restock men and women smallholders affected by loss through civil strife with improved animal breeds; rehabilitate and construct strategically located stock water facilities that will be owned, managed and maintained by the target communities on a user-pays basis; and develop an equitable range-management strategy to minimize the impact of migratory livestock on the environment and to improve the interactions between local farmers and livestock owners and pastoralists who originate from outside the State.
- (iii) Community support services will enhance potable water supply and sanitation by refurbishing existing community facilities, install hand pumps on a cost-sharing basis and promote pit toilets; reconstruct community health clinics that have been damaged by civil strife; train women in hygiene, preventative health care and mother and child health, as well as community health workers, who will be equipped with basic medical aid kits; and establish mechanisms for maintaining rural feeder roads and improving access for communities in areas of insecurity and to produce markets.
- **(iv)** Rural financial services will provide formal credit lines for crop inputs, equipment, livestock acquisition, produce marketing and women's agriculture, beneficiary micro-enterprise and privatized venture; offer informal credit lines from a community-development fund for community *sanduq* support and mobilization of savings; and train men and women, giving technical assistance for community financial services planning, organization and management.
- (v) Institutional strengthening will encompass the following:
  - Community and women's groups. Through community awareness and mobilization it will instil the principles of participatory development, community orientation, formation of community and women's groups, and training in social development, project identification, planning and execution; and will fund community and women's centres.
  - **Localities**. It will fund extension facilities, vehicles and equipment, training, staff salaries and allowances, and operations.
  - **Programme management**. It will provide funds for facilities, vehicles and equipment, and operational management of a PMU; and technical assistance and training, including local conflict resolution.

#### **D.** Costs and Financing

24. **Costs.** Programme baseline costs are estimated at USD 34.2 million, with a foreign exchange element of 31%. The base costs are calculated at November 1999 prices and include estimated duties and taxes. Costs are budgeted for the full ten-year period. Investment costs account for 70% of total



costs. Physical contingencies have been applied at 10% to civil works except for rural roads. Physical contingencies have also been applied, where there is uncertainty as to the exact implementation quantities, at a rate of 5% to the costs of equipment, training and to the recurrent costs of salaries and allowances, and operation and maintenance. Physical contingencies have not been applied to the costs of vehicles, technical assistance and studies, and credit lines. Price contingencies have been applied on all costs except for credit lines. Price contingencies have allowed for foreign cost escalation at 2.7% for PY1, 2.6% for PY2, 2.5% for PY3 and 2.4% for the remaining seven years. Purchasing power parity between the SDD and USD was assumed.

25. As presented in Table 1, total programme costs are estimated at USD 39.62 million. The cost per direct beneficiary household amounts to USD 1512 and USD 36 per overall beneficiary, comprising the people living in rural areas.

TABLE 1: SUMMARY OF PROGRAMME COSTS a/ (USD million)

	Component	Local	Foreign	Total	% FE	% Base Costs
A.	Agricultural extension and samllholder	3.48	1.71	5.19	33	15
В	services Livestock production and range management					
C.	Community support services	2.46	1.58	4.04	39	12
D.	Rural financial services	7.17	4.12	11.29	37	33
E.	Institutional strenthening	2.61	0.50	2.66	2	8
	Community and women's groups	2.62	0.90	3.52	26	10
	Localities	3.16	1.44	4.60	31	13
	Programme management	1.98	0.95	2.93	33	9
Tota	l baseline costs	23.48	10.75	34.23	31	100
	Physical contingencies	0.91	0.37	1.28	29	4
	Price contingencies	2.86	1.24	4.10	30	12
Tota	l programme costs	27.26	12.36	39.62	31	116

- a/ Discrepancies in totals are due to rounding.
- 26. Table 2 gives details of the financing plan by component. The proposed IFAD loan and grant will amount to USD 18.02 million or 45.5% of programme costs. The USD 150 000 grant will finance one out of three years of an expatriate programme management advisor to support the PMU, with the focus on the preparation of the implementation manual and the planning of the budget process. Cofinanciers are expected to provide USD 16.10 million (39.7% of programme costs) for the community-support services components. The ABS will contribute the equivalent of USD 0.40 million to the formal credit line; and the Government will contribute USD 4.20 million. The beneficiaries will contribute the equivalent of USD 0.90 million to the community-based investment and operating costs, partly as funds but principally as labour and local material.
- 27. Regarding the cofinanciers, the IsDB has confirmed its interest in financing the South Kordofan Rural Development Programme road component up to an amount of USD 9.50 million. As new donors are resuming their cooperation with The Sudan, the Government will undertake to find suitable financing for the community support services and feeder roads, including with the Saudi and the OPEC Funds. This investment is also of potential interest to the European Union, once cooperation resumes. Since the South Kordofan Rural Development Programme is designed for parallel financing, an initial financing gap (until an external source of financing is secured) will not impinge on the timely start-up of the IFAD-financed components.

TABLE 2: FINANCING PLAN<sup>a</sup> (USD '000)

		Other (1)														Local	Duties
	IFAD l	LOAN	IFAD GR	O GRANT Cof		Cofinancier ABS Be		Beneficiaries		The Government		Total	1	For.	(Excl.	and	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	Taxes)	Taxes
A. Agricultural extension and smallholder services  B. Livestock production and range	4 796	78.6	-	-	-	-	-	-	519	8.5	790	12.9	6 105	15.4	1 984	3 661	460
management C. Community support services	-	_	-	_	3 911	81.0	_	-	353	7.3	563	11.7	4 827	12.2	1 864	2 506	457
D. Rural financial services	-	-	-	-	12 220	95.3	-	-	-	-	596	4.7	12 816	32.3	4 614	7 606	596
E. Institutional strengthening	2 237	83.4	-	-	-	-	405	15.1	-	-	41	1.5	2 683	6.8	52	2 590	41
Community and women's groups	4 134	95.9	-	-	-	-	-	-	-	-	178	4.1	4 312	10.9	1 112	3 022	178
Localities	3 997	71.9	-	-	-	-	-	-	-	-	1 560	28.1	5 558	14.0	1 712	3 306	540
Programme management	2 710	81.6	150	4.5	-	-	-	-	-	-	460	13.8	3 319	8.4	1 025	2 002	292
Subtotal	10 841	82.2	150	1.1	-	-	-	-	-	-	2 198	16.7	13 189	33.3	3 849	8 330	1 010
Total disbursement	17 874	45.1	150	0.4	16 131	40.7	405	1.0	872	2.2	4 188	10.6	39 619	100.0	12 362	24 694	2 563

<sup>&</sup>lt;sup>a</sup> Discrepancies in totals are due to rounding.

<sup>(1)</sup> IsDB confirmed its interest for cofinancing the road component up to an amount of USD 9.5 million.



#### E. Procurement, Disbursement, Accounts and Audit

- **Procurement.** The procurement of goods and services financed by the IFAD loan and grant will be carried out in accordance with IFAD Procurement Guidelines. Each contract for the supply of goods, including vehicles and equipment estimated to cost more than USD 100 000 equivalent will be awarded following international competitive bidding procedures. Goods supplied under contract estimated to cost between USD 10 000 and USD 100 000 equivalent, up to an aggregate not to exceed USD 500 000, may be procured following local competitive bidding procedures approved by IFAD. All civil works will be awarded following local competitive bidding procedures. The programme will prepare technical specifications of the goods and services to be procured under both bidding procedures and a programme procurement committee will undertake procurement evaluation. Local shopping will be used for minor items costing less than USD 10 000, up to an aggregate amount not exceeding USD 200 000 (excluding taxes), under contracts awarded on the basis of the evaluation and comparison of bids from at least three suppliers. This will be done in accordance with procedures approved by IFAD. Local technical assistance personnel and experts for studies for the IFAD-financed components will be engaged through national advertisement consistent with IFAD policy. The services of the programme general manager, the deputy manager, the financial controller, the two operations managers, the women's development officer, the M&E officer, and expatriate technical assistance will be procured in accordance with procedures acceptable to IFAD.
- 29. **Disbursement.** The IFAD loan will be disbursed over a ten-year period. Local expenditures for contracts costing less than USD 50 000 equivalent each for training, consultant's services, goods and works, purchases of seeds, payment to the community credit funds and incremental operating costs will be disbursed against certified statements of expenditure. Related supporting documents will be retained by the PMU for subsequent review by supervision missions and examined in the course of the annual audit of programme accounts. All other withdrawals from the loan account will be made on the basis of full supportive documentation. The award of any contract for goods, works and consultants services estimated to cost USD 50 000 equivalent or more will be subject to the prior review of IFAD.
- 30. **Accounts and Audit.** The Government of The Sudan will open two accounts for the programme: a special account in Swiss Francs and a programme account in SDD for normal programme operating expenses. The special account with an authorized allocation equivalent to USD 1 300 000 will be maintained in the Khartoum branch of the Bank of Sudan the Central Bank where it will be accessible to programme management. The programme account for normal operating expenses will be maintained in the Kadugli branch of either the ABS or a commercial bank to be determined and acceptable to IFAD. The Government will deposit the initial deposit amount into the programme account, replenishing the account quarterly in advance from its own resources in accordance with the consolidated annual work plan and budget (AWPB), including the prospective lending schedule of the programme.
- 31. All organizations receiving programme funds will maintain separate accounts that will then be consolidated at the programme level. The programme general manager and the financial controller will contract a qualified external auditor, subject to approval by IFAD, to undertake an annual audit. This does not preclude internal examinations or audits carried out in accordance with the national administrative system. The external auditor will present certified accounts within six months of the end of the financial year.

#### F. Organization and Management

32. Since the programme is placed within the State, the interministerial committee that has overall national responsibility for programmes of this kind will have only policy and strategy concerns. Reflecting the predominant State interest and the devolved and privatized nature of the implementation approach, an executive board of directors will supervise the programme. They will



have overall responsibility for programme performance and will be accountable to the State Central Government and financiers. The programme executive board will include a coalition of partners with representatives from the key State Ministries (preferably at the director-general level rather than ministerial), a representative of the Federal Ministry of Agriculture and Forestry, one from the ABS and from an NGO and/or UNICEF representing non-government cooperating agencies. It will also include representatives from the locality councils (not more than five members, two of whom will be from insecure areas) elected by the councils and community beneficiaries (not less than five members, including women, and two from insecure areas) elected by the community development committees. The programme general manager will be a full member and the financial controller its secretary. The Director-General of Agriculture will chair the programme executive board as the delegate of the State Minister of Agriculture. The Executive Board of Directors will make the initial selection of priority communities on the basis of the greatest need and disposition to participate.

- 33. The PMU core executive team will consist of the programme general manager, the deputy manager, the financial controller, two operations managers one in the east and one in the west of the State the women's development officer and the M&E officer. They will be recruited on a competitive basis, but will preferably consist of professionals originating from within the State and from the State ministries or NGO cadres, all things being equal. An expatriate programme management advisor will support the PMU during the programme's first phase and all other external/expatriate inputs will be confined to short-term consultancies. The PMU will be directly accountable to the Executive Board of Directors, and will be responsible for the day-to-day management and coordination of programme activities undertaken by the localities and the State.
- 34. **Beneficiary Participation.** The adoption of a participatory approach is fundamental to the success of the programme, and is particularly important under the prevailing conditions in South Kordofan. A conservative approach has been taken with regard to start-up activities and implementation as each locality is brought into the programme. The first step will involve identifying target groups including men and women, creating awareness of the objectives and modalities of the programme, and mobilization. Groups will be formed, support staff trained and technical packages adapted to smallholders' requirements. In this step, implementation will be limited to intensive training and simple interventions for the most severely disadvantaged people. The second step will involve the rehabilitation of existing community agriculture and social infrastructure. The communities will undertake these activities. Financial services will be established for seasonal and medium-term credit for staple food production, the rehabilitation of agricultural and livestock enterprise and women's initiatives. The third step will encompass the lessons learned from initial programme implementation. Emphasis will be placed on developing a replicable framework for sustainable food security, local social services and feeder roads, and economic growth.

#### **Annual Work Plan and Budget and Reports**

- 35. An AWPB for the first year of programme operations will be prepared as part of start-up activities, which will be presented to IFAD within three months of loan effectiveness. Subsequent AWPBs and reports will be prepared and submitted to IFAD not later than 1 November of each year. A first phase review assessment will be undertaken in PY4 to determine if the triggers for proceeding with the programme's second phase have been met; it will determine modifications to programme design (see paragraph 22). A programme completion report that gives detailed information on the implementation and the operation of the programme, its costs, benefits and lessons learned will be submitted within six months of loan closure.
- 36. Effective M&E is essential for flexible and sensitive programme management. It can also assist in the early warning of conflict, food-availability problems and environmental degradation. It will be strengthened by contracted inputs for acquisition and the use of satellite imagery and associated



geographic information system (GIS) collation, and analysis and interpretation by the national remote sensing centre.

The management information system (MIS) will generate information to assist programme management, locality councils and community-development committees and groups to do the following: plan activities on a short-term basis; produce AWPBs at all levels; compare physical progress with planned targets; and take timely remedial action to correct problem areas. The evaluation system will analyse the programme's impact on the food security, social well-being and incomes of the target group; communal resource management activities; the technical impact of the interventions on the environment; the effectiveness of extension initiatives; and the generation of income through farming and off-farm enterprises. Water supply, health, educational and welfare effects will be examined and desegregated by gender. The participation of staff and beneficiaries will be sought, but the major inputs will be competitively contracted to a suitable independent agency. Annual surveys will be conducted with a permanent sample of target group households, to allow benefits to be quantified. The innovative introduction of informal financial services will require specific M&E activities to safeguard their sustainable development and draw lessons for replication. This will include quarterly monitoring of financial status, particularly savings and lending data. This will be based on variations of gross margins of financed activities and, in the case of individual borrowers, changes in the net-worth of the borrowing household against parameters established at loan application.

#### **G.** Economic Justification

- 38. The principal quantifiable benefits of the IFAD-financed components are the incremental farm incomes of 26 200 smallholders that are expected to adopt the productive interventions of the programme and obtain their benefits. Incremental costs for all components, including those for social and institutional-building activities of the programme, were accounted for in the economic analysis. The economic internal rate of return is 19.0%, which represents a satisfactory return for a community and institutional development programme in the difficult conditions of South Kordofan. Sensitivity calculations show that the programme is flexible to changes in the levels and timing of costs and benefits, e.g., a combination of an 20% increase in costs and a 20% decrease in benefits still indicates a 14.7% return.
- 39. The substantial benefits that will result from partial uptake of programme advice and services for crop, livestock and range improvement by farmers other than the 26 200 accounted for above, and the profits from off-farm enterprises, are discounted for the purposes of the calculation of programme returns. There will also be a range of significant, non-quantifiable benefits that will include important social, civil security and environmental improvements, in addition to the significant improvements in the socio-economic situation and the role of women.

#### H. Risks

40. Recurrent civil strife is the most important risk. Yet this is abating and the parties have already made significant efforts to remove the causes. These include policies for the devolution of government to the locality level, adjustments to large farming schemes, landholdings and the reopening of traditional migratory stock routes. If these policies are rescinded, successful implementation within the participatory approach will be difficult. UN agencies and NGOs have demonstrated that it is possible to have successful interventions with communities located in insecure areas. In these areas, a conservative approach will be taken with initial assistance provided in the form of low-cost basic inputs, which will demonstrate the benefits of the communities and other parties participating in programme activities. The programme design attempts to minimize the risks both by its phasing over a ten-year period under the flexible lending mechanism and through the modalities adopted for linkage between the different administrative levels to the beneficiary level. Programme



management will nurture working relations among the parties involved in implementation and help resolve any conflicts that may arise.

#### I. Environmental Impact

41. Programme design specifically addresses environmental problems and the components will have a direct beneficial effect on preserving natural resources. The farming practices that will be adopted by the smallholders will involve moderate rainfed cropping intensities and reintroduce crop rotations. Traditional farm sizes will not increase, but instead the area under crops will be brought back to levels that were sustained before the advent of civil strife. Similarly, animal numbers will be brought up to the usual carrying capacity of the range. The techniques for improved crop and livestock production are not that different from present, well-established practices: they do not involve the heavy use of fertilizers or chemicals. Environmental improvement and conservation will be specifically addressed with the development of a comprehensive range management strategy, which will provide a plan encompassing suitable migratory stock routes, the development of properly located stock water points and an environmental conservation policy. Using the traditional native administration control systems with full community involvement will enhance this. A proposed hydrogeological survey will define the parameters for use and preservation of groundwater aquifers.

#### J. Innovative Features

- 42. The programme will be IFAD's first state-wide decentralized intervention in The Sudan with locality councils responsible for its implementation. Programme support at the community level will be conditional on communities supporting the process of poverty alleviation and gender equity. To do so, a community-empowerment process will be implemented that provides the skills for self-sustainable and self-financing development with the assistance of the State, using the positive aspects of cooperation whenever possible for the market economy. The programme will enforce the role of women involved in all programme aspects and reinforce their role in society; they will be recruited as locality extension officers and community extension agents and contact farmers. Gender sensitization will build new attitudes to women and development in the programme area.
- 43. The programme will nurture and support partnerships. Other international financiers and agencies will be encouraged to participate in the programme to achieve its goal by providing assistance for essential community infrastructure to provide balanced development. Devolution and decentralization of the Government are in their infancies. The programme will help to improve capabilities and rehabilitate the reputation of the Government at the State and locality levels as providers of economic services by enhancing their revenues through increased community productivity. Similarly, formal financial services will be strengthened and informal community-based financial services established to mobilize savings that will enforce rural development initiatives and moves to the private sector.
- 44. As South Kordofan has been exposed to recurrent civil strife, the programme will provide the post-crisis rehabilitation and development. Appropriate international and local NGOs will be used to re-enforce locality cadre where they lack the capacity or capability to deliver programme services, such as insecure areas or those inaccessible to Government staff.



#### PART III - LEGAL INSTRUMENTS AND AUTHORITY

- 45. A financing agreement between the Republic of The Sudan and IFAD constitutes the legal instrument for extending the proposed financial assistance to the recipient. A summary of the important supplementary assurances included in the negotiated financing agreement is attached as an annex.
- 46. The Republic of The Sudan is empowered under its laws to borrow from IFAD.
- 47. I am satisfied that the proposed financial assistance will comply with the Agreement Establishing IFAD.

#### **PART IV - RECOMMENDATION**

48. I recommend that the Executive Board approve the proposed financial assistance in terms of the following resolution:

RESOLVED: that the Fund shall make a loan to the Republic of The Sudan in various currencies in an amount equivalent to thirteen million three hundred thousand Special Drawing Rights (SDR 13 300 000) to mature on and prior to 1 May 2040 and to bear a service charge of three fourths of one per cent (0.75%) per annum, and to be upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board in this Report and Recommendation of the President.

RESOLVED FURTHER: that the Fund shall provide a grant to the Republic of The Sudan in various currencies in an amount equivalent to one hundred and fifteen thousand Special Drawing Rights (SDR 115 000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board in this Report and Recommendation of the President.

Fawzi H. Al-Sultan President



## SUMMARY OF IMPORTANT SUPPLEMENTARY ASSURANCES INCLUDED IN THE NEGOTIATED FINANCING AGREEMENT

(Negotiations concluded on 14 April 2000)

- 1. The officer responsible for planning and development within each Locality Council will prepare a draft AWPB for the locality concerned for each programme year. Each Locality Council will submit this draft to the relevant programme operations manager, who will consolidate the AWPBs and will forward them up the line of management control. They will be reviewed by the Programme Executive Board not later than one hundred and twenty (120) days before the beginning of each programme implementation year. The consolidated AWPB, as approved by the Programme Executive Board, will be submitted to IFAD and the cooperating institution for their respective comments and approval not later than sixty (60) days before the beginning of the relevant programme year. However, for purposes of programme start-up, the consolidated AWPB for the first programme year will be submitted to IFAD and the cooperating institution for their respective comments and approval not later than ninety (90) days after the date of effectiveness. Thereafter, the PMU will adopt the AWPBs substantially in the form approved by IFAD and the cooperating institution.
- 2. For purposes of carrying out agricultural extension and smallholder services, livestock production and range management, community support services and institutional strengthening under the programme, the Government of the Republic of The Sudan (the Government) will make a portion of the proceeds of the loan and grant available to the South Kordofan State Ministry of Agriculture, Animal Resources and Irrigation (the lead programme agency), in Sudanese dinars and on a grant basis, under a subsidiary grant and implementation agreement to be concluded with the lead programme agency upon terms and conditions satisfactory to IFAD. Under this agreement: (a) the Government and the lead programme agency will adopt and include a set of formal guidelines specifying the procedures, conditions and modalities to be followed by each of them in the implementation of the programme and the respective rights and obligations arising therefrom in order to ensure full cooperation and commitment to the success of the programme; and (b) the lead programme agency will undertake to carry out and cause the programme parties to carry out the programme in accordance with the provisions of the financing agreement.
- 3. The Government will exercise its rights under the subsidiary grant and implementation agreement so as to protect the interests of the Government and IFAD and accomplish the purposes of the loan and grant and, except as IFAD will otherwise agree, the Government will not assign, amend, abrogate or waive the said agreement or any provision thereof.
- 4. The lead programme agency will open and thereafter maintain in the Kadugli branch of ABS or a commercial bank approved by IFAD a current account in Sudanese dinars for programme operations (the programme account).
- 5. In addition to the proceeds of the loan and grant, the Government will make available to the lead programme agency and each party to the programme, promptly as needed, such funds, facilities, services and other resources as may be required from time to time to carry out the programme in accordance with the financing agreement. Without limiting the generality of the foregoing, during the programme implementation period the Government will make counterpart funds available to the lead programme agency from its own resources in an aggregate amount equivalent to USD 1 625 000, in accordance with its customary national procedures for development assistance. For this purpose, the Government will deposit counterpart funds in an initial amount equivalent to USD 30 000 into the programme account, as soon as practicable but in no event later than ninety (90) days after effectiveness, to cover the first three (3) months of programme implementation. Thereafter, it will replenish the programme account by depositing in advance the counterpart funds called for in the AWPB for the relevant quarter.



- 6. For the purpose of carrying out rural financial services under the programme, the Government will make a portion of the proceeds of the loan available to ABS under a subsidiary loan and grant agreement to be concluded with ABS, upon terms and conditions satisfactory to IFAD, and whereby:
  - (a) (i) the Government will (1) relend to ABS, in Sudanese dinars, a portion of the proceeds of the loan allocated for the purpose of carrying out the sub-loan part of the programme, valued as of the date of withdrawal from the loan account, and (2) bear the risk resulting thereunder from changes in the foreign exchange, the Sudanese dinar and other currencies used by ABS in its operations; and (ii) ABS will agree to (1) pay service charges on the principal amount of the proceeds of the loan so re-lent and outstanding from time to time at an annual rate to be determined in accordance with the existing regulations of the Government and ABS and as approved by IFAD, and (2) repay this amount in Sudanese dinars in accordance with an amortization schedule not exceeding twenty (20) years, including a grace period of seven (7) years; and
  - (b) the Government will make available to ABS in Sudanese dinars and on a grant basis the proceeds of the loan allocated for the purpose of carrying out the *sanduq* part of the programme.
- 7. The Government will exercise its rights under the ABS subsidiary loan and grant agreement so as to protect the interests of the Government and IFAD and to accomplish the purposes of the loan and, except as IFAD will otherwise agree, the Government will not assign, amend, abrogate or waive the ABS loan and subsidiary grant agreement or any provision thereof.
- 8. (a) The Government, through the lead programme agency, IFAD and the cooperating institution, will jointly carry out a review of programme implementation during the latter half of the fourth programme year (the first-phase review) based on terms of reference prepared by the lead programme agency and approved by IFAD and the cooperating institution.
- (b) On the basis of the results of the first-phase review and recommendations thereon, IFAD will determine through an independent assessment if it will fund the programme during the second phase. The Government hereby acknowledges that unsatisfactory performance during the first phase, as evaluated through review of the trigger indicators set forth in the financing agreement, may result in a decision by IFAD to not fund or to delay the second phase.

#### (c) Should IFAD decide to:

- (i) stop funding the programme, any unutilized loan and grant proceeds would be cancelled;
- delay the second phase of the programme, the Government would make any necessary corrections/adjustments as recommended and communicated by IFAD. Such a delay would be for a maximum of one (1) year from the date of IFAD's decision. In the latter half of that year, a second review would be conducted in accordance with the procedures set out in paragraph (a) above. Based on that review, IFAD would then make a final determination to go forward with phase II or to stop funding. In no event would the Government be entitled to receive funding from the loan and grant relating to the delay period; or
- (iii) proceed with phase II of the programme, a mutually acceptable action plan and design for the second phase, based on the findings of the first-phase review, would



be prepared by the programme's general manager and endorsed by the Programme Executive Board.

- (d) If IFAD decides that the programme will continue to the second phase, the Government will ensure that the recommendations resulting from the first-phase review are implemented within the time specified and to the satisfaction of IFAD. It is agreed and understood that these recommendations may result in modifications to the loan documents or cancellation of a portion of the loan and grant. It is further agreed and understood that failure to implement the recommendations resulting from the first-phase review within the time limits specified may result in cancellation of the loan and grant.
- 9. IFAD may suspend, in whole or in part, the right of the Government to request withdrawals from the loan and grant accounts upon the occurrence of any of the events set forth therein or any of the following events:
  - (a) the cofinancing agreements have failed to become effective two (2) years after the effective date or at a later date agreed with IFAD; however, the provisions of this paragraph will not apply if the Government establishes to the satisfaction of IFAD that adequate funds for the programme are available to the Government from other sources on terms and conditions consistent with the obligations of the Government under the financing agreement;
  - (b) (i) subject to subparagraph (ii) of this paragraph:
    - (1) the right of the Government to withdraw the proceeds of any part of the cofinancing has been suspended, cancelled or terminated in whole or in part, pursuant, respectively, to the terms of the cofinancing agreement; or
    - (2) any part of the cofinancing has become due and payable prior to the agreed maturity thereof;
    - (ii) subparagraph (i) of this paragraph will not apply if the Government establishes to the satisfaction of IFAD that: (1) such suspension, cancellation, termination or prematuration is not caused by the failure of the Government to perform any of its obligations under such agreement; and (2) adequate funds for the programme are available to the Government from other sources on terms and conditions consistent with the obligations of the Government under the financing agreement;
  - (c) the credit by-laws, or any provision thereof, or the terms, conditions and procedures for *sanduq* operations have been waived, suspended, terminated, amended or otherwise modified without the prior consent of IFAD, and IFAD has determined that this waiver, suspension, termination, amendment or modification has had, or will have, a material adverse effect on rural financial services under the programme; and
  - (d) the Programme Implementation Manual, or any provision thereof, has been waived, suspended, terminated, amended or modified without the prior consent of IFAD, and IFAD has determined that this waiver, suspension, termination, amendment or modification has had, or will have, a material adverse effect on the programme.
- 10. In order to ensure that the programme activities are carried out in a properly coordinated fashion, the PMU will prepare a proposal in consultation with the programme parties and the communities defining the modalities and procedures to be adopted in order to integrate the proposed activities.



- 11. The Government will take all suitable measures to enter into the necessary arrangements for the effective and timely delivery under the programme of relief assistance to target groups in areas of insecurity and/or currently inaccessible.
- 12. In order to foster the ability and capacity of ABS to provide adequate means of formal and informal development financing under the programme, in accordance with the regulations of the Government's Central Bank, ABS will establish a fully operational branch in Kadugli not later than six (6) months after effectiveness.
- 13. In order to ensure the successful operation of the programme, South Kordofan State (SKS) will make the facilities established under the completed South Kordofan Agricultural Development Project available for the exclusive use of the programme.
- 14. No disbursements will be made from the loan in respect of sub-loans or matching grants unless: (a) the ABS subsidiary loan and grant agreement has been approved by IFAD in draft, a signed copy thereof has been delivered to IFAD substantially in the form so approved and certified as true and complete by a competent officer of the Government, and all conditions precedent to the effectiveness thereof have been fulfilled; and (b) the sub-loan or the matching grant, as the case may be, has been made in accordance with the relevant provisions of the financing agreement.
- 15. The following are the conditions precedent to the effectiveness of the financing agreement:
  - (a) the Programme Executive Board and PMU have been duly established by the Governor of the SKS under terms of reference and with resources approved by IFAD;
  - (b) the programme's general manager, financial controller and monitoring and evaluation officer of the PMU have been duly appointed by the Governor of the SKS in accordance with terms of reference and with qualifications and experience approved by IFAD;
  - (c) the financing agreement has been duly signed, and the signature and performance thereof by the Government duly authorized and ratified by all necessary administrative and governmental action;
  - (d) the subsidiary grant and implementation agreement has been approved by the Government and IFAD in draft, a signed copy thereof has been delivered to IFAD substantially in the form so approved by the Government and IFAD and certified as true and complete by a competent officer of the Government, and all conditions precedent to the effectiveness thereof have been fulfilled; and
  - (e) a favourable legal opinion issued by Government's Ministry of Justice in form and substance acceptable to IFAD has been delivered to IFAD by the Government.



#### APPENDIX I

#### **COUNTRY DATA**

#### **SUDAN**

Land area (km² thousand) 1996 1/	2 376	GNP per capita (USD) 1997 2/	290
Total population (million) 1997 1/	27.7	Average annual real rate of growth of GNP per capita, 1990-97 2/	3.7
Population density (people per km²) 1996 1/ Local currency Sudanese	11 Dinar (SDD)	Average annual rate of inflation, 1990-97 2/ Exchange rate: USD 1 =	81.6 SDD 258
Local currency Sudanese	Dillar (SDD)	Exchange rate: USD 1 =	SDD 256
Social Indicators		Economic Indicators	
Population (average annual population growth rate) 1980-97 1/	2.3	GDP (USD million) 1997 1/	10 224
Crude birth rate (per thousand people) 1997 1/	33	Average annual rate of growth of GDP 1/	
Crude death rate (per thousand people) 1997 1/	12	1980-90	0.4
Infant mortality rate (per thousand live births) 1997 1/	71	1990-97	7.7
Life expectancy at birth (years) 1997 1/	55	Sectoral distribution of GDP, 1997 1/	
Number of rural poor (million) (approximate) 1/	n.a.	% agriculture	n.a.
Poor as % of total rural population 1/	n.a.	% industry	n.a.
Total labour force (million) 1997 1/	11	% manufacturing	n.a.
Female labour force as % of total, 1997 1/	29	% services	n.a.
Education		Consumption, 1997 1/	
Primary school gross enrolment (% of relevant age	51	General government consumption (as % of GDP)	n.a.
group) 1996 1/	4.5	D: ( ( ( (CDD)	
Adult literacy rate (% of total population) 1995 3/	46	Private consumption (as % of GDP)	n.a.
Nutrition		Gross domestic savings (as % of GDP)	n.a.
Daily calorie supply per capita, 1995 3/	2 310	Balance of Payments (USD million)	
Index of daily calorie supply per capita (industrial countries=100) 1995 3/	73	Merchandise exports, 1997 1/	518
Prevalence of child malnutrition (height for age % of children under 5) 1992-97 1/	34	Merchandise imports, 1997 1/	1 493
Prevalence of child malnutrition (weight for age % of children under 5) 1992-97 $1/$	34	Balance of merchandise trade	- 976
Health		Current account balances (USD million)	
<b>Health</b> Health expenditure, total (as % of GDP) 1990-97 1/	0.2	Current account balances (USD million) before official transfers, 1997 1/	-2 100
Physicians (per thousand people) 1990-97 1/	n.a.	after official transfers, 1997 1/	-1 993
Percentage population without access to safe water 1990-96 3/	50	Foreign direct investment, 1997 1/	0
Percentage population without access to health services 1990-95 3/	30		
Percentage population without access to sanitation 1990-96 3/	78	Government Finance	
2220 2007		Overall budget surplus/deficit (including grants) (as % of GDP) 1996 1/	n.a.
Agriculture and Food		Total expenditure (% of GDP) 1996 1/	n.a.
Food imports as percentage of total merchandise imports 1997 1/	17	Total external debt (USD million) 1997 1/	16 326
Fertilizer consumption (hundreds of grams per ha of arable land) 1995-97 1/	52	Present value of debt (as % of GNP) 1997 1/	170
Food production index (1989-91=100) 1995-97 1/	139.8	Total debt service (% of exports of goods and services) 1997 1/	9.2
Land Use		Nominal lending rate of banks, 1997 1/	n.a.
Arable land as % of land area, 1996 1/	5.4	Nominal deposit rate of banks, 1997 1/	n.a.
Forest area (km <sup>2</sup> thousand) 1995 1/	416		
Forest area as % of total land area, 1995 1/	17.5		
Irrigated land as % of cropland, 1994-96 1/	15.0		

n.a. not available.

Figures in italics indicate data that are for years or periods other than those specified.

<sup>1/</sup> World Bank, World Development Report, 1999 2/ World Bank, Atlas, 1999 3/ UNDP, Human Development Report, 1998

#### PREVIOUS IFAD LOANS TO THE SUDAN

									Disbursem as at 25.2.2				
Loan No.	Project Title	Initiating Institution	Cooperating Institution	Terms of Loan	Approval Date	Effectiveness Date	Actual Closing Date	Loan Amount SDR million	SDR million	%			
ONGOIN	NG PROJECTS												
501-SD	North Kordofan Rural Development Project	IFAD	IFAD	НС	28.04.99	Not Effective							
SRS 36-SD	White Nile Agricultural Services Project	IFAD	UNOPS	HC	15.09.93	18.01.95	31.12.01	7.6	5.2	68.36			
268-SU	Southern Roseires Agricultural Development Project	IFAD	UNOPS	НС	02.10.90	10.01.92	31.03.00	7.5	7.5	99.64			
	Subtotal												
CLOSED	LOANS												
304-SU	Northern Province Irrigation Rehabilitation Project - Phase II	IFAD	World Bank:IDA	HC	15.04.92	10.03.93	30.04.99	4.3	4.3	100			
SRS 32-SU	Northern Province Irrigation Rehabilitation Project - Phase II	IFAD	World Bank:IDA	НС	15.04.92	10.03.93	30.04.99	4.3	4.3	100			
SRS 16-SU	En Nahud Cooperative Credit Project	IFAD	UNOPS	НС	30.11.88	15.03.89	31.12.98	6.5	6.5	100			
SRS 5-SU	Northern Province Irrigation Rehabilitation Project - Phase I	IFAD	World Bank:IDA	НС	03.12.86	07.12.87	30.06.98	7.5	7.5	100			
181-SU	Western Savannah Project-Phase II	World Bank:IDA	World Bank:IDA	HC	06.12.85	27.11.86	30.06.94	9.1	9.1	100			
151-SU	Stock Route Project	World Bank:IDA	World Bank:IDA	HC	12.09.84	18.10.85	31.12.99	5.7	5.7	100			
134-SU	Northern Region Agricultural Rehabilitation Project	IFAD	World Bank:IDA	НС	13.09.83	19.07.84	31.12.93	8.5	8.5	100			
039-SU	New Halfa Irrigation Rehabilitation Project	World Bank:IDA	World Bank:IDA	НС	07.05.80	17.02.81	31.12.88	11.5	11.5	100			
020-SU	Southern Region Agriculture Project	World Bank:IDA	World Bank:IDA	НС	27.06.79	14.02.80	30.06.85	10.7	10.7	100			
	Subtotal												
	TOTAL												

2



#### APPENDIX III

#### IFAD PROGRAMME STRATEGIC FRAMEWORK AND LESSONS

#### A. IFAD Strategy and Operations

- 1. IFAD has financed eleven projects in The Sudan, with an approved investment of USD 118.6 million. Eight projects have closed, two are ongoing and one has yet to become effective. IFAD's interventions are guided by the following strategies: vertical expansion of the rainfed sector through provision of technical packages, farmer-services, credit, research and environmental protection; improved livestock marketing; and irrigation rehabilitation and development for small farmers. Initially, projects have had a wide geographical spread, covering both high potential and marginal areas; they have progressively emphasized the development of rainfed agriculture areas.
- 2. Ongoing projects are the Southern Roseires Agricultural Development Project, which became effective in 1992, and is due to close in 2000. It is demonstrating a replicable system of mechanization and group organization for smallholder rainfed agriculture; and the White Nile Agricultural Services Project, began in 1995, which provides improved agricultural services to small-scale irrigation farmers through scheme rehabilitation, provision of credit, promotion of self-help extension and seed multiplication, adaptive research and community forestry.
- 3. The most recently completed project is the En Nahud Cooperative Credit Project, which increased agricultural production, incomes and food self-sufficiency of drought-affected rainfed farmers in West Kordofan. The project tackled major constraints of environmental degradation, lack of inputs, inadequate water supply and poor crop husbandry through the following practices: simple, environmentally sound technology; cooperative group credit, including for community-managed water supply and especially for women farmers; and the financing of farm enterprises and support services. Its lessons are particularly relevant to development in South Kordofan.
- 4. The North Kordofan Rural Development Project is expected to become effective in early 2000. It aims at improving the living standards of communities in the Um Ruwaba and Bara Provinces and especially to assure their food security and enhance their resilience to drought and natural disaster. The project will be closely linked to the South Kordofan Development Programme, chiefly with respect to range management strategy, since a large number of livestock migrate seasonally between that project area to South Kordofan.

#### **B.** Lessons Learned

- 5. The economic and institutional constraints to project implementation in The Sudan are formidable: the larger and more complex the project, the greater their effect. The principle obstacles to the smooth and effective execution to IFAD projects in the past have included the following:
  - Staffing and remuneration. Personnel from the Government are reluctant to serve in remote and difficult locations, even with monetary incentives; greater recourse must be made to competitively recruited staff from the private sector, consultant and contract staff, to local people trained for technical and advisory work, and to proper, performance-related payment for the job.
  - **Counterpart funding.** Budget stringency has been and will continue to be such that Government contributions to funding will be delayed or restricted; withdrawal from project funds is slow and does not keep pace with implementation progress, entailing



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extension to project duration; projects should be designed as far as possible so as not to be overreliant on counterpart funds flows.

- **Scarcity of foreign exchange.** For recurrent expenses such as spare parts and consumables.
- Line agency performance. Line agencies and parastatals, with few exceptions, do not have the resources, capability, incentive or will to provide, through the normal official channels, the services or the technical backup that projects need. Systems of direct departmental or individual contracting (or reliance on alternative private sector sources, both preferably by competitive bidding) have proven to be much more effective and are now accepted.
- **Procurement.** Once a major obstacle, this is now satisfactorily financed, with Government agreement through the operation of the IFAD-financed Project Coordination Office in Khartoum, for which service charges are made.
- Land tenure and use. Tenure arrangements in some locations do not encourage investment, agricultural improvement or responsible resource management, formalization and legal recognition of traditional tenure systems and rights of use should be pursued as they have been successfully done in the Southern Roseires Project.
- Reticence in encouraging beneficiary participation. Past neglect by the Government and project management of farmer and community motivation, involvement and delegation of responsibility underlie a number of project problems and failures; follow-through on decentralization and active local empowerment are crucial to project progress and success.
- 6. A 1994 IFAD Country Portfolio Evaluation highlighted and emphasized several of these lessons, which were later found to be largely valid in the Country Portfolio Review undertaken in 1998. Of particular relevance to South Kordofan were the following. First, beneficiary participation is necessary for establishing the priorities of interventions and sustainability operations. Second, proper dialogue and analysis of the real needs and aspirations of smallholders is overwhelmingly important, as are the practicalities of achieving them in the context of the local resources and socio-economic and production environment. Third, community-selected and well-supported village-based extension agents are most effective. Fourth, competent and reliable financial services are necessary. And finally, the greatest impact on IFAD's target group could be effected by geographic concentration on the rainfed sector.

#### C. Framework for the South Kordofan Rural Development Programme

7. IFAD must consider all the foregoing lessons, along with simple programme components, funding and management arrangements. The limitations to the Central Government's capability dictate greater reliance on the populations supported by State and locality authorities and agencies. Their institutional capacity must be built up without the operational constraints that have characterized the federal system. The programme should be targeted fundamentally at the traditional rainfed agriculture subsector and interventions must be selected in a responsible manner by the participating communities; they must be designed to be affordable, manageable and maintainable by the community members. Rural financial services must be improved by a prudent combination of the formal financial sector and beneficiary group mobilization of their own savings. Where innovative methods are proven successful and applicable, they need to be adapted and applied.

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8. The experience of the organizations that are currently undertaking relief and development activities in South Kordofan State provided some important elements to programme design and implementation. First, it is possible to work effectively in insecure areas, particularly as an NGO. Second, cooperation with OLS and WFP will be significant in achieving programme objectives. Third, NGOs have developed considerable skills in community organization. Fourth, UNICEF and SFC have a depth of understanding of the practical modalities of community participation in water and environmental sanitation and cost-recovery primary health care. This should be exploited by the programme.

APPENDIX IV

#### LOGICAL FRAMEWORK

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
PROGRAMME OBJECTIVE  The sustainable improvement in the productive capacity and social well-being of smallholder farming and pastoralist households, including those headed by women, in a secure environment managed by their communities.	Reduction in the demand for emergency food and medical aid.     Increased output and sale of agricultural produce, livestock and animal products.	Baseline survey and periodic impact assessment.     Surveys of men and women's production and sales statistics.     Household food security and income statistics of men and women.     National poverty indicators disaggregated by state, localities, groups, gender and age.     Periodic social impact assessment.	
PROGRAMME OUTPUTS: PHASE I  Locality council as well as State-level institutions established with resources and cost-effective systems to assist rural communities in improving their livelihoods.	<ol> <li>Locality council revenues.</li> <li>State fees-for-service and companies formed.</li> <li>Women's representation in localities staff.</li> </ol>	Locality budget and revenue balances.     State budget and revenue balances.	Civil strife continues to abate.     Political stability with decentralization.     Macroeconomic conditions continue to improve.
Enhanced productivity and incomes of individuals and groups from crop and livestock enterprises through the provision of a community-based extension service and technical and input support.	<ul><li>4. Change in crop area, yields and sales by men and women.</li><li>5. Change in livestock numbers, condition and sales.</li></ul>	<ol> <li>Extension service surveys, annual crop and livestock assessments and tax revenues.</li> <li>Qualitative, open-ended interviews with men and women staff at different levels of programme operation; villages, localities and state representatives of both genders, as well as interviews with men and women beneficiaries.</li> </ol>	
Reduced incidence of disease and mortality by establishing 220 of the planned 510 community-owned and managed potable water supply and 200 basic health facilities.	<ul><li>6. Community condition; morbidity and mortality rates, especially among women and children.</li><li>7. Incidence of parasitic and intestinal disease.</li></ul>	<ol> <li>Ministry of Health records.</li> <li>Locality council records.</li> <li>Aid agency and NGO records and findings through direct interview.</li> </ol>	
Improvement and maintenance of 484 km of the planned 634 km of rural roads so that communities have access to markets and public services.	<ul><li>8. Vehicular traffic, delivery of inputs to men and women.</li><li>9. Market activity by men and women.</li></ul>	8. Ministry of Finance and ABS records. 9. Market surveys.	



APPENDIX IV

	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
10.	Primary healthcare available at the community level and locality health services staffed and equipped to provide medical assistance for the general public and women's specific problems.	<ul> <li>16. Number of men and women Locality/Community promoters.</li> <li>17. Number of men and women community health workers trained, equipped and at post.</li> <li>18. Number of locality clinics refurbished.</li> </ul>		
11.	Rural feeder roads being maintained; Kadugli to Talodi road open to traffic.	<ul><li>19. Kms. of feeder roads graded annually.</li><li>20. Kms. of Kadugli - Talodi road constructed.</li></ul>		
12. 13.	Formal credit lines for men and women in place for crop inputs, agricultural equipment and livestock acquisition, marketing, women's microenterprise, and agricultural equipment manufacture.  Community-based credit lines for both men and women in place for development and social improvement; savings are mobilized.  Communities planning, organizing and managing their own financial requirements and commitments.	<ol> <li>Number of seasonal and medium-term loans to men and women.</li> <li>Seed company and equipment company financed and operating.</li> <li>Money expended from community-development fund.</li> <li>Number of sanduq bank accounts held by ABS.</li> <li>Size of funds and level of cash flow in and out of sanduqs in proportion to the size of each community.</li> </ol>		
15. 16. 17.	Men and women equally represented on community- development committees and women represented on community advisory committees.	<ul> <li>26. Level of participation by men and women in each community <i>sanduq</i>.</li> <li>27. Number of committee meetings.</li> <li>28. Number of contacts/visits and training sessions.</li> </ul>		
INI	Civil works and materials.  Vehicles and equipment equally available for use by men and women programme staff.  Training for men and women.  Technical assistance and studies, including microlending and extension services for women.  Formal and informal credit funds for men and women.  Staffing salaries and allowances.  Operations and maintenance budget.	<ol> <li>Funds released by programme.</li> <li>Vehicles and equipment procured.</li> <li>Number and types of training sessions conducted and visits made.</li> <li>Technical reports submitted.</li> <li>Number of community development funds released.</li> <li>Number, type and effects of activities supported by community development funds.</li> </ol>	Six-monthly and annual reports.     Programme financial accounts.	Strong involvement, including women and continued interest of the population.

#### **COSTS AND FINANCING**

## Expenditure Accounts by Financiers (USD million)

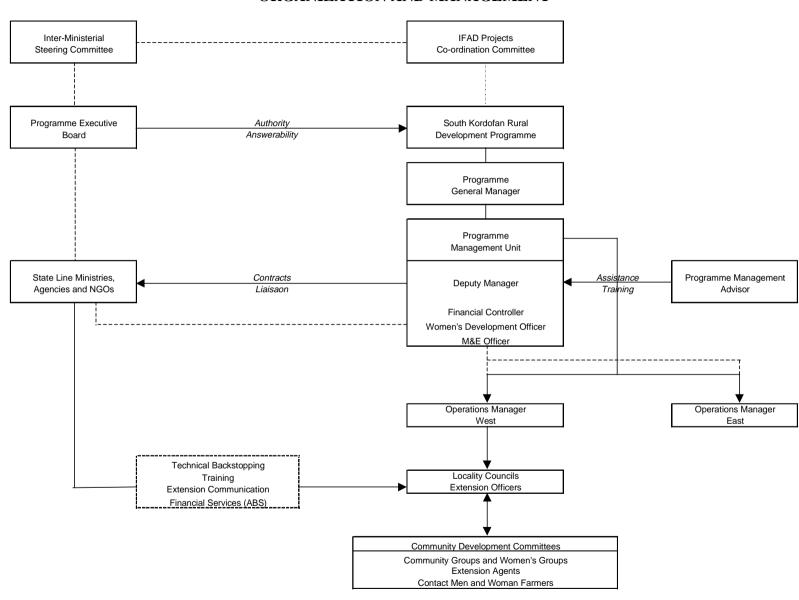
																		Local	
	IFAD LC		IFAD GR	ANT	Cofinancier 1		Cofinancie	er 2	ABS		Benefic.		Governme	nt	Total			Excl.	Duties &
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	<b>%</b>	Amount	%	Amount	%	Exch.	Taxes)	Taxes
I. Investment Costs																			
A. Civil works	6 763	35.5	-	-	9 406	49.4	2 065	10.8	-	-	800	4.2	0	-	19 034	48.0	6 662	12 372	-
B. Vehicles	1 031	47.7	-	-	-	-	180	8.3	-	-	-	-	951	44.0	2 162	5.5	1 211	-0	951
C. Equipment	1 074	32.1	-	-	683	20.4	686	20.5	-	-	71	2.1	831	24.9	3 345	8.4	2 494	20	831
D. Studies and technical assistance	1 369	80.4	150	8.8	24	1.4	160	9.4	-	-	-	-	-0	-0.0	1 703	4.3	566	1 137	-
E. Training	2 909	89.8	-	-	18	0.6	312	9.6	-	-	-	-	-	-	3 239	8.2	128	3 111	-
F. Credit fund	2 019	83.3	-	-	-	-	-	-	405	16.7	-	-	-	-	2 424	6.1	-	2 424	-
<b>Total Investment Costs</b>	15 164	47.5	150	0.5	10 131	31.8	3 403	10.7	405	1.3	872	2.7	1 782	5.6	31 906	80.5	11 060	19 063	1 782
II. Recurrent costs																			
A. Salaries and allowances																			
Salaries	730	37.7	-	-	-	-	-	-	-	-	-	-	1 207	62.3	1 937	4.9	-	1 937	-
Allowances	236	41.5	-	-	-	-	191	33.5	-	-	-	-	142	25.0	569	1.4	-	569	-
Subtotal salaries and allowances	966	38.5	-	-		-	191	7.6	-	-	-	-	1 350	53.8	2 506	6.3	-	2 506	-
B. Operation and maintemance																			
Civil works O&M	-	-	-	-	2 089	85.0	-	-	-	-	-	-	369	15.0	2 458	6.2	615	1 475	369
Vehicles O&M	1 058	64.0	-	-	-	-	182	11.0	-	-	-	-	413	25.0	1 653	4.2	413	992	248
Equipment O&M	569	60.5	-	-	-	-	136	14.5	-	-	-	-	235	25.0	940	2.4	235	564	141
Office supplies	117	75.0	-	-	-	-	-	-	-	-	-	-	39	25.0	156	0.4	39	93	23
Subtotal operation and maintemance	1 744	33.5	-	-	2 089	40.1	318	6.1	-	-	-	-	1 056	20.3	5 207	13.1	1 302	3 124	781
<b>Total Recurrent Costs</b>	2 710	35.1		-	2 089	27.1	508	6.6	-	-	_	-	2 406	31.2	7 713	19.5	1 302	5 630	781
Total Disbursement	17 874	45.1	150	0.4	12 220	30.8	3 911	9.9	405	1.0	872	2.2	4 188	10.6	39 619	100.0	12 362	24 694	2 563

## Expenditure Accounts by Components – Totals Including Contingencies (USD million)

						Institutional Support		
	Agricultural Support Services	Community Support Services	Rural Roads	Rural Financial Services	Community & Women's Groups	Localities	Project Management Unit	Total
I. Investment Costs							-	
A. Civil works	2 894.6	2 346.7	9 405.6	-	1 650.4	2 636.0	100.3	19 033.6
B. Vehicles	518.4	321.0	-	92.8	-	857.9	371.6	2 161.7
C. Equipment	432.3	1 009.0	910.4	-	712.2	116.6	164.5	3 344.9
D. Studies and technical assistance	429.7	159.8	24.3	49.2	-	-	1 040.1	1 703.0
E. Training	651.0	312.5	17.9	116.9	1 948.9	128.7	63.1	3 239.0
F. Credit fund	-	-	-	2 423.9	-	-	-	2 423.9
<b>Total Investment Costs</b>	4 925.9	4 148.9	10 358.2	2 682.9	4 311.6	3 739.2	1 739.5	31 906.2
II. Recurrent Costs								
A. Salaries and allowances								
Salaries	218.5	-	-	-	-	932.2	786.7	1 937.3
Allowances	104.7	254.4	-	-	-	-	209.9	569.1
Subtotal Salaries and allowances	323.2	254.4	-		-	932.2	996.6	2 506.4
B. Operation and maintenance								
Civil works O&M	-	-	2 458.1	-	-	-	_	2 458.1
Vehicles O&M	545.4	242.3	-	-	-	633.2	232.6	1 653.4
Equipment O&M	247.7	181.2	-	-	-	253.3	257.4	939.6
Office supplies	62.6	-	-	-	-	-	93.0	155.6
Subtotal operation and maintenance	855.7	423.5	2 458.1		-	886.5	583.0	5 206.8
<b>Total Recurrent Costs</b>	1 178.9	677.9	2 458.1		-	1 818.6	1 579.6	7 713.2
Total PROJECT COSTS	6 104.8	4 826.8	12 816.3	2 682.9	4 311.6	5 557.8	3 319.2	39 619.3
Taxes	459.5	457.0	596.3	40.8	178.1	539.6	292.1	2 563.4
Foreign Exchange	1 984.1	1 863.7	4 613.6	52.0	1 111.8	1 712.1	1 024.7	12 362.0

APPENDIX VI

#### ORGANIZATION AND MANAGEMENT



#### APPENDIX VII

#### FINANCIAL AND ECONOMIC ANALYSIS

#### A. Financial Analysis

#### **Main Assumptions**

- 1. **Input prices.** These are market determined for most crop production inputs, including fertilizers and agrochemicals as well as investment items. Custom service rates for agricultural machinery from cooperatives are close to the market rates; in all cases, these are at cost-recovery levels. Input prices for the livestock subsector are, on the whole, determined by the market place.
- 2. The financial prices of programme inputs and products were derived from information obtained from the field visit and in discussions with officers in the departments concerned. In order to arrive at farm-gate prices, appropriate adjustments were made for handling, transport from the farm to the market and other internal costs.
- 3. **Labour**. In general, the supply of labour is not a major constraint to agricultural development in the programme area, except during limited peak periods when there is a high demand. There is no strain on the local labour (unskilled) supply. The family labour available will largely meet the field requirement. The cost of farm labour is set at the going market rate of about SDD 300 per day.
- 4. **Crop Budgets.** Crop budgets were prepared on the basis of one feddan for the following indicative crops: millet, sorghum, groundnut, sesame, cotton, cowpea and tomato for the three zones. Table 1 shows the yields and incomes after-labour cost in the "with" and "without" programme situations for the various crops and livestock activities.

**Table 1: Yields and Incomes** 

	Yields (k	g/feddan)	Income After Labour Cost		
	Present	With	Present	With	
		Programme		Programme	
Zone I					
Millet	120	180	4 028	5 790	
Sorghum	120	270	240	2 677	
Groundnut	200	360	7 300	16 900	
Sesame	100	140	6 235	6 465	
Zone II					
Millet	180	450	6 420	18 160	
Sorghum	180	450	1 260	5 227	
Groundnut	200	360	7 300	16 903	
Sesame	90	180	5 070	11 175	
Cotton	45	135	5 900	18 470	
Zone III					
Sorghum	180	450	1 260	4 377	
Cotton	45	135	5 900	17 320	
Jubraka					
Cowpea	45	80	-418	1 509	
Tomato	250	2 000	2 600	78 999	

#### APPENDIX VII

#### Farm Models

- 5. In order to determine the impact of the programme on individual farmers, detailed financial analysis of crops and farm budgets were prepared on typical farm models. Three farm models were developed and used to arrive at incremental incomes at the farm level produced by programme interventions. The models represent the agro-climatic zones of the South Kordofan State and are described below.
- 6. **Farm Model 1** is representative of the present 30 *feddans* in Bildat and one *feddan* in Jubraka in the semi-arid sub-Sahelian zone. This model represents 78 600 *feddans* of traditional farmland in the programme area. With the programme, the gross value of production will increase by SDD 423 462, from SDD 148 115 for the "without" programme situation to SDD 571 577 at full development by Farm Year 10. Total production costs will increase by SDD 108 885. The farm family benefit after financing will increase by SDD 313 576, from SDD 125 198 for the "without" programme situation to SDD 438 774 at full development.
- 7. **Farm Model 2** is representative of a present 40 *feddans* in Bildat and one *feddan* in Jubraka in the semi-humid savannah zone. This model represents 801 720 *feddans* of traditional farmland in the programme area. With the programme, the gross value of production will increase by SDD 513 620, from SDD 133 569 in the "without" programme situation to SDD 647 189 at full development by Farm Year 10. Total production costs will increase by SDD 160 719. The farm family benefit after financing will increase by SDD 352 895 to SDD 447 001 at full development.
- 8. **Farm Model 3** is representative of a present semi-mechanized 20 *feddans* in Bildat and one *feddan* in Jubraka in the semi-humid savannah zone. This model represents 70 740 *feddans* of farmlands. With the programme, the gross value of production will increase by SDD 466 422, from SDD 79 749 for the "without" programme situation to SDD 546 171 at full development. Total production costs will increase by SDD 166 994. The farm family benefit after financing will increase by SDD 299 428, from SDD 74 575 for the "without" programme situation, to SDD 374 003 at full development. Table 2 summarizes the results of analysis of the farm models.

Table 2: Farm Incomes (SDD)

	Without Programme	With Programme	Incremental	Factor
Typical Farm – Zone I				
Gross value of production	148 115	571 577	423 462	2.9
Total production cost	22 918	131 803	108 886	4.8
Farm family benefits	125 198	439 774	314 576	2.5
Typical Farm – Zone II				
Gross value of production	133 569	647 189	513 620	3.8
Total production cost	39 464	200 183	160 719	4.1
Farm family benefits	94 105	447 001	352 895	3.8
Typical Farm – Zone III				
Gross value of production	79 749	546 171	466 422	5.8
Total production cost	5 174	172 168	166 994	32.2
Farm family benefits	74 575	374 003	299 428	4.0

#### APPENDIX VII

#### **Economic Rate of Returns**

- 9. Economic programme costs have been derived from the financial cost of the incremental investment and recurrent costs by applying the appropriate conversion factors. Price escalation and taxes were excluded from the economic analysis.
- 10. The stream of net economic benefits has been determined for both "without" and "with" programme situations. These net benefits were derived by taking the difference between the "with" and the "without" programme net value of crop production and deducting the imputed cost of farm labour. Table 3 shows the programme production.
- 11. The economic internal rate of return (EIRR) on the investments in the programme area over 20 years without residual values is estimated at about 19.0%. The EIRR was subject to sensitivity analysis to measure variations in it due to unforeseen factors. The criteria adopted were a 20% cost overrun; a 20% decrease in benefits, a combination of the two criteria and a two-year lag in programme benefits. The results of the analysis are as follows:

	<b>Basic Assumptions</b>	EIRR (%)	
(a)	Base case	19.0	
(b)	20% cost overrun	16.5	
(c)	20% decrease in benefits	15.9	
(d)	Combination of (b) and (c)	14.7	
(e)	Two-year lag on case (a)	16.8	

**Table 3: Programme Production** 

		Without	With	
		Programme	Programme	
	Unit	1 to 20	1	20
Main Production				
Sorghum	Ton	22 780	22 780	85 877
Millet	Ton	503	503	1 509
Sesame	Ton	4 519	4 519	17 685
Groundnuts	Ton	2 096	2 096	17 580
Lint	Ton	-	-	6 239
Seed	Ton	-	-	10 167
Cowpea	Ton	94	94	188
Tomato	Ton	524	524	4 192
Stover	Ton	117	117	236
Sheep	Head	8 384	8 293	23 894
Goats	Head	90 547	89 875	316 915
Cattle	Head	25 152	25 152	83 840
Milk	Litre	11 221 984	11 200 668	81 345 760
By-Products				
Sorghum Straw	Ton	28 476	28 476	97 489
Millet Straw	Ton	670	670	1 970
Haulms	Ton	2 620	2 620	21 487