DAVID Young

215

KORDOFAN

CREDIT

INSTITUTION

THE DEMOCRATIC REPUBLIC OF SUDAN

PROJECT OF THE GOVERNMENT OF KORDOFAN REGION

A RURAL CREDIT INSTITUTION FOR KORDOFAN REGION

A PROJECT REPORT PREPARED FOR THE REGIONAL MINISTRY OF ECONOMICS AND FINANCE.

BY

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DRAFT REPORT
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Page

CHAPTER ONE

TERMS OF REFRENCE AND SCOPE OF THE STUDY

1.1 Terms of Reference:

The proposal for this project has been formulated in response to an initial letter (in Arabic) sent by Dr. El Fatih M. El Tigani, Minister of Finance and Economics of Kordofan Region, to Dr. Bashir Omer of the Economics Department, University of Khartoum, on October 17th, 1981. In that letter the Minister requested Dr. Bashir to shoulder the responsibility of studying and consequential to that establishing, a "Rural Credit Institution" to serve small farmers in Kordofan region. The Minister considered that letter as a preliminary contract between the Regional Government of Kordofan and the Team to be chosen to execute the study.

1.2 After replying affirmatively to the Minister, a team was formulated which included the following list of members, each with the capabilities and the capacities shown against them in the list. In the selection of the team, due care was given to the fact that the study requires an inter-disciplinary approach, although emphasis was given to the economics side of it.

1.3 Scope of the Study:

A scope of study was subsequently formulated which included the following list of sub-headings:-

(i) Introduction

Under this section the objectives of the project are to be laid down and justified; the small farmer for whom the institution is to be created is to be

TEAM MEMBERS

NAME	OCCUPATION	SPECIALIZATION (PROJECT)
(A) Team Members:		
1. Dr. Bashir Omer M. Fadlalla	Lecturer, Economics University of Khartoum	Team Leader. Economics, Agricultural Economics and Development Finance.
2. Dr. Abdel Ghaffar Mohamed Ahmed	Director, Development Studies and Research Centre, Associate Professor, Anthropology, University of Khartoum.	Social Organization, Institutional and Rural Development.
3. Dr. Mohamed Osman El Sammani	Lecturer, Geography, University of Khartoum.	Population and Locational Aspects.
(B) Consultants:		
1. Dr. Ahmed Hassan El Jack	Dean, Faculty of Economic and Social Studies, University of Khartoum Associate Professor, Management.	Management and Administrative Aspects.
2. Dr. Mohamed Hashim Awad	Professor, Economics Dept., University of Khartoum.	Banking and General Finance.

NAME	OCCUPATION	SPECIALIZATION (PROJECT)
(C) Supporting Staff:		
1. Mustafa Zakaria	Teaching Assistant, Economics, Dept. University of Khartoum	____
2. Mustafa Babiker	Teaching Assistant, DSRC, University of Khartoum.	____
3. Mukhtar Mohamed Ahmed	M.Sc. Student Geography University of Khartoum	____

Table (1.3): Area Cultivated and Yields of the Small Farmer in Kordofan Region

Crop	Average Acreage: (M = Mukhamas; F = Feddan)	Average Yield (Kantar per Mukhamas)	Total Average Yield (per each household)
1. Dura	8.58 M. (15.02 F)	2.76 Kantar/M	23.68 Kantar (11.84 Sacs)
2. Groundnuts	5.70 M. (9.98 F)	6.64 Kantar/M	37.85 Kantar (18.93 Sacs)
3. Sesame	6.30 M (11.02 F)	0.62 Kantar/M	3.91 Kantar (1.96 Sacs)
4. Other	1.07 M (1.87 F)	0.50 Kantar/M	0.54 Kantar (0.27 Sacs)
5. Total	21.65 M (37.89 F)	12.24 Kantar/M	65.98 Kantar (32.99 Sacs)
The Small Farmer (1)	15.35 M (26.86 F)	4.7 Kantar/M	72.15 Kantar (36.07 Sacs
The Small Farmer (2)	15.95 M (27.91 F)	1.29 Kantar/M	20.63 Kantar (10.31 Sacs)

Source.

Rural Council - Nihud)

(c) Southern Kordofan Eastern District (previously Eastern Jebels Tegale Rural Council)

The phyiscal conditions of each of the above areas (i.e., climate, soil, geographical features, general agronomy, etc.) are studied, so is the present state of agriculture and its future potential.

(iii) The Role of Agriculture in the Economy:

(A) The National Economy

(B) The Kordofan Economy

The role of agriculture in both economies is discussed and carefully evaluated with respect to the contribution of agriculture to such important macroeconomic aspects like,

- Gross Domestic Product,
- Exports
- Employment
- Investment
- Incomes
- Marketing, transportation, and storage.

Major constraints which prevent agricultural from realizing its full potential are identified.

(iv) The Basis For Organization of Production In The Project Area

To the extent that this has a direct influence both on the shape and the operation of the proposed institution, full investigation is made of this topic.

Traditional agricultural practices still dominate the scene of economic life in Kordofan and the evaluation of these practices is thus regarded as an essential prerequisite to any efforts of influencing this sector. Under this topic, full investigation is made of such practices like:

- Self-effort,
- Nafir,
- 'Sharaka',
- Hired labour, etc.

(V) Appraisal of Present 'Modern' Agricultural Practices in Kordofan:-

Three main types are discussed and evaluated under this heading, these are, (a) the Agricultural Bank - Umm Ruwaba experiment, (b) Nuba Mountains Agricultural Corporation and, (c) Mechanised Farming Corporation (Habila). The close investigation of the performance of these 'modern' practices and a deep look into the causes of their success and failure, is regarded as a necessary platform for the proposed institution to stand upon.

(Vi) Agricultural Finance and Credit Systems:

- A household survey and a questionnaire for a sample of 60 households (general) plus 10 households (detailed to establish such things like rural income per capita consumption, savings, etc. are discussed.

(vii) Impact of Migration On:

- Agricultural Production
- Agricultural Finance
- Traditional Institutions
- Patterns of Consumption

- Style of village life in general

(viii) Marketing Systems and the Price level:

- Prices of agricultural crops and livestock,
- Marketing Systems,
- Distributional Channels and transportation,
- Storage facilities.

(ix) A Model of the Structure of the Institution:

(a) Objectives,

(b) Its relation to the Agricultural Bank - Umm Ruwaba Experiment,

(c) The Co-operatives option for agricultural finance and for achieving integrated rural development,

(d) Initial branches

(e) Sources of initial funds

(f) Infrastractural aspects of the model:

- Staffing
- Administrative Structure
- Staff cars and other office equipment
- Buildings (offices, houses, storage facilities)
- Transportation of production for marketing

(g) Supporting measures (e.g., 'Tagawi', food supply, training of staff, contingency funds for subsidization, etc.).

(h) Extension aspects of the institution,

(i) Mechanisms of money lending and recovery.

(X) Calculation of Total Costs:-

(a) Fixed assets

- Buildings
- Office equipment
- Cars and trucks

(b) Capital and investment costs

(c) Wages and salaries

(d) Money needed for supply of dura for 5 years,

(e) Money needed for 'Tagawi' and improved seeds for 5 years;

(f) Cost of training staff of the bank for 5 years;

(g) Cost of training the Co-operative administration (Co-operative officers) and the Co-operatives' leaders (at the village level) for 5 years.

(h) Contingency fund for subsidization in years of crop failure and of exceptionally low prices.

(i) Cost of extension: lending money to Co-opatives to expand in the direction of flour mills, consumer shops, transportation, marketing, etc.

(j) Operational, maintenance, and repair costs.

(k) Other costs.

1.4 Methodology, field visit and the Questionnaire:-

After formulating a very detailed questionnaire to be conducted in the sample areas (see Appendix), the team embarked on a field visit during the period 1.3.82 to 14.3.82. The visit started at El Obeid city, the capital of the Kordofan region. At El Obeid, the team met many government officials, conducted guided interviews, and visited many government and non-government units where relevant information was cited and collected.

In a meeting with the Regional Minister of Economics and Finance, his Deputy, the Head of the Regional Planning Unit, and a representative of the Regional Ministry of Agriculture, the broad aspects of the regional economy were discussed and the team had the opportunity to find out the

Regional government's plans for the whole agricultural sector. Due emphasis was laid on the important role of the traditional agricultural sector in the lives of the people of Kordofan. El Obeid visits included the Governerate's offices, the Agricultural Bank offices, the Co-operatives offices and various other offices.

Then the team left El Obeid towards Umm Ruwaba. On the way to Umm Ruwaba, the team stopped at Rahad, Simaih, the villages of Tibna and Kou'a Namousa where Public meetings were held and other fact- finding procedures were carried out. The main theme has been, throughout, to investigate the living conditions of the small farmer, the constraints to agricultural production (livestock included), and the type of institutional and social organization.

At Umm Ruwaba itself, the team's activities included visits and intensive interviewing at the city's Council, the Co-operatives office, the Agricultural Bank (Umm Ruwaba Branch) The Grains Market, the Farmers' Union, and selected crop traders. One of the team members stayed over at Um Ruwaba for 15 days to distribute a general questionnaire to a sample of 60 small farmers in neighbouring villages and a more detaile questionnaire to a sample of 10 households in the same vicinity

The team then set towards Abbasia town. On the way, it held public meetings and conducted guided interviews at the villages of Wad-el-Hadig, Gardood Taweel, Tabasa, and Fariq-Awlad-Himaid. At Abbasia town the team members spent quite sometime at the Headquarters of the Nuba Mountains Agricutlura Corporation (NMAC) interviewing officials, Co-operative member digging into the files and holding public meetings. Here agai

a second member of the team was left behind for 15 days to conduct the questionnaire.

The same procedure of fact-finding and data collection was repeated at a number of villages on the way to Rashad town all chosen randomly. This methodology, the team discovered, produced very good results. A sample of villages and towns was further covered in the following areas,

- Rashad to El Faid Um Abdalla,
- El Faid Um Abdalla to Habila,
- Habila to Dilling,
- Dilling to El Obeid,
- El Obeid to El Khuwai,
- El Khuwai to Nihud (where a third member of the team stayed over for 15 days),
- Nihud to Khamas, to Sa'atta,
  Abu Haraz and El Obeid again.

Having accomplished the enlightening field visit, the team held a final meeting with Ministers and regional government officials to restate the regional government's policies with regard to agriculture and the small farmer and the regional economy in general. On returning to Khartoum the team embarked on a two-month data analysis and report-writing the result of which is this feasibility report.

CHAPTER TWO

2. The Project Area.

2.1 A Pilotting Approach

The agricultural credit institution under inception shall offer its services to all of the small traditional farmers of Kordofan Region in the long run; which is one of the basic assumptions on which the present study rests. However, and for practical reasons, the institution should start small; at least in the first years of its operation; which implies that, it has to limit its activities to specific areas in the region.

Adopting this pilotting approach is meritted by many considerations:

(i) Despite the wide awareness about the need for agricultural credit, expressed at the level of the individual tenant, the local community, or the formal bodies, there is no clear idea about the philosophy on which agricultural credit should be based. There is also no definite frame regarding its objectives, organization, administration, and the channels through which it reaches the beneficiaries. Therefore, starting small will enable the experiment to attain better results.

(ii) Implied in the above consideration, yet it has to be stressed more, is the opportunity availed by pilotting to shift the geographical or the planning focus, from the initially set targets, to newly conceived ones as the Project is being implemented; without affecting drastically large target populations. It is hoped

that this will rise into view as one of the basic assumptions guiding the development of the Project. In other words, the Project shall be looked at as an experiment in agricultural credit, closely monitored by research of multi-disciplinary nature, aimed at perfecting and extending the experiment.

(iii) Of equal importance is that development founded on pilotting, being based on area selection, or agricultural production type, incurs less costs, being compared to wider geographical coverage, or all forms of agricultural production. Again, the same comparative picture holds true in case of failure: as less costs are involved if the Project is limited. Finally, a smaller Project which is well formulated stands better chances of being funded, than a widely spread one.

It becomes evident therefore, that the agricultural credit institution that shall eminate from the present study should be founded on specific areas in Kordofan. This means selecting representative agricultural production areas. To optimize results, the selection has to be done against general background information on the present land resource potential and the agricultural situation in the Region; as shall be attempted in the forthcoming sections.

2.2 Basic Physical Features

2.2.1. climate:

The Region can be divided into four main climatic zones;

with the same classification holding true for the ecological zones of the area; and influencing to a great degree the resultant vegetation and land use types. The four climatic zones are: the Desert, the Semi-desert, the Low Savannah rainfall, and the High Savannah rainfall. All types merge gradually into each other from north to south, or vice versa, with no distinct boundaries between one zone and the next, especially for the desert and semi-desert types, which are less developed in the case of Kordofan.

The above characteristics of the climate of the Region are accounted for by the three main factors: wind, temperature, and rainfall; conditioning the tropical climate in this part of the continent. Of the three, rainfall is the most controlling factor; with averages ranging from 100mm in the Desert type to the north, to 800mm in the Savannah High Rainfall to the south; and with the 400mm isohyte running approximately in the middle of the Region.

It usually rains during the period July to October in most of the Region; with the areas to the south experiencing early showers during May and June. As for maximum rains, these fall during July and August. In nearly all of the area, the months November to June are a dry period. Due to the rainfall pattern and its distribution most of Kordofan Region, excluding its very northern parts, lies within the grazing and dry farming belt; occupying the central parts of the country and the African continent as a whole.

2.2.2 Soils and Natural Vegetation.

The northern half of the Region consists of sandy soils, while its southern half is made of heavy clays. It is

important to remark in this connection, that though rainfall is less in the northern parts of the Region, it is more effective from crop production angle; since all the amount received are absorbed by the sandy soils, which is not the case with the heavy clays.

Dividing the soils of the Region into sandy, and heavy clays is very generalized. The local people distinguish three soil groupings: The "goz", the "gardud", and the "Teen" and within these, soil sub-types exist. According to the survey findings of Kordofan Special Fund Project(1) (1962 - 1967) in the northern half of the Region (which can be generalized for its southern half, except for the very south of it) the following soil combinations are distinguished:

Geomorphic Unit	Soil Combination
1. Inselberg and pediment	Nuba
2. Sandy Pediplain	Abu Zabad
3. Clayey Pediplain	Kazgeil
4. Clay Plain	Magolin
5. Alluvial Flood Plain	Semeih
6. Sand Sheet & Low Dune Complex	Taloshi
7. Longitudinal Dunes	El Tayara
8. Transverse Dunes	Umm Busha
9. Dune Complex	Mahbub
10. Fluvio-Lacustrine Deposits	Umm Hashas.

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(1) Land and Water use survey, in Kordofan Province of the Republic of The Sudan; funded by the United Nations Special Fund, supervised by FAO, and executed by Doxiadis Associates. The surveys covered an area of 90,000 sq.Km.; extending between Lat. 14 and 11 ; and long.28 and 31 approximately.

Traditional agriculture involving the small farmer is practiced almost in all of the above soil combinations. The farming intensity, the crops produced, the practices in use, etc. of course vary from one area to the other.

Considering vegetation, its distribution is influenced very much by the climatic conditions and the soil types. The Region is characterised by three ecological zones: Tropical Desert (combining the desert and semi-desert climatic zones identified above) Tropical Thornland, and Tropical Savannah Woodland. Each of these zones is dominated by certain vegetation associations.

In the Tropical Desert there is one dominant formation which is Aristida Grassland Association.

In the Tropical Thornland, seven Associations are to be found including: Acacia tortilis - Leptadenia, Acacia senegal, Acacia senegal - Combretum cordofanum, Acacia seyal - Balanites, Acacia mellifra - commiphora, Acacia mellifera, and Riparian vegetation.

As for the Tropical Savannah Woodland the Associations to be found are: Combretum cordofanum - Guiera, Albizzia amara - Dalbergia, Terminalia browni, Jebel and Rock outcrop, and Jebel Pediments.

2.2.3 Land Use:

As the climate and soils have shaped the vegetation of the area, the same factors have greatly influenced the prevalent land use systems. Parallel to the north-south arrangement of the ecological zones, also run the land use

types; with those parts to the north of lat. 14 dominated by the Abbala group (camel nomads). The central ones between Lat. 14 and 11 by dry farming on sandy soils mainly. And the southern parts between Lat. 11 and 10 approximately, by dry farming on clay soils; besides the prevalence of the Baggara group (cattle nomads) in the same zone.

Dry farming in the central zone is fully undertaken by traditional village communities of small farmers, spread throughout the Region from east to west; with patterns of distribution influenced very much by the availability of drinking-water sources.

Up to the mid 1960's, the overwhelming majority of the population of the southern clay parts of the region, was made of traditional small farmers, and accordingly this type of agricultural economy was the dominant one. By then mechanized farming began to assume importance in the area. Though it constitutes at present a leading agricultural production sector in terms of areas cultivated, the investment allocated to its development, and the resultant volumes of production, traditional agriculture is still dominant in this zone, whether judged by the size of population practicing it, or by its geographical spread.

2.2.4. Population:

According to the 1973 census Kordofan Region had a population of 2,098,073 persons; out of whom 269,070 persons were urban (12.8%) 1,422,729 were rural settled (67.8%) and 406,274 were rural nomadic (19.4%). Applying an annual rate

of increase of 2.8 percent (except for the urban case) the Region's population is estimated to be 2,625,000 persons by 1982, of whom 1,800,000 are rural settled, 500,000 are rural nomadic, with the rest as urban population.

Of the above three categories of population, the present study is concerned more directly with the rural settled who by occupation are traditional small farmers. The following Table (1) gives the population sizes and geographical distribution by People's Regional Councils Units according to 1973 census.

Table (1)

Population by Region Council Unit, 1973 census.

Peoples' Regional Council	Rural Settled	Rural Nomadic	Urban	Total
1. Kababish	59652	137523	2676	199851
2. Dar Hamid	126906	14762	8927	150595
3. Eastern Kordfan	245414	20634	34157	300205
4. Bederiya	88233	4973	-	93206
5. Hamar	276972	9486	33182	319640
6. Messiriya	103720	108409	31474	243603
7. Northern Jebels	149167	22030	19216	190413
8. Tegale	159448	74323	30897	264668
9. Southern Jebels	213217	14134	18468	245819
			+ElObeid: 90073	
Totals	1,422,729	406274	269070	2,098,073

The figure for the rural settled category of population given in the previous table are projected for 1982, in Table (2). The same table gives also estimates of the

numbers of settled families (based on an average family size of 7 persons) by regional councils units; as an indication of the size and geographical distribution of small traditional farmers populations.

Table (2)

Projected Rural Settled Population (1982) With Estimates of Number of Families, by Regional Council Unit.

Peoples' Regional Council	Projected Rural Settled Population 1982	Estimated Number of Families 1982
1. Kababish	74600	10700
2. Dar Hamid	158600	22700
3. Eastern Kordofan	306800	43800
4. Bederiya	110300	15800
5. Hamar	346200	49500
6. Messiriya	129700	18500
7. Northern Jebels	186500	26600
8. Tegale	199300	28500
9. Southern Jebels	266500	38100
Totals	1,778,500	254,200

Out of the four types of economies prevailing in the Region (camel and sheep pastoralism, traditional agriculture, mechanized farming, and cattle pastoralism), the present study being focussed on traditional agriculture has to concentrate therefore, on the central and southern parts of the Region. Which areas to select within these parts in the frame of the pilot scheme recommended earlier, shall be discussed next.

2.3 The Project Area:

In selecting the pilotting areas, two sets of criteria have been taken into consideration:

(i) The agricultural production situation, with regard to acreal distribution of crops, production intensity, farming patterns, etc.; and

(ii) The acquired institutional experiences in the areas of agricultural credit, co-operation, and planned agricultural development.

2.3.1. The Agricultural Situation:

The types of crops produced and their geographical distribution can be used as a basis, for assembling the Regional Councils Units of Kordofan into sample areas. From these, representative ones can be selected for the pilot scheme. By examining the distribution of crops in the Region, it is evident that four crops predominate. These are: Sorghum, pennisetum, sesame, and groundnuts. Other less important crops are found including: water-mellons, karkade, cotton, lubia, and maize in some places. Besides the above crops which are produced under dry farming conditions, we find small irrigated areas like El Kheiran, Bara El Bangadeid, El Abassiya, Abu Gibeiha, El Feid Umm Abdallah, Abu Zabad, Abu Haraz, etc. where fruits and vegetables are produced.

If the soil combinations referred to earlier are narrowed down to four types, and related to the distribution of the crops produced in the Region by Regional Councils Units, the following picture is reached, as given in table(3)

Table (3)

Distribution of Crops by Regional Units

Soil Croup	Geomorphic Unit	Crops produced (Listed in order of importance)	Regional Council Units
I Goz	i.Sand sheet & Low dune complex	i.Pennisetum.	-Eastern Kordofa
		ii.Sorghum	-Dar Hamid
	ii.Longitudnal dumes.	iii.Sesame	-Bederiya
	iii.Traverse dunes.	iv.Gum	-Hamar
	iv.Dune complex	v.Kerkade	
		v-.Groundnuts	
II Abu Zabad Soils	i.Sandy pediplain	i.Pennisetum	-Hamar
		ii.Groundnuts	-Messiriya
		iii.water mellon	
		iv.Sorghum	
		v.Sesame	
		vi.Gum	
		vii.Kerkade	
III Gardud Soils	i Clay pediplain	these soils are too compacted for wide spread farming. where cultivation is possible,the main crops are:	
		i.Sorghum	-Bederiya
		ii.Sesame	-Northern Jebels
iv. Clays	i.Alluvial flood plain	i.Sorghum	-Tegale
	ii Clay plain	ii.Groundnuts	-Northern Jebel
	iii Inselberg & Prediment	iii.Cotton	-Southern Jebel
		iv.Sesame	
		v.Pennisetum	

Out of the four groups of Regional Councils Units identified above as production areas, the one based on "gardud soil", being of limited aereal extent, is excluded from selection. Of the remaining three, one unit is being selected from each, for the recommended pilot scheme on agricultural credit; namely: Eastern Kordofan, Tegale, and Hamar Fig (1). This selection has proved feasible from the findings of the other sets of criteria used.

2.3.2 Acquired Institutional Experiences:

Investigation of past institutional developments aimed at the improvement of the agricultural situation in the Region, whether through agricultural credit, co-operative movement, or planned agricultural development, has shown that the three Regional Councils units chosen have experienced the above developments variantly. This can be summarized in the following manner:

Kind of development	Regional Council Unit
1. Agricultural Credit, by Agricultural Bank of Sudan	i. Eastern Kordofan
2. Hashab Rehabilitation Programme	i. Eastern Kordofan
3. Groundnuts improved seeds loan	i. Eastern Kordofan ii. Tegale iii. Hamar
4. Co-operative departments with regional offices	i. Eastern Kordofan (Umm Ruwaba) ii. Tegale (El Abassiya) iii. Hamer (En Nahud)
5. Nuba Mts. Agricultural Corporation for Modernization of Traditional Agriculture	i. Tegale

These findings substantiates the selection made. Furthermore it enables the study to examine the performance of the institutions mentioned above and draw from their experiences. This shall beenefit the exercise aimed at the establishment of the agricultural credit institution under proposition.

CHAPTER THREE

THE ROLE OF AGRICULTURE IN THE ECONOMY

A. The National Economy:

The agricultural sector is by far the most important sector in the Sudanese economy both at the macro- and the micro-levels. It is still the net earner of foreign exchange, Sudan's most wanted resource, it being a major constraint to developmental efforts and to importation of vital consumer commodities like oil, sugar, wheat and other foodstuffs. Agriculture also, so far, is the area where most of the wealth is accumulated and where most of the fortunes are made. Big (mechanized) agricultural schemes in both the irrigated and the rain-fed areas are a relatively easy and quick way of making vast profits.

The agricultural sector has been steadily contributing about 40% of Sudan's Gross Domestic Product, and despite the recent decline in that percentage it is still the biggest contributor to GDP as table (3.1) below indicates. Moreover, agriculture provides over 90% of Sudan's merchandise exports. Cotton still is, and will probably continue for quite some time to be, the leading export item, followed by such items like groundnuts, sesame, gum Arabic, oil cake and so on. Table (3.2) gives time-series data (in percentage form) about the contribution of these items in our export activity to the rest of the world. It has to be noted however that in recent years our agricultural exports' performance has not been that good. This is not the place to discuss the causes of decline in agricultural production and factors' productivity. However, this fact, coupled with increased propensity for importation, has led to serious problems in Sudan's balance of trade and

Table (3.1):- Gross Domestic Product At Current Producers Prices By Economic Activity For The Period 1971/1972 — 1979/1980
(In £s Millions)

Economic Activity	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
1. Agriculture	324.1	344.6	516.4	585.3	628.2	824.3	1,052.0	1,222.4	1,420.4
2. Commerce	284.1*	142.9	175.7	245.2	315.3	445.3	555.8	684.1	797.7
3. Manufacturing & Mining	76.8	82.9	111.3	142.9	161.1	193.1	216.8	284.7	326.6
4. Transport & Communication	51.3	61.5	74.8	89.4	192.4	226.6	279.1	346.9	434.2
5. Construction & Public Works	26.4	31.2	61.0	65.0	88.8	103.3	118.6	146.5	180.9
6. Electricity and Water	16.9	17.5	18.6	20.9	28.6	34.3	38.6	41.9	45.4
7, Government Services	-	104.8	127.9	151.2	171.5	217.9	261.2	308.5	364.3
8. Other Services	-	111.4	160.5	210.9	262.1	294.9	360.6	427.0	505.6
G.D.P. At Current Producers Prices	832.4	896.8	1,246.2	1,510.8	1,848.0	2,339.7	2,882.7	3,462.0	4,072.1
% of Agriculture of G.D.P.	39%	38%	41%	39%	34%	35%	36%	35%	35%

Source:- Bank of Sudan Annual Reports, 1978, 1979, 1980

* Includes Finance and Services.

consequential to that also to problems in the balance of payments. Table (3.3) shows how the gap in the balance of trade has been growing.

At the local scene, agriculture provides the bulk of raw materials for domestic industry like textiles and sugar in particular. The latter is now the most important manufacturing (agro-) industry in the country in terms of volume of investment, employment opportunities created, and economic activity in general. The agricultural sector itself, provides employment opportunities for about 80% of the work force in Sudan. Of the actual and planned public sector investment, agriculture has been awarded an average of 35%, 27%, and 38% for the three periods 1965-70, 1970-75, 1975-80. While in the Three Year Public Investment Programme, 24.4% of total public investment is allocated to agriculture, as table (3.4) shows.

About 200 million feddans of Sudan's area (625m.f.) is regarded as suitable for cultivation. To date, only about 15% is actually cultivated, and only half that area is used for growing crops and raising livestock. Certain features of Sudanese agriculture, such as the large number of independent holdings, where production is very much dependent upon weather conditions and ecological circumstances, make agricultural production quite unpredictable and constrain its full potential to be realized. In this connection, availability of water supply and some of the basic needs and the availability of finance have been major hurdles to agricultural expansion. Massive public sector investment has thus often been cited as a must in order to release that potential to achieve and sustain a reasonably high rate of growth of agricultural production.

Table (3.2):- Main Items of Export As Percentage of The Total Value Of Exports During The Period 1971 -- 1980

Items	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Cotton	61.1	58.6	55.4	35.5	46.0	50.7	57.2	51.8	65.8	42.5
2. Groundnuts	8.1	7.8	8.5	14.9	22.9	20.2	12.5	10.2	4.3	2.2
3. Sesame	7.0	7.4	7.0	13.5	7.8	9.0	7.9	9.5	2.7	9.2
4. Gum Arabic	7.0	7.3	4.9	11.7	5.0	5.8	5.9	7.3	8.0	6.7
5. Cake and Meal	3.9	3.5	5.2	1.8	2.7	2.6	3.4	3.3	3.2	5.0
6. Others	12.9	15.4	19.0	22.6	15.9	11.7	13.1	17.9	16.8	34.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source:- Bank of Sudan Annual Reports, 1978, 1979, 1980 - Based on Customs data.

Table (3.3):- The Performance of the Balance of Trade, 1973 - 1980

	1973	1974	-975	1976	1977	1978	1979	1980
1. Exports £s Millions	152.2	122.0	152.5	193.0	230.2	202.3	232.7	271.3
Annual Rate of Growth	+22.4%	-19.8%	+25.0%	+26.6%	+19.3%	-12.1%	+15.0%	+16.6%
2. Imports £s Millions	151.8	247.5	359.9	341.4	376.5	449.5	477.3	788.2
Annual Rate of Growth	+28.8. %	+63.0%	+45.4%	-5.1%	+10.3%	+19.4%	+6.2%	+65.1%
3. Balance of Trade	+0.4	+125.5	-207.4	-148.4	-146.3	-247.2	-244.6	-516.9

Source: Bank of Sudan Annual Report (1980) P. 28.

Table(3.4):- Sectoral Distribution of Public Investment 1980 - 1982/83

(£s Millions)

Sector	Local	Foreign	Total	%
1. Agriculture	112.0	215.4	327.4	24.4
2. Industry	117.1	159.9	277.0	20.6
3. Transport and Communication	148.6	274.7	423.3	31.5
4. Services	49.6	75.1	124.7	9.3
5. Other	129.2	61.0	190.2	14.2
Total	556.5	786.1	1,342.6	100.0

Sources: (i) Ministry of National Planning - The Three Year Public Investment Programme 1980/81 - 1982/83.

(ii) Bank of Sudan Annual Report 1980, P. 92.

B. The Kordofan Region's Economy:

The Kordofan region in Western Sudan is a vast region of an area of 146,932 square miles which is about 16% of Sudan's area and whose population size is 2,098,073, which is equivalent to 14% of the country's total population.

The region of Kordofan is potentially quite wealthy in at least two areas of economic production. These are the area of agricultural production of some key products, and the area of livestock production. Table (3.5) below gives an idea about the region's potential in those two areas. As the second column of the table indicates, Kordofan region produces a very appreciable proportion of Sudan's major crops, and as such it's a leading contributor to the provision of food and foreign exchange.

Agriculture is thus the predominant economic activity in the region with over 90% of the population deriving their living from it. Traditional agriculture (including traditional livestock raising) supplies not only food, housing material and cash, but also satisfies basic social and cultural needs commonly included in the definition of the social welfare function or the quality of life function.

Such important crops like Gum Arabic, sesame, groundnuts, dura (sorghum), and dukhn (millet) are produced in large quantities in Kordofan both in the traditional sector and the recent 'modern' mechanized rain-fed sector of Habila area. Livestock, on the other hand, is a main source of employment (particularly for women), income, consumer goods and, in some limited cases, of savings and investment.

Table (3.5):- Kordofan Region's Agricultural & Livestock Production

(Average of 5 Years 1975 —— 1980)

Product	% of Sudan's Production	Value of Wealth (Million Sudanese Pounds)	Value of Wealth if Commerialised (£s M. per annum)
1. Gum Arabic	67%	9	9
2. Groundnuts	25%	8	8
3. Dukhn (Millet)	40%	7	5
4. Sesame	40%	4	2
5. Dura (Sorghum)	18%	4	1.5
6. Cotton	4%	2	2
7. Maize	7%	1/20	-
8. Cattle	14%	123	34
9. Camels	36%	80	19
10. Sheep	20%	35	7
11. Goats	22%	15	1.5
		287.05	89.0

Source :- Current Agricultural Statistics - Ministry of Agriculture.

However despite the above favourable comments about the role of agriculture in the economy of the people of Kordofan, we find that traditional methods of agricultural production are still the dominant means. Obsolete and outdated tools used by the farmers are a major constraint to lifting production above subsistence level and are a main hindrance to enabling the sector to realise its full potential. Other factors also contribute to this state of affairs and these include low fertility of the land, meagre and uncertain rainfall, scattered population, nomadism, and shifting agriculture. As a result of the above, we find that the proportion of the commercialised agriculture and the ratio of agricultural production which enters the market (see Ch. 7) is relatively quite low. No wonder, therefore, that the income derived from it is also quite low (a net per capita of Ls. 127.00

It has to be noted however that some of the problems cited above are a result of some other economic deficiences from which the traditional sector suffers. The lack, or the gross inadequacy of the basics of life in many areas of the region may be singled out as the most important constraint to increased agricultural production. Fieldwork findings (see chapter two) revealed that the inadequacy of drinking water for both the human beings and the animals in all the areas surveyed was a serious problem that needs to be tackled rather urgently. Other factors are also important. For example, there is an absence of marketing facilities and organised and systematic marketing (see chapter 8, below) and the prices offered by the local markets (merchants) are often exceedingly unfavourable. Moreover, the transport and storage facilities are grossly inadequate. In fact, many of the essential supportive services like schooling, health, communication and

other infrastructural facilities are also lacking. Government involvement in investment in the region is nonexistent and credit financing from local or external sources is extremely limited. The uncertain finance obtainable from the Agricultural Bank of Sudan is difficult to get. The terms of the bank are rigid (save the Bank's experiment at Um Ruwaba, appraised in chapter 8) since the lending rate is quite high (12%)(i), and it requires the ownership of a house or of property which most small farmers in the traditional sector do not have. In this connection, there seem to be a bias in the bank's lending policies towards wealthy farmers in the mechanised and more modern sub-sectors of agriculture. Perhaps understandable so.

Regarding the involvement of the government in the agricultural sector in the region, figures indicate that it is relatively very low (see). Given the assumption that a more balanced approach to growth is preferable to the one which concentrates investment in one sector or one region, the above fact can thus be criticized on two counts: one of equity and another of returns on investment. An ILO report(ii) published in 1976 argues very strongly in favour of investment in traditional agriculture in this region under those two arguments. It argues that traditional agriculture and animal

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(i) In November 1981 (, interest rates were abolished in the Sudan on the grounds that they are a form of usury and the latter is prohibited by Islamic Law. Only the 'marginal cost of providing the service is to be paid by the borrower. When calculated, this comes approximately to about 12%.

(ii) ILO: "Growth, Employment and Equity: A Comprehensive strategy for the Sudan", ILO, Geneva, 1976.

husbandry are capable, in the long run, of better returns to investment than either mechanised rainfed or irrigated agriculture. Moreover, the report makes the point that the modern sector, despite its size (one-third of cultivated land) and relatively rapid growth rate, is capable of absorbing only one-third of the 150,000 workers entering the labour market each year. The report also adds the argument of regional balance and accordingly recommends that priority in public investment should be given to the traditional crop and livestock sector of the South and the West.

While the ILO report, perhaps, presents an extreme case for the sector, it does emphasize nevertheless the necessity of directing public funds to ease the constraints which are so much forbidding it from achieving its potential.

Some very preliminary conclusions may be derived from the discussion above. First, it is evident that the farmer's situation in Kordofan disquises many aspects of poverty; and if development in Third-World countries came to mean particularly the removal or reduction of poverty, then urgent developmental efforts in this sector are justified. Secondly, it is also evident that the real potential of traditional agriculture has not been released and that is because of:

(1) scarcity and inaccessibility of finance in the hands of farmers when they really need it to secure basic inputs (mainly seeds - "tagawi" or "tairab"), and to feed themselves and their families (purchase of food and other consumer goods).

(2) Accordingly, the only alternative left for him to secure such finance is to resort to the notorious rural credit

finance system known as the "shayl" system.[(i)] Basically, this is a borrowing system with exorbitant rates of interest and very unfavourable terms to the borrower (i.e. the small farmer). The lender is normally the village merchant or a merchant from the nearst town or city. Credit finance is usually needed for preparing the land for cultivation, for cultivation and weeding, for harvesting, and for getting the produce to the market. Payment is consequently due at harvesting time or soon after that

(3) While securing finance for agricultural activities alone may not be the magical solution for the farmer's diverse problems which constitute his low economic status, it certainly resembles the cornerstone in enabling him to combat those problems. Securing finance for small farmers in the traditional agricultural sector could bring the following favourable results. These results invariably, contribute substantially to development and to the improvement in the quality of life of farmers.

(i) An increase in personal and household income.

(ii) An increase in the production of food and commercial Commodities.

(iii) As a result of (i) and (ii): an increase in savings leading to increased investment and hence increased agricultural production.

(iv) A diversification in the sources of income and employment.

(v) A check for rural-urban migration which is generally criticized as depriving the rural areas from the educated, the able, and the skilled labour and as creating or reinforcing the 'urban problem' in cities (see chapter below).

(i) For a full treatment of the characteristics, types, and mechanism of the system: See Chapter 4 below.

(vi) The creation of local conditions that are capable of meeting rising aspirations particularly of the young people in rural areas.

All these favourable effects are very essential at this stage of the development of agriculture in Kordofan until such a time when other relevant inputs are catered for. Accordingly, the emphasis of this study on the question of finance for small farmers stems from four major considerations

(a) A microeconomics consideration reflected in the likely improvement in farmers' incomes,

(b) A macroeconomic one resembled by increased production for domestic consumption (and hence food security) and for exportation,

(c) A reduction in the rate of dependency by farmers on the Shayl system.

(d) A quality of life consideration whereby agriculture becomes an activity that persuades people to stay with it and improves their welbeing.

CHAPTER FOUR

THE BASIS FOR ORGANIZATION OF PRODUCTION IN THE PROJECT AREA.

The production practices in the visited areas are organized in two different manners; the traditional small farmers activities and the large scale farming practices introduced recently in the region. This part of the report is concerned mainly with the traditional small farmer practice.

The small farmer in Eastern Kordofan, the Eastern Jebels and the Hamar areas depends on the family as a major institution for the organization of the process of production consumption and distribution of surplus, if that ever materializes. The degree of homogenity of this unit depends to a large extent on the degree of monitization of the economy i.e. the degree of involvement in production of cash crops. There is a positive correlation between the greater attention paid to cash crops and the inclination towards gradual disintegratio of the family unit homogenity and the increase of individualistic attitudes. This attitude in social organization is more conspicuous in eastern Kordofan and Hamar area where the growing of cash crops such as seseme and groundnuts is dominating the agricultural practices.

In most of the areas of the eastern Jebels, specially where the "modernization schemes" have not yet been extended, production seems to be based on subsistance practices, and the family as a unit is still holding together.

Self Effort and Cooperation

Among those groups who are egnaged in agricultural practices and keeping animals in all three areas the division

of labour is the major mechanism for the organization of production among family members. This division takes place on the basis of sex and age. However, now-adays it has to be supplemented by hired labour in the area of Eastern Kordofan and Hamar. This is mainly due to the fact that the close ties of cooperation that used to exist among members of the farig are gradually fading away. All possible surplus labour is either working on its own small farms, looking after its herds or migrating to other areas to sell its labour services. It is only in the Eastern Jebels area that those groups which compine animal husbandry with agriculture still maintain the practice of organizing their herding and watering of animals on joint basis. The way it is done allows for excess labour force to be directed to other activities since only two or three members follow the animals for a certain period of time. In the process of watering they are joined by more village members since watering in the dry season is a labourious activity.

Where such self effort and village or camp cooperation in organizing joint activities has declined, hired labour has taken over. Those who can not afford to hire labour have to engage only in one of the two activities i.e cultivation or animal husbandry. Those who attempt to work on the two fronts suffer failure due to their limited labour supply sources. This the case for both Eastern Kordofan and Hamar area.

The Nafir:

The above statement should not, however, make us ignore the important role played by the Nafir as a mechanism

for generating the necessary labour force at critical periods in the agricultural activities as well as herding of livestock. The Nafir (collective labour system) has traditionally been dominant in all visited areas. It has been used in almost all agricultural activities, in herding animals and in watering them during the dry season (as already mentioned in the case of some of the communities of the Eastern Jebels today), and in other activities such as house building and others. Beside being an economic activity where reciprocity is the main guiding principle and the expenses incurred by the person organizing it are relatively low; it served a social function i.e. expressing the solidarity of the settlement members.

Until recently the practice was very common in all the areas visited but many changes have taken place now. Nafir as a labour system is mainly geared towards ~~support~~ supporting activities directed towards subsistence production. The material reward gained by those joining the Nafir is also of a subsistence nature. The participants are either offered tea, food and/or local been depending on attitudes and values of the communities in question.

With the dominance of cash crops production in most of the areas visited individuals started to direct their efforts to production of crops which are marketable rather than producing for consumption. This is sometime over done to the extent that the area had suffered shortages in basic food supplies. This rush toward cash crops production led individuals to seek paid employment with merchants or other economically able individuals rather than cooperating on the

basis of family ties or through the Nafir system. This can be seen clearly in the Hamar area where the Nafir is rarely practiced today. One of the major reasons offered as an explanation of its disappearance is that it is becoming costly. That is to say the amount spend on tea or food or local beer preparation for a Nafir can be easily used to hire labour from within the settlement or neighbouring ones to do the job required in a far better manner. Given the prices of commodities needed for preparation today one can see the economic rationale behind abstaining from the Nafir. However as already indicated above the Nafir was never just an economic activity; its social implication were always given prominance. But indigenous system of production, specially collective ones, are always destroyed when cash production enters the area, and this area is no exception.

The Eastern Kordofan area is also following the same track. The introduction of cash crops in the area and the extention of credit from the Agricultural Bank and the merchant (although on different principles) have negatively influenced the Nafir practices. Here again it is gradually declining.

The Eastern Jebels area still show strong evidence of practice of Nafir. Even with the modernization schemes in the area individuals take part in Nafir activities. The penetration of cash crops in the area is still very slow.The main crop which is required on the modernized schemes is cotton, which unlike other cash crops in Eastern Kordofan and Hamar, involves the government only in the process of marketing.

In response to a question concerning the use of Nafir in agriculture activities the respondents confirmed

the statement given above for each region. The following table shows the magnitude of the engagement in Nafir in the three visited areas during the last agricultural season 1981/82:-

Area	East Jebels		East Kordofan		Hamar*	
Using Nafir	42	70%	36	60%	5	13%
Not using Nafir	18	30%	24	40%	33	87%
Total	60	100%	60	100%	38	100%

In all these areas where it is used the Nafir is seen to be a very necessary mechanism in the operation of clearing of the land and weeding as well as harvesting of the crops. All these are operations that need to be done in a specific period of time and if not complete in the time given the farmer may suffer major losses. They also require an intensive labour input.

One final note to be made about the engagement in Nafir , which closely relate to the increase of marketed commodities, is that Nafir is now mainly organized by merchants. In the past the merchants can not be in a position to organize Nafir unless they themselves participate in Nafirs organized by other villagers. This is when the reciprocity and the solidarity issues were the governing factors in its organization. But presently some villagers

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* The sample size in Hamar area is slighty smaller than the other two.

will join a Nafir by a merchant even when he does not join a Nafir which they hold. This mainly due to the fact that such a Nafir offers an opportunity to get a meal or a drink at a time when the farmers have very little themselves. However, more important is the fact that the merchants are the money lenders in the village (through the Shayl system) and absence from the Nafir they organize might jeoperdise the chances of the individual in obtaining credit.

Recent Changes in Production Practices:

The introduction of cash crops in the visited areas, specially the high demand on oil seeds, have led to a number of organizational and structural changes within the production units. The basic unit of production and consumption has already been influenced in terms of its structure through the increasing tendency towards individual action. The division and organization of labour on the basis of collectivity and reciprocity is gradually giving way to new systems.

In addition to this the modernization schemes, where the government enters into specific arrangement with the farmers in the Eastern Jebels area is a new system of organization of production relations which is also influencing the basic family unit. The individual member of each family (mainly male members) tries seek opportunities where he can get the maximum reward for his efforts. Hence there is the tendency to either cultivate more land or sell ones labour to other individuals who can pay for it.

In this manner hired labour started to gradually replace the Nafir system in the Eastern Jebels and East Kordofan. In West Kordofan it became the most dominant

feature of the agricultural production. The groups that keep livestock and undertake some agricultural activities have also similarly been influenced. They hire labour either to help in herding or to complete the agricultural activities.

The earning from selling ones labour during the rainy season seem to be rewarding enough to make the individual involved neglect his field. This activity is undertaken on the expense of ones own field production. But normally those who opt for such a choice are people who do not have any savings to last them until the new crop is out. They are also people whose chances with money lenders are slim or they have already passed the limits of what they expect to pay back. They are normally the poorest of the poor in these areas.

Some of the hired labour in the visited areas come from neighbouring groups where the economic situation is even more critical. The Hamar area attracts a number of people from Dar Hamid; the eastern Kordofan seems to have quite a large number surplus labour force and sends a large number to work in the modernization and private schemes of Eastern Jebels. The Eastern Jebels area have the capacity to attract people from various Parts of Kordofan specially after such individuals have harvested their cultivation. Having done that task they come to the mechanized schemes area to join the harvest season which they find rewarding. Beside earning a reseasonable daily pay they collect what remain of the dura after the harvest. This may come to three or four sacks of dura per family and they take this home for subsistance until the next agricultural season.

The Sharaka System:

In the Hamar area various systems of production are found. Beside the self effort where the family members are engaged in their own farm it is frequent to find well off families, merchants, or government employees (in small urban centres) using hired labour. The Nafir system has almost disappeared in some places in this area and as shown above out of the sample chosen only 13% have used it last year.

However, there is one system of production which seems to be a characteristic feature of this area, that is the system of Sharaka. This is a system which is mainly dominant in small urban centres. It is operated by government employees and merchants as suppliers of finance on the one hand, and individuals or groups of Dinka origin on the other, usually coming to the area for that purpose. the financers undertake to provide all the necessary support that gives the workers their subsistence needs during the agricultural operations. A contract is signed between the two parties and witnessed by a prominant Dinka figure in El Nuhud. When the crop (which mainly oil seeds) is harvested and marketed the financer subtracts all the expences offered to the workers and then shares what is left on the basis of 50% for each.

When examined closely the sharaka system is an exploitative system. However, the financer's risk is high since some of the workers on discovering that their expected crop is not possibly going to cover their expenses and earn them some money to take home they just leave without fulfulling their contract. In such a case the financer loses his initial money.

CHAPTER FIVE

IMPACTS OF RURAL MIGRATION ON THE PROJECT AREA

1. Introduction:

Kordofan Region is affected by out going migration, in the same way as many of the rural areas in the country. Migration is motivated by many factors, some of which are related to economic forces, others to social ones, leading in totalatily to the movement of population from the country-side to other regions or urban centres. Associated with the phenomenon ate many positive and negative impacts which have a direct bearing on the vallage and the farmers' life in the Region; therefore affecting traditional agriculture, which reflects in a number of ways on the objectives to be served by the rural credit Institution under consideration.

In what follows, migration as a phenomenon taking place annually shall be discussed first. Following that, the impacts of migration on: rural population, the agriculture of the Region, fanily income, the building of local capital, and the dynamics of social change, shall be considered in relation to the proposed rural credit institution.

2. Types of Migrations:

Western Sudan in general, including Kordofan Region, has known large scale migration for employment only after the independence of the country in 1956. Before that only a limited number of migrants coming from certain parts of Dar fur (Fur, Dago, Masalit, Bargo, etc.) and Kordofan (the Nuba Mts.) used to lead eastwards; mainly to the Gezira and to some degree the pump Schemes areas, which at the time were the main sources

totality

of agricultural employment. The sizes of these migrations varied from one year to the other, being very much influenced by the local harvest situation at one particular year, Furthermore, only a trival number of the migrants found their way to towns at that time.

As from the mid-1960s' and on, migration from the Region for employment in irrigated agriculture, industry and urban jobs accelerated; to gain still a high momentum, unpreceded before in the history of the Region, as from the mid of the 1970's. During this last epoch, a new element has been added to the situation, and that is: the migration from the Region to outside Sudan; mainly to the oil rich Arab countries. As an outcome of the internal and external migrations, the following trends of population mobility are distinguished:

i. Migrations to Irrigated Agriculture:

Migrations from the Region to areas of irrigated agriculture take one of two forms: a temporary movement from the area of origin and a return to it after a short time spent there, or a long stay in the irrigated schemes, that might lead sometimes to temporary or permenant settlement. Though the latter type is cited in many places in the irrigated schemes, it can not be taken as phenomenal. Migrations of the first trype i.e. the short term ones, are the ones that are most prevalent. Usually they assume a massive form during the cotton picking period, especially from Eastern Kordofan and Tegale; with migrants heading mainly to the Gezira and the Rahad Schemes. As for

migrations for agricultural employment outside the cotton - picking period i.e. during rainy season for example, these take place on individual migrant initiative, and in fact do not assume a massive form.

The cotton picking time spans the period February-March; after which migrants return home. This type of migration is practised by whole families, being motivated by the opportunity that all members can raise incomes from the picking operation. As for the limited migrations outside the cotton-picking period, these take place normally after August, when those practising them have already finished the weeding operation in their own farms.

II. Migrations to the gum producing areas:

These usually take place from specific localities in the Region, namely from Dar Hamid, Eastern Kordofan, Dar Bederiya, Dar Hamar, and as far north as Kaja areas in Dar Kababish. The migrants head to certain places in Blue province, located mainly within Singa and Er Roseires Regions. The tradition of migrating to these areas started sometime back during the first quarter of the present century.

The trade takes the form of a share - cropping activity, whereby migrants from the above mentioned areas in Kordofan are being contracted by businessmen from the same tribal stock, who usually lead them into the gum producing areas, with the amounts produced shared between the two. This kind of

migration starts in October, with the migrants returning to the areas of origin sometime in May.

III. Migrations for off-farm jobs, and for employment in Urban areas:

These are carried to irrigated schemes where migrants seek employment in jobs outside farming as in the first type; or to urban centres especially the Three Towns, and the other towns of Central Sudan, where migrants are attracted by the employment opportunities offered by such centres. These migrations attract populations from all parts of the Region, and are being practiced more by the younger groups; especially those among them who received some education. Included in these groups are those who engage in migration as a seasonal activity to raise incomes during the period they are out of farming: December - June.

The majority of this category of migrants would qualify as unskilled labourers, who usually take all kinds of available jobs. However, within the same groups, there are some who have managed to pick/differen skills; and these are most probably being lost to the rural areas from which they migrated; since they tend to reside semi-permenantly in those places where they find employment.

IV. Migration to areas of Mechanized Farming within the Region:

This is of recent occurence, dating back to the mid 1970's. From that time on, it has gained more importance due to the expansion in areas under mechanized

farming. Migrants come from the southern parts of the Region, and are attracted as well from its northern parts; especially when the latter areas have bad harvests.

Since the type of operation for which labour is recruted determines the sex of the migrant, it is observed that the majority of those found in Habila area, during the time of the survey in March were women; being engaged in the winnowing of the dura. It is estimated that each family carries back home up to 4 sacks of dura, over and above the cash they raise when the season is over. In this way, migrations to the southern parts of the Region result in complementarity, between the economies of the areas to the north, and those to the south.

V. Migrations to neighbouring countries:

This type of movement became significant in the early 1970s'; however, it has actually become a widespread phenamenan as from the mid - 1970s'. It started with migration to Libya, since the latter is accessable through Darfur; and gradually shifted to Saudi Arabia and the other oil - rich states of the Gulf area. It has not stopped at that, but extended to embrace countries like Jordan, Iraq, Yemen; as was reported in some of the localities studied.

Those engaged in this type of migration came from one of two backgrounds: either being financially capable (for example livestock owners who sold animals) to meet the expenses of travelling; or migrants of the third category discussed above, who have managed to

accumulate savings to finance their travel.

Normally there is a tendancy for migrants to stay abroad for as long as they feel necessary. When they come home, they usually spend a short time, and then migrate again. In case they stay home, they tend to change from farming to completely new economic pursuits, which they might initiate in their indegneous areas, such as: opening a shop, entering trade in water, running a lorry, or raising of live-stock.

As outlined above, there are at least four types of migration taking place from Kordofan Region to those centres of employment in the country; besides of course the migration of some populations to the neighbouring states. To what degree this mobility of population is generated by certain 'push' factors arising from the present-day economic situation of Kordofan needs to be discussed; which shall be tackled in the coming section.

3. Forces behind Migration

The push factors that are behind migrations from the Region are basically economic ones; motivated by social aspirations for better life conditions, so far unmet by the economic opportunities available at the local level. Therefore, it is essential in this respect to analyse the factors behind population migration, and relate the result of this analysis, to the concepts on which the suggested rural credit institution is to be founded. An examination of the push factors would reveal that:

x indigenous

i. Because of historical factors, locational ones, and general differences, the countrys' development has experienced imbalances that have resulted in economic and social gaps between the irrigated areas, and the rest of the country under traditional modes of production. The majority of areas from which migrants came from Kordofan Region tend to show poor economic bases.

ii. Due to limited resource potentials, lack of infrastructure, slow progress of local economies, bad planning and a multitude of other factors, the share of these traditional areas - supplying migrant labour - in the rational economic development programmes has continued to be very low.

iii. The economic and social progress of these traditional areas have been maintained by the interia in the resources. With time there have been increases in populations due to improved health care and control of epidemics, while little has been done in the area of productivity. The result has been in many areas: less production from the same lands, evident in declining soil fertility and low yields, the pushing of the northern grazing belt southwards, and the prevalence of enviromental degredation.

iv, Migrations for employment have started from areas of traditional agriculture such as Kordofan as early as mid 1930s. Since then the trend has been maintained, and with time the populations of these traditional

lands have become convinced that their local economies are short of securing for them a sustained living. Migrations for employment have therefore become part of the culture of these populations.

v. Migrants move from their areas of origin under economic and social motivations. In this way migration is a means for social up grading of ones' status, especially if he is highly motivated. Sources of aspirations in these traditional communities are the migrants returing home with new goods, ideas, and styles of life, and the general enlightment due to change impacts and the influence of education.

vi. Sometimes those traditional areas supplying labour are hit by catastrophes, causing the dispersion of large populations into other parts of the country. Similarly, climatic hazards result in increasing the size of migrations from these traditional areas in certain years. It is established that out of every five years in the semi-arid and Savannah low Rainfall Zones, one year registers rainfall failure; which means unreliable pastures and a bad harvest. Both effects result in in larger size of migrant population from these traditional areas.

Survey findings from the three areas studied confirm the above analysis on types of migrations, and the push factors behind them. It has been found that out of the 60 samples investigated at each area (Umm Ruwaba, El Abassiya, and En Nahud) about 30% of those interviewed have members in the family, who either migrated some time in the past, or have been migrants at the time of the survey. The dates at which these migrations

were reported to be carried out, differed from one respondent to the other; however, they range from 1962 as the earliest date given in the sample to 1982; with the majority falling during the late 1970s'.

As to the destinations where migrants sought employment, these include the Gezira, Managil, and Rahad; as irrigated schemes visited for agricultural employment. For off-farm, and the other jobs of similar nature in urban areas, the places visited include: Greater Khartoum, Wad Medani, Port Sudan, Gadaref, EdDueim, etc. Besides, the data confirms the occurence of internal migration inside the Region to Habbila mechanized farming schemes, and to towns such as El Obeid, En Nahud, Umm Ruwaba, Er Rahad, etc., finally it shows that there is migration from the Region to the neighbouring Arab States.

4. Impacts of Migration

To examine the impacts of migration on the economy population, and social life of the Region, it is important to investigate the pattern of expenditure of the migrants. The data furnished by the survey point to the facts that these incomes are spent on:

i. Purchase of food: This includes all food items consumed by the family. However, of special mention in this respect is buying of additional amounts of dura to meet the family requirements. The shortage becomes very acute in years of bad harvests, when people are forced to leave their areas earlier than usual, to seek employment elsewhere, so as to earn money

that can be used for purchasing dura. It is often the case that a villager might borrow dura from the village merchant, through the Shayl system and leave it to the family to feed on, before he departs looking for employment in other areas. Usually he pays the amount credited on returning home, or sends the loan while he continues living away.

ii. Purchase of other consumers' goods: Other than foods, many items have become accessable to the family in recent years, either through being carried home by migrants when they come back, or purchased from the near-by centres by money sent by absent relatives. The range is wide including: better quality clothes, house equipment, house furniture, etc.

ii. Financing of agricultural operations: This stands as one of the basic goals served by migration. While most migrants time their return home with the preparations for the new agricultural season - sometime in June - others might not return, and instead send money home for the same purpose. Usually financing in this context should be viewed from two angles: (a) expenditure on agricultural inputs and operations; and (b) the ability to spend on the food requirements of the family during the rainy season. Though the farmer implies more cropped areas, and possibly expanding the cash crop base, the latter is not less important; since it means that the farmer

shall devote all his labour to his fields, and shall not be forced to sell part of it to others to purchase food, as it is the case of many villagers, especially those who are poor.

iii. Investment in Livestock: It is observed that, there is a remarkable increase in the numbers of livestock, especially in recent years. This applies to both categories of populations: the rural nomadic, and the rural settled. Part of this increase is attributed to the flow of money raised outside the Region; especially by the migrants who invest their savings in the purchasing of animals. One of the basic factors that has strengthened this trend is the insecure return from agriculture in some years; besides its limited absorptive capacity to capital; since under the traditional conditions of Kordofan, investment in agriculture reaches its ceiling after certain increments. 1/

iv. Investment in other enterprises: The latter include establishment of village shops, trade in water that is transported to villages by trucks particularly in some of Hamar areas, and finally the purchasing and running of lorries for general transportation purposes. Those who pursue these kinds of enterprises are the ones who have been able to migrate and accumulate capital. It is interesting to note in this connection, that this impact of migration has resulted in drastic changes in the village social-life. It has added to or substituted the foreign traders elements by ones from the indigenous village population. As well, it has expanded the base of the merchant class in the rural areas; and finally led

to change in the mutual relationships that used to govern the village life, to more economically structured ones. It is adequate to mention in reference to the last of these impacts, that a migrant who returns home and manages to set up a shop very soon enters into the Shayl business with his fellow villagers.

The above disposition points to a number of realities that have bearing on the proposed rural credit institution. That migration and the income generated from it complement the returns from the traditional economy of the Region, and enables it to survive under the present level of development attained. The suggested rural credit institution should aim at meeting some of the goals served presently by migration.

It has to have within its objectives, supplying the traditional farmer with adequate amounts of dura at reasonable prices. It has to secure for the farmer loans, that enable him to carry out his agricultural work efficiently; plus meeting his family food needs during the rainy season. With these two basic requistes met, migrations that are motivated at present by these forces shall be checked considerably.

As for the migration taking place after the harvest season, is likely to continue in future; since the months December - June are a slack period; during which the local economies of the Region are short of engaging efficiently all of the available hands in the traditional sector. Whether during this period; migrants will head southwords for employment in mechanized farming and cotton picking within the same Region, or head eastwards to the schemes of irrigated agriculture, shall very much depend on the comparative economic return from the two opportunities.

CHAPTER SIX

Traditional Financial Institutions in The Areas Visited

A. The Shayl System:

The traditional institutions used in financing the agricultural activities in the area are many. The most important of these are the Shayl system and borrowing against certain deposited items or animals. The marked impact of the Shayl system is not a peculiarity of the visited areas. It is practiced in a variety of forms in different part of the Sudan such as Kassala, Southern Blue Nile, White Nile and the Gezira Scheme. The system practiced in the visited areas is that which involves the advances of money against future crops.

"At the beginning of the season the farmer will request a sum of money (or sometimes consumer goods) to be repaid in a specified quantity of produce. The money lender will set the amount to be lent against the future delivery substantially below the last harvest price or the anticipated value at the forthcoming harvest, whichever is lower. Thus when the borrower surrenders the pledged quantity of produce, the lender should derive a considerable "windfall" from the operation, namely the difference between the harvest value of the commodity pledged and the Shayl value set by him". (F.H. Adam and W.A. Apaya 1973: 104).

Most of the villagers in the areas visited are engaged in this systems with the village merchant and other affluent villagers being the operators. The percentage of profit gained by the lender in such an operation can be as high as 500% as

happened in the case of Shayl against groundnuts in the season before this last one. However, there are few exceptional cases where the villager engaged in the Shayl may incre a profit. This happens when unforeseen circumstance interfer to act against the low prices set by the lender. The case of the last season 1981/82 with reference to the prices of groundnut is a case in point. The lenders set the Shayl price at £. 17 per quarter having already seen the prices gone up to £ 25 per quntar the season before. But due to change in marketing policy on the national level and decrease of prices of Sudanese groundnut in the International market the prices have gone down at the start of the harvest season to £ 8 per quntar. However both villagers and lenders agree that this is an exceptional case. Generally the margin of profit for the lender in the Shayl system is no less than 200%.

The Shayl system is not an out right economic operation: if it was so the risk would have been very high. It is a socio-economic phenomenon operating on the basis of good faith. It is a reflection of the social attitutde common in the communities visited that every man is a good man until the contrary is proved. In addition to this the village life is intimate and more so with blood and marriage relationships. There are cases where there may be no merchant or an affluent villager who is able to lend money or had enough to lend all the needy people in the village. In this case money lenders from other villages or in small urban centres have to be contacted. In such a case the money lender needs a third party to guarantee that the borrower is going to deliver the crop at the harvest season. The third part here is normally the Shaykh of the village or a well known figure among its promenant figures. Cases f of this nature are very common

for the Eastern Jebel areas specially in villages inhabited by western Sudanese e.g. Gardud Tawil. As stated the profit of the lender is very high in the shayl operation, and its very diffcult for those engaged in it to break even. Moreover those who practice the shayl are in the majority of case the people who attempt to sell their labour during the rainy season and hence deprive their own farms ~~from~~ of the necessary input. This normally results in low yeilds at the end of the season and hence inability to settle the loan. In this case the shayl system turns into a debts crop, once in the farmer is never or rarely out of it. Failure to deliver the agreed amount of the crop at harvest, usually leads to postponement of repayment of for the next season and the chance to do so then is even ~~slimener~~ slimmer.

B. Borrowing against standing property:

This is mainly a system of mortgage of animals or selling them at a low price and buying them back against a price set by the lender whether this is a merchant or another vill ger. In such a case the farmer contacts the money lender and asks for a loan against any of his animals, for example a cow. The money lender sets a price much below its market price and gives the money to the farmer and give him the animal to keep as he used to do. After harvest the farmer comes back to the money lender and buy back his animal at the current market price which is in most cases 100% higher than what of the transaction.

This type of borrowing leads to quite a number of serious problems and most of the time the two parties go to court over the payment issue. This happen mainly when the

lender refuses to sell back the animal to the villager or sets a price which even higher than the current prices. This type of borrowing is common in the Eastern Kordofan area. The introduction of modern financing institutions has to some extent reduced its impact on the farmers life but has not yeat illuminated it.

Another type of borrowing is what had been practiced by government authorities in the Eastern Jebels. This is a situation where the family members bring their valuables, mostly jewelleries belonging to the women in the family. The latter are deposited in the rural council and the owners are given a loan against its value. After harve t the farmers are expected to pay back the loan and collect their valuables without payment of interest. This system is known as "Masak". It has declined recently due to shortages of funds at the rural council levels.

A third system of borrowing which is more akin to the shayl than the masak is lending cash at a certain percentage of profit. The lenders normally do not like to engage in this operation if they can get in the shayl system proper, basically because in thes shayl system their margin of profit is by far greater. This type of borrowing is common in the Hamar area.

Form what has been stated above it can be noted that the traditional finance institutions are in all cases, (whether shayl or different systems of borrowing except masak) act against the prosperity of the farmer. In fact the money lenders in the community, whether merchants of affluent villagers socially related to the borrower or not, are there to make

abnormal profits out of the farmers activities. The masak system is the only one which is run by the government and is fair to the farmers. However it has become very difficult in the present economic circunstance to continue that system.

C. The modern financing institutions:

(1) The experience of the Agricultural Bank in financing small farmers in Eastern Kordofan and El Obeid area deserves a special attention. The next chapter will discuss this experient in details. However, some points have to be raised at this stage. The farmers in the area are expected to organize themselves in co-operatives of no less than fifty members who can be from one village or a number of villages. The village cooperative committee helps the Agricultural Bank officials in identify people who should receive money from the bank and also how much they should be given according to the area they can cultivate. It is the duty of this committee to collect the crop harvest; store it and together with the Bank officials decides when it should be sold; trying as much as it can to choose the time when prices are favourable.

Although it is very difficult at this stage to make a statement on the successful or failure of the experiment, but one sure thing is that it has a positive influence on the life of the farmers. It has also led to the decline of shayl in the area since it seem to be giving funds to the ordenary farmer at just the right time to stop him or her from going to the money lenders. This of course leads to a conflict between the modern institutions and the traditional one. The money lenders have not sat quitely and look at the

quietly

area of their activity being dominated by the Bank. On the contrary they tried all means of pressure to stop villagers from taking the Bank's loan. In some case they tried to give money to villagers outside the shayl system frame for one season in order to stop them from joins the cooperatives organized by the Bank. In other cases spread they ~~runers~~ Rumours that when the harvest is collected all farmers will be treated equally no matter what they produce and hence those who produce more than others will loose. Sometime they start introducing a religions element in their arguement by saying that the percentage (12%) is haram (sinful) forgets that the percentage in the shayl is more than ten time higher and should be considered more serious on religious grounds. The last pressure they use against villagers is that the Bank is just ~~experments~~ experimenting and may stop financing at any future season and those who join it will not be accepted in the shayl system again.

With all these odds against it the way the Agricultural Bank is operating is satosfactpru.

(ii) The farmer's union of Kordofan attempted tp help the small farmers last year through lending groundnuts that were used as seeds for the new season. What happened to most farmer last year is that due to high prices of groundnuts they sold all the crop including the part they customary keep as seeds for the new season. When the time of sowing came close they faced the difficulty of getting seeds. The union brought in improved groundnuts seeds from the Gezira and distributed them to the farmers with the arrangement that they will give back to the union the same quantity after harvest.

This effort of the union saved the farmers the trouble

of getting these seeds through the shayl system. However, the quantities distributed were not adequate to satisfy the needs of the farmers and many areas had only heard about such distribution of seeds. Whether such an effort will continue in the future or not remains an open question.

CHAPTER SEVEN

MARKETING SYSTEMS AND THE LEVEL OF PRICES

1. INTRODUCTION:

General agricultural marketing is concerned mainly with supplying consumers with food and other agricultural items in the quantity and the form they want, when and where they want them. The simplest system is when the farmer sells his produce directly to the consumer. However, this system is restricted to products that are consmed in little quantities or those which involve little or no processing after they leave the farm. There are many other direct methods of sale which the producer can adopt and these methods probably secures the best possible returns to the producer while the consumer obtains a supply of reliable produce at fair prices.

However, now-a-days, the majority of agricultural products are marketed through a distributive machinery which may involve many middlemen, some highly specialised while others may lack any experience, but rather act in a parasitic way.

2. MARKETING SERVICES:

The marketing of agricultural produce involves many services besides selling and distribution, for it is the function of the marketing system to give,

(a) form utility,

(b) time utility and,

(c) place utility,

to the crops which farmers produce. To fulfil those utilities, invariably, the following different services have got to be performed. These are,

(a) Assembling: its purpose is to collect the output of numerous farmers into the optimum bulk necessary for subsequent marketing operations.

(b) Grading and standardization: grading is the process of sorting commodities into lots of uniform kind, size or quality; while standardization is ensuring that the same specification are used each time grading is performed.

(c) Packaging: adequate packaging facilitates the handling of the product, protects it from dirt and damage, reduces costs of storage and transport, and enables consumers to buy in convenient units.

(d) Processing: It is necessary in order to convert the product into a consumable form, or for preserving the product (e.g. perishable goods).

(e) Storing: the need for storgge arises from the seasonal nature of most farm production and it is a fundamental stage in efficient marketing in order to hold over supplies during periods of glut until a more favourable period for selling arises and it benefits both producers and consumers.

(f) Transportation: in the journey from farm to consumer, three stages of transport are usually involved - from the farm to the point of assembly, from the assembly point to the urban market - to the consumer. Costs of transportation play a significant role in influencing marketing

efficiency and they have an important effect on the localization of agricultural production.

(g) Financing and Risk-bearing: the need for financing, tp a large extent, is dependent on the length of time the whole process of marketing takes. Moreover, the time element involved in marketing adds to the risk embodied in the process. Such risk takes various forms of which physical deterioration of the goods and fluctuations of prices are the most obvious. The commercial devices may be employed to reduce the risk like insurance, 'hedging' and future trading.

3. MARKETING COSTS:

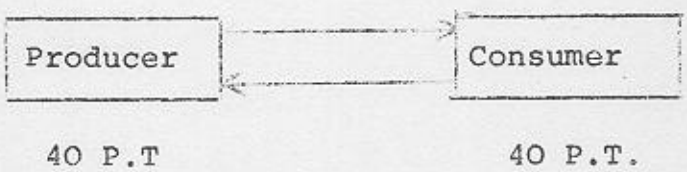
The distributive margin is used to denote the spread between the price which the farmer gets and the price which the consumer pays for the same product. This margin reflects the costs of marketing and it could vary widely. This system is inflationary due mainly to unnecessary duplication of function as a result of redundency amongst distributors. This major criticism stems from the fact that distributors, though they may be performing an essential service to the community, are not primarily organized in the interest of either producers or consumers.

4. CO-OPERATIVE MARKETING:

Co-operative marketing is a form of the general marketing system whose main advantage is the substitution and the elimination of the middlemen system in which both producer and consumer suffers. A simple diagramatical example will make the point.

Diagram A.

Diagram B.



In diagram A, and due to the presence of middlemen (or distributors), the producer receives the very low price of 20 P.T. per item (for example) for his produce while the consumer gets it at the high price of 60 P.T. A move to eliminate the role of middlemen (through Co-operative marketing, for example) could compromise the price between producer and consumer to 40 P.T. This, expectedly, resulted in a 100% rise in the price which the farmer receives for his product and in a 33% decrease in the price which the consumer pays to acquire the product. A Mutual benefit for both parties.

When contrasted to other forms of marketing, Co-operative marketing has the following features:

(i) The replacement of profit motive by the motive of service to members, which enables farmers to retain the

greatest possible share of what consumers pay for their products.

(ii) The Co-operative does not exploit the disadvantages interest in the nature of farm production (e.g., seasonality and perishability).

(iii) Elimination of trade abuses and the maximization of such trade advantages like lower transport rates, more favourable credit facilities, etc....

(iv) Ensuring a reliable and smooth flow of supply of production into the market.

(v) Better integration of marketing into production.

5. AGRICULTURAL MARKETING IN THE STUDY AREAS:

In all the three study areas, agricultural marketing was found to be characterized by all the defocoemcoes and the shortcomings of the wide-spread of parasitic middlemen and the gross inadequacy of marketing services particularly assembling, storage, transportation and finance. These disadvantages have often resulted in low prices to the farmers, severe fluctuations in those prices (and hence in farmers' incomes), and in an exceedingly high distributive margin. Merchants were found to be the main beneficiaries of all those difficiences.

All Umm Ruwaba area, for example, the team found out that neither the farmers who are orgainzed in agricultural Co-operatives nor those who resemble the huge pool of small independent farmers were able to secure any worthwhile

marketing system. Perhaps the lack of marketing services is the main factor to blame. Villagers still assemble their produce in a scattered and ad hoc manner; transport it to the village using local transport means (i.e. donkeys, camels) and thereby resulting in loss of time and other losses; and at village level storage is a major constraint. Speedy and reliable transportation from the village to the urban centres is hard to come by and when they do get one it is usually at exorbitant costs. As regards storage, this was found to be even a bigger problem. The agricultural Co-operative societies around Umm Ruwaba which benefit from finance extended by the Agricultural Bank, transport their crop to Umm Ruwaba and store it at available merchants' stores on rental basis. The rents were found to be excessive, besides, once a certain volume of crops entered a certain merchant's store, it is conventional in the trade that volume becomes automatically his. Those prices paid are controlled by the few merchants who own the stores and competition which pushes prices up for the benefit of the farmer is practically ruled out. Such concepts like elasticity of demand and its effect on price changes were found to be hardly relevant, and the other factors which influence demand for such crops like dura, groundnuts and sesame impose only a marginal impact on prices. Merchants perform monopolistic and cartel-like practices and accordingly control the market at will. Because they sell the cash crops which they prachase from the farmers (mainly groundnuts, sesame, and karkadaih) to other national and international markets they usually reap very sizeable profits.* As for the staple food crops like dura and millet, the same quantities bought from the farmers at harvesting time and even more, are sold back to farmers at the beginning of the

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* An average of 32% for sesame and 77% for groundnuts

cultivation season at double prices, triple prices, and sometimes four times the original prices.(*)

Price fluctuations from year to year (and sometimes inside the same year) could reach anything between 15% to 170%. When it is known that this happens to the price of dura, the staple food of all people in the region, then the necessity of alternative marketing systems and price control can hardly be emphasized enough.

The same marketing deficiencies and the inadequacies of the marketing services were also recorded by the team at Abbasia town and surrounding villages of the Northern Jebels District. Inadequacy of transportation was found to be particulary inhibiting to improved agricultural production and the betterment of farmers' condition. The lack of proper marketing and transportation of horticultural crops was found to be a key element in the stagnation of living conditions of many small farmers in this part of the study area. At villages such as "Tomi", "El Faid Umm Abdalla": infrequent passing lorries purchase such fruits like mangoes, oranges, lemons, etc. at prices 700% lower than the price at which they sell them at Kosti, Medani, Khartoum and Omdurman. Inavailability of transport in the face of prevailing 'surpluses' makes it a buyers' market.

The same story is repeated at Bidayria and Hamar Western District areas. The only difference found here which reinforces the bad consequences (to the farmer) of the lack of marketing services is that the distances involved (Nihud El Obeid, for example) are very long. In the light of

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(*) Figures furnished by the survey for the three areas averaged 470% profits.

shortages of fuel and spare parts, transportation becomes a true limiting factor.

In summing up, it becomes evident that while emphasis on inavailability of finance as a limiting factor to increased agricultural production could well be justified, the provision of efficient markets and marketing facilities and services becomes an equally urgent task. One could hardly expect farmers to have their full potential released, if they know that their surpluses either rot away, are sold at unjustifiably low prices, or have to go through a great pain and cost to have them marketed at distant markets for better returns.

CHAPTER EIGHT

APPRAISAL OF PRESENT 'MODERN' AGRICULTURAL PRACTICES IN KORDOFAN

1. INTRODUCTION:

In order to suggest a viable and realistic framework for the 'Rural Credit Institution' for the small farmers in Kordofan, the team considered it necessary to visit and evaluate existing relevant efforts in the field. This is regarded as essential for four reasons. First, to try to see how successful those efforts have been and try to build upon those successes without the need to duplicate the efforts. Second, to find out where they have gone wrong and hence avoid making the same mistakes. Third, to see to what extent use could be made of already accumulated knowledge and personnel skill in the establishment of the new institution And, fourth, to endavour, in the light of studying and evaluating those efforts, to give the suggested institution a broader developmental role both at the regional and national settings.

Four such efforts are discussed in this chapter. These are;

(1) The Agricultural Bank, Umm Ruwaba Experiment, which is a joint effort with the World Bank.

(2) The Nuba Mountains Agricultural Corporation in the Eastern Jebels area.

(3) Mechanized Agricultural Farming at Habila near Dilling town.

(4) Co-operatives in various parts of the study area.

1. The Agricultural Bank - Umm Ruwaba Experiment:

(a) Background:

The Agricultural Bank is one of four specialised

banks[i] established with the specific objective to help in development efforts. Realizing that finance is a major constraint to agricultural production, the government decided to avail some public funds through the bank. Ever since its establishment in 1959, the bank has been engaged in financing agricultural activities but these have been mainly of a short-term nature and largely confined to the 'modern' subsector. Table (8.1) indicates this, and it indicates that long-term finance has been minimal. The latter problem has been created mainly by the weakness of the bank's capital; which has also been the reason why the bank did not actively contribute to other supporting measures like storage, transportation, marketing, importation of capital goods fertilizers and improved seeds.

(b) Umm Ruwaba Experiment:

In the year 1977, the Agricultural Bank (Umm Ruwaba Branch) detected a very strong demand for finance by small farmers in the neighbourhood and it was decided to start a unique experiment to absorb that demand. The striking thing about the experient was that the small farmers of the villages of Semeih and Abu Saad near Umm Ruwaba organised themselves in co-operatives and came to seek finance in that capacity. In the past, the Agricultural Bank's policy had always been to lend money to big farmers and to ones who own real estate in order to use that as a guarantee against non-payment. However the Bank decided to accept the Challenge of lending those two co-operatives.

After some careful studies built largely on field visits and interviews, a policy was reached that lending should

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(i) The other 3 are the Industrial Bank, The Estates Bank of Sudan, and the Sudanese Savings Bank.

Table (8.1):- Amount (and percentages) of Loans - by type - granted By The Agricultural Bank 1970 - 1980 (£s 000's)

Year / Type of Loan	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1. Short-Term Loans	1,281 (67%)	814 (55%)	1,209 (77%)	1,909 (79%)	2,380 (86%)	3,087 (70%)	4,287 (88%)	5,243 (75%)	2,400 (78.7)	3,799 (84.4)	4,089 (85.8)
2. Medium-Term Loans	598 (32%)	590 (40%)	332 (21%)	479 (20%)	391 (14%)	1,289 (3%)	602 (12%)	1,757 (25%)	650 (21.3)	653 (15.6)	668 (14.0)
3. Long-Term Loans	12 (.6%)	65 (4%)	28 (2%)	6 (.3%)	-	-	2 (-)	-	-	2 (-)	9 (0.2)
4. Total	1892	1469	1569	2,394	2,771	4,376	4,891	7,000	3,050	4,454	4,766

Source:- Bank of Sudan Annual Reports

be tied to the acreage cultivated. Each Mukhamas[(i)] is designated a fixed sum of money. The executive of the Co-operative would assess the ability of its own members (the farmer and his family) to cultivate a certain area. And then they will sum up the total area which that Co-operative will be ready to cultivate and it is this area which decides the volume of finance to be extended to the Co-operative. Although any minimum area of one Mukhamas or more could be financed, a maximum of 20 Mukhamas per household is set.

Contrasted to the possession of real property as a guarantee for paying back the money borrowed, the bank reached, with the Co-operatives, a rather interesting arrangement. Farmers, through the Co-operative, would hand over 'all'[(ii)] their produce to the Co-operative representative, and the latter arranges to have it stored in the nearest market to await appropriate selling prices. The production of each farmer is weighed and he is given a receipt indicating the amount delivered.

As for the volume of the credit and the time it is granted, this is divided into two distinct installements (a) the cultivation loan and (b) the harvesting loan. Credit is extended to two cash crops only: Sesame and groundnuts. For a given year (1981), the following figures indicate the volume of the loan per one Mukhamas; Table (8.2):-

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(i) One Mukhamas = 1 1/3 feddans

(ii) Clearly subtracted from this is the farmers' domestic consumption and whatever minor quantities that find their way to the local market.

Type of Loan	Sesame	Groundnuts
(a) Cultivation		
(i) Land preparation and Sowing	Ls. 1.50/Mukhamas	Ls. 2.00/Mukhamas
	3.00/ "	41.00/ * "
(ii) Weeding	6.00/ "	8.00/ "
(b) Harvesting all processes including transportation	7.63/ "	15.40/ "
Total	Ls. 18.13/ "	Ls.66.40/ "

Source:- The books of the Agricultural Bank, Umm Ruwaba Branch.

It is obvious from table (8.2) that the maximum that the farmer can get for growing sesame is Ls. 360.00 and for growing groundnuts is Ls. 1320.00.(i)

These loans are not extended against a payment of a rate of interest. This is because in February, 1981, a decision was made by the Central Government to stop using the rate of interest, describing it as usury. The decision became operative one year later, and the rate of interest was replaced by 'a mere administrative and supervisory fee'. This is described as one piastre per each Sudanese pound per month,

(i) These figures relate to one given year (1980/81) and should be expected to vary relative to variation in the cost of agricultural operations from year to year.

* This includes the purchase of improved seeds (Ls.27.00/ sack), a loan of Ls.10.00 and sowing at the rat of Ls. 4.00/Mukhamas.

i.e., 12%/annum. However, evidence showed that the maximum that the bank has charged to these co-operatives so far was 7%/annum while a minimum of 3.9%/annum has been recorded. Considering that the Agricultural Bank itself borrows from the Bank of Sudan at 6.0% interest rate, it is evident that the former's terms have been reasonable.

Going back to the mechanism of crop collection, storage, and marketing: this is all done by the Co-operatives themselves. The Co-operative undertakes the transportation of sesame and groundnuts from the farms to a suitable collection centre, and then from there to the stores at the nearest market centre at Umm Ruwaba-Stores which belong to the merchants are rented for storage of the two crops. The Co-operative representatives then keep observing the market prices until the most suitable price is obtained without interference from the bank. They go back to the villages to confer with their membership and accordingly decide to sell. The Bank intervenes at this stage to work out its accounts by the mechanism of the individual's accounting system. These accounts are done by the Co-operative supervisors (from the Local Co-operative Office), whose responsibility extends to include the formation of Co-operatives for credit finance, their supervision and their daily running, besides some other advisory services. These Co-operative supervisors are also members in the Co-operatives' Boards of Directors.

The Co-operative supervisor considers the revenue accruing to each farmer from the sales of his produce and subtracts from it the amount of the money he had borrowed from the bank plus any other expenses relating to the cost of empty sacks, cleaning, transportation, storage, etc. The difference is either a surplus which goes directly to the farmer or, in

Table (8.3)

The Development of Agricultural Co-operatives Around Um Ruwaba

For the Period 1977/78 - 1981/82

Year	Area Cultivated (Mukhamas)(i)		Number of Co-operatives	Total Sum of Money lent	Payback as a %
	Sesame	Groundnuts			
1977/78	4,357	621	2(ii)	£s 15,000	100%
1978/79	7,016	922	5	£s 71,160	100%
1979/80	8,971	1,967	6	£s130,682	94%
1980/81	16,101	4,831	19	£s203,828	70%(iii)
1981/82	23,457	6,558	27	£s680,000	90%(iv)

Note:- (i) 1 Mukhamas = 1 $\frac{1}{3}$ feddan Semeih. (ii) The two co-operatives are those of Abu Saad and

(iii) This was a bad year, in which there was a rainfall shortage.

(iv) This is an estimate figure based on the volume of production accumulated at the time of the field visit, and given the prices of the time.

Source:- Agricultural Bank - Um Ruwaba Branch.

some cases, a deficit which the farmer has to pay from his other sources; or can be carried over depending on the conditions that have created the deficit. If the farmer's deficit, for example, is because of a shortage of rainfall, an attack of pests, etc., then most likely the bank will postpone the payment of the loan. Whereas if the cause of the deficit was negligence from the part of the farmer, then the bank, through the executive of the village Co-operative make the farmer pay his dues even if they have to take him to court. The executive of each Co-operative deducts a certain some of money from each farmer to meet administrative expenses and to account for some minor services at the village level.

The experiment has so far been very attractive and has met some success both for the Co-operatives and the bank. The success is partly reflected in table (8.3) which indicates the development of the experiment in terms of the increase in area cultivated, number of Co-operatives benefiting from finance, size of money lent, and the pay-back percentage. It is unfortunate that the team could not get hold of the actual volumes of production to complete the picture. And perhaps this is the place to mention that such statistics are vital for monitoring the performance of the experiment.

The advantages of the system:

The main objectives of the Umm Ruwaba experiment have been the following:

(i) The creation of a rural credit system that could encounter, and subsequently force out, the use of the all non-desired shayl system.

(ii) The organization of farmers in a form that will make it easy to provide them with services in general.

(iii) The improvement in agricultural production and in farmers' income.

(iv) The creation of a platform for the all-desired integrated rural development notion.

Although it is perhaps too early to try to evaluate the experiment, it would be fair and desirable to say that it had already brought some positive results. There is a market decline in the number of people depending on the Shayl system and evidence seems to indicate that even the terms of borrowing in the traditional system may change to the better as a result of the experiment. Many farmers who are benefiting from the experiment found themselves no longer forced - because of the need for cash - to sell their crop in the field before it is harvested. There is an obvious increase in area cultivated, in production, and in farmers' income. The field visit survey reflected a clear improvement in food habits, clothing, housing, and life-style in general of those members of the Co-operatives currently borrowing from the bank. All of the above positive results have been confirmed by the Co-operative members interviewed.

The disadvantages of the System:

The disadvantages of the system are embodied mainly in the shortcomings that characterize the experiment, and the problems that restrict its application. Among these are the weakness of the bank's capital and the inadequacy of the logistics available in terms of staff, cars, and other support-

ing aids. This have made it impossible for the bank to meet the vast growing demand for finance through Co-operatives. In this respect, the team noted gross inadequacy in the Local Co-operative Office at Umm Ruwaba to form, supervise, and run Co-operatives in the area. With only five personnel and no car or any other means of transport, their activities are restricted to Umm R waba town and its immediate vicinity.

With regard to the presently operating agricultural Co-operatives, transportation of agricultural produce was found to form a major headache: both from the farm to collection centres; and from there to the stores at Umm Ruwaba. Storage itself is a big problem for the Co-operatives. So far, all the stores at Umm Ruwaba are owned by big merchants. Under conditions of limited supply of stores, prices of renting tend to be determined under very monopolistic terms. Farmers, having no other alternative, are compelled to accept almost whatever prices that are set. Once sesame and groundnuts are in those stores and their volumes are known, the market knowledge concerning their selling becomes a sole property of those merchants. An implicit cartel/monopoly/no-competition sort of arrangement seem to exist among those merchants; with the consequence that the prices offered at the Umm Ruwaba crop market at all periods are relatively quite low. The Bank's contribution to the marketing of the crop is minimal. Apart from minor advisory services at cultivation season, the Bank rarely gives any advice of any sort to farmers that could make the realization of the objectives more prominent. One shortcoming in the experiment is the lack of any financial arrangement on the part of the Bank to bridge the gap between harvesting and sales regarding the extension of loans during this specific period. This had often meant that

farmers could not wait for very long for prices to go up and may decide to sell soon after harvest time at low prices. When marketing was done through the Bank, this was found to be relatively more expensive and this was partly ascribed to the inclucion of middlemen in the process.

No attempt has as yet been made to amalgamate those Co-operatives for joint transportation, storage, and marketing purposes. Neither has the Bank planned, nor has it the financial (and administrative) resources to help in those three rather important areas. The Bank, under its present conditions perhaps quite justified, sets the 15th of April as the last date for selling by Co-operatives so that it could work its accounts for the new season. Merchants, usually knowing this, keep prices very low until that time and Co-operatives unwillingly sell at those prices.

Although it is not perhaps directly the responsibility of the Bank, villages where agricultural Co-operatives are established, are found to lack basic needs like drinking water, health facilities, and the like. These, have in many cases formed the true constraints to increased production and increased farmers' incomes. Therefore, the experiment can only meet with success if these problems are tackled jointly with the question of finance.

Lastly, it has to be mentioned that agricultural extension is absent from this experiment. Development has little chances of being achieved by the simple merchanism of lending money for agricultural purposes without giving due consideration to the other social and economic parameters in the community.

THE NUBA MOUNTAINS AGRICULTURAL CORPORATION (NMAC):

(a) Historical Background:

The NMAC has undergone three stages in its historical development, first, it was established in the late 1920s as the Nuba Cotton Corporation and continued under that name untill 1966. Nuba cotton was a pure commercial enterprise and all its contact with the small traditional farmer was to purchase his cotton from him at the end of the season and distribute cotton seeds free to him at the beginning of the season. Cotton was therefore the only commercial cash crop in the area at the time.

Second, in 1967, the NMAC was established with the specific objective of improving the negative relationship between the Nuba Cotton Corporation and the small traditional farmer. The NMAC was assigned the following duties,

(i) to attempt to improve agricultural production, reduce cost of production, undertake plant protection and related activities.

(ii) to endavour to improve the economic, cultural and social welbeing of farmers through the provision of such essential services like drinking water, other services, and the encouragement of the Co-operative movement.

(iii) To encourage and organize amalgamated mechanized farming of cotton, dura, or any other crop.

However, despite the fact that the Corporation's association with the farmer has now become relatively closer,

yet no drastic improvement was registered as a result of this change. The reasons for this are to be found in latter sections of this part. On the other hand the Corporation's own revenue had declined 83%, an equivalent of ¾ of a million.

Third, in 1970, the so-called 'Modernization Schemes' were introduced with the further objectives of:

(i) Increasing the traditional farmer's productivity through the introduction of the machine with the eventual hope of increasing his income.

(ii) The amalgamation of small independent holdings into large mechanized schemes as a care for big future agricultural Co-operatives.

(ii) The introduction of agricultural services and agricultural extension.

(iv) Improving both the vertical and horizontal productivity of cotton to enable the Corporation to balance its books.

Likewise, these objectives met with very little success as the few following pages shall indicate.

2 b) Facilities and Mechanism of assistence:

The Corporation extends a number of facilities to the small farmer in the 'Modernization Schemes'. However it provides negligible assistence to the small farmer in the

traditional sub-sector. The facilities extended to the farmer in the 'Modernized Schemes' have admittedly resulted in some increase in agricultural production over the last few years as table (8.4) shows. This increase may justifiably be ascribed to the introduction of mechanization and related facilities. However, the use of machines and other related issues have their problems which resulted in the recent decline in production. These problems shall be described below.

The Corporation basically extends the following facilities to the Modernized Schemes farmers:

(1) The ploughing and preparation of the land for cultivation at basic price.

(2) Free improved cotton seeds.

(3) General and specific advice at all stages of agricultural production.

(4) Spraying of cotton (and dura) against locast and other insects.

(5) Other various supportive services.

In return to the above facilities, the Corporation expects the farmer to undertake the following commitments.

(1) that he should cultivate a minimum of 50% of the area of his alloted land (hawasha)[i] with cotton,

(2) that he should hand over his crop after picking to to the Corporation to decide upon its price and marketing.

(i) Regarding the area of land alloted in the different Modernized Schemes, the following areas (per Hawasha) were recorded by the team: 3 feddans, 4 feddans, 8 feddans, 10 feddans, 12 feddans and 15 feddans.

TABLE (8. 4 a)

Abbassia Productive Unit: Area Cultivated and Total Production (1969 - 1981).

(1) Cotton

Crop Year	Area Cultivated (Feddans)	Total Prod. (Kantar)	Average Production
1969/70	9891	32294	3.26
1970/71	6384	9780	1.53
1971/72	2497	3313	1.32
1972/73	3774	12512	3.31
1973/74	2003	3959	1.97
1974/75	2300	2677	1.16
1975/76	164	495	3.01
1976/77	119	578	4.85
1977/78	1089	7745	7.11
1978/79	4516	9434	2.08
1979/80	5625	3758	0.66
1980/81	4485	2982	0.66

Table (8.4 b):

(2) Dura

1969/70	42857	257,142	6.00
1970/71	42361	296,527	7.00
1971/72	39880	279,160	7.00
1972/73	50168	401,348	8.00
1973/74	48542	254,026	5.23
1974/75	50168	423,178	7.00
1975/76	58516	672,934	11.50
1976/77	53230	585,530	11.00
1977/78	40521	364,689	9.00
1978/79	187949	709,042	3.77
1979/80	37521	297,168	7.92
1980/81	84966	252,678	2.97

Table (8.4. c)

(3) Sesame

Year	Crop prod. Area (in feds)	(in Kantar) Tp	AP
1969/70	19315	57945	3.00
70/71	19896	79584	0.25
71/72	19326	42105	2.17
72/73	33137	132,548	4.00
73/74	20665	17628	0.85
74/75	31724	94171	2.99
75/76	20418	71463	3.50
76/77	16049	48147	0.33
77/78	11463	34389	3.00
78/79	23605	70815	3.00
79/80	14843	44529	3.00
80 81	27615	41422	1.49

Table (8.4 d)

(4) Groundnuts

69/70	8665	43325	5.00
70/71	11363	45,452	4.00
71/72	21530	39,461	1.83
72/73	13888	97,216	7.00
73/74	13845	69660	5.03
74/75	20585	144,095	7.00
75/76	20025	200,250	10.00
76/77	19450	77,800	4.00
77/78	17705	70,820	4.00
78/79	32129	192,774	6.00
7 /80	18416	147428	8.00
80/81	15731	102924	6.54

Table (8.4 e)

5. Maize

Year Crop Prod.	Area (in feddans)	TP (in kantar)	AP
69/70	452	2260	5.00
70/71	871	5226	6.00
71/72	638	1780	2.78
72/73	895	8950	10.00
73/74	1066	6076	5.69
74/75	1720	6880	4.00
75/76	890	5340	6.00
76/77	978	3900	4.00
77/78	666	1998	3.00
78/79	2855	22840	8.00
79/80	2117	16936	8.00
80/81	356	6780	19.04

Table (8.4 f)

6. Red-Pepper

69/70	113	452	4.00
70/71	200	1600	8.00
71/72	126	287	2.27
72/73	464	1392	3.00
73/74	176	704	4.00
74/75	308	1232	4.00
75/76	413	2585	6.25
76/77	467	1451	3.10
77/78	671	2684	4.00
78/79	621	1863	3.00
79/80	864	3456	4.00
80/81	385	1155	3.00

Table (8.4.g)

7. Millet

Year Crop Prod.	Area (in feds.)	TP (in kantar)	AP
69/70	4227	6908	1.6
70/71	3338	23366	7.0
71/72	3946	7844	1.9
72/73	5095	5475	1.0
73/74	5347	13819	2.5
74/75	5689	11378	2.0
75/76	4738	23690	5.0
76/77	3914	11742	3.0
77/78	7822	23556	3.0
78/79	7745	38175	4.9
79/80	5674	28370	5.0
80/81	4011	8022	2.0

Table (8.4.h)

Average Cost per feddan in Mechanized Cotton Project (75-82)*

Item	1975-76/77	1978-1979/80	1981/82
	Cost in Ls.	Cost in Ls.	Cost in Ls.
1st Plough	1.000	1.000	1.500
2nd Plough	0.600	0.600	1.000
Seeding	1.500	2.000	2.500
Weeding (Kt & 2nd)	4.400	5.400	7.000
Picking	4.500	7.000	9.000
Cotton stem elimination	1.000	2.000	3.000
Packing	0.250	0.500	0.500
Transport-ation	0.750	1.500	1.500
TOTAL	LS.14.000	20.000	26.000

* Calculated on the assumption of average product of 3 Kantars per feddans.

The condition that farmers should put 50% of the land under cotton has been a difficult one to implement. Cotton, when compared with either dura or other cash crops,is regarded by the farmer as very unrewarding financially.(*) The cost of growing and picking of cotton is relatively quite high and there is often a shortage of labourers for picking, table (8.4.h) reflects the recent increase in the cost of growing cotton. Inadequacy of transport facilities both at the hands of of farmers and the corporation have constrained production greatly. Farmers also face a serious problem of lack of drinking water in and around most of those schemes. It is striking to note that no serious thought seem to have been given to this problem of inadequacy of drinking water when those schemes were created.

If left alone, farmers will not grow cotton; 90% of the 85 farmers interviewed replied negatively to the growing of cotton. In fact the majority of the officials of the NMAC at Abbasia were not totally convinced with the wisdom, to the farmer, of growing cotton. The reason it is grown is simply because it is the government's policy aiming at availing this type of short-staple cotton which is badly needed by the domestic textile industry.

Recently, there have been many pressures that have contributed to the decline of cotton production in the Nuba Mountains. Big private mechanized schemes for the production of dura that have grown in the vicinity of those 'Modernization Schemes' have created a havoc of competition. Private business concerns seem to tackle the problem of inadequacy of drinking

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(*) and therefore farmers show a lot of relectance to abide strictly by that rule.

water much better, get hold of hired labour much quicker and foresee trouble areas in the process of production with more ingenuity. In contrast, the Corporation has been suffering from acute shortage of facilities. The skilled manpower including tractor drivers, mechanics, and supervisors have been attracted away by those private schemes. The low and almost stagnant budget of the Corporation has hampered it from purchasing vital spare parts and other essential facilities. This situation has resulted in the followingdifficulties:

(1) An inadequate budget causing an inability to purchase spare parts, keep present personnel and/or employ new ones. One of the main effects of this is that repair and maintenance of tractors have virtually stopped.

(2) Among the drivers, mechanics, and workers who are still wit the Corporation, there seem to be a good number who are incompetent; besides the fact that they are tempted to join the private schemes because of the high pay.

(3) The Corporation lacks Co-ordination with Departments such as Plant Protection and Agricultural Extension Services.

(4) The whole experiment has been implemented rather hurriedly. Many 'tribal' and 'political' considerations seem to have entered in its creation. Since then, the experiment has not been subjected to any evaluation.

(5) Partly as a result of (4) above, there is no comprehensive plan of follow-up, betterment, or extension.

(6) The extensive distances separating the schemes from the headquarters and from each other, coupled with the lack of transportation and/or fuel have made the contact between the Corporation and the farmers very weak. This, and other reasons, have led to unstable production relations between the farmer and the Corporation and often to lack of trust between the two.

One way of solving this, seem to be through adopting the following set of measures if agricultural production and the farmer's situation are to be improved.

(1) The removal of the major constraints hindering the increasing of production by the small farmer such as provision of drinking water, food, finance, and improved seeds.

(2) The undertaking of a comprehensive appraisal study for the schemes to identify underlying so as to draw better policies for the improvement of these schemes.

(3) The provision of adequate finance to the Corporation to meet the demand for spare parts,(i) fuel, and other requirements.

(3) Mechanized Agricultural Farming - Habila:

In the season 1969/70, the Mechanized Farming Corporation started the experiment of rain-fed mechanized farming at Habila some 46 kilometres east of Dilling town.

(i) Of its current needs of spare parts for tractors, harvestors, etc... only 15% are provided annually.

Agricultural schemes of an area of either 1000 feddans or 1500 feddans were prepared and then alloted to private businessmen from all over the country.(i) By 1970/71, 1980 147 such schemes were allocated resembling what is now known as Old Habila.

At present, four types of schemes can be distinguished within the Habila area, these are:

(1) Private mechanized schemes.

(2) Guided Private mechanized schemes, directed and monitored by the World Bank.

(3) The State Farm.

(4) Other.

Under the first category, a total of 187 projects have now been allocated and are operative. For this category, the Corporation provides mainly improved seeds and advisory service. Owners arrange for their tractors, harvestors, fuel and the like. Finance is mainly obtainable from the Agricultural Bank, as table (8.5) shows. These schemes have proved to be extremely lucrative for the owners and one must note that they have contributed substantially to the increase in food and agricultural production in general in the area. Certain practices like "smuggling" of dura tend to belittle that contribution at times and reduce its positive impact on the rest of the country.

Schemes of the second category are similar to those of the first categ in terms of both the area and type of ownership. The only difference is that the World Bank has been

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(i) However most owners were found to have come from the main towns of Omdurman, Kosti, El Obeid, Umm Ruwaba, etc.

Table (8.5):- Credit Extended to Mechanized Farming, Dilling Area (1979 - 1980)

Number	Area/Item	Volume of Loan	Interest	Total Sum
111	Habila area	148,192	9,594	193,786
21	El Bayda area	64,403	4,717	69,119
3	Umm Lobia area	3,572	0,084	3,656
2	Karandal area	3,090	0,203	3,298
3	Tousi area	9,105	0,357	9,462
2	El Darangas area	6,755	0,574	7,329
2	"Outside Planned" area	4,680	0,179	4,859
3	Co-operative Societies	22,403	2,052	24,455
147	Dura Cultivation	298,200	17,765	315,964 (i)

Source:- The 1980 'Report', The Agricultural Bank, Dilling Branch.

(i) For the Season 1980/81, total credit reached £s 643,723.

closely involved in financing and directing production processes in them. Through receiving technical assistance, improved seeds and general advice, owners of Guided Schemes have benefited a great deal. A total of 134 schemes have been allocated to this category.

The State Farm is composed of 28 schemes[(i)] although recently some of those schemes are being rented to private enterprise. The State Farm is run completely as a public sector concern with all the machinery, the technical skill, and the personnel management. The Farm started, perhaps like many other public Corporations in the Sudan, with an excellent performance in terms of productivity and aggregate production but it gradually started to fall apart. Originally, the idea was that the State Farm be the leading sector in the area and the good example to be followed by other schemes. This dream was short-lived and today as being conveyed by the Managing Director of the Farm, the farm lags behind both in terms of production and productivity. Despite all this however, it had not registered a loss. The problems facing the State Farm have been competition from private mech ized schemes, inadequacy of technical staff, the acute shortage of spare parts and other vital machinery and fuel, and the inadequacy of agricultural services and facilities.

Over and above the three categories discussed in the previous paragraphs, there has been emerging a new type of agricultural schemes in the Habila area. First, there are the organized Co-operatives of various villages applying for schemes and running them on a co-operative basis. Some of these have

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(i) It used to be 30 schemes, but 2 schemes have been given to Sudanese who have returned from abroad after the National Reconciliation in 1978.

had some success but most of them have met difficulties. The weakness of the Co-operative movement and lack of official backing have been the major responsible factors. Second, the team has detected a rather interesting type of recent practice. Village delegates from as far as Dibaybat (near El Obeid) will come over to Habila area, lay their hands on a pie e of land, and start cleaning it to prepare it as a scheme. Faced by this 'public' pressure, the MFC gives in and plans the area properly for them, include it in the schemes plans, and have it registered under their name as a Co-operative. This type is still of negligible weight and it is too early to assess it in terms of any criteria.

In all four types of agricultural practices, the MFC involvement has been weakened by a number of problems. These can be summarised as follows:-

(1) Land acquisition for those schemes was not done according to well-thought, well-studied, and fair criteria. The result has been a pile of cases by the residents of the area against the MFC and a lot of harm and injustice seem to have been caused to some small farmers and nomads.

(2) There is an on-going quarell between the Corporation and the Regional authorities over the issue of land ownership. The Corporation regards itself as a national entity aiming at serving the country as a whole, while the Regional authorities want to apply strict regional measures on the agricultural activities. This quarell has jeopardized the relationship between the two public bodies to the deterent of increased production.

'detriment' better,

(3) Schemes at times are allocated through political and/ or 'tribal' considerations. The result has been that economically unable owners cause the schemes to incur losses and lead to waste of resources.

(4) The growth of schemes outside the planned area has hindered both the ability of the Corporation to run existing schemes efficiently, as well as its desire to extend the area under cultivation.

(5) The Corporation's officials seem to complain continually that farmers do not abide by their regulations and do not follow the advice and directives for production. As yet there seem to be no way of persuading them to do so.

(6) Transportation of machinery, produce, and people is found to be a major restrictive factor. Heavy rain during the rainy season and the loose clay soil make movement very difficult. Improved transportation facilities could clearly be a causative factor for enhansing production in the area and improving marketing.

4. The Cooperatives Societies in The Study Area:

The Copperative movement in Kordofan is relatively small in size and most of the societies are established as recently as the mid 1970s. All the cooperative societies in the region come under the categories of multi purpose, flour milling, consumers and agricultural ones. The study area, as well as the rest of the region, is domoninated by flour milling cooperatives. This category represents 53.9% of the total number of the established cooperative societies in the study area (24.7% in East Kordofan, 48% in Tagali area, 72.5% in

Hamar area). The following table gives the numbers and the categories of the established societies in the study area:-

Area	Flour Milling	Consumers	Agricultural	Multi-Purpose
Eastern Kordofan	21	6	27	31
Tagali	13	-	11	3
Hamar	103	35	4	-
Total	137	41	42	34

The argicultural cooperatives represent 16.5% of the total societies established in the study area. However this percentage differs from one part of the study area to the other, i.e. 31.7% in East Kordofan, 40.7% in Tagali area and 2.8% in Hamar area. The percentages in each area corresponds to the degree of commercialization of the agricultural sector. The more commercially oriented the production, the less is the degree of involvement in cooperative activities.

The agricultural cooperatives given in the table above are either getting financial support from the agricultural Bank (East Kordofan) or in the process of doing so (Hamar Area), or from the government through the NMAC (Tagali Area). As already mentioned in this chapter the activities of the cooperatives under the Bank's finance are limited to the lending aspect.

The connection between the Agricultural Bank in Eastern Kordofan and the cooperative office in Umm Ruawba is not strong enough to allow for the office's guidance and supervision of these societies. In fact the bank had seconded two staff members from the cooperative office to assist in the setting of the agricultural cooperatives in villages and in keeping the individual accounts for each society. These two staff members represent the Bank on all the committees of the different cooperatives it finances. Hence, what is done is running the cooperative in the manner the Bank acknowledges, which means using the committees as vechiles for lending money and getting the loan back rather than extending a wide range of activities related to agricultural production.

However, it is necessary to note that the cooperative office in Umm Ruawba does not have the facilities to cope with services demanded, in terms of guidance and supervision, by the 77 societies under its responsibility. All it has thus far is four officers, one of whom is a university graduate and three high secondary school graduates. There are two other members who have been seconded to the Agricultural Bank. The office is set in a rented house and there is no car available, at the time of the survey, to allow for the movement of the personnel to visit the different cooperative societies.

In fact what is said about Umm Ruawaba Cooperative Office is applicable to the offices in Abbasiya and El Nihud. They all face shortages in staff and transport facilities

which does not allow them to do their supervision and guidance in a proper manner.

From the experience of the agricultural cooperative in East Kordofan it can be said that the utilization of the indigenous system of organization can be very successful indeed. All the cooperative societies which are doing reasonably well under the Bank lending terms are those which are constituted by homogenious groups i.e members of one village who are in most cases related through kinship and/or marrigage and exhibit a sense of solidarity. Societies made of members from different villages seem to have difficulties in meeting the Bank's requirements and their committees are unable to function effectively.

One cooperative society outside the Bank cooperatives, which has a reputation as being successful in the study area, is that of Abbasiya. The membership composition and the way this cooperative started does not qualify it to be considered under the category of cooperatives. The present day Abbasiya cooperative was established orginally as a partnership between 28 members who were government employees, merchants and farmers from Abbasiya village. In 1976 the cooperative officals from El Obied visited the area and suggested to the partners to change their establishment into cooperative and open it for a wider membership. This was done and the partnership was registered as a cooperative and the membership increased to 56 members. Presently the membership is 216 who are mainly government employees and merchants.

His surely a small town ?
I've seen it !

In 1979, the ILO got interested in the cooperative and gave it a grant in aid of $40,000. In 1981 the ILO provided the cooperative with a landrover and arranged for a cooperative specialist, who is a university graduate, to be attached to it. The committee of the cooperative who consist of a majority of merchants seems to be not in good terms with the specialist and favoured the other cooperative officer(a high secondary school graduate) who was attached to the society since its registration.

The membership of this cooperative as already mentioned are in the majority merchants and government employees. They do not engage in the agricultural operation. These operations are mainly undertaken by hired labour employed by members of the committee. In reality the cooperative still maintains its character as a partnership and operates as if it is a company rather than a cooperative society.

This example of Abbasiya agricultural cooperative and the other agricultural cooperatives under the Agricultural Bank as well as the difficulties faced by the cooperative offices in the region indicate that the cooperative movement has still a long way to go. The Rural Credit Institution suggested in this study have to ensure that the supporting cooperative offices are well equiped to help it in performing all its functions.

CHAPTER NINE

A MODEL OF THE RURAL CREDIT INSTITUTION (RCI) FOR KORDOFAN REGION

General:

The rural settled population of Kordofan who are to be the target group for the outcome of this study represent 67.8% of the population of the region. According to the 1973 census this was an equivalent of 1,422,729 persons.

Looking at the envioynomental setting and the agricultural activities, it has to be noted that there are varieties of crops grown in the region correlating with certain types of soil and climatic conditions. The study area contained three out of four soil types of the region. These are namely "goz", "teen" and "gardud" types. The major crops grown in these soil types are, dura, millet, sesame, groundnuts, Kerkade, cotton and water-melon.

In considering the contribution of the region to the national production in the agricultural sector it can be seen that it produces a large proportion of most of Sudan's crops (e.g. 67% of gum Arabic, 25% of groundnuts, 40% of sesame, etc.). Over 90% of the population of the Region are engaged in agriculture and all the food requirements for the people in the region are more or less produced in this sector. In addition, the livestock sub-sector plays a particularly important role in the economy of the region and the country as a whole.

The main constraints arresting agriculture in the region from realizing its full potential can be summerized as follows:-

(a) Obsolete and outdated methods of production,

(b) meagre and uncertain rainfall,

(c) scattered population, nomadism, and shifting agriculture,

(d) NON- inavailability of drinking water and other basic needs,

(e) inadequacy of marketing, transportation, and storage facilities,

(f) inavailability and/or inaccessibility of finance and,

(g) low level of government involvement.

In this connection availability of finance, in particular, is seen as the most positive way of:

(i) raising personal incomes per capita,

(ii) raising production,

(iii) checking rural-urban migration and,

(iv) improving the quality of life and the countryside conditions in general.

2. Some Basic Problems of Agricultural Production in The Study Area.

Crop production in the study area is dominated by traditional practices and systems. This is reflected in both small farmers activities and the recently introduced large scale mechnaized schemes. In the latters' case many of the operations depend directly on traditional labour practices. There is evidence that such traditional systems have been open to changes in the recent years. Some of the change impacts have resulted in certain distortions in the

systems themselves. This has led to imbalances, which have their reflections on the agricultural production of the region.

The 'nafir' as a system of traditional Co-operation widely practised in Kordofan has been variantly affected. The change is part of a series of changes that have taken place in the social organization of the societies inhabiting the study Area. It has been found that the family institution as the basis of the traditional farmers' system is Shaken. It's homogeneity and solidarity are gradually disintegrating due to many factors including the introduction of cash crops.

Individualistic attitudes are replacing the family unity in most of the visited areas. This is very clear in the Hamar area where the collective labour system, Nafir, is being gradually replaced by hired labour and other forms of agricultural organization (e.g, Sharaka). While in Eastern Kordofan, family homogeneity, solidarity and Co-operation on the basis of Nafir are still competiting with the forces of commercialized agriculture. As for the Eastern Jebels they are still exhibiting a strong element of homogeneity and solidarity with little impacts from commercialized agriculture. However, in the long run, the area shall be affected by similar changes in family and other community institutions.

The same institutions are also affected by migration, which is of many types. Some of these are agricultural employment oriented to the irrigated schemes, to the gum-producting areas and to the mechanized farming areas of Southern Kordofan. While others are attracted by off-farm employment in the same schemes and the big urban centres. Beside the above types, migration from the region to the Oil-rich

countries has become a phenomenon in the last few years.

The push factors behind migration have been regional imbalances in the process of development, the historical factors, environmental degredation, low absorptive capacity of local agriculture for capital, rising local aspirations and occasional natural calamities. Migration in the region has had positive and negative effects. The positive effects have mainly been to bridge the resources gap to enable the regional economy to keep going. On the other hand, the negative effects have been the deprivation of the region from its skilled and able labour force.

Of the other shortcomings faced by traditonal agriculture in Kordofan is the lack of finance in the hands of the small farmer. Two major traditional financial institutions are identified in the study Area. These are (a) the Shayl system and (b) borrowing against standing property. Each of these embrace a number of sub-systems. The common Shayl system practiced in those areas involves payment in kind (crops) or in cash with a very high rate of interest. The lenders in this case are either village merchants or affluent villagers. Borrowing against standing property includes mortgage of animals and Masak. The former causes a number of problems that often lead to court procedures. The latter, though was helpful to the farmer, has been stopped due to shortages in finance.

All these traditional lending systems, with the exception of Masak, act against the farmer's prosperity

especially in bad years of harvest.

Compared to the above the modern financial institution, represented mainly by the Agricultural Bank's experiment in Eastern Kordofan area, presents an alternative which has proved to be more beneficial to the farmer. On the other hand, the Farmers' Union efforts in the provision and distribution of seeds offers a potential system that can be improved upon.

3. Appraisal of 'Modern' Agricultural Institutions In Kordofan:

Comprehensive rural development, largely advocated by the team for modernizing the traditional agricultural sector in Kordofan, requires some extended efforts starting from the provision of basic needs, through committed government involvement in the production processes, to an active participation in transportation, storage and marketing of crops. To have the farmer fully devoted to crop production, his daily needs will have to be satisfied. At the rural setting these include his drinking water, his shopping for consumer goods, the milling of his dura for getting flour, the satisfaction of his needs for meat, milk, and so on. These socio-economic activities may require the formation of various Co-operatives specifically geared to fulfill those needs. In the establishment of such Co-operatives, or the satisfaction of such needs, the suggested Rural Credit Institution (RCI) should have an important role to play. Such a role would obviously imply a continuous expansion of its own financial, administrative, and transportational capabilities. Equally important is an expansion

and an improvement in the capabilities of local Co-operative offices to help in the formation, the advising and the running of agricultural Co-operatives as well as other types of Co-operatives.

The other area that needs to be emphasized is the area of marketing. General agricultural marketing is concerned mainly with supplying consumers with food and other items in the quantity and the form they want, when and where they want them. Two main types of marketing may be distinguished: direct contact between the two parties, and the one which involves middlemen. The former usually brings better returns to the farmer. Marketing of agricultural produce requires many related services such as assembling, grading and standarization, packaging, processing, storing, transportation and finance. Given all the above, Co-operative marketing could be said to have superior advantages (to both farmer and consumer) over the other types of marketing. In the study Area, major defficiences in all the marketing services mentioned above were found to be present. The consequencies of this have been fluctuations in prices and in farmers' incomes and accordingly a lot of harm and uncertainty to his standard of living. While finance may be identified as a major limiting factor to increased agricultural production deserving a lot of attention, , the provision of markets and marketing facilities is also regarded as an urgent task for releasing the potential of traditional agriculture.

Since this study aims at building upon the experiences of current institutions in the region, mainly to avoid duplication, that is why the Agricultural Bank experiment at Umm Ruwaba area, the Nuba Mountains Agricultural Corporation,

and Machanized Farming Corporation are studied and evaluated. Before the Umm Ruwaba experiment was launched, there has been no real lending by the Agricultural Bank to small farmers in the traditional sector, and long-term finance has been minimal (see text). The Umm Ruwaba experiment started in 1977 and credit finance is restricted to two cash crops only: sesame and groundnuts. By the time of the survey the experiment has embraced 27 co-operatives. The money involved reached £s. 680.000 and the total area cultivated stood at 30.000 Mukhamas (52,500 feddans) of sesame and groundnuts. The services extended in this experiment are credit to meet financing various agricultural operations and some minor organizational help with storage. Farmers involved in the experiment have benefited mainly in terms of improved production and incomes. The shortcomings of the experiment have been in the areas of transportation, marketing and other development - related issues.

The above point raises the question whether rural credit alone is enough to bring betterment to the farmers' situation, or whether in fact this should be coupled with other development - oriented efforts.(i)

The Nuba Mountains Agricultural Corporation, on the other hand, is responsible for agricultural production in the 'Modernization Schemes' with the objective of improving the conditions of small farmers. This is perceived through the extension of specific services such as ploughing, improved cotton seeds, agricultural advice, spraying and the like. Out of the land alloted to each farmer, the Corporation requires that 50% be put under cotton. The Corporation is facing a

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(i) Development is used here to mean the progressive, comprehensive and continuous transformation of society with emphasis on the reduction of poverty, hunger & ill-health.

great difficulty trying to implement this condition.

In almost all the 'Modernization Schemes' farmers face shortages of transportation facilities, drinking water supply, etc... which have serious negative impacts on production and the general well-being of the farmers. Competition from private sector schemes in the area has been an added difficulty which those 'Modernization Schemes' have had to face. All these problems have made it evident that there is need for a comprehensive evaluation of the Modernization Schemes and of the role of the NMAC.

The Mechanized Farming Corporation came into being in early 1970s and is presently responsible for four types of mechanized schemes of 1000 - 1500 feddans, all of which are growing dura. The four types are private Mechanized Schemes, Guided Private Mechanized Schemes (directed and monitored by the World Bank), the State Farm and others. The schemes have proved to be extremely Lucrative and have contributed substantially to the increase in food supply and agricultural production in general in the area. In all four types of schemes, the MFC's involvement has been weakened by a number of problems. These include: misappropriation of land, [illegible] conflict between the interests of the regional authorities and the national character of the MFC, extension of mechanized farming outside the planned area, non-compliance of farmers with the advice and directives of the Corporation, and difficulties of transportation in general.

The inadequacies of the regional economy outlined

above often manifest themselves in push-bound migration. The proposed Rural Credit Institution (RCI) should accordingly try to cater for some of the functions presently served by migration. The most important of these is the increased income generated in the process and which has direct bearing on agricultural production, provision of food and other essential requirements of life.

4. A MODEL OF THE RURAL CREDIT INSTITUTION (RCI) FOR KORDOFAN REGION

(a) Theoretical and Organizational aspects:

(a.1) In the light of the discussion presented in the above three sections of this chapter, the proposed Rural Credit Institution for Kordofan Region is recommended to make full use of the experiment of the Agricultural Bank at Umm Ruwaba. Appraisal of the experiment is included in the text.

(a.2) Though the Institution should have full autonomous position, it will have to be guided and monitored by regional authorities (e.g. the Ministry of Economics and Finance).

(a.3) The major function of the Institution shall still be to supply finance to the small farmer in the traditional sector as required for the agricultural operations in order to facilitate efficient production. In the process, certain infrastructural requirements should be catered for.

(a.4) Equally important, is that the proposed RCI must have dimensions other than the simple exercise of money lending. The most pressing of these dimensions are the provision of the basic needs mentioned above such as secured dura supply and drinking water facilities for the farmers to be served by the Institution. The above should be regarded as the short-term objectives to be met by the Institution.

(a.5) Over and above, during the medium - and long-term, the Institution should gradually build a'Reserve Fund' to meet such occurances like crop failure, sudden famine, epidemics, etc..

(a.6) Furthermore, its long-term activities should expand to include the encouragement and the support of all types of Co-operatives for farmers, the support of their socio-cultural activities, and other development aspects of a much bigger magnitude.

(a.7) In addition to the ordinary lending rate, the RCI should charge farmers an extra 2-5% to cater for services and new investment.

(a.8) The proposed RCI should have its headquarters at El Obeid town. It should have three branches in each of the study areas, i.e., East Kordofan (Umm Ruwaba), Tegali area (Abbasia - Dilling), and hamar area (Nihud).

(a.9) Each branch should cover 50 villages, and the experiment should be run for an initial period of 5 years. Both Eastern Kordofan and Hamar areas are fairly homogeneous and the 50 villages for each area may be distributed according to some specific criteria. In the Eastern .

Jebels areas however, the distribution should be done in such a way as to incorporate the "Modernization Schemes", Horticulture and other traditional farming.

(b) Infrastructural Aspects of the RCI:-

The Rural Credit Institution (RCI) shall consist of the following management set up:-

(b.1) The RCI Board:

The Board shall be constituted by a decree by the Regional Minister of Economics and Finance. It shall include the following members::

(a) The Minister of Economics and Finance or his representative, (Chairman).

(b) Managing Director of RCI (Secretary).

(c) Representative, Regional Minister of Agriculture.

(d) Representative, Agricultural Bank.

(e) Representative, Regional Cooperative department.

(f) Representative, Nuba Mountains Agricultural corperation.

(g) Representative, Mechanized Farming Habila.

(h) Branch Directors RCI Umm Ruawaba, El Abbasiya and El Nuhud areas.

(i) Two representatives, Farmer's Union: One Northern Kordofan the other Southern Kordofan.

(b.2) This Board shall act as the permenant body which makes the RCI policies and approves its annual programme and budget. The Director of the RCI is accountable to the Board.

(b.3) The Managerial Staff:-

The RCI shall have a managing director running its main office at El Obeid with three assistant directors running the sub-offices at each of the three project areas.

(b.4) The Headquarters Office:-

This office shall consist of

- The managing director (e g. salary segment group one).
- Head department, rural credit finance (eg. salary segment group three).
- Head cooperatives department (eq. salary segment group three).
- Head department, Research, Training or extention, (eq. salary segment group three).
- Supporting clerkal and accountants staff, (one senior clerk, 4 typists/secretary; one senior accountant, 3 accountants). (eq. salary segment H-B).
- Workers: 4 drivers (eq. old group 5) massangers and guards 6 (old group 4).

(b.5) Area Office:

At each of the three areas the RCI office shall be manned by

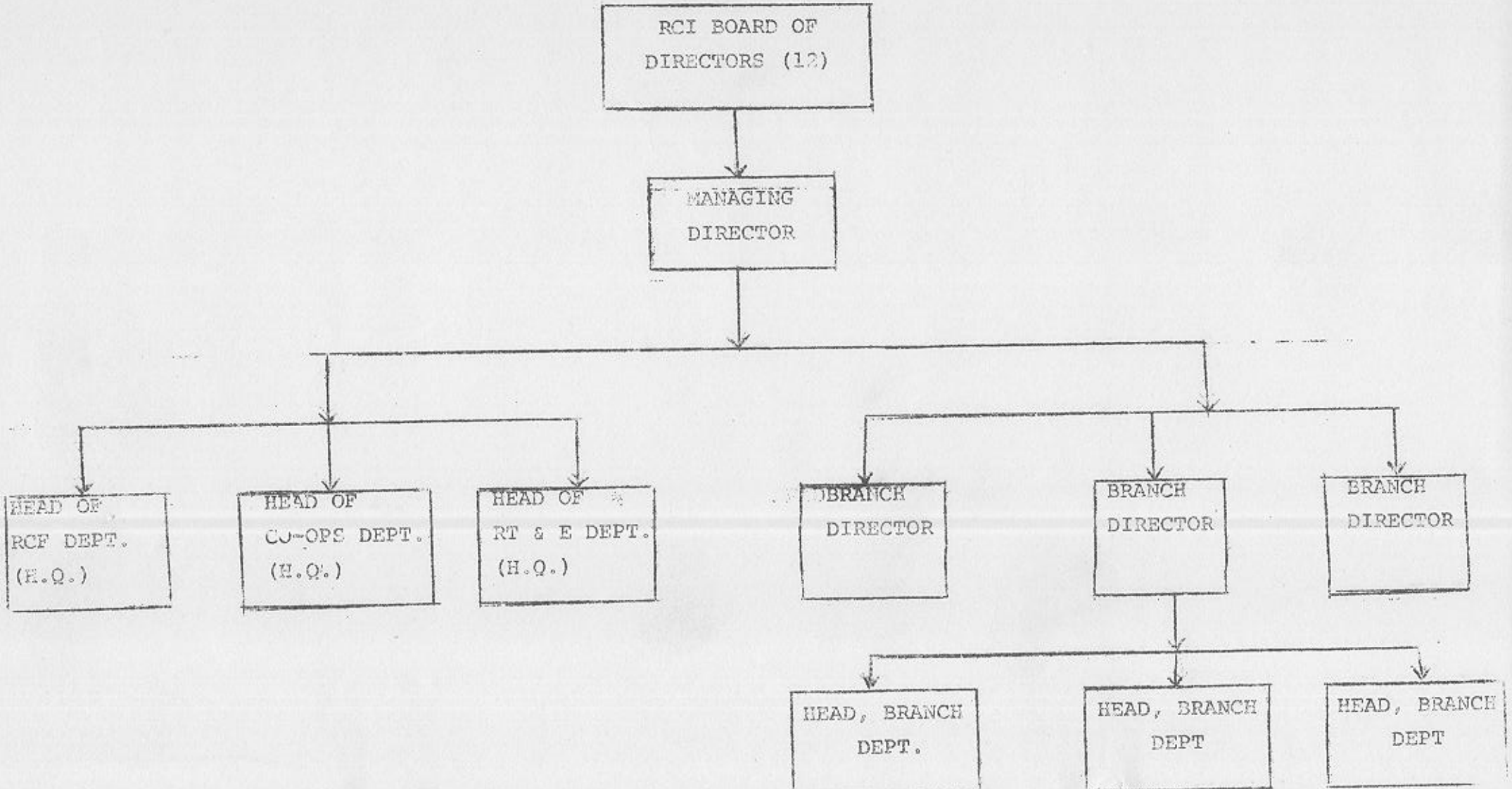
- Branch Director (salary segment group 3).
- Six university graduates, representing the three departments (credit and finance, cooperative, research training and extention). These shall be drawn from relevant disciplines, namely agriculture, economics and sociology. (Salary segment eq. to Q - B).
- Supporting clerkal and accountant staff: one senior clerk, 3 typists, secretary: one senior accountant, 4 accountants (eq. salary segment H - B).
- Workers: 6 drivers (eq. old group 5) messengers and guards 8 (eq. old group 4).

(b.6) Buildings:

During the five years of the project the building item shall consist of two components, renting of office facilities and staff accomodation. Pending the success of the project the construction of permanent building for the above two categories shall be considered. Buildings to be rented at Headquarters & the area offices shall consist of

- Four big houses for offices (at the rate of £s 500 per month each).

TABLE (4.1) : ORGANIZATIONAL CHART OF RCI



- Seven house for directors and heads of departments at the rate of £s 300 per month each).
- Twelve houses in total at headquarter and area offices to accommodate staff at the rate of £s 150 per month each.

- Stores: 3 big wharehouses are to be constructed one at each of the project areas, capacity sack.

Office Equipment:

Furniture of the offices at headquarters and branches plus one large meeting room at headquarters and three small ones at the brnach offices.

Transportation:

Two types are to be catered for: small vehicle required for the mobility of the staff and truck for transport of crops:

A total of 13 small cars (land rovers:)
6 stat , 7 pickups) A total of
nine truck (three for each area).

CHAPTER TEN

THE COST OF ESTABLISHING THE RURAL CREDIT INSTITUTION FOR KORDOFAN REGION

1. Introduction:

The proposed RCI for Kordofan Region is intended to be a model lending institution for the small farmer in the traditional agricultural sector. In the future, the operations of the RCI may be extended to include a bigger geographical coverage within the Kordofan region and could also be repeated in other regions of the country with the necessary adjustments and adaptations made. Since the proposed RCI is expected to serve a wide range of objectives which shall have an important contribution to the improvement of the quality of life of small farmers in the countryside, then the costs of establishing it seem well justified. In fact the justification may be sought not only within the context of expected improvement in farmers' life, but also in far-reaching positive impacts that may benefit the country as a whole. Increased agricultural production in Kordofan means an increase in the level of GDP, a possible increase in exports and in the volume of national employment. Likewise, an increase in regional incomes at Kordofan shall lead to, given the regional propensities to consume and to import, a bigger volume of trade with other regions, and hence a stimulation of inter-regional trade with all the benefits resulting from the process. In short, an injection of income in Kordofan's regional economy through the proposed RCI shall generate a series of positive repercussions that may extend outside the borders of the region. To enable

the proposed Institution to play its expected role efficiently, its proper implementation, supervision, guidance, and its future follow up and evaluation are regarded as of paramount importance. It is recommended that the evaluation should take place at the end of the fourth year of operation of the Institution.

Over and above, any financial aid for the proposed RCI in the future could be directed to at least six areas of activities which could help to reduce the shortcomings of existing practices and reinforce their positive sides. These areas are:

(1) Provision of transport for the Institution's management and personnel.

(2) The building of stores at the three centres of the project areas.

(3) The provision of transport means for the crop from collection centres to stores.

(4) The provision of some of the basic needs, especially dura and drinking water.

(5) The training of the Institution's and the co-operatives' personnel for improved management and improved advisory capacity.

In the following section the major cost items involved in the establishment of the RCI are discussed.

2. Major Cost Items:

The cost of establishment of the proposed RCI shall include the following items:-

(a) Fixed Costs

(a.1) Buildings (offices, housing and stores)

(a.2) Office equipment.

(a.3) Staff cars.

(a.4) Pick-up trucks and other transport facilities.

(a.5) Cost of capital.

(b) Variable Costs

(b.1) Initial capital for lending and borrowing

(b.2) Working capital

(b.3) Wages and salaries

(b.4) Depreciation and insurance cost

(c) Other Costs

(c.1) Contingency Fund for dura supply, subsidy, provision of 'Tagawi', etc....

(c.2) The cost of training staff and personnel of both the Institution and the co-operatives.

(c.3) The cost of agricultural extension.

Under the building item, the appropriate policy would have been to construct necessary buildings to house the Institution both at Headquarters and at the branches. However, since the Institution is recommended

to be run as a pilot scheme for an initial period of 5 years, then renting of buildings is seen as most suitable. The only buildings to be constructed are the three stores at each of the branches.

The following calculations show the necessary sums required for renting the buildings, purchasing the equipment and furniture and the transportation facilities.

Buildings

(1) H.Q. Office (Renting) = 1x500x12x5 = 30.000

(2) 3 Area Offices (") = 3x200x12x5 = 36,000

(3) H.Q Director, house(") = 1x300x12x5 = 18,000

(4) 6 Houses (3 Branch Directors plus 3 Head depts) (Renting) = 6x150x12x5 = 54,000

(5) 12 Staff houses (Renting) = 12x100x12x5 =72,000

(6) 3 Stores (capacity 30,000 sacks each) ($3x1000m^2x100.00$) (construction) = 300,000

Total =£s 510,000

Equipment:-

		Es
1. Managinging Director's Office (H.Q) 1x3000	=	3,000
2. Heads of Depts offices (H.Q) = 3x2000	=	6,000
3. Typists and Secretaries (H.Q) = 2x1500	=	3,000
4. A/C Office (H.Q) = 1x2000	=	2,000
5. Branch Directors Offices = 3x2000	=	6,000
6. Heads of Depts. offices (Branch) = 3x1500x3	=	13,500
7. Typists and Secretaries (Branch) = 3x3x1500	=	13,500
8. A/C Offices (Branch) = 2x3x1500	=	9,000
9. Meeting Hall (H.Q) = 1x5000	=	5,000
10. Meeting Hall (Branch) = 3x3000	=	9,000
TOTAL EQUIPMENT COST	=	70,000

Transportation:

			£s
1. 13 Landrovers			
- 6 station wagons	= 6x45,000	=	270,000
- 7 Pick-ups	= 7x25,000	=	175,000
2. 9 trucks	= 9x54,000	=	486,000
			931,000
3. Fuel and lubricants	= 22x2000x5	=	220,000
4. Repair and Maintenance	22x500x5	=	55,000
Total transportation cost=		=	1,226,000

On the other hand, the cost of capital (i.e., interest payable on the sum to be borrowed from the banks) is given by the following table.

Table (10.1)

Cost of Capital (i)

(interest payable on the balance to be borrowed)

Year	Interest (at 6%)	Repayment	Total
2	34,769	115,895	150,664
3	32,682	115,895	148,577
4	30,722	115,895	146,617
5	28,878	115,895	144,773
Total			590,631

(i) See table of sources of finance.

The variable costs (category (6)) include the initial capital for lending and borrowing, the working capital, wages and salaries and the cost of depreciation and insurance. These are given by the following calculations.

Initial Capital for Lending and Borrowing:-

Evidence of the Agricultural Bank's experiment at Umm Ruwaba shows that the volume of money currently involved is £s 680,000 for 27 co-operative societies (i.e., an average of 25,185 per society). Building upon this evidence and setting an extra 10% to be made available for finance then a sum of £s 27,703 shall be needed for each co-operative society.(i) Each area (50 societies) shall accordingly require £s 1,385,150; and the three areas (150 societies) shall require a volume of finance of £s 4,155,450 annually. Assuming that out of the 5 years, the life time of the project, there shall be two failure years when the pay-back percentage shall drop from 100% to 70%, an extra sum of £s 2,493,270 shall be needed to subsidize those years. This makes the total volume of capital required to sum up to £s 6,648,720. These calculations are on the assumption that the money paid pack by farmers at the end of each season shall be used as a revolving capital to finance activities of the following season and so on.

(i) The extra 10% is to allow for a similar increase in acreage over what the experiment allows.

Table (10.2):

Working Capital

1	1 month of pay	= £s 9,955
2	6 months of all other costs	= 2,077,725
3	10% of Institution costs as contingencies	= 930,000
	Total	= 3,017,680

Note: The working capital shown in this table is what is needed before the RCI starts its actual operations.

Table (10.3):-

Cost of Depreciation and Insurance

(All Cars (Declining rate)

Year	Cost	Depreciation Cost (at 20%)	Insurance (at 4%)
1	931,000	186,200	37,240
2	744,800	148,960	29,792
3	595,840	119,168	23,834
4	476,672	95,334	19,067
5	381,338	76,267	15,254
TOTAL		625,929	125,187

Total depreciation and insurance cost =

Es 751,116

Wages and Salaries:

(Headquarters)

(1)	Managing Director (H.Q El Obeid)	1x700x12x5	= 42,000
(2)	Head, Department of R.C. Finance	1x500x12x5	= 30,000
(3)	Head, Department of Co-operatives	1x500x12x5	= 30,000
(4)	Head, Department of Research, Training and Extension	1x500x12x5	= 30,000
(5)	1 Senior clerk	1x150x12x5	= 9,000
(6)	4 secretaries/typist	4x100x12x5	= 24,000
(7)	1 senior accountant	1x150x12x5	= 9,000
(8)	3 Accountants	3x100x12x5	= 18,000
(9)	4 Drivers	4x50x12x5	= 12,000
(10)	6 Messengers & guards	6x40x12x5	= 14,400
	Total Cost at H.A.		£s 218,400
	Plus 10% allowances=		= 21,840
	Grand Total		=240,240

Wages and Salaries:-

(Area Offices)

(1)	Branch Director	1x500x12x5	= 30,000
(2)	6 University graduates (2 for R.C.F. Dept.; 2 for Co-op. Dept. and 2 for R.T., & Ext. Dept.)	6x150x12x5	= 54,000
(3)	1 Senior clerk	1x150x12x5	= 9,000
(4)	3 Secretaries/typist	3x100x12x5	= 18,000
(5)	1 Senior Accountant	1x150x12x5	= 9,000
(6)	4 Accountants	4x100x12x5	= 24,000
(7)	6 Drivers	6x50x12x5	= 18,000
(8)	8 Messengers and guards	8x40x12x5	= 19,200
	- Total one area office		=181,000
	- Total 3 area offices		=543,000
	- Plus 10% allowances		= 54,300
	Grand Total		=597,300

The category of other costs (C) embraces the Reserve Fund, the cost of training, and the cost of agricultural extension. These are explained below under their respective headings.

Reserve Fund:-

The proposed RCI shall need a Reserve Fund in the form of cash in hand to finance shortages in dura supply, in drinking water, to provide sesame, groundnuts and dura seeds and any other similar activities.

1. Evidence of the field survey indicate that an average shortage of 6 sacks of dura per family may be regarded reasonable for the life time of the project. For the 150 villages, 90,000 sacks shall be required. This, for all practical purposes, is a total sum of money of £s 1,800,000 (assuming 10% increase over today's dura prices).

2. To supplement available sources of drinking water during the hard months of March, April and May; and taking into account various sources of drinking water in the project area and water prices, a further £s 1,650,000 shall be required over the life time of the project.

3. Assuming a 10% increase over today's prices for dura, sesame and groundnuts' seeds, and assuming a rate of need of 3 sacks per family per year (for two years)(i) and an average buying prices of £s 30 : a total sum of £s 1,350,000 shall be required under this item.

(i) These are the failure years.

4. If 10% of the R.F. is to be set for other unforeseen events, the total volume of money needed under this heading amounts to £s 5,280,000.

Training Cost:-

1. RCI personnel	= 6x2000x5 =	60,000
2. Co-operatives personnel	= 6x1500x5 =	45,000
3. Co-operatives Leaders	=30x1000x5 =	150,000
Total Training Cost	=	255,000

Cost of Agricultural Extension Programmes:-

1. Flour Mills	= 10x1000x5 =	50,000
2. Consumer Co-Ops.	= 10x500x5 =	25,000
3. Other	= 10x2000x5 =	100,000
Total cost of agricultural extension		175,000

The following table gives a summary of all the costs involved:-

	ITEM		COST
			£s
1	Buildings (rent plus construction)	(V.C) (F.C)	510,000
2	Equipment and Furniture	(F.C)	70,000
3	Transport Facilities	(F.C)	1,226,000
4	Cost of Capital	(F.C)	590,631
5	Initial Capital for lending and borrowing	(V.C)	6,648,720
6.	Cost of depreciation and insurance	(F.C)	751,116
7.	Wages and Salaries (H.Q)	(V.C)	240,240
8.	Wages and Salaries (Branches)	(V.C)	597,300
9.	Reserve Fund	(V.C)	5,280,000
10.	Training Cost	(V.C)	255,000
11.	Cost of Agricultural Extension Programmes	(V.C)	175,000
	TOTAL		16,343,376

3. Financial Analysis:

1. The proposed RCI is presumed to borrow the balance of capital (see table of sources of finance, below) at a 6% rate of interest. On the assumption that the Institution is going to lend money at a rate of interest of 10%, it could derive an annual income of £s 664,872. Over the 5 years of the project, this shall amount to £s 3,324,360. When contrasted to the cost of running the Institution, this more than cover the variable cost if we exclude the initial capital for lending and the Reserve Fund. However, the proposed RCI should not be judged simply on this evidence. Four other issues will have to be included. These are,

   (a) its contribution to public tax revenue as a result of increased agricultural production,

   (b) its contribution to personal income per capita,

   (c) returns on dura supply and (d) the value of seeds provided and which are to be returned by farmers with no extra charges.

2. As regards tax income, and assuming that the present tax rates on crops shall prevail, the projected production implies the following increases in tax revenue,

- Sesame .	150,000 Sacks x 3x16x5x2%	= 720,000
- Groundnuts :	300,000 Sacks x3x15x5x2.4%	= 1,620,000
Total		= 2,340,000

SOURCES OF FINANCE

Financing of the total initial investment outlay is envisaged as follows:-

Table (10.4):-

	Source	Sum (£s)	Comment
1.	International Sources (USAID, ILO, EDF, World Bank, Etc...)	13,000,000	Pledge
2	Kordofan Regional Government	1,000,000	Pledge
3.	Ministry of Commerce, Co-operation and Supplies	2,000,000	Pledge
4.	Bank-Borrowing	579,476	to request

3. As for personal income per capita, and preserving the same assumptions about projected production, the level of income per capita is expected to increase gradually over the 5 years from the present level of £s 127 ($ 90) to £s 236 ($ 168), an increase of 87%.

4. The supply of dura which is to be provided by the Institution to small farmers at the beginning of the season, is to be returned with an extra charge of 1%. Both the amount returned, plus the extra charge may be regarded as income generated for the RCI. Over the life time of the project, this shall amount to £s 1,818,000.

5. As for the seeds of sesame, groundnuts and dura, these are to be provided against cost of provision and no other extra charges. Assuming similar prices, the amount to be returned is the same as that advanced, i.e.. £s 1,350,000.

6. To sum up, the total revenue expected to be made by the RCI (i.e., 6,492,360), more than covers its variable costs, and safely caters for its revolving capital (i.e., 4,155,450).(i) If we add to this the substantial increases in farmers' personal income per capita and in public tax revenue: the RCI becomes economically justified, though financially it still fall short from covering its total costs.

(i) The subsidy required to be paid for the two failure years is not included in this figure.

It remains to be mentioned however that in the calculation of the cost of capital, the interest payable on the foreign loans has not been included. An initial grace period of 10 years is assumed for those loans. After that period, the Institution's activities would have grown financially to enable it to cater that cost.