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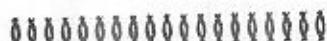
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## I. INTRODUCTION :

### 1. Introduction :

#### 1.1. Scope of the Study :

SRADD (1992-2000) is implemented with the following key objectives (Appraisal Main Report, p. 24).

- a) Increase of production, income and food security of farming households through area expansion and yield improvement of crop enterprises, improved productivity of livestock, better marketing arrangements and less exploitative credit systems;
- b) generate greater participation by beneficiaries in the long-term development of their area through support to the existing local and co-operative structure to enable it to deliver improved credit, inputs and improved marketing associated services and off-farm activities, on a financially viable and self-sustaining basis;
- c) inculcate, through experience of a successful project, the capacity and capability of the local people in Southern Roseires to plan, finance and manage their own welfare and development;
- d) evolve a pioneering project management system which is more strongly based in the private sector and reliant on local beneficiaries, which can serve as a model for other projects in the Sudan.

As the project has entered its fourth year of implementation, it was seen as necessary to carry out an assessment of its impacts on beneficiaries. The assessment findings shall serve the purposes: (i) gauge levels of attainments of project targets, and (ii) furnish some basic information, to be used by the mid-term review of project progress.

The 4 previously mentioned project objectives are currently operationalized through the implementation of 7 development components. These are taken by the present study as basic parameters for the monitoring and evaluation of the project impacts, viewed from the following perspectives :-

1.2. The 7 Components :-

a) Institutional building : through establishing and fostering of village co-operative societies (VCSs) and Abu Gimai Co-operative Union (AGCU) involving support inputs, organizational and financial training and monitoring of activities.

Co-operative building is pivotal to project success, being the chosen mechanism for community empowerment. On its vitality rests the delivery of inputs to members, the strengths of the AGCU and the project sustainability.

b) Introduction of semi-mechanized farming : already covered 4 co-operatives, with more to be added annually to cover all VCSs.

In fact renovated on new considerations, as it was practised under some VCSs before the present project. The project management, the AGCU and beneficiaries attribute large gains to the establishment of the semi-mechanized; in improving land productivity, increasing returns from farming, enhancing food security and generating surpluses for exporting to other areas.

c) Provision of Agricultural Credit to both traditional (Beldat) and semi-mechanized farmers : essentially a major input for the improvement of farming, the main activity of the population. The targets set cover availing finances to farmers to optimally carry

out their cultivations, combat the exploitative Sheil system, expand cultivated acreage, plus cumulative gains, such as improved food situation and commercial viability of the area.

d) Provision of other forms of credit : short and mid-term loans to individuals, groups and communities, covering miscellaneous activities in farming and off-farming; in fields of small ruminants, dairy cattle, oil-presses, flour-mills, irrigation pumps, etc., which are taken as essential activities, integrated into rain-fed farming to expand, diversify local economies and generate incomes.

e) Running of a WID Programme of varied components : covering a general female promotion programme through the development of women centres, and parallelly of income generating activities such as the distribution of small ruminants.

The programme aims at enabling women to have a share in development, as partners in H/H activities. It concentrates on enterprises in which women are essentially involved and in promoting the general welfare of the community through women enlightenment, training and improvement of H/H conditions.

f) Establishment of village-based agriculture extension service : to up-grade agricultural production in fields of traditional, and Gircouf farming, by availing inputs, improved seeds, pests and diseases control, and through demonstration and building of village extension cadres. The service is essential in supporting project supply inputs, through building farming knowledge by introducing new techniques. Its role in promoting farming systems shall reflect on project sustainability.

g) Promotion of veterinary services : by availing drugs, treatment and carrying out of annual vaccination, supported by a revolving fund and through selection and training of veterinary nurses.

Livestock raising is complementary to farming, standing as the second main activity of the population. Its promotion improves on family diet, increases H/H income and avails finances for agriculture through trading-off between the two economies. Up to the intervention of the project in the activity, livestock in the area suffered inadequacy of veterinary services.

#### 1.3. Research Design :-

In conducting the study the following methods were applied :-

##### 1.3.1. Sampling :-

A representative sample of co-operatives was selected, on a number of considerations :-

- i) as reflecting variant degrees of successes and failures, viewed in a continuum,
- ii) showing the different economic activities practised in the project area: semi-mechanized, traditional farming, livestock raising, Girouf and horticultural farming, fishing, etc., and
- iii) reached by the project interventions.

To the above samples, some known VCSs cases of successes and failures, with regard to implementation of certain components, e.g. agricultural credit, flour-mills loans, small ruminants distribution, etc., were included, to verify certain results. The final sampling frame is given in Table (1).

Table (1):

Sampling Frame

Name of VCS	Project	Intervention			Veterinary Services.
		WID Centres	WID Ruminateants	WID Jubaraka	
1. Kharen Kharen		X			X
2. Balboom		X			X
3. Abeigo		X			X
4. Khor Ed Dom		X			X
5. Masfa		X			X
6. Banat		X			X
7. Abu Gumai		X			X
8. Dan Dan		X			X
9. Abala		X			X
10. Abu Shaneina		X			X
11. Bekori		X			X

### 1.3.2. Research Techniques :

The study opted for a small sample that can be annually monitored, using the results of the present study as a base for measuring changes. Definitely, there is always a room for incorporating in future surveys examples of successes and failures to highlight certain results.

For data generation, two methods were applied, participatory group discussions, supplemented by spread sheet for stock-taking, and a questionnaire. The questionnaire was designed, tested and reformulated. It was intended to generate data from three sources:-

- The project technical departments;
- the VCSs boards; and;
- a sample of 5-10 farmers at each of the chosen VCSs.

The group discussions were convened at each VCS visited, to illuminate issues arising from the questionnaire, with the meetings concluded by selecting a sample of 10 respondents to fill the spread sheet for certain data parameters.

## II. PRESENTATION OF FINDINGS :

### 2. Institutional Building :

#### 2.1. VCSs Membership :

Table (2) gives co-operative and women groups membership. Table (3) gives membership in percentages to the VCSs population. Based on an assumption that each H/H has 1.5 eligible members, a male and a female, to enter the VCS and the women group, respectively, it is apparent that both institutions are not incorporating all of the eligible males and females in the community. The situation,

Table (2) a. Co-operative Memberships.

Name VCS	Date of Establish- ment	Membership			Capital Ls.
		Total	Males	Females	
1. Kharesh Kharesh	3/5/1982	171	170	1	099,860
2. Balboom	26/9/83	195	126	69	90,500
3. Abeigo	27/5/73	263	196	67	128,500
4. Khor Ed Dom	26/9/83	166	102	64	80,200
5. Massfa	8/8/85	161	134	27	73,500
6. Banat	8/9/83	179	133	46	96,946
7. Abu Gumi	23/5/82	254	182	72	79,861
8. Aballa	13/9/83	191	127	64	41,075
9. Abu Shaneina	17/3/88	216	151	65	64,124
10. Bakori	8/8/85	106	87	19	70,200
<b>Totals</b>		1902	1408	494	724,906
<b>Average</b>		190	141	49	80,545
<b>Percentages</b>		74.08		26.94	

Note 1. Kharesh Kharesh, excluded on computation of average capital.

Source: ORC Files.

b. Women's Groups Membership

Name VCS	Women Groups Membership.
1. Balboom	69
2. Abeigo	67
3. Khor Ed Dom	64
4. Massfa	26
5. Banat	65
6. Eseil	17
7. Abu Gumi	72
8. Sheira	55
9. Abala	64
10. Abu Shaneina	65
11. Reba Wadi	61
12. Apar Dalo	61
13. Bakori	19
<b>Totals</b>	695

Table (3):

VCSS Population Related to Co-operative Membership and Women Groups Membership.

Name of VCS	Population			Number Co-oper- ative Membership	No. women Groups members (sampled Co-op.)	Number(1.5) eligible males- females/H/H co-operative	Percent- age Co-op. male member- ship	Percent- age women group membership
	Total Population	Number H/Hs.	Average size H/H.					
1. Kharan Kharen	1383	175	7.9	171		263	74.14	26.24
2. Balboot	2630	346	7.6	195	69	464	56.66	14.44
3. Abeygo	2441	309	7.9	263	67			
4. Khor Ed Dom	1159	184	6.3	166	64	276	60.14	23.19
5. Masfa	6930	700	9.9	161	26	1050	15.33	2.48
6. Banat	2475	275	9.0	179	65	413	43.34	15.74
7. Abu Gumi	3022	521	5.8	254	72	782	32.48	9.21
8. Aballa	906	151	6.0	191	64	227	84.14	28.19
9. Abu Shaneina	861	118	7.8	216	65	177	122.03	36.72
10. Rakori	5805	645	9.0	106	19	968	10.95	1.96
<b>Total/Averages</b>	<b>27612</b>	<b>3424</b>	<b>7.6</b>	<b>1902</b>	<b>511</b>	<b>4620</b>	<b>—</b>	<b>—</b>
<b>Percentage(Overall)</b>							<b>41.17</b>	<b>11.01</b>

Source: PRA 1995, Office File Data, Field Survey.

especially of the VCSs, does not show increases in membership since dates of establishment. For the women case, some of the VCSs have not yet succeeded in establishing their women groups.

As the AGCU is legally the institution, to promote development in the area, the size of beneficiaries could be one of the yard-sticks to measure the AGCU success, in reaching the targeted population of the project area. The two tables reveal variant VCSs and women groups sizes, with overall percentages of 41.17 and 11.01% out of VCSs population, for the two respectively. Table (4) expresses respondents' reasoning for not joining VCSs which could be summarized in :-

- Lack of awareness about co-operative benefits : 15%.
- No observed benefits accruing to members : 15%.
- Inability to pay entry fee : 12%.
- Delay or inadequacy of semi-mechanized plot : 12%.
- Fear of indebtedness, imprisonment, delay of settlement of outstanding crop dues, and absence from the project area for some time, each : 8%.
- Fear of mismanagement of co-operative finances, inadequacy of loans per feddan, added expenses, and failure of AGCU policies, each : 4%.

Most of the above stated reasons could apply too, to the low membership of women groups. However, more important are factors including the conservatism of women in these communities, the formation of the groups on initiatives coming from outside the communities, the narrowness of the WID programme and its slow rate of implementation.

Reasons Behind Not All Villages H/Its are Joining Co-operative.

Table (4) :

Name VCS	Lack of aware- ness about co-operative benefits.	No observed benefits accrue- ring to members	Fear of mis- management of co-operative finances.	Inability to pay entry share.	Fear of per- sonal indebtedness	Import somme- ment because of debts.	Delay of settlement of outstanding debts.	Added expen- ses crop tax, Zakat, etc..	Prefers to be independent with its Beliefs.	Delay or inadequ- acy of semi- mechanized as a motivation.	Absence from time.	Failure of AGCU politics.
1. Kharesh Kharesh	/	/	/	/	/	/	/	/	/	/	/	/
2. Balboom	/	/	/	/	/	/	/	/	/	/	/	/
3. Abiego												
4. Khor Ed Dom												
5. Massfa												
6. Banat												
7. Abu Guial												
8. Aballa												
9. Abu Shaneine												
10. Bakori												
Totals	4	4	1	3	2	2	1	2	1	3	2	1
Percentage of all answers received.	15.37	15.37	3.85	11.53	7.70	7.70	3.85	7.70	3.85	11.53	7.70	3.85

Source: Field Survey Data.

## 2. 2. VCSs Management :

Table (5.1 and 5.2) show changes in co-operative board membership. It is apparent that the project has succeeded in covering the project area with VCSs, and these have become the accepted institutions by the beneficiaries to implement project activities. Their vitality could be partly judged by the change in board membership for the three officers (Chairman, Secretary and Treasurer) to a few persons, who would be repeatedly elected. The 1994/95 imprisonment of board members of some defaulting VCSs by the ABS, has made some persons of leadership capabilities to refrain from accepting selection to the board. Deviant leaderships, driven by personal benefits, such as of Kharen Kharen case, and possibly other VCSs not covered by the sample, impede the progress of co-operatives.

The project has made an impact on training, in giving basic skills to board members, in fields of co-operative organization and financial management. Interviewed board members who attained training rounds ascertained that they benefited from training, voicing their interest in more training in the same fields and new ones.

Table (5.1): Change of Co-operative Board Members During 1993/94 - 1995/96.

Name VCS	Changes of Board Members		Reasons	Co-operative Showing: VCSS Current Status Based on ORC Knowledge.			
	Added members	Removed members		Name VCS	Harmony	Conflict	Viability
1.Kharen Kharen	X			1.Kharen Kharen	X	X	X
2.Balboom	X	X		2.Balboom	X		X
3.Abeigo	X		1 Problems with treasurer	3.Abeigo	X		X
4.Khor Ed Dom	X		1 Conflict among board members.	4.Khor Ed Dom	X		
5.Masfa	X		1 Poor management and non- adherence to financial procedures.	5.Masfa	X		
6.Banat	X		1 A normal change to enter more active members.	6.Banat	X		X
7.Abu Gumi	X		1 Changed some members for management and financial reasons.	7.Abu Gumi	X		
8.Mallia	X		1 Mismanagement and owing to ethnic conflicts.	8.Mallia	X		
9.Abu Shaneine		X		9.Abu Shaneine	X		
10.Bakori		X		10.Bakori	X		
Total	6	4	40%				
Percentages	60%						
Source							
							ORC

Table (5.2): A General Assessment of  
VCSS Current Status Based  
on ORC Knowledge.

2.3. The AGCU :

Appendix (1) of this report embraces interviews results generated from 6 respondents, randomly selected from Banat VCS. Banat was chosen because of its proximity to Abu Gumai. The purpose of the interviews was to assess the knowledge and perception of the average beneficiary of AGCU and its activities. Reading through these interviews, one would come with the following conclusions :-

- i) Knowledge of beneficiaries of AGCU is hazy.
- ii) Confusion of AGCU with the project management.
- iii) A sharp focusing by beneficiaries on the semi-mechanized, as a main thrust of the project.
- iv) Poor knowledge of the project objectives and its different components.
- v) Frustration caused by agricultural loans indebtedness and the low returns to the farmer.
- vi) Convening of few general assembly meetings, mostly centred on loans disbursement and repayment.
- vii) Weak communication between the VCS board members and farmers, on broader issues other than credit.
- viii) Poor prioritization within project objectives.
- ix) Dismayment due to unmet promises.
- x) Doubts about project succeeding in achieving its objectives.
- xi) Plus other conclusions that could be derived from the same notes (Appendix 1).

It is apparent that neither the project management nor the AGCU had attempted carrying out this exercise before to comprehend beneficiaries perception about project progress. Clearly, there is some shadow of the ex-U.S.A. supported project on the current one. The

semi-mechanized farming developed under the previous project is still riding high in people's conceptualization and development prioritization. The AGCU made attempts some time back to enlighten VCSs about project objectives and the Union's role, by organizing meetings for this purpose at the VCSs, however its efforts went half way, not being able to reach all co-operatives.

It seems that boards' members are highly absorbed every year in the processing and repayment of the agricultural loans. Parallelly VCSs members are mostly active in their contacts with their boards at times of disbursement of loans. Most VCSs boards complain of failing to convene general assembly meetings on issues outside credit. On the other hand, contacts between the project technical departments and beneficiaries have been going on, on individual components lines, without conceptualization and integration into the broader project objectives. Beneficiaries have been acting as recipients of development inputs, with little room for initiation, thus limiting their involvement outside Beldat credit, semi-mechanized, some WID activities and a dispersed number of off-farm enterprises.

### 3. Implementation of Project Components :

Table(6) exhibits the status of implementation of the project components. Credit for Beldat comes as the most implemented activity, reaching all VCSs. Veterinary services, mainly through vaccination of village livestock assumes a similar coverage. The WID Programme comes next as reaching a sizeable number of VCSs. The other components are variably distributed. While Beldat credit is a necessity to all co-operatives, hence widely adopted through individual VCSs initiative, the other components are more of project directed activities with initiation coming mainly from the technical departments.

1 e (6) 1

### Implementation of Project Components by VCS.

Table (6) clearly indicates a mal-distribution of project activities, with many VCSs being confined to Beldat credit. This situation needs to be corrected if the project is to have wider impacts. A re-examination of the situation entails a fresh look into village priorities, since VCSs, if rightly approached, are not short of prioritizing their needs. Table (7) sketches out the priorities given by three VCSs, as an example.

#### 4. Agriculture :

##### 4.1. Beldat :

###### 4.1.1. Acreage and Productivity :

Beldat farming is the major activity of the population, traditionally practised prior to the advent of the project. The main support by the project to Beldat farming has been in the form of credit to finance the main agricultural operations. Through practising Beldat farming, the farmer targets producing the sorghum needed for his sustenance, also sesame as a cash crop.

Table (8) depicts acreage and productivity for the sampled villages. The following facts, in the form of figures and percentages, could be concluded from the table :-

- The total acreage cultivated by a Beldat farmer ranges from 10.31 to 19.30, with an average, of about 14.75 feddans.
- Of this acreage, the area put under dura ranges from 5.0 to 11.30 feddans, with an average of 8.15 feddans.
- That under sesame is in the order of 2.50 to 8.70, averaging 5.6 feddans.
- The productivity of sorghum varies from 0.44 sacks (39.60 Kg.) to 2.19 sacks (194.10 Kg.) to the feddan, with an average of 1.82 sacks (163.00 Kg.). As for sesame productivity, it is between 0.45 sacks (40-50 Kg.) and 1.35 sacks (121.50 Kg.) with an average of 0.85 sacks (76.50 Kg.).

Table (7):

Examples of Village Priorities.

Name VCS.	Development of Semi- mechanized.	Promotion of horticultural farming.	Small tractor and disk.	Co-operative stores.	Barabha Loans for non- agricultural activities.	Distribution of small ruminants.	Loans for purchasing cattle.	Co-op. consumer shop.	Flour-mill	Sap-making.	Oil pressing	Women development centre	Sewing machines	Literacy classes	Provision of water	Water pump.	Generator.	
1. Kharen Kharen	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2. Abeigo	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3. Abu Shaineen	/																	

Source: Field Survey.

Table (8) :

N a m e VCS	Size surveied.	Size No.	A c r e a g e / P r o d u c t i v i t y		S e a s o n	C o n d i t i o n o f L a n d	F a r m e r s' R e a s o n s f o r l o w P r o d u c t i v i t y.				
			D a r a	A c r e a g e (P e d d a d a)			P r o d u c t i o n (S n c k a)	F e d d u m (S n c k a)			
1. Abeigo	10	1	1.2	8	1.4	1.75	1.2	9	0.75	Late sowing of seasons, irregularity of rains.	
	2	20	10	15	1.50	1.0	11	1.10	1.10	Irregularity of rains, delay of loans.	
	3	20	5	2	0.4	15	4	0.27	0.27	Co-op Secretary, spent 12 days at Abu Gamui chasing loan, delayed planting.	
	4	20	15	50	3.33	5	17	3.40	3.40	Serious farmer, newly opened forest land, regular rains.	
	5	20	10	5	0.50	10	8	0.80	0.80	Planted in time, irregularity of rains, late maturing dura failed, quick maturing gave 8 sacks.	
	6	20	10	10	1.00	10	6	0.60	0.60	Ex-Co-op Chairman, was in prison for delay of repayment, late sowing/seedling.	
	7	20	10	14	1.40	10	12	1.20	1.20	Delay of crop establishment loan.	
	8	20	15	9	0.6	5	5	1.00	1.00	Dura affected by Striga.	
	9	10	5	8	1.6	5	4	0.80	0.80	Late sowing irregularity of rains.	
	10	30	25	55	2.2	5	4	0.80	0.80	Dura planted more than one time, irregularity of rains.	
Totals Averages Percentages	19.2	113	18.2	14.28	87	80	10.72				
	19.20	11.30	18.20	1.61	8.70	8.0	0.92				
		58.85			41.15						
2. Khor Ed Dom	9	1	30	15	1.2	0.08	15	0.1	0.07	13 years	
	2	10	5	3	0.60	5	6	1.20	3	15	
	3	20	10	2	0.20	10	5	0.50	4	16	
	4	10	5	5	1.00	5	3	0.60	5	16	
	5	10	5	5	1.00	5	3	0.60	3	15	
	6	20	15	4	0.27	5	2	0.40	2	13	
	7	20	10	8	0.80	10	7	0.70	5	14	
	8	15	8	5	0.83	7	3	0.43	2	15	
	9	5	2.5	0	0.00	2.5	2	0.40	4	15	
Totals Averages Percentages	14.0	75.5	33.2	4.58	69.50	31.10	4.84				
	15.56	75.30	33.98	0.44	7.72	0.45					
					46.08						
3. Ababla	10	1	20	1.2.5	2.4	1.92	7.5	0	0.00	2	13 years
	2	7.6	5.0	2.2	4.40	2.5	6	1.20	3	13 years	
	3	10	5.0	20	4.00	5	0	1.20	2	13 years	
	4	7.5	5.0	2.2	4.4	2.5	7	2.80	1-3	1-3	
	5	7.5	5.0	20	4.0	2.5	1.3	0.62	4	14	
	6	15	7.5	1.6	2.13	7.5	2	0.27	2	15	
	7	10	7.5	1.6	2.13	2.5	2	0.80	2	15	
	8	10	7.5	1.4	1.87	2.5	2	0.80	5	14	
	9	10	7.5	6	0.80	0	0.00	3	13	Severe attack of Striga.	
	10	7.5	5.0	10	2.00	2.5	2	0.80	2-3	14	
Totals Averages Percentages	10.5	67.5	17.0			31.5	3.36				
	10.5	67.5	2.52			3.75	2.8				
	64.29					35.71					

Table (8) (Cont....)

Name VCS	Size sample surveyed.	Acreage / productivity		Condition of Land		Farmers' Reasons for low productivity.	
		Area Dara	Session	Number of years cultivated	Was present cultivated for 1-2 years Was last cultivated for 3-4 years Was last cultivated for 5-6 years		
					Productivity (Sacks)	Fertilizer (Sacks)	
4. Abu Shaneina	8	1 12.5	7.5	5.0	5	5	Irr regularity of rains, Striga, birds.
	2	12.5	5.0	7.5	5	5	Irr regularity of rains, Striga, birds.
	3	20.0	2.5	17	36	2	Newly opened land, no Striga, timely operations, birds, labour.
	4	12.5	5.0	8	7.50	6	Irr regularity of rains, birds, other pests.
	5	7.5	5.0	6	2.50	5	Striga.
	6	7.5	5.0	10	2.50	2	Striga.
	7	5.0	5.0	4	0.00	0	Late sowing, irregularity of rains.
	8	5.0	5.0	3	0.0	4	Striga.
Total Average Percentage		82.5 10.31	65 1.62	42.5 51.50	58 5.31	7.26	
5. Benat	10	1 10	5.0	10	5	2	Delay of loan, delay in crop establishment.
	2	32.5	7.5	60	80	2	Did not wait for loan used his own finances, early planting and weeding.
	3	5	1.5	20	3	2	Did not wait for loan, financially poor.
	4	12	12.0	20	0	0	Under semi-mechanized, did not cultivate Beldat, poor soil.
	5	12	12.0	4	0	0	Under semi-mechanized, poor soil, untimely preparation, poor weeding.
	6	12	12.0	24	0	0	Under semi-mechanized, did not wait for loan, sold livestock to finance cultivation.
	7	10	5.0	12	10	16	Under Beldat, timely operations, borrowed money to finance cultivation.
	8	24	24.0	48	5	7	Irregularity of rainfall, regarding season.
	9	7.5	5.0	9	0	1	Under semi-mechanized (one family - two plots) poor soil, crop affected by Striga.
	10	17	17.0	18	0	0	Timely operations.
Total Average Percentage		165.5 16.55	110 1.1	24.05 06.47	55.8 5.55	1.35 33.53	Under semi-mechanized, poor soil, late preparation.

Source : Field Survey.

The above figures on productivity reflected against the figures given by the Agricultural Department show a high discrepancy :

<u>VCS</u>	<u>Dura</u>	<u>Sesame</u> ( Sacks per fed.)
Abu Gumai	4.5	3.5
Banat	4.0	4.0

Though both sets of figures were reached through random sampling of a number of farmers (as informed by the Agricultural Department in their case), the comparison between the two seems to be sharp - and there are justifications to adopt the figures reached by our survey.

#### 4.1.2. Reasons for low productivity :

Of the justifications to accept the figures reached by the present study are the reasons given by farmers explaining the factors behind low productivity, which could be summarized in :-

- i) Irregularity of rains.
- ii) Soil logging.
- iii) Late planting, untimely and poor weeding.
- iv) Part of the reasons for late planting was attributed to delay of credit, especially the first installment.
- v) Lack of seeds, more specifically sesame for some farmers.
- vi) Use of long maturing varieties of sorghum.
- vii) Harvest losses due to pests and diseases.
- viii) The conditions of the land, as to level of fertility, being newly opened, or repeatedly cultivated.
- ix) The presence of striga as a soil depliant.
- x) The financial ability of the farmer, as to his capability to finance farming from his own resources, not awaiting credit.

xi) Impoverishment of some of the poorer segment of farmers, dividing their labour between their fields and for wage raising by employing themselves to others.

Except for availing credit, there is a limited impact of the project on Beldat farmers, to be assessed in addressing the above problems.

#### 4.1.3. Categorization of Beldat Farmers.

Assuming that things are equal for Beldat farmers across the project area and that credit is the mobilizing factor for achieving increased production, some measurement of its impact was attempted. In absence of data series on farmers productivity, such assessment is difficult to reach. A research method applied to make up for this gap in information was to roughly assess the production status of a large sample of VCS members, based on the judgement of a panel of farmers. The exercise involved :-

- Sampling of a number of VCSs.
- At each VCS a panel of farmers was chosen to pass a judgement on production per farmer.
- A list of farmers from the VCS register was randomly selected and read individually before the panel to make judgements.
- The judgements aimed at : Categorizing farmers into three groups : (i) as producing sufficient aura to keep the H/H to the next harvest, (ii) partially producing his needs and supplementing his production from the market, and (iii) low producing, barely sustaining his needs two months after harvest.

The results of the assessment are revealed by Table (9) which points out the following conclusions :-

Table (9):

Categorization of Beldat Farmers According to Production Levels.

Name VCS	Number of Co-operat- ive members	Number of Assessee members	Number of Farmers producing with their own labour	Number of Farmers producing with the help of family members	Number of Farmers producing with the help of non- family members	Cate- gori- es		Number of Low prod- ucting farmers	Number of Par- ticular farmers	Number of medium farmers	Number of high farmers	Total No. of sample of farmers	Percentage of farmers	Percentage of sample
						Co- opera- tive mem- bers	Assessee mem- bers							
1. Kheren Kharen	171	155		29	18.71	69	44.52	57	36.77	100.00				
2. Abi go	263	108		16	14.8	65	60.19	27	25.00	100.00				
3. Khor Ed Dom	166	54		1	1.85	35	64.82	18	33.33	100.00				
4. Banat	179	94		10	10.63	48	51.06	36	38.31	100.00				
5. Abal a	191	81		2	2.47	45	55.56	34	41.97	100.00				
6. Abu Shaneina	216	113		39	34.51	41	36.29	33	29.20	100.00				
7. Bakori	106	97		21	21.65	44	45.36	32	32.99	100.00				
Totals	858	702		118		347		237						
Overall percentage.				81,81		16,80		49,43		33,77	100.00			

Source : Field Survey.

- i) Percentages of farmers producing with sufficiency range from 1.85 to 34.51% of VCSs members.
- ii) Those partially producing make percentages of 36.29 to 64.82.
- iii) The low producing category is between 25.00% and 41.97%.

Those present at the interviews were asked to sketch out the conditions of each of the three categories, of which we shall account for the first and last ones, leaving out the medium category as in-between the two levels.

- a) The category producing with sufficiency :
  - i) They are mostly serious farmers.
  - ii) Most probably they are cultivating newly opened land.
  - iii) The size of their Beldat is not less than 20 feddans.
  - iv) They are financially capable to carry out the farming operations without waiting for the ABS credit.
  - v) They use hired labour and in some communities organized Nafir (traditional labour raising through food provision).
- b) The Low Producing Category :
  - i) Among them are careless farmers.
  - ii) Often combining farming with other activities.
  - iii) Probably cultivating old exhausted land.
  - iv) Their farm sizes are 5 feddans or less.
  - v) Financially poor and dependent on ABS credit.
  - vi) They divide their time between farming and other jobs including, gold mining, agricultural wage labour within and outside the project area, and bamboo cutting, hence irregularly attending to their fields.

The partially producing, being in-between the two categories, their farm sizes are in the order of 10 feddans, mostly dependent on ABS credit and are cultivating lands of variant soil fertility.

Reflecting the above against Beldat credit finances by size of farm and crop (1995/96) taking Abeigo VCS as a case, this categorization looks to hold true as could be detected from the following figures and percentages :-

Type	Acreage (feddan)		Number of farmers credited.	Percent- age
	Dura	Sesane		
1	10	10	54	49.09
2	10	5	1	0.91
3	5	10	2	1.82
4	4	10	1	0.91
5	3	10	2	1.82
6	5	5	42	38.18
7	5	0	2	1.82
8	0	5	6	5.45
Total	8		110	100.00

Source : ABS, Abu Gumai.

It is interesting to mention that the well-to-do category is an important source of financing for the other two categories, especially the poor one. Through their dura surpluses they employ the needy farmers, paying them in dura or in cash, also loaning dura to relatives, hence acting as a parallel credit support line to ABS at the village level, sometimes on "Sheil" dealings.

#### 4.1.4. Impact of Credit :

Through a similar exercise, the same panel of farmers was asked to pass a judgement on the impact of credit, on the same sampled list of farmers, as to : improved their farming conditions,

or not. The question was framed to detect whether the farmer was using the greater part of the credit he received in supporting his agricultural operations, or in meeting his subsistence needs.

The results of the judgement are presented in Table (10). The table reflects that :

- i) The percentages of farmers, whom credit has improved their situation ranged from 57.43% to 88.89%, with a mean of 70.20%.
- ii) Those whom credit had little impact on their production were in the order of 11.11% to 42.55% with a mean of 28.80%.

The above three sets of data on areas and productivity levels and impact of credit, show the importance of Beldat farming in the economy of the project area, exhibits its main problems and clearly indicate that ABS credit has an impact in availing finances for Beldat farming.

#### 4.2. The Semi-mechanized :

The semi-mechanized is implemented at 4 VCSs (Abu Gumai, Dan Dan, Banat and Iseil) with preparations going on to include 6 more VCSs this season. Table (11) gives averages and yields of a sample of farmers (Abu Gumai and Banat) for the semi-mechanized and Beldat, with the latter included for comparison. In the case of Abu Gumai, farmers cultivated both dura and sesame, while at Banat, cultivation was limited to dura. The figures in Table(11) reveal that :-

Table (10): Credit Impact On Beldat (Traditional) Farmer.

Name VCS	Number Co-operative membership	Assessment			% of number Assessed	Number of farmers credit im- proved their situation.	% of farmers credit did not improve their situation.	% of number Assessed
		Number Farmers Assessed	% of Membership	Number of Farmers credit im- proved their situation.				
1. Abeigo	263	108	41.06	79	73.15	29	26.35	
2. Khor Ed Dom	160	54	32.53	48	88.89	6	11.11	
3. Banat	179	94	52.51	54	57.45	40	42.55	
4. Aballia	191	81	42.40	56	69.14	25	30.86	
5. Abu Sheneina	216	113	52.31	71	63.39	42	36.61	
6. Bakari	106	97	91.50	76	78.35	21	21.75	
<b>Total</b>	858	547		384		163		
Overall percentages.				93.75		70.20		29.80

Source: Field Survey.

Table (11)

Acreage and Yields of Semi-Mechanized Farms, Abu Samai, Banat, VCS

Name of VCS	Size of Sample Planted	Cultivar	Semi-Mechanized		Sesame		Date		Yield per Hectare (Sacks)	
			Area (feddan)	Yield (feddan)	Sesame		Date			
					Production (feddan)	Yield per Hectare (feddan)	Production (feddan)	Yield per Hectare (feddan)		
1. Abu Samai	10	1	1.2	8	1.2	4	5	2.5	1.5	
		2	1.2	12	20	0	0	0	3	
		3	1.2	6	21	4	5	2.5	1	
		4	8	8	12	0	0	0	0	
		5	8	8	8	0	0	0	0	
		6	1.2	8	3.5	4	1.2	5	6	
		7	1.2	8	9	4	7	5	8	
		8	1.2	8	1.2	4	5	2.5	2	
		9	1.2	8	7	4	4.5	2.5	2	
		10	1.2	12	18.5	0	0	0	0	
Total, 1	112	88	1.69	1.75	24	38.5	0	22.5	0	
Average						1.6			0.9	
2. Banat	10	1	1.2	12	24	0	0	0	7	
		2	1.2	12	30	0	0	0	0	
		3	1.2	12	4	0	0	0	0	
		4	24	24	48	0	0	0	16	
		5	17	17	18	0	0	N	N	
		6	24	24	48	0	0	0	0	
		7	1.2	1.2	20	0	0	N	N	
		8	1.2	12	21	0	0	N	N	
		9	18	18	23	0	0	N	N	
		10	1.2	12	30	0	0	N	N	
Total, 2	165	155	26.2	1.69	0	0	10	23	2.30	
Average										

Source 1 Field Survey.

N = Belaid Cultivating farmers, but t

- i) The acreage per farmer ranged from 8 to 24 feddan. The standard plot size is 12 feddan and deviations from the standard are due to cultivating less or extra, by same farmer, attending to the plot of another member of the same H/H.
- ii) Productivity per feddan ranged from 1.69 sacks (152 Kg.) to 1.75 sacks (167 Kg.) of dura for the studied sample.
- iii) As for sesame it was in the order of 1.39 sacks (125 Kg.).

The project department of agriculture gave averages of 2.0 - 4.0 sacks (180 - 360 Kg.) of dura for Abu Gumai and Barat, respectively, and 2.5 sacks (225 Kg.) of sesame for Abu Gumai. There is a large discrepancy between the present study figures and the Department of Agriculture ones, and for some of the justifications stated previously, the study tends to adopt the figures reached through the survey.

On the right side of Table (11) above there are figures on acreage and levels of productivity of Beldat farming, for the same sample of farmers, who practised the semi-mechanized, revealing the following results :-

- i) Total farm acreage ranged from 7.5 to 9.5 feddan.
- ii) Dura acreage ranged from 1.65 to 5.00 feddan, and sesame from 1.67 to 2.50 feddan.
- iii) Productivity of dura ranged from 0.33 to 1.38 sacks (29.70 - 124.20 Kg.), while that of sesame, from 0.90 to 2.3 sacks (81 - 207 Kg.).

Comparing the two figures of yields shows a limited impact of the semi-mechanized on farmers' productivity.

Crops	Semi-mechanized	Beldat
Dura	1.69 - 1.75 (Sacks) (152 - 157 Kg.)	0.33 - 1.38 (Sacks) (29.70 - 124 Kg.)
Sesame	1.39 (Sacks) (125 Kg.)	0.29 - 2.3 (Sacks) (26.10 - 207 Kg.)

Reasons given by farmers as leading to low productivity under the semi-mechanized include :-

- i) Land exhaustion, especially in the case of Banat where its land block was opened in 1983 and since then continuously cultivated.
- ii) Late preparations.
- iii) Delayed credit to farmers.
- iv) Some farmers failed to carry out weeding in time, especially the second weeding, which was not executed at all by some farmers.
- v) High costs of agricultural operations, exceeding the loan amount.

#### 4.3. Girouf Cultivation :

The project area is endowed with extensive Girouf (river recession lands and patches of Wadi banks) of high horticultural potential. This potential is demonstrated by the types of crops traditionally raised : maize, cassava, sesame, vegetables, sugar-cane, and fruits especially mango. Some farmers of Abala VCS succeeded in striking a huge crop of water melons this season, amounting to many lorry loads taken to Ed Damazine.

A pioneering farmer from Bakori put about 0.75 feddan under vegetables this year and made a gross income of Ls. 442,000, estimating his net profit at Ls. 350,000. He used a "Shadouf" (lifting water by bucket and pole) and a small benzine driven pump. There existed before about 10 Shadoufs in Bakori area. This farmer obtained most of his seeds from Khartoum and Singa. He did not face a marketing problem and used to sell locally at Bakori weekly market.

The project is currently implementing a programme, through the Agriculture Extension Section to improve on Girouf cultivation, also by preparing land under the semi-mechanization programme at Abulaa, to be planted with maize.

The programme under the agriculture extension is targeting the two centres of Abu Gwai (4 VCSs) and Abu Sheneina (6 VCSs). The objectives of the programme are to encourage farmers to expand on traditional crops and to adopt new ones, to improve diet and for cash generation.

The above 10 VCSs were approached through their boards to specify the quantities of seeds needed on loan to the co-operatives from the ABS. Together with the seeds, 10 knapsacks were provided to the two centres, with the required chemicals availed at the project stores on sale.

The programme is at its start and has not yet shown impacts on Girouf farmers.

#### 5. Veterinary Services :

##### 5.1. The Programme :

The programme of veterinary services was started in February 1995. It is presently run by a veterinarian, assisted by two technicians and 5 nurses. The staff is under the State Ministry of Animal Resources, Ed Dajazine. The programme has four objectives :-

- i) Effective control and treatment of animal diseases.
- ii) Improvement of animal production.
- iii) Provision of technical assistance to women development unit on small ruminants.
- iv) Availing disease free meat from butchers to villagers.

These 4 objectives were developed from the work plan of the project and integrated into the general programme of the state ministry. The relationship with the ministry is a technical one ; any work carried out at the project is under the supervision of the ministry.

5.2. Implementation :

a) Control and treatment of diseases.

It is implemented by nurses operating from the ADCS, as a form of a mobile service, using motor-cycles (two, one out of order), visiting VCSs monthly each on a fixed schedule, plus rendering the service on call. The main diseases treated against are pneumonia, trypanosomiasis, internal and external parasites and tick-borne diseases. The active months of treatment are November-June.

b) Preventive medicine :

A vaccination programme which is run in co-ordination with the state ministry is annually implemented by November. The ministry has the responsibility of ordering and availing the vaccines. Last year, and due to a shortage in the project personnel, the programme depended fully on Ed Dangazine. For this year (June 1995-June 1996) the programme targeted to vaccinate 18,000 head of cattle using the project team. The two vaccines given are against rinderpest and H.S. The vaccines were administered at the cost of Ls.50 per head.

c) Improvement of animal production :

This activity is so far limited to building general awareness among villagers about improved animal breeds, through keeping good quality animals and getting rid of inferior types. About 57 meetings were held by the veterinarian and his staff with communities for this purpose.

d) Disease free meat :

The activity covers inspection of meat slaughtered by butchers at the small market places within the project area. The programme is at its start and is casually carried out.

5.3. Supply of drugs :

A revolving fund was created by the project for this purpose. Finances for the fund have been provided by AGCU. A first payment to the fund, of Ls. 551,750 was made in March 1995, topped by Ls. 200,000 in April 1996. The fund is run by the veterinarian, through a direct relationship with the project finance department. The system adopted in running the fund involves ordering and purchases of medicines by the veterinarian, usually procuring supplies from pharmacies at Ed Damazine and companies at Khartoum. The veterinarian meets orders from his staff at the centres for fixed supplies. The nurses would sell medicines on cash purchases to users, collect the revenues, repay the veterinarian so as to obtain new consignments. 7% of the drug cost is added to sales prices, to curb inflation.

#### 5.4. Livestock Status :

Two communities of livestock raisers exist in the project area : the settled villagers and the pastoralists. The former make the population of the VCSs, while the latter are comprised of Rufaa El Hoi and the Fellata groups, who live in the project area during the dry season (November to June) added to them, the Ingessana, who visit shortly during the cool period (November-February). The VCSs livestock is small in number, mostly limited to goats, Table (12).

Goats are normally raised for their high reproduction, to be sold for cash generation and for meat. Supply of milk from goats is a third priority in breeding targets and only about 30% of the samples surveyed, Table (12) reported obtaining milk from their goats, mostly confined to the rainy season period. For the pastoralists, cattle is the main animal, with sheep equally important among Rufaa El Hoi. They breed for sustenance on milk and milk products and for cash generation, through the selling of the two animals.

#### 5.5. Impacts :

The main impacts of the veterinary programme could be summarized in :-

- i) Establishment of an organized veterinary service in the project area, which was previously almost non-existent.
- ii) The service being organized under the state Ministry of Animal Resources, bears prospects of continuation in future.

## Livestock Ownership.

Table (12) :

Name VCS	Sample size	Goats		Sheep		Cattle		Donkeys		Chickens	
		Respondents Reporting Owned.	Average Owned	Respondents Reporting Owned	Average Owned	Respondents Reporting Owned	Average Owned	Respondents Reporting Owned	Average Owned	Respondents Reporting Owned	Average Owned
1. Kharen Kharen	9	5	27	3.0	0	0	0	0	0	9	54
2. Abego	10	8	106	10.5	0	0	2	8	0.8	4	0.4
3. Khor Ed Dow	10	6	18	1.8	1	0.1	0	0	0	2	0.2
4. Banat	10	5	22	4.4	1	0.5	2	19	1.9	4	0.4
5. Bakori	10	8	121	12.2	1	25	2.5	1	15	4	0.5
Totals	49	32	293	3	31	5	42	14	15	35	416
Overall Averages			65.31%	5.98	6.12%	0.63	0.86	0.31	0.31	71.93%	8.49
Percentages											

Source : Field Survey.

- iii) The selection of some of the nurses from the villages of the project area opens possibilities for the initiation of a para-vet programme, which this study supports, as shall be explored.
- iv) Providing treatment and vaccination to the livestock population of the project area. It is estimated that 90% of the drug purchases are by the pastoralists.
- v) Participation in the implementation of the small ruminants programme, managed by the WID department, through involvement in the selection of suitable animals, their vaccination before delivery to women and by availing treatment when needed.

## 6. WID Programme :

### 6.1. Objectives and Coverage :

The WID Programme was started in 1993. Its main objective is to enhance women's role and participation in the development process through organization, training and skill building. The programme is run by a WID unit, comprised of a director and 6 women workers. The staff qualifications cover 2 workers of university degree level and 4 of secondary school education.

The programme is implemented at the VCSs, through women groups or associations, founded by the WID Unit. Table (2) - p.7 - presented earlier, gave the sizes of the women groups, based on membership registers. It is apparent from the figures in the table that the programme coverage is partial, both in terms of size of membership and the number of VCSs reached.

Table (13) shows the activities currently promoted by the programme, which indicate a mal-distribution both in terms of the components implemented and the geographic coverage, with observed concentration on certain VCSs.

Table (13); WID - Programme, Activities Implemented at various VCSs.

Name of VCS.	Distribution of Activities.		
	Jubraka	Small Ruminants	Women Centre
1. Kharen Kharen	/		
2. Dokan			
3. Belboom			/
4. Abeigo	/	/	
5. Talinkosh			
6. Khor Ed Dom	/	/	
7. Khor Adar			
8. Masfa	/	/	
9. Banat		/	/
10. Eseil			
11. Abu Gumi	/	/	/
12. Dan Dan			
13. Sheira			
14. Abala		/	
15. Abu Shaneina	/	/	
16. Raba Wadi			
17. Amar Dallo			
18. El Yas			
19. Bakori			/
20. Abagona			

Source : WID Department.

6. 2. Components :

6. 2.1. Jubraka Farming :

Jubraka is a kind of a house garden, established within homes or in the village vicinity. Its cultivation is normally practised by women, not excluding some assistance by the males of the H/H, in some of the farming operations. The crops grown in the Jubraka are many, including : maize, early maturing sorghum, okra, squash, sweet potatoes, baboon (a root crop) cassava, pepper, groundnuts, Kerkade, etc., Jubraka production plays an important role in H/H sustenance, as it fills the gap in the H/H food supply between the previous and the in-coming Beldat harvest. The WID Programme is targeting improving the Jubraka production, through the distribution of improved seeds of new crops, mostly vegetables.

6. 2. 2. Small Ruminants :

The programme was implemented at 7 VCSs, with plans set to cover new VCSs. The objectives of the programme are to improve women incomes through raising and selling S.R. The animals are availed to women on credit supplied by the ABS, to be repaid in two installments. The organization of the credit groups and the processing of the loans was done by the WID Unit.

Table (14) furnishes data on the performance of the programme at 6 VCSs. The data on the first 5, compared to the 6th one, reveals some contrast, mainly arising from the difference in the systems applied in organizing the activity, as to the first 5 VCSs compared to the 6th one. In the first case, the provision of S.R. was assigned to contractors who supplied animals, mostly from outside the project area, Ed Dmazine and other centres, brought in bulk

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Performance of Small Business Programmes.									
Name of VCS		Geogta		Sheep		Size of sample surveyed		Number of women interviewed	
1. Khor Ed Dom		Total Number of women interviewed	49	Total	49	Geogta	4.59	Average	5
2. Rana		Female	27	Male	22	Sheep	85	Percentage	25
3. Abu Gamra		Female	123	Male	22	Geogta	4.19	Average	5
4. Aballa		Female		Male		Sheep		Percentage	0
5. Abu Sheneina		Female		Male		Geogta		Average	0
Totals		4.59		4.19		30		8	
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and distributed to women. In the second case the project opted for local contractors, chosen from the same villages, and directed that S.R. to be selected from animals within the area. One more requisite observed was the vaccination of the animals on delivery to beneficiaries. The differences in the vitalities of the two systems could be judged from the increase in the numbers of animals, comparing the first 5 cases to the 6ths one, though the latter has a one year lifetime, while the former are in their second year.

The figures in Table (14) indicate the following :-

- i) The number received by each beneficiary was in the order of 4-5 S.R., goats or sheep.
- ii) The overall percentages of numbers at home to numbers received were in the order of 69.9% and 40.00% for goats and sheep, respectively, for the first 5 co-operatives, compared to the 6th one, bearing in mind that in the last case the programme had one year lifetime.
- iii) The following losses were evidenced in the two cases :-

First case :

Goats : Deaths out of number received : 73.17%

" " " " born : 34.34%

Lost or stolen : 7.21%

Sheep : Deaths out of number received : 37.65%

" " " " born : 68.18%

Lost or stolen : 19.87%

Second case :

Goats : Deaths out of number received : 20.00%

" " " " born : 22.00%

Lost or stolen : 14.71%

- iv) There are incidences of animals being lost or stolen, with fingers pointing to the Arab pastoralists.

As reported by the women of the first case the programme has been facing a difficulty of obtaining timely veterinary treatment who was included by the programme, demonstrate this. The number she received was 4 sheep. The number which died out of that received was one head. The number born was 10 (two births). The number which died out of that born was 4. The number sold was 3 (Ls.30,000) and the number at home was 6 heads. Related to this case, the ABS loan was in the order of Ls.30,000, and as could be seen, this lady is in a financial position to repay the loan and achieve a substantial profit. Of the management systems, she applied, was giving her livestock to the Arab pastoralists to herd with their animals for the period of the 5 months of the rainy season.

#### 6.2.3. Women Centres :

Out of the 4 centres listed in Table (13) Belboom had a centre activity for some time during 1994, presently stopped. The remaining 3 centres were visited for the purpose of this study. Their programme ranged from on-going to planned activities. Under the first, there were tailoring and handicrafts, home economics - mainly food preparation, and general enlightenment in the form of lecturing on religion and home up-keeping. On the planned side, there are sewing, illiteracy

classes, revolving funds schemes, credit for small enterprises for income generation, general hygiene and sanitation, maternity and child health and diet and nutrition.

#### 6.3. Constraints to WID Programme :

The following are the constraints to the programme as given by the WID Unit :-

- i) High illiteracy among women.
- ii) Lack and weaknesses of basic services in the project area, such as, health and education, which do not facilitate the promotion of WID activities.
- iii) Non-existence of premises for women centres, affecting activities, especially training.
- iv) Lack of extension facilities, e.g. Audio-visual aids.
- v) The busy time of women, being heavily engaged in domestic and production activities, which undermines their participation in WID programmes.
- vi) Limitations posed by lack of local cadres e.g. village agents, for women work.
- vii) Poor marketing channels for women-made products, hence lack of motivation to increase and improve production.
- viii) Inadequacy of WID staff, with limited experiences in covering the actual needs of women.

#### 6.4. WID Approaches :

Regarding the preparedness of women to participate in development, the VCSs could be divided into two categories, open and closed communities, as in Table (15) for those reached by the WID Programme. Each category would require special treatment, to effectively mobilize its communities.

Table (15): Assessment of Women Viability in 10 VCSs  
as to Degree of Exposure/Closeness.

Name VCS	Degree of Viability	
	Exposed	Closed
1. Kharen Kharen		/
2. Belboom		/
3. Abeigo	/	
4. Abala		/
5. Masfa	/	
6. Khor Ed Dom	/	
7. Banat	/	
8. Abu Gumai	/	
9. Abu Shaneina	/	
10. Bakori	/	

Source:

WID Department.

Meetings seem to be one of the most tools used by WID workers to bring out women involvement. Table (16) indicates the number of meetings held by the WID unit during the three years of the programme.

Subjects discussed at these meetings covered the overall programme objectives :

- i) Explanation of project objectives and WID Programme.
- ii) Formation of committees for women associations.
- iii) Integration of WID programme into VCSs activities.
- iv) Working out mechanisms for implementation of WID programme through women associations committees and VCSs Boards.
- v) Explanation of the importance of women centres in the promotion of WID programmes.
- vi) Selection of the needed contractors for the provision of small ruminants.
- vii) Encouragement of women to repay small ruminants loans.
- viii) Formation of women groups to organize revolving funds.

#### 6.5. Impacts :

The programme has achieved some impacts, but not yet succeeded in realizing its potential, and is short of achieving its goals. On the positive side the programme has managed to :-

- i) Form women groups in about half of the VCSs as forums for effecting development.
- ii) Start a dialogue with women on issues of direct relationship to their lives, however a dialogue not yet concluding results.

Table (16):

Number of Meetings held by WID Department  
with Women Associations 1993 - 1996.

Name of VCS	Number of Meetings		
	1993/94	1994/95	1995/96
6. Banat	6	3	10
7. Abu Gumai	7	6	10
8. Abu Shaneina	4	4	3
9. Bakori	4	7	8

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- iii) Creation of male awareness about the importance of the programme, resulting in urging for its implementation.
- iv) The S.R. programme, despite some of the constraints that faced it, is well received by women, judged on the many requests put for loans from new and already receiving groups.

On the shortcomings side, there are :-

- i) The unmet promises made by the WID Unit to many communities on various programmes' components, not yet delivered, e.g. S.R. loans, which put the formation of some groups void of any activity. This frustrates the beneficiaries, as a result long waiting, makes them lose faith in the programme credibility.
- ii) The weakness of need prioritization, partly a result of superceding women development model fixation, by women workers i.e. confinement to S.R., Jubraka, diet and health, etc. and partly due to inflexibility of project design in meeting basic needs such as in health, education and water supply.
- iii) The poor studying and documentation of women issues which are essential for effective programme design, implementation, and impact assessment.

#### 7. Fisheries :

Fishing for income generation is practised in the project area in about 8 communities, listed in the following order by the size of activity : Dan Dan, Abu Gumai, Abu Ushar, Rabs, Abu Sheneina, Abala, Amar Dallo and Eseil. Catches are sold in one of three forms :-

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- i) To in-coming lorries from Khartoum and Wad Medani, using ice for chilling and collecting the produce at the river bank.
- ii) Locally, to consumers from the villages.
- iii) Made into "Kajeik", salt dried fish, usually bought by traders coming from Ed Damazine.

The months May-September make the period of high production, with income per fishermen averaging Ls. 25,000 per month. For the rest of the year, catches become irregular and the monthly income is reduced to Ls. 5,000 per month. Fishing equipment consists mainly of locally made boats and nets with accessories. Usually a boat is manned by three persons, one of them being the owner.

The project, through the ABS extended loans to three fishermen groups : Dan Dan, Abu Gumai and Abu Sheneina. The groups were registered by ORC into a kind of co-operation form.

#### 7.1. Dan Dan Group :

The study examined Dan Dan group, to assess the impact of ABS loan on their fishing activity. The loan was taken in August 1994, of an amount of Ls. 2,691,381, to be repaid in two installments, with the first one already paid. The ORC organized a committee of 3 officers, a chairman, a secretary and a treasurer, for the group. The loan was worked out on costings of individual fisherman's requirements which ranged from boats to fishing nets and accessories (lead, corks, ropes, etc.). Accordingly, the loan to each of the group members varied in amount, as to the costs of individually listed equipment. To obtain the loan, group guaranteeing through the committee was applied. While the boats were purchased locally, the

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fishing nets and the accessories were bought from Kosti by the committee of the three officers.

On interviewing the 9 fishermen, comprising the group, they expressed their dissatisfaction of the imported nets, describing them as of low efficiency for their work, rating their locally used nets, as far better, compared to the imported ones. They discredited them on considerations of : not of the right mesh size and thread thickness, rating them as unsuitable for large fish catches.

When remarked to them "that the responsibility of purchasing this equipment lied with them as a group, and that their delegation of the three officers was their choice", their answer was that they knew that, and that now they were not in a position to do any thing about it". They followed that by saying "We are accepting the matter as it happened, and we are repaying the loan". When asked about the financial sources from which they repaid, they mentioned fishing, selling of crops, labour employment, bamboo cutting, etc..

To further test their interest in these nets and the degree they benefited from them, it was suggested to them to hand over all the equipment they received to ABS which would be ready to exempt them from repaying the loan. They responded by not accepting the suggestion, making arguments, like, "we have entered into an agreement with the bank and we have to honour our word" and that "we have already cut the nets into sizes that shall not be accepted by the bank". This indicates one of two things : that either their story was true, or actually benefited from the loan and were making

an argument to soften the terms of repayment. In absence of feed-back data on their performance, it is hard to tell which position is to consider.

It is interesting to note that in relation to the question of data generation by the project, that this fisheries group was not visited by any of the project staff, since the time they took the loan. Also that, out of the three officers committee, only the chairman knew to read and write, and both the secretary and the treasurer were illiterate.

#### 8. Credit Lines and Repayment :

##### 8.1. Repayment of Agricultural Credit :

Table (17) gives the loan sizes for dura, sesame and the repayment levels for the years 1993-1996, for the sampled VCSs. Of the figures displayed by the table, the study highlights the status of VCSs repayments levels, more particularly for 1996. Except for Kharen Kharen VCS, which is denied credit for the last two years, because of its defaulting situation, levels of repayment range from 60% to 100% with a mean of 73.2% .

Relating the repayment situation to data in Tables (9 and 10) on the categorization of farmers according to production levels, and the credit impact on traditional Beldat farming, respectively, would enable deriving important conclusions. The 73.2% repayment connotes a defaulting situation of 26.8%, which is synonymous with the 33.77% of the low producing farmers, Table (9) and the 29.80% of the farmers whom credit had not improved their farming situation. On discussing the question of defaulting at the sampled VCSs, it

Table (17):

Name of VCS.	Dara L.s.	Production			Seasons			1993/94			1994/95			1995/96			
		Season L.s.	Total L.s.	% Repayment	Dara L.s.	Season L.s.	Total L.s.	% Repayment	Dara L.s.	Season L.s.	Total L.s.	% Repayment	Dara L.s.	Season L.s.	Total L.s.	% Repayment	
1. Kharan Kharan	160,000	51,200	211,300	55%	1,375,400	533,500	1,912,200	50%	948,750	0	0	0	1,418,750	0	18%		
2. Balboom	—	—	—	—	—	1,862,850	1,41,180	1,804,040	50%	—	—	—	3,341,500	0	60%		
3. Abi go	235,200	232,000	467,200	60%	1,451,600	1,757,500	3,209,100	50%	1,052,000	1,989,500	1,989,500	88%	—	—	—	—	
4. Khor Ed. Dara	188,800	283,750	472,550	50%	965,900	1,140,200	2,137,250	50%	842,250	932,000	1,774,250	85%	—	—	—	—	
5. Masta	99,200	72,000	171,200	100%	66,700	54,600	1,213,000	50%	722,500	903,750	1,025,000	100%	—	—	—	—	
6. Abul Ali	208,000	217,600	425,600	50%	361,050	449,500	810,550	50%	801,250	883,750	1,465,000	79%	—	—	—	—	
7. Shahat	—	—	—	—	669,870	422,410	1,092,060	50%	2,078,420	1,207,000	3,383,420	68%	—	—	—	—	
8. Ban Dara	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9. Abu Guwai	168,920	160,960	327,920	50%	1,270,660	1,118,620	2,389,580	50%	2,111,000	1,053,800	3,164,800	72%	—	—	—	—	
10. Abu Shanelma	301,130	171,200	372,320	50%	554,810	458,210	1,013,020	50%	895,000	485,250	1,131,250	84%	—	—	—	—	
11. Bokori	173,500	104,000	277,600	50%	—	—	—	—	—	788,850	548,850	1,325,700	78%	—	—	—	—
Total	—	—	—	—	450	—	—	—	450	—	—	—	732	—	732	—	
Percentages	—	—	—	—	57.50%	—	—	—	50.00%	—	—	—	73.2%	—	73.2%	—	

Source : ABS, Abu Guwai.

clearly came out that it was mainly caused by about 20 to 30% of VCSs members, who mostly channelled the larger part of the credit outside agriculture.

It was admitted that, this segment constraints the VCSs activities in many respects :

- i) Put more work on board members, by closely following their loan repayments.
- ii) Delay the settlement of VCSs accounts, hence the access to new loans.
- iii) Bar the settlement of outstanding dues on crop valuation, to timely repaying farmers.
- iv) Confuse the planting time of the VCSs farmers because of late disbursement of credit.

Abeigo Co-operative was considering taking a decision to liquidate the membership of 60 defaulting farmers. At other VCSs, when asked to follow the example of Abeigo, they shied off, by leaning on reasons such as, fear of breaking community solidarity, or creation of power groups, which would threaten the future of the VCS. Kharen Kharen presents a clear case of financial mismanagement, however, on considerations of community solidarity, the co-operative has not taken loans for the last two production seasons, and it is doubtful that it will have access to loans this season too. Some action needs to be taken regarding defaulting VCSs members, both by the project management and the AGCU.

It is interesting also in relation to agricultural credit to assess the benefits accruing to the farmer under the semi-mechanized farming, being held as the real break-through in increasing farmers'

production and income. Taking Banat as an example, though it is not a good one for its semi-mechanization is not optimal, according to the project plans, it comes out clearly from Table (18) that the repayment of the ABS loan makes 41.11% of what the farmer produces. The balance of 48.89% includes the production costs. This leads to the conclusion that, productivity has to be substantially raised through the semi-mechanized, otherwise the rise in production costs and the bank borrowing rates, the marketing havoc and the uncurbed inflation, shall undermine any targeted farmers' betterment.

#### 8.2. Credit outside Agriculture :

Table (19) indicates the performance of credit lines outside agriculture, for 8 sampled VCSs. A main conclusion to be drawn from the table, is that repayment levels are generally very high, under the various credit lines, which connotes the credit worthiness of the various VCSs and groups.

### III. CONCLUSIONS AND RECOMMENDATIONS :

#### 9. Institutional Building :

##### 9.1. VCSs and Women Groups Membership :

The project has succeeded in building the essential institutional frame, through the establishment of the VCSs and the women groups, which are important structures for receiving the project components. Increasing the membership of both institutions is very much related to resolving the kind of problems which discourage people from joining them. Some of the solutions are straight forward and can be recommended, like paying the entry fee to VCSs and women

Table (18): Duru Production Under Semi-mechanized, Bank Repayment  
Banat VCS.

Name VCS	Size sample surveyed	Case No.	Acreage cultivated	Total Production (Sacks)	Repayment (Sacks)	% Production	Whether cultivating Beldat		
							Yes	No	
Banat	10	1	24	48	20	41.67	/		
		2	17	18	7	38.89	/		
		3	12	50	20	40.00	/		
		4	12	26	11	42.30	/		
		5	18	29	20	68.97	/		
		6	12	36	10	27.78	/		
		7	12	30	15	50.00	/		
		8	12	14	3	21.43	/		
		9	12	11	0	0.00	/		
		10	12	6	2	33.33	/		
		11	12	20	7	36.00	/		
		12	12	23	11	47.82	/		
		13	12	8	4	50.00	/		
		14	12	20	9	45.00		X	
		15	12	21	9	42.86	/		
Totals			203	360	148		14	1	
Averages (Productivity)					1.77				
Percentages						41.11	93.33	6.67	

Source : Field Survey.

Name VCS	Year Credit taken	Credit Lines				Tractors				Fisheries			
		Small Ruminants		Flour Mills		Amount Repayment As Scheduled		Amount Repayment As Scheduled		Amount Repayment As Scheduled		Amount Repayment As Scheduled	
		Amount L.s.	Repayment As Scheduled	Default- ing	Amount L.s.	Repayment As Scheduled	Default- ing	Amount L.s.	Repayment As Scheduled	Default- ing	Amount L.s.	Repayment As Scheduled	Default- ing
1. Abeygo	1995	3,235,360	Not Yet due										
	1994				1,663,021								
2. Abal u	1995	724,500											
3. Benet	1994	886,420											
	1994												
	1995				2,755,000	Not yet due							
4. Abu Gumi	1994-95	1,387,774											
	1994												
	1995												
5. Abu Shaeina	1994	483,780											
	1995												
6. Khor Ed Doin	1995	935,610											
	1995												
7. Dan Dan	1994	484,057											
	1994												
8. Maafaa	1995	3,485,000	Not yet due										

Source : ABS, Abu Gumi.

groups, for those who cannot afford paying it, as stipulated in the project reformulation. However, for the other constraints, explored in Table (4) these are of intricate nature and could only be resolved as the project progresses towards achieving wider impacts with observed benefits to beneficiaries, such as VCSs breaking even with no indebtedness to ABS, implementation of semi-mechanized farming, etc.. As for the women groups, more effective mobilization and meeting of women needs would induce more women to join.

#### 9.2. VCSs Management :

The high illiteracy rate limits capabilities of representation in the VCSs boards to a few persons in most of the project communities. Some of those who entered the board after going through the experience have become reluctant to join for other terms, due to the fact that management responsibilities demanded on their time without rewarding. The delays in the processing of loans were cited by some board members as wasting their time. "I spent 12 days chasing the loan at Abu Gumai, planted late, and had a bad harvest". Frustrations caused by some of the VCSs members in not repaying in time and the effort exerted in following them up, discourage some from assuming responsibilities. Financial violations and the passiveness of beneficiaries to take action may keep away some potential leaders from participating.

For more activation of the VCSs leaderships, future training should address both organizational and financial matters, as currently practised, as well as the wider community issues. On the former the ORC has already the experience of running the type of training needed. However, it should be directed to covering those

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VCSs not yet reached and to target those board members who have not yet received training. As for the community-based training, this is seen as an essential enlightenment programme on project objectives, development components, mechanisms of implementation and the AGCU status and role. A well designed training programme to address the above issues would be effective in transmitting the project message to a population where illiteracy is high. The audience of this training would be the VCSs board members, the co-operative directors, plus any interested VCSs members, with participation of the ADCs supervisors. On parallel lines the WID Unit would carry out similar enlightenment programmes among the women groups.

#### 9.3. The AGCU :

The AGCU is the umbrella under which the VCSs should function. As targeted, the AGCU would run the project at the end of its life-time. Hence building the AGCU on the strengths of the VCSs is an ultimate goal. To attain this, the three bodies : the AGCU, the Project Management and the VCSs should more strongly work together on a common focus, which entails :

- i) Increasing the awareness and the conceptualization of beneficiaries about the project objectives and programmes.
- ii) Inculcation of board members with the union's roles and objectives.
- iii) Implementation of a wider spectrum of project components outside Beldat credit and semi-mechanized farming.
- iv) Reorientation of VCSs members through achieving broader benefits to see an essence for participation outside credit disbursement and the collection of loans.

v) Monitoring of VCSs performance to stand on constraints, with timely intervention of the AGCU and the project management to correct situations.

As more specific recommendations, it is suggested that :-

- i) The AGCU would organize a day each year, to be called the "Union's Day" with activities to be run at all VCSs concentrating on enlightenment programme, with the main objective of beneficiaries learning about the project and the Union. Specific measures, achievements, constraints, etc., from both ends would also be highlighted. The organization of the day would include communal festivals, e.g. dances, shows, etc.. Different subjects could be chosen each year for the organization of the day.
- ii) The previously suggested community-based training would be carried out in support of such enlightenment efforts.
- iii) To strengthen integration between the work of the project management and the AGCU, a four man committee, two from the Union and two from the Management is suggested to be formed, to meet every two months to review the progress of the project across all components, reporting to the AGCU and the management.

#### 10. Project Components :

It is essential for promoting the overall project objectives, to enable the VCSs to receive as many as possible of the project components. Conveying knowledge about the prospects of development under the project is a start for initiation by the VCSs. The technical departments and the AGCU should take a lead in that, and not to be passive, leaving things to whatever reaches the project offices at Abu Gumai. On the technical departments lies the responsibility of the preparatory work of visualization and

assessment of what is feasible to be promoted. Of the project components, the ones seen as suiting each VCS should be globally assessed, within the project set-up, and it is only the technical departments which could do that. Some flour-mills were financed, and later on, others at near-by villages financed too, which resulted in affecting the economic viability of the ones established earlier. A rough blue-print by the project management, of what is feasible for each VCS may prove to be useful in guiding project activities and in co-ordinating the work of the different management units. Only through such a global assessment, VCSs which are lacking behind in adoption of components could be coached and mobilized, so as to achieve equity in the distribution of the project inputs.

#### 11. Beldat Farming :

Except for the financial support to Beldat farming through the ABS credit, the project seems to have made little improvements on this activity. The focussing on the semi-mechanized has so far diverted attention away from Beldat, though it is the main farming activity of the population. The previously listed constraints facing Beldat, (Section 4.1.2. Reasons for Low Productivity) could be considered under 3 categories :-

- i) Ones, difficult to solve, e.g. irregularity of rains, unseriousness and poverty of some farmers, etc..
- ii) Ones, feasibly solvable : delivery of credit in time, and
- iii) Ones, of mid to long term nature : provision of improved seeds, combating pests, soil fertility problems, optimum <sup>5</sup> crop rotation, etc..

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Approaching the latter ones entails implementing the programme of field trials (19 demonstration plots are programmed for 1996/97) with results to be communicated to farmers. Strengthening agriculture extension through adoption of the village extension agent, which is started this year, is crucial for extending the results reached. Such improvements would have impacts on upgrading a good number of farmers from the lower into the medium and higher producing categories, sketched previously.

12. The Semi-Mechanized :

It is a highly held development priority by the VCSs. The importance farmers attribute to it may be related to the following :-

- i) Being a major activity under the ex-U.S. A. supported project, which made improvements on farmers' production in some co-operatives, under the conditions of the time.
- ii) It was implemented under more relaxed costs of production, with benefits accruing to the farmers who practised it.
- iii) Lands were newly opened, with higher levels of productivity.
- iv) Presently, there seems to be a high concern among farmers to owning more land as a future security against the invasion of the area by the private sector farming.

The semi-mechanized under the present project is capitalizing on chisel ploughing to raise productivity. Last year performance, particularly of Abu Gumai block, have proven good prospects of attaining projected results. High sorghum yields of 641 Kg. from well attended fields were recorded. As the semi-mechanized is still at its start, the following pre-requisites need to be given attention :-

- i) On farm trials, as planned, should be carried out to verify results.
- ii) Though farming costs are annually revised for the purpose of setting the land preparation costs and the loans, farmers are still complaining of costing as not matching expenses. More realistic costing needs to be applied.
- iii) Timely disbursement of credit and early land preparation should be highly realized.
- iv) Meeting the above two conditions would enable the farmer to implement a more balanced farming calendar, with Beldat cultivation, started by the early rains of May-June and the semi-mechanized by mid July.

### 13. Girouf Farming :

Promoting Girouf is essential for increasing farmers activities and for diversifying production. Apart from its nutritional value, it could be a ready source of cash for a good part of the year. The land and water resources are abundantly available to accelerate future expansion. The traditional base of crops and practices provides a good start for improvements. Outputs in terms of cash and food improvement are immediate.

Due to shortages in the agriculture extension staff, the extension section would hasten applying its plan of founding the activity on village or community agents, where already 8 extensionists are being selected from 5 VCSs (Abu Ushar, Abeigo, Balboom, Wadi Arab and Bakori). The training of agents does not pose a problem, however, motivating them and keeping in practice, through a scheme of rewards is to be supported by the project.

En Nahud (ENCCP) Project is applying a scheme of rewards for securing the involvement and continuity of the village extension agent, which SRADP may look into :-

- i) Avails him loans through the extension unit, without interest, to be repaid at soft terms,
- ii) the co-operative, where he works, bears the cost of transport and other expenses in case of carrying out a task on behalf of the co-operative; and,
- iii) the co-operative assists him in his farming, so as not to be economically affected.

#### 14. Veterinary Services :

The programme is in its second year, and as stated before it had yielded some positive impacts. To strengthen the programme, so as to meet its objectives, it is seen as essential, to emphasize the following :-

- i) Give concern to the animal production side, by working on the improvement of goat breeds in the area, through selection and distribution of good quality bucks, preferably from the local types (Arabs and Ingessana animals) to increase the H/H milk supply for nutritional purposes. There are plans for starting this activity as reported by the veterinarian.
- ii) Almost all village H/Hs own chickens. They are mainly raised for their meat and for cash generation. They suffer certain diseases, especially during the hot months. The WID Unit is including the development of poultry under its activities. The veterinarian should join effort in this respect to improve and increase stock, as a viable women income generating activity.
- iii) The sustainability of the vet. programme, in terms of personnel and finances has better prospects, especially at the end of IFAD financing, if it is turned into a community-run

activity. This entails a reorientation of the revolving fund to be beneficiaries' supported, with the grass-root staff availed through a para-vet programme.

- iv) Based on the above suggestions, the revolving fund has to be restructured. The AGCU contribution could be reallocated as specific VCSs contributions, known to the VCSs. With that, the pastoralists (as purchasers of 90% of the drugs) need to be involved by subscribing to the fund, through organizing them into co-operatives (already one of their groups is in the last stages of its registration into a co-operative). A more effective management of the fund entails forming a beneficiaries committee under AGCU. The committee would monitor the work of the veterinarian.
- v) Drug purchases have to be made basically from Khartoum, where the main suppliers exist, benefiting from competition.
- vi) The project may look into organizing a para-vet programme, through the selection of persons by VCSs and the pastoralists, with training to be given at Ed Damazine. The project would bear the cost of training and assist beneficiaries to reach a scheme of rewarding for the services of the para-vets. A system similar to the one currently applied in the supplying of drugs and collection of sales could be applied on the para-vets.
- vii) The current recording systems of drug purchases, disbursement, sales collections, animal treatment and vaccination need to be improved.

#### 15. WID Programme :

It stands as one of the major components of the project. Gaps in implementation need to be addressed, to consolidate the programme so as to achieve its objectives. Improvements on the programme entails giving attention to the following :-

- i) More detailing of the annual plans of the programme, with targets and schedules of implementation specified.
- ii) Giving attention in the annual plans to equity in the distribution of the various programme activities, so that benefits would reach the majority of VCSs.
- iii) More effective prioritization of needs, with illiteracy, individual and group income generating activities through ABS loans and the founding of revolving funds, to be given weight in women centres activities.
- iv) Continuation of the other programme that have already been founded, i.e. home economics, enlightenment, tailoring, handicrafts, etc..
- v) Not directly under the WID Programme, but highly important to facilitate its implementation are the provision of water supplies and health services. The AGCU, the VCSs and the project management should take interest in promoting, these two areas.
- vi) Water supply is a basic need, of special interest to women. Hauling water is an all-year burden on young females. It takes much of their time during the dry season, as farming keeps them away from participating in the WID programmes during the rainy season. Hence, apart from the health hazards caused by bad water, relieving women of this burden, would give them the time to participate in the WID programmes.
- vii) Medical treatment on the other hand is a community need, again of special concern to women. It needs to be organized to make up for the present gap, resulting from the collapse of the rural health services. The current practising of treatment is through the service offered by the village nurse, who charges for it. He obtains the drugs from Ed Damazine and the small market places. The drugs are open to expiry, bad storage, or administering of inadequate

doses. There are a few examples of drug revolving funds, being organized within the project area, by Village Salvation Committees. These could be studied and followed by VCSs, with the community to raise the fund and manage it and the nurse to give the treatment.

- viii) Reassessment of the Jubraka programme (preferably to be renamed : Magora or Abala, as it is known by these names in the project area) to reach a decision as to be continued or not. From the point of view of this study, there is not much to be added to the crops traditionally raised by women. In case improved seeds of new crops need to be introduced, the right channel for that is the agriculture extension unit, after trial and verification. However, what Magora farming actually needs is pest control and soil water conservation improvements, which are all technical inputs, more appropriately to be handled by the Agriculture Extension Unit.
- ix) An important input to the WID Programme not yet given focus is food processing and preservation. The area has a wide range of food crops; staples, fruits and vegetables. At the same time the population experiences seasonal food shortages. Directing efforts towards processing and conservation and training women in that, shall have impacts on improving nutrition and health; equally, it may open opportunities for income generation.
- x) The S.R. Programme is to be continued. Priority is to be given to those VCSs not yet reached by the programme. It is to be based on the currently applied system of local contractors and the vaccination of animals on delivery to beneficiaries. The programme is to concentrate on goats, as sheep are not ecologically suited to the rainy season conditions of the area. Future loans would include a fund set aside for treatment, for those women who can not afford down payments.

xi) For the activation of the women groups, it is suggested that one to two males to be selected by the VCS board to support the women committee, for a definite period of time. These are to be gender-sensitive, to back up the activities of the group and to provide institutional and outside communication. It is for sure that this suggestion would be argued against, on considerations of male dominance. But male dominance is already there. It is a matter of trading-off some drawbacks for some benefits, even limited at the time.

xii) Linkages with Ed Damazine on the various aspects of the programme are highly essential. A proper assessment of the institutional and personnel potential that would promote the objectives of the programme (health, sanitation, nutrition, handicrafts, training, etc.) need to be made. Based on the potentialities available, the programme would draw on the expertise there.

#### 16. Fisheries :

The project area has a fisheries development potential. However, the remoteness of the area from big consumption centres, its closure during the rainy season, together with the non-organization of the fishermen communities and their lack of owned transport means, render the development of commercial fishing as unfeasible at the present time. As for salt-dried fish, this is already carried out traditionally, with a high marketing sensitivity.

Under such conditions, there is little that can be done to promote fisheries in the area. Hence, the activity is bound to continue depending on visiting lorries, limited local marketing, and the processing of surplus catches into "Kajeik".

In case similar loans are to be given in the future, a better technical advice needs to be provided to fishermen groups, on the right equipment to be bought, with some supervision of the procurement. More flexibility is also required, to guarantee that individuals select the kind of equipment that suits their needs. In this regard, the conditions of the loan should cater for the required guaranteeing by the group, and within that, individual disbursement of the loan. Equally important is that, the project should follow closely the activity and monitor its progress.

#### 17. Credit Lines and Repayment :

##### 17.1. Agricultural Credit.

The problem of defaulting, of about 30% of VCSs membership, has to be faced. Under the ex-U.S.A supported project, the ORC had the power of intervening to liquidate the membership of defaulting persons. Though VCSs would hardly do that on their own, from the interviews held, a general opinion expressed was that VCSs members would support any action taken on their behalf. This study highly recommends that, the ORC and the AGCU look into the matter, and take the necessary steps towards resolving the question of defaulting.

##### 17.2. Other Lines of Credit.

The high repayment rates of credit lines other than agriculture should encourage the project to expand on these activities and initiate new fields of investment that would lead to the diversification of VCSs economies and the promotion of income generating activities.

## 18. Monitoring the Project :

### 18.1. Current Situation.

This impact study was conducted in the context of monitoring and evaluation of the project achievements. It needs not to be emphasized, that monitoring and evaluation is part and parcel of project activities. The project has an M & E Unit, and has designed systems to generate data to meet this requirement.

#### a) Project Reporting System.

On assessing the project reporting system, it could be said that it had passed through two stages :-

- i) A stage of written essay form of reporting, describing the progress of implementation of the various departments activities, each according to its set work plan, with quantification of achievements, in the form of percentages against the set targets.
- ii) A tabular form of assessment was introduced, (See Specimen on following page), on discovering that the descriptive system applied was not adequate in quantifying the various targets of progress. More emphasis on figures and percentages was applied. Information generated through this scheme proved to furnish an effective data base for reporting.

#### b) Impact assessment Reporting.

Both of the above explored systems are short of assessing the project impacts on beneficiaries. They tend to measure the progress of the project on input/output flows, against project targets, as spelled out in the work plans. As such, they stand as "physical and mechanical measurements". Assessments of impact have to focus on levels of achievements by beneficiaries. Pure technical data on measurement of inputs application against physical aggregates of

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Adopted Form

execution would not yield the kind of data needed to assess impacts. It is only through reaching people and dialoguing with them as recipients and interacting targets of the project, that the required data could be generated. The thrust in that is, to explore and quantify what the project delivered, to improve the socio-economics of the population.

c) Project Capabilities.

As the situation stands at present, there is hardly a data generation system to meet the impact assessment requirements. Before attempting to suggest a system we need to look into the present project professional capabilities to carry out the task.

The M & E Section of the project is poorly manned 'three persons : two university graduates, one of them newly appointed, and one of secondary school level. The one person doing the job is preoccupied with the collection and collation of individual monthly departments reports into general progress reports, which are short of furnishing a concerted scheme of feed-back on project technical impacts. The/departments personnel on the other hand are professionally oriented towards their programme priorities, set for execution under their assigned tasks. On this assessment of staff time and capabilities, one immediately sees the difficulties of running an effective system of monitoring and evaluation of the project impacts.

To improve on the situation it is suggested a capable person with a good background in rural sociology be recruited, to strengthen the section, by carrying out the required work at the VCSs level.

In case this suggestion does not materialize, the present M & E Officer is to be fully assigned the task, with the essential training given to him. To do the job efficiently, the assigned person has to be provided with a vehicle to programme and implement his activities.

#### 18.2. Impact Data :

Simple and few indicators are normally suggested for assessing impacts. In some situations, applying these principles seems to be difficult. Under this study we tried researching :

- H/H income,
- expenditure on certain items such as clothing, house furniture, utensils, etc.,
- purchase of animals,
- building new housing units,
- improvements in food intake, etc..

All of the above proved to be inappropriate parameters for the assessment of the project impacts. One of the difficulties faced was the lack of base-line data, against which change could be measured. Also that, each of the above listed indicators proved short of conveying impacts. H/H income turned to be partly generated from sources outside agriculture : gold mining, casual labour, petty trade, wood sowing, etc.. Expenditure on certain food items and purchase of animals was found to be practised by many H/Hs, but the question was on what sources of income. The building of new housing was widely practised in most villages which could be visually detected by counting huts, however proved to be not a connotation of wealth; as being built by the

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newly married, or adding a unit for a second wife, also for privacy because children have grown up, and in some cases induced by the resettlement of some elements who previously left the area. The Nafir, the communal system of labour raising, applied in the area makes it affordable for people to put new huts. These conclusions lead to the fact that, there is no system of assessment of impacts that could be readily applied, and it is only through exploring ideas with communities, on the various project delivery inputs, that data could be generated, for beneficiaries form the other end in projects' implementation.

This report is still short of suggesting a concrete scheme of impact assessment, however, could be used by the M & E Unit to guide future researching on the subject. For effective monitoring of the project certain conditions seem to be essential, mostly important among these is the scheduled delivery of inputs under the various programmes activities. Without that, project impacts could not be attained. On these premises the following suggestions are made :-

#### 18.2.1. Inputs delivery :

These provide for the hygienic conditions of implementation :

- Fuel for the season operations should be available at the project site by March every year.
- Land preparation under the semi-mechanized should be finished by May.
- VCSs account should be closed by March.
- Loans for Beldat and semi-mechanized are to be disbursed by May.

18.2.2. Parameters of Impact Assessment :

a) Methodology :

Data generation is to be based on participatory interviews, to be carried out at sampled VCSs by January every year. A sample of 10 respondents is to be selected at each interview, to generate quantitative data, on the project components implemented at the VCS.

b) VCSs Management :

- Number of general assembly meetings held.
- Number of Board meetings held.
- Subjects discussed in these meetings.
- Changes in board membership since last year.
- Number who received training.

c) Agriculture :

i) Rain-fed farming (Beldat and Semi-mechanized) :

- Type and source of seeds for planting.
- Acreage planted under different crops.
- Productivity per unit area of Beldat and semi-mechanized.
- H/H dura sufficiency on self production.
- Value of sesame sales.
- Calender of execution of agricultural operations.
- Times weeding carried out.

ii) Horticulture :

- Acreage cultivated.
- New crops introduced.
- Project inputs applied.
- Income generated.
- Places of products marketing.

iii) Jubraka Farming :

- New crops introduced by the project.
- Soil water conservation practices applied.
- Chemicals and other crop protection measures used.
- Levels of production in meeting H/H sustenance, compared to last year.

iv) Veterinary Services :

- H/H livestock ownership by type.
- Number vaccinated/treated.
- Levels of productivity.
- Number sold and value.
- Levels of milk consumption.

d) WID Programme :

i) Organization

- Women groups sizes.
- Number of meetings held.
- Subjects discussed at meetings.
- Programme components implemented.
- Priorities for programming.

ii) S. R. :

- Number of women receiving.
- Type and number received.
- Loans sizes.
- Growth rates.
- Sales and revenues.
- Current status of animals.
- Levels of milk consumption.
- Expenditure of income generated.

iii) WID Centres :

- Activities run by centre.
- Audience participating in each activity.
- Support of community to centre.

iv) Income Generating Activities :

- Revolving funds created.
- Enterprises funded.
- Levels of profitability.

e) Credit :

i) Agriculture :

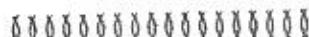
- Date VCS settled accounts.
- Size of members repaid.
- Size of members with outstanding crop dues.
- Number defaulting.
- Time loans disbursed.

ii) Other Credit Lines :

- Types and amounts of credit.
- Levels of repayment.

Generation of data under the above listed parameters would normally draw the researcher into other findings, namely participants' analyses of situations which provide valuable support data to reaching results and finalizing conclusions.

On examining the same parameters, there is evidently a room for inputs from the technical departments, and the M & E Officer has to develop the necessary linkages, that would enlist the support of the different departments.



APPENDIX I.

APPENDIX I.

Beneficiaries' Perception of AGCU.

Based on interviewing 6 VCS members at Banat.

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Case 1 : Amer Hamid Nasir.

1. Do you know AGCU ?

Yes, I know it very well. It came with the U.S.A. project. It was performing very well. When the Americans left, it was taken over by Sudan Government, which we followed for a short period. After that the Union took over and we entered a period of confusion. We are living through a time of anxiety, as regarding the semi-mechanized scheme. The semi-mechanized is very important to us. There is no adequate land preparation, costs are continuously rising and the little we produce is taken from us below its value. As a result the farmer has totally lost.

I know the Union is running the project but without success for the high costs and impoverishment of the farmer. They introduced something called "the bank" which destroyed us. It took everything through applying the Salam contract.

2. Whom do you know of AGCU Board members ?

Yes, I know :

i) Mahmoud El Nur Alim, in charge of accounts (actually the Secretary of Banat VCS and the Secretary of AGCU).

ii) El Khalifa Mohamed, in charge of tractor ploughing, collection of loans and delivery of repayments to the bank (in fact, ex-member of Banat VCS board, and present member of AGCU Board).

I know many of them, but they do not interest me.

3. What those persons do when they travel to Abu Gumai ?

Possibly the accounts, but we actually don't know, and if we ask them they do not tell us.

4. What do you want of the Union ?

We want them to exert more effort to achieve benefits to the farmer and to encourage the farmer to work. Presently the AGCU is not doing much.

5. Do you know Abdullabi Nasir ?

(The President of the Union).

Yes, I know him. He is the President of the Union.

Case 2. Hamed El Tahir :

1. Do you know AGCU ?

Co-operation is agreement between people to share responsibility to make development reach every village. For example, in agriculture, the farmers should work to solve constraints. As we have to co-operate as farmers, we need too to co-operate with you (as technical staff) to give us advice, or learned opinion.

2. When was the AGCU established ?

About one year back.

3. Do you know any of AGCU Board members ?

I know people like :-

i) Mohamed Ali - son of the Omda (actually, the Omda - tribal chief - and president of the Abu Gumai Rural Council).

ii) Mohamed Zein, an ex-board member of Banat VCS.

iii) Mahmoud and Khalifa (currently board members of Banat VCS).

4. What those persons do when they travel to Abu Gumai ?

They talk about subjects related to the co-operative, how to make the scheme successful, and on similar issues.

5. What benefits have you reaped from AGCU ?

In the first years (U.S.A. and Sudan Government support periods) we did not benefit, equally the government. We obtained some benefits later, in dura and sesame.

6. What do you want us to say to the Union on your behalf ?

We want assistance from the Union in the provision of sesame seeds for planting the semi-mechanized. Also we want the Union to do something about the loans and the repayment. All we produced we paid back as repayments. Our outstanding dues on the co-operative have not yet been settled. I swear by God that I do not have food for my family. I spoke to Mahmoud (VCS board member) many times on the issue of payment of outstanding crop dues, but he had not responded.

7. Do you know Abdullahi Nasir ?

(The President of the Union)

Yes, he is a responsible person at Abu Gumai.

Case 3. El Nazeer Galb :

1. Do you know AGCU ?

Yes, it is to meet the needs of farmers.

2. What are the needs of farmers ?

Like agriculture and its problems, like a veterinarian,  
like the development of women.

3. The headquarters of the union are at Abu Gumai; where else has the Union presence ?

Many places : Esseil, Masfa, Raba, Bakori, etc..

4. How is the Union bringing all these places under it ?

Through officials or workers employed by it and through the formation of co-operatives. Each co-operative has members and a board.

5. From where did you obtain this information ?

Through observation. I pick ideas from meetings.

6. Did any body from the Union inform about its formation ?

No, no .

7. Whom do you know of AGCU Board members ?

I know the President of the Union. His name is Abdullahi Nasir (which is true) and the Secretary (Mahmoud El Nur - also true - ), I do not know others. I know also the ABS. Other than that I know nothing.

8. Do you know the persons representing you at the VCS Board ?

I know Mahmoud El Nur, Awad Ahmed Sabit and Zakaria Abdel Hameed (two are board officers and the third is a board member).

9. Those persons travel regularly to Abu Gumai, what do they do there ?

They guarantee the loans, and the goats for the women.

10. When they come back, do they meet and discuss with the co-operative members ?

Yes, whatever issues they raise, they usually inform us about the results reached.

11. What benefits has the Union achieved for you ?

Except our indebtedness, I don't see any achievements for the Union. The main support to agriculture which is credit, comes late every year. You can see now, we are in May with good rains, and up to now we have not received the credit. Usually they avail the credit late in the rainy season. We take it, "eat it" and end in prison.

12. What do you want of the Union ?

If the Union avails the credit early enough, we become rich, and the Union becomes rich too. Also we produce enough dura to fill our stomachs.

13. How does the Union become rich ?

When the VCS pays in time, the Union makes profit, but when it pays two years later, how the Union profits ? The Union is made to achieve the progress of the farmer. I really don't know, whether the delay of credit is from the Union, or from the bank. I think the main objective of the Union at the end is to provide each VCS with one or two tractors, but I don't think this will be attained for the continued debts on the farmer.

Case 4. Hamid Isa Naser :

1. Do you know AGCU ?

Yes.

2. What is it ?

It is agriculture.

3. What else ?

Development. It was created to serve the farmer.

4. Who created it ?

The government. In the village, the Sheikh is put in office by the villagers, in case of the Union, it is the government.

5. Whom do you know in AGCU ?

- i) Abdullahi Nasir who is the President (true).
- ii) Murtada who was in the past the Chief of the Co-operative Union (not true, he is the Director of ORC and the Deputy General Manager).
- iii) Abdel Bazi who is in charge of the co-operatives accounts (true, officer in ORC).
- iv) Mahmoud who is the Secretary of our VCS (true).
- v) Mohy El-Din, "The Agricultural Director". He is new and up to now we have not understood much about him (not true, he is the General Manager).

6. What has the Union achieved for you up to now ?

Some women development, mainly the distribution of small ruminants, plus many promises. They promised a tractor, a shed for the tractor, a women development centre. They "filled" us with promises, which we don't know shall materialize, or are only talking.

7. More specifically, what has the Union achieved in the field of agriculture ?

The Union guarantee us to the bank which provides the loans to support our agriculture. Some years are good, others are bad.

They are supposed to provide the credit early in the season, and in fact we receive it late every time.

8. You have four VCS representatives who often visit Abu Gumai, what do they do there ?

They hold meetings to convey our demand for money and development.

9. What do you want of the Union ?

They came to us before and promised to deliver many things and we want them to honour their promises. Some of these things, they told us would be in the form of loans on the farmer and others as grants. The items on loans are the tractor and the shed, and the ones as a grant are the trailer and the tanker.

Case 5. Anna El Hag (a lady).

1. Do you know of AGCU ?

I do not know, I know nothing. I am a member of the VCS and have never been called to a meeting. My husband is the one who attends the meetings. All the women members of the VCS know nothing.

2. Whom do you know in AGCU ?

Which do you mean, the company or outside the company ?

The company (reply of consultant)

I know in the company :

i) Rabai, the Director of the company (not true, he is the Director of ABS).

ii) Abdel Bagi.

iii) Murtada who was the director before, but now I don't know what work he does (ORC director and Deputy Project General Manager).

3. Do you know the VCS board members ?

Yes, I know Mahmoud, Khalifa and Zakaria (true).

4. What those people do when they visit Abu Gumai ?

How I know, if I am not participating in the meetings. I think they fill their note-books with writings and keep them in their brief cases. We are only instructed to make the repayments on loans.

5. What benefits have so far reached the village from AGCU ?

I really do not see much. All I know, they demarcate for us the plot at the semi-mechanized and provide us with the loans so as to cultivate. We have little understanding of the Union. The Union should target to improve our conditions, but things seem to be confused.

6. How do you think improvements could be brought about ?

I cannot contribute to answering this question. There is "nothing" in my head. They implemented the Women Centre, but it is not solving the basic problems of women, like the provision of water. How women participate in the centre activities, if they are spending much time carrying water to their homes. Water should be accessible to every house.

7. Have you heard of Abdullahi Naser ?  
(President of the Union).

I heard about him, but I don't know what role he has.

Case 6. Osman Mahmoud Amer :

1. Have you heard of the AGCU ?

Yes, they say it is about development, like agriculture.

2. Who had formed the AGCU ?

It was formed by IFAD. The coming of IFAD has improved the situation a little bit, and has enabled us to harvest some duras.

3. Do you know some people in the AGCU ?

Yes, I know :

i) Abdullahi Naser, the President of the Union.

ii) Mahgoub, a Director (Head of the Agricultural Dept.).

iii) Abdel Bagi in ORC (true).

iv) Mahmoud and Awad, the VCS Board members (true).

4. Is it true that the AGCU was formed by IFAD ?

Really, I am not sure, may be it was formed by the new expatriate staff (meaning the technical assistance personnel).

5. When your VCS board members travel to Abu Gumai, what issues they raise there ?

I don't know, possibly they talk about agriculture; how the operations to be carried out, how the repayment of loans to be handled. I truely don't know what other subjects they talk about.

6. When those people return to the village, do they explain things to you ?

They do not tell us much, only when Abdel Bagi (ORC Officer) visits on settlements of VCS accounts. We have 3-4 meetings of the general assembly a year and the main subject of these meetings is the repayment of loans : who repaid and who is defaulting.

7. Have you as a member of VCS plans for new projects ?

How we plan if the things we already planned have not yet reached us. We registered for small ruminants and they provided for a patch of women, with the majority not yet receiving animal.

What relationship you want with the Union and the company. Books.

10. What do you want of the Union ?

Since their establishment, the Union and the company, they have not offered us much. The mosque building fell down, there is a secondary school approved for the village, and we expected of the Union to assist us to build these facilities. Mahgoub (Director of Dept. of Agriculture) told us about the tractor shed and the women centre. It is all rumours. When are they going to provide these things ? When we die and finish ! Why the company does not improve the road to the village by constructing an earth embankment.

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