

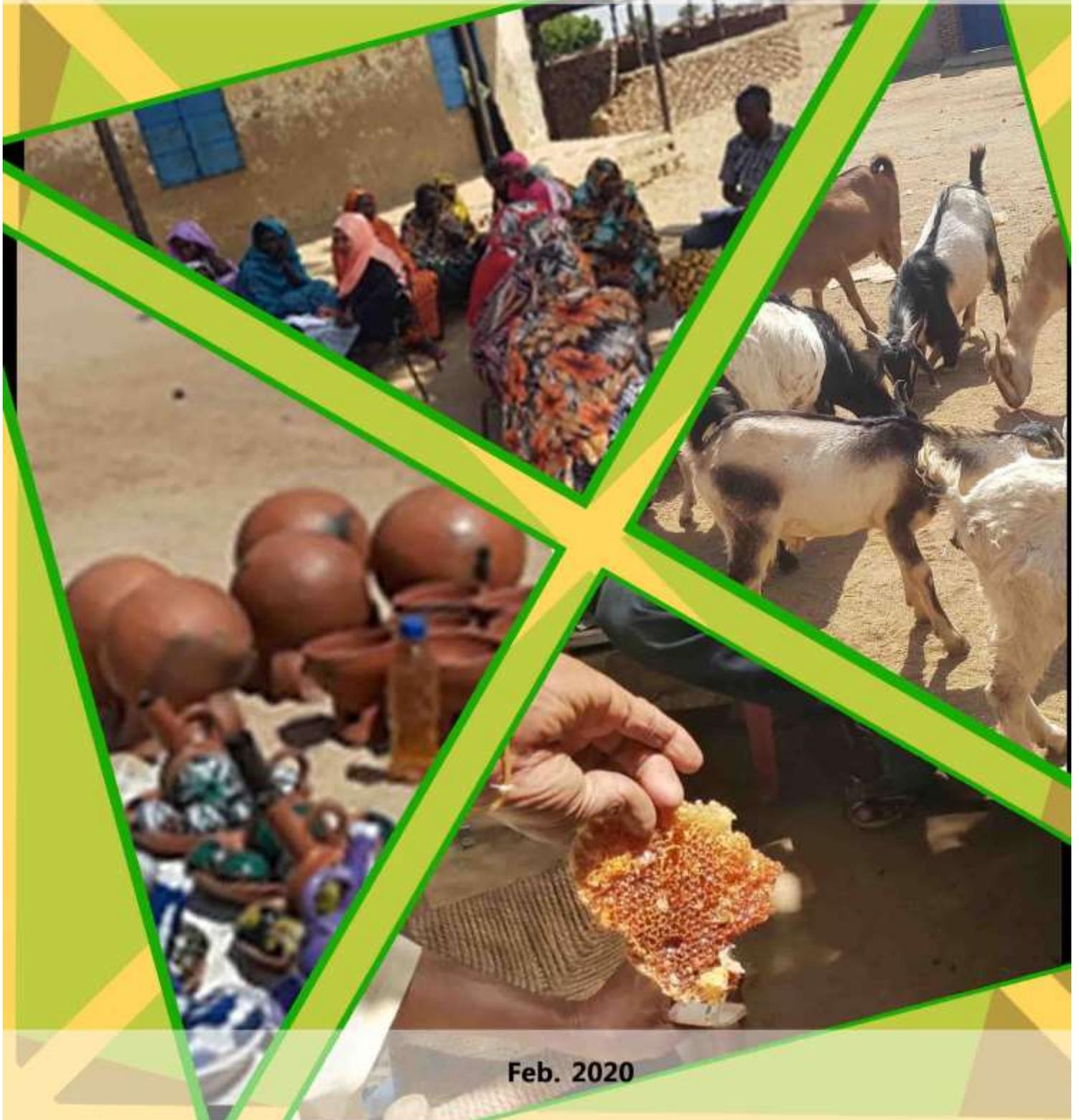


CIS

Step Up to Empower Women and End Violence Project

Study on:

***Income Generation Activities and Agricultural Value Chains
Analysis in Abujibiha and Rashad Communities
South Kordofan State***



Feb. 2020

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ACRONYMS AND ABBREVIATIONS

ABSUMI	Agricultural Bank of Sudan Microfinance Initiative
ARC	Agricultural Research Corporation
BoS	Bank of Sudan
CBOs	Community Based Organizations
CIS	CARE international Switzerland
DO	Direct Observation
FS	Food Security
FGDs	Focused Group Discussions
IFAD	International Fund for Agricultural Development
IGAs	Income Generating Activities
KI	Key informants
MoPER	Ministry of Production and Economic Resources
NGOs	Non-governmental Organizations
RPA	Range and Pasture Administration
SEEV	Step Up to Empower Women and End Violence
SI	Structured Interview
SSI	Semi Structured Interview
VSLA	Village Saving and Loan Association

WEIGHT AND MEASUREMENT

<i>Mukamas</i>	1.75 Feddan
<i>Feddan</i>	4200 m ² = 0.42 ha.
<i>Jadaa</i>	5 Feddan
<i>Habil</i>	1 Feddan
<i>Guntar</i>	100 bound
<i>Malwa</i>	4.125 liter

EXECUTIVE SUMMARY

This study was conducted in order to assess the socio-economic situation in the project-targeted area and identify potential opportunities for women to participate in far-reaching value chains. This has been done through Identifying potential cash crops and their value chains to support women to benefit from; and create clear pathways to participate. In addition to that, identify potential key income generating activities mainly for girls and women. The study was conducted for CARE International in Sudan within the project of “Step Up to Empower Women and End Violence” (SEEV) being implemented in Abujibiha and Rashad localities in South Kordofan.

The methodology was based on secondary data collected from the project documents and the reports from relevant government institutions. The primary data formed the backbone of the report and was collected through direct fieldwork that involved Focused Group Discussion (FGDs), Semi Structured Interviews (SSI), Key Informants (KI) and questionnaire administered in seven communities that were sampled covering a total sample size of 600 households. In addition to that, Information sources included women groups, CBOs, project stakeholders and Value Chain actors at markets and production sites. Statistical standard; approaches and methods were used for the sampling, sampling layout and data analysis, interpretation and presentation.

The main findings of the study indicated that the households’ demographic characteristics are typical rural type. Illiteracy rates are as high as 29.5% at Tandik in Rashad locality. This will need to be considered in extension messages and delivery of the extension activities especially in Gabarouna and Taypa in Abujibiha and Tandik in Rashad localities.

Farming constitutes the main livelihood mainstay for Households in the targeted area and the main source of income; however, Abujibiha households adopt other sources of income compared to Rashad locality. More than 60% average of total at the two localities own the land that they cultivate, while 30% of the two localities cannot cultivate all the land they have because they have no resource to this

The crops selected for value chain especially sorghum, sesame and groundnut found to be strategic in relation to food security as well as sources of income, as the estimated percentage sold reached 56%, 90% and 64% for the crops respectively in Abujibiha and 46%, 80% and 68% for Rashad locality. To increase the agriculture added value based on the analysis of the value chain there is a need to focus on making the agricultural system more effective and improving agricultural production process through addressing each of the issues stated as explained with details in the report

Results proved that the farming activities of the selected crops for value chain are not noticeably different between the two localities; however, minor differences exist as indicated by soil characteristics or some specific culture (*a group may prefer to grow specific crop*). Farming is dominated by women where almost 70% of the farming practiced at Bildat¹ (rainy season and winter season) and Gubraka are practiced by women, and these where sorghum, groundnut, cow pea, and pumpkin. The study revealed that, components of agricultural production system including seed sources, farming practices and storage in addition to promotion of financing services represent entrance for improving production process, the quality and increasing productivity. Organizing farmers mainly women in production groups and enhancing agricultural extension and agricultural protection through demonstrations and adoption

¹ Small farmlands owned by family and located close to the villages.

of Integrated Pest Management approach considered as promising means and added value in relation decreasing loss in harvest. Sorghum, groundnut and sesame cultivation found to be rewarding and contributing remarkably to women income. This is because women dominate cultivation of these crops at Bildat farms (*small farms close to villages*). Vegetables and other crops grown at Gubraka level also contribute to household food security as well as income.

Raising of goats and sheep in particular is widely practiced among households in the study area. In Rashad and Abujibiha localities average percentage of 56.7% and 34.7% of surveyed households are raising both goats and sheep respectively.

According to the study results honey production is rewarding, but practiced by traditional means where producers just collect honey from naturally existing hives but not involved making in hive (traditional or improved). Males practice honey collection and dominantly at Rashad outside the village however, few women are involved in selling honey. The project might adopt improving the practices of honey collection through enhancing adoption of production based on using improved manmade traditional hives like those used in South Darfur. Training is needed to equip and enhance the skills of honey producers and means of packing product

The study showed that both males and females practice a number of IGAs, though women and girls practice specific activities, these activities are rewarding and are products are sold inside and outside village through mediators. Inputs for IGAs mainly for women are sometimes not available or expensive. Limited or no training has been received to improve these activities and financing opportunities especially for women and girls related to IGAs is limited. There is a need to promote IGAs along the package of interventions recommended by the study. This might include organizing women into groups in order to develop their practices and enable them to receive services and to access financing services. The study provided a number of recommendations to inform interventions and direct the way forward for improving women and girls' situation.

INTRODUCTION

Background:

South Kordofan State extends over an area of 112, 000 km² and shares borders with the Republic of South Sudan. Total population is around 2 million. The State is rich in natural resources and arable land is estimated at 800, 000 feddans². Natural resources in the state are, poorly managed and used. Farming is the predominant economic activity in Southern Kordofan followed by the rearing of livestock, particularly cattle. Semi mechanized farming constitutes a major land use system. The population bears all the characteristics of war-torn societies where the quality of social capital is exceptionally low, poverty conditions are appalling. The separation of the South has resulted in the intensification of conflicts and increased pressures and demands for natural resources³.

CARE International in Sudan (CIS) has secured a funding to implement a two years project called “Step Up to Empower Women and End Violence” (SEEV). The project will be implemented in Abujibiha and Rashad localities in South Kordofan (Map 1). It comes as part of the efforts of empowering women as decision makers within their households and communities, provide support for economic empowerment of women, and ensure an inclusive and enabling environment for women, girls and other vulnerable groups.

Abujibiha locality:

Abujibiha locality is wealthy with natural resources. The population is about 21,790 people representing different ethnic groups and Sudanese tribes. The livelihood activities vary from cultivation and livestock raising mainly cattle goats and sheep to light industry and retailing. Agriculture and livestock raising are the most important economic activities of the population. The most important fruits, are mango and caster apple, which is famous for the city in Sudan, and Gum Arabic

Rashad locality:

Rashad is located in the northwestern part of the Nuba Mountains in South Kordofan State. It lies between latitudes 10° and 13° north and longitudes 29° and 33° east with total area of 7872 km² and with population around 241,046 (UNDP, 2003)⁴. The main livelihoods are farming and livestock rearing. In addition, non-timber forest products contribute to rural people’s income especially during the dry season.

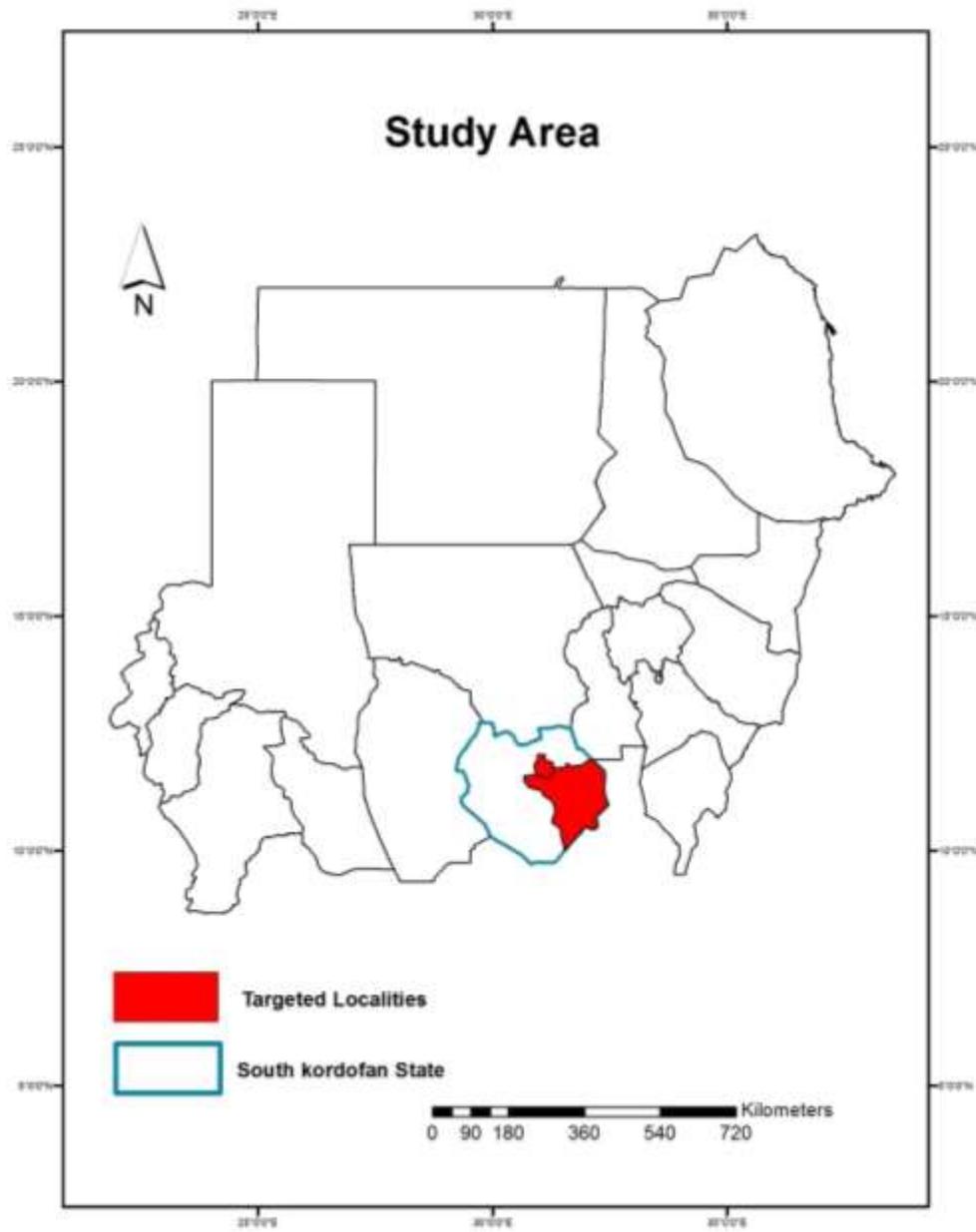
² *Nuba Mountains Land and Natural Resources Study, Simon Harragin, 2003*

³ *SPDP (2016). Analysis of Natural resources management, legal policy frame work and conflict*

⁴ *UNDP, (2003). Report on SPLM/A controlled Nuba Mountains Region.*

Map 1:

Map showing targeted state and localities



PURPOSE AND METHODOLOGY

Purpose:

The purpose of conducting this assignment is to assess the socio-economic situation in the target communities and identify potential opportunities for women to participate in far-reaching value chains through:

- Identify 10 potential cash crops and their value chains, which can be scaled up in South Kordofan. Conduct a comprehensive analysis of the value chains and their actors in addition to providing an understanding of the barriers, opportunities and need for support for women to benefit; and create clear pathways on how women can participate.
- Identify other key income generating activities -IGAs (tailoring, shoe-making etc.) per village that can be introduced and provide an understanding of the barriers, opportunities and need for support for women to benefit; and create clear pathways how women can participate.

Sample size and layout:

The study covered selected communities at the two-targeted localities. The selection of the communities for households survey was made based on consultation process that involved SEEV the project staff and key Informants (KI). The total sample size was determined based on the total targeted groups and using of standard formula as following:

$$SS = \frac{Z^2 \times (P) \times (1 - P)}{C^2}$$

SS= Sample Size

Z= Z-value (Taken as 1.96 for the 95% confidence level)

P= Taken as 50% (for considering 50% positive against investigated issue)

C= the confidence interval (Taken as 0.04 for percentage points)

$$SS = \frac{(1.96)^2 \times (0.5) \times (0.5)}{0.04^2} = 600$$

Sample size for each locality was determined based on the estimated weight of households numbers within each locality. The relative sample size for each community was determined on the weight of its households' number to total households' number within each locality. This resulted in selection of seven communities namely Tayaba, Kariema, Abujibiha (Dibaiba Gumaa and Jabarouna) and Sambo in Abujibaiha locality and Diebakir, Algardod and Tandig in Rashad locality. The selection of these communities considered coverage of social and cultural variations. See (table 1) below.

Table 1:

Sample size for the survey

Locality	Village	Sample
Abujibiha	Tayaba	62
	Kariema	37
	Abujubeiha (Dibaiba Gumaa and Jabarouna)	100
	Sambo	40
Subtotal		240
Rashad	Diebakir	50
	Algardod	28
	Tandig	286
Subtotal		360
Total		600

Data collection:

- Separate visits and meetings were held with project partners/stakeholders that include Agricultural Directorate representing the Ministry of Production and Economic Resources (MoPER), Crop Protection Department, Animal Production and Veterinary Department and Horticulture Department. Meetings were also held with financing bodies including ABSUMI of the Agricultural Bank (Annex 1).
- Market survey for Abujibaiha and Rashad, where information related to selected value chains was collected from traders, sellers and buyers and services providers. Information also covered localities' authorities, types of Income Generation Activities (IGA), marketing process, and condition of market yard.
- Focus Group Discussions (FGDs) were held with groups of the selected communities covering issues related to the selected value chains and IGAs. It also covered the livelihood patterns, gender relations, market and marketing opportunities.
- Tools used included questionnaire and checklist to guide FGDs, Direct Observation (DO), Key informants Interviews (KII) and interviewing of partners (Annex 2, 3, 4 and 5).

Household's data collection process:

- Eleven enumerators were involved in information and data collection comprising of 6 males and 5 females.
- The consultancy team made an orientation about the tools, their contents and the sampling procedures in order to make the enumerators acquainted with the tools and data collection process.
- Tools were tested before starting the data collection. After testing, another meeting was held with the enumerators to get their reflections on the tools, the data collection process and sharing challenges and potential solutions.



Photos showing data collection at the community level (Questionnaire and FGDs)

Data analysis:

After data collection was accomplished, the data collected through questionnaire was checked, organized, coded, entered in computer and analyzed. Data from the FGDs and interviews were summarized, consolidated and the results were interpreted as related to different issues under investigation.

Standards considered:

To ensure the quality of the study procedure, use of standards methods, tools and participatory approaches in the data collection process was considered.

STUDY FINDINGS AND KEY ISSUES

Household Socioeconomic characteristics

Households head:

Table 2 shows gender of household head. Average percentage of households in Abujibiha and Rashad localities headed by male were 76.1% and 56.3% respectively while females represent 23.9% and 43.7% in Abujibiha and Rashad localities respectively. High average percentages of households headed by females were 59.2% at Debaikir village in Rashad while 34.8% recorded at Tayba village in Abujibiha locality. This result should be considered during the project activities implementation.

Table 2:

Surveyed households according to household head

Locality	Village	Male	Female	Total
Abujibiha	Dibaib Gumaa / Gabarouna	82.7%	17.3%	100.0%
	Sambo	72.3%	27.7%	100.0%
	Tayba	65.2%	34.8%	100.0%
	karima	82.5%	17.5%	100.0%
	% of total	76.1%	23.9%	100.0%
Rashad	Algardoud	71.0%	29.0%	100.0%
	Debaikir	40.8%	59.2%	100.0%
	Tandik	57.3%	42.7%	100.0%
	% of total	56.3%	43.7%	100.0%

Source: study survey

Age structure:

Data presented in Table (3) shows the surveyed households age structure. Average percentage of both categories (21-40) and (41-60) scored 86.0% and 84.9% in Rashad and Abujibiha localities respectively. Surveyed households age categories less than 20 years represent 6.3% and 3.3% in Rashad and Abujibiha localities respectively. However, age category above 60 years scored 7.7% and 11.8% in Rashad and Abujibiha localities respectively.

Table 3:

Surveyed households according to age structure

Locality	Village	Less than 20	21 - 40	41 - 60	More than 60	Total
Abujibiha	Dibaib Gumaa / Gabarouna	4.3%	47.9%	33.0%	14.9%	100.0%
	Sambo	6.5%	56.5%	32.6%	4.3%	100.0%
	Tayba	1.5%	27.7%	53.8%	16.9%	100.0%
	karima		60.0%	35.0%	5.0%	100.0%
	% of total	3.3%	46.1%	38.8%	11.8%	100.0%
Rashad	Algardoud	6.5%	61.3%	19.4%	12.9%	100.0%
	Debaikir	4.1%	67.3%	26.5%	2.0%	100.0%
	Tandik	6.7%	60.0%	25.3%	8.1%	100.0%
	% of total	6.3%	61.1%	24.9%	7.7%	100.0%

Source: study survey

Marital Status:

Data in Table (4) shows marital status of the sampled households in Abujibiha and Rashad localities. Average marital status of surveyed households was 85.0 %, 8.1%, 1.2% and 5.7% for married, single, divorced and widowed in Abujibiha locality respectively. However, in Rashad locality the average percentage of married, single, divorced and widowed was 81.1%, 8.2%, 3.6% and 7.1% respectively. The highest average percentages of widowed and divorced were reported in Abujibiha with 10.6% at Dibaib Gumaa and Gabarouna followed by 8.2% in Rashad at Debaikir village. This will need to be considered in relation to livelihood support activities.

Table 4:**Surveyed households according to marital status**

Locality	Village	Married	Single	Divorced	Widow	Total
Abujibiha	Dibaib Gumaa / Gabarouna	81.9%	5.3%	2.1%	10.6%	100.0%
	Sambo	78.7%	21.3%			100.0%
	Tayba	86.2%	6.2%	1.5%	6.2%	100.0%
	karima	97.5%	2.5%			100.0%
	% of total	85.0%	8.1%	1.2%	5.7%	100.0%
Rashad	Algardoud	93.5%	6.5%			100.0%
	Debaikir	73.5%	18.4%		8.2%	100.0%
	Tandik	81.1%	6.7%	4.6%	7.7%	100.0%
	% of total	81.1%	8.2%	3.6%	7.1%	100.0%

Source: study survey

Family status:

Table (5) depicts that, majority of surveyed households are settled in Abujibiha and Rashad localities with average percentage of 91.7% and 92.0% respectively. Semi settled/Nomads represents 2.9% and 1.9% in Abujibiha and Rashad localities respectively. However, IDPs and returnees represent percentages of 5.8% and 5.4% in Rashad and Abujibiha respectively. High percentage of IDPs with 21.7% was reported at Sambo village in Abujibiha followed by 7.4% at Tandik village in Rashad locality. According to the FGDs the IDPs are from North Kordofan during the drought spell of year 1984-1985 in addition to others came from Aleri area. This result should be considered during delivery of livelihood support by the project.

Table 5:**Surveyed households according to family status**

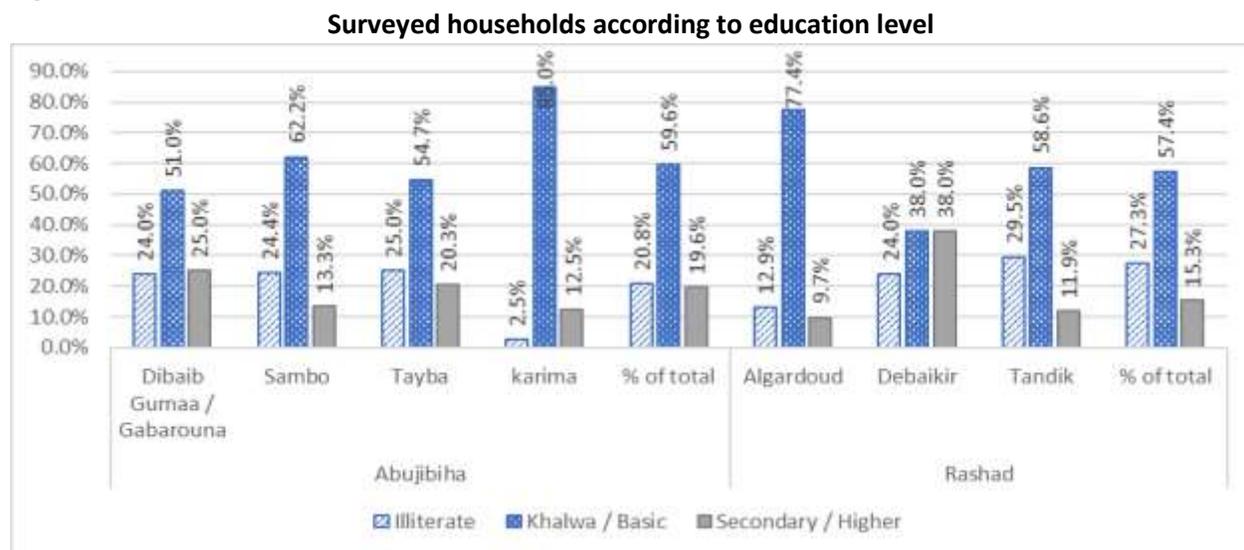
Locality	Village	Settled	Semi-settled/ nomads	IDPs	Returnees	Total
Abujibiha	Dibaib Gumaa / Gabarouna	97.9%	1.1%	1.1%		100.0%
	Sambo	69.6%	8.7%	21.7%		100.0%
	Tayba	95.3%	1.6%	3.1%		100.0%
	karima	97.3%	2.7%			100.0%
	% of total	91.7%	2.9%	5.4%		100.0%
Rashad	Algardoud	96.7%	3.3%			100.0%
	Debaikir	96.0%	4.0%			100.0%
	Tandik	90.8%	1.4%	7.4%	.4%	100.0%
	% of total	92.0%	1.9%	5.8%	.3%	100.0%

Source: study survey

Education level:

The sampled household heads were asked to report their education level. Figure (1) shows average percentages of 27.3% and 20.8% of the sampled household heads were illiterate (*those do not read or write*) in Rashad and Abujibiha localities respectively. Surveyed households who had Khalwa and basic education represented 59.6% and 57.4% in Abujibiha and Rashad respectively. However, surveyed households who had secondary or high education represented 19.6% and 15.4% in Abujibiha and Rashad localities respectively. Highest score of illiteracy was recorded in Rashad at Tandik village with percentage of 29.5% followed by percentage of 25.0% in Abujibiha at Tayba village. Concerning female illiteracy rate, highest scores recorded in Abujibiha locality found in villages of Dibaiba Guma'a 70.6% followed by Tayba 54.5%, while highest female illiteracy rate in Rashad Locality recorded 43.7% and 27.6% at Tandik and Debaikir villages respectively. Literacy rate is the percentage of the population age 15 and above who can, with understanding, read and writes a short, simple statement on their every date live⁵. It is worth to note that, the available literature indicated that the adult literacy rate for Sudan was 60.7% in year 2018, which indicate that 39.3% were illiterate⁶. This result should be addressed by the project when conducting orientation and extension messages.

Figure 1:



Source: study survey

Main source of income:

The main sources of income for the surveyed households. The majority of the households in Rashad are engaged in crop production with average percentage of 91.8% while in Abujibiha locality 58.8% depend on farming as a main source of income. Those practiced livestock raising as a main source of income scored 2.9% and 1.1% at the two localities respectively. Hired labor for different activities represents 20.8% and 4.4% of the surveyed households in Abujibiha and Rashad locality respectively. However, Trading and other occupation scored 20.4% and 3.8% as main source of income in Abujibiha and Rashad locality respectively. This result revealed that, crop farming and livestock rearing are dominant activities in the study area and this should be considered when the project delivering livelihood activities in the project area.

⁵ www.UNESCO.org

⁶ Sudan adult literacy rate, 1960 – 2019. www.konem.com

Table 6:**Surveyed households according to main source of income**

Locality	Village	Farming	Livestock raising	Hired labor	Trading and other	Total
Abujibiha	Dibaib Gumaa / Gabarouna	53.1%	6.3%	21.9%	18.8%	100.0%
	Sambo	28.9%		44.4%	26.7%	100.0%
	Tayba	67.7%	1.5%	9.2%	21.5%	100.0%
	karima	74.4%		10.3%	15.4%	100.0%
	% of total	55.9%	2.9%	20.8%	20.4%	100.0%
Rashad	Algardoud	93.5%		3.2%	3.2%	100.0%
	Debaikir	89.8%	6.1%		4.1%	100.0%
	Tandik	90.6%	.3%	5.2%	3.8%	100.0%
	% of total	90.7%	1.1%	4.4%	3.8%	100.0%

Source: study survey

Secondary occupation:

Table (7) shows surveyed households answer about their second source of income. Crop farming and livestock rearing as a second source of income scored 30.5% and 26.5% for surveyed households' in Abujibiha and Rashad localities respectively. Surveyed households who are not practicing any occupation as a second source of income scored 27.4% and 13.0% in Abujibiha and Rashad localities respectively. However, trading on households, consumption items, selling, and other occupation as a second source of income represent 34.9% and 33.7% in Rashad and Abujibiha localities respectively.

Table 7:**Surveyed households according to secondary source of income**

Locality	Village	Farming	Livestock raising	Hired labor	Trading and other	Don't have secondary occupation	Total
Abujibiha	Dibaib Gumaa / Gabarouna	7.1%	31.6%	9.2%	31.6%	20.4%	100.0%
	Sambo	2.1%	19.1%	6.4%	31.9%	40.4%	100.0%
	Tayba	11.9%	13.4%	7.5%	43.3%	23.9%	100.0%
	karima	12.5%	17.5%	10.0%	25.0%	35.0%	100.0%
	% of total	8.3%	22.2%	8.3%	33.7%	27.4%	100.0%
Rashad	Algardoud	3.2%	61.3%	3.2%	19.4%	12.9%	100.0%
	Debaikir	6.0%	32.0%	12.0%	42.0%	8.0%	100.0%
	Tandik	2.1%	18.3%	30.4%	35.3%	13.8%	100.0%
	% of total	2.7%	23.8%	25.7%	34.9%	13.0%	100.0%

Source: study survey

Crops cultivated:

Surveyed households were asked to show the types of crops that they cultivate (Table 8). Majority of the surveyed households reported that they cultivate more than one type of crops with average percentage of 97.1% and 87.2% in Rashad and Abujibiha localities respectively. However, Sorghum or sesame are cultivated each alone by 7.2% and 2.2% of the farmers in Abujibiha while in Rashad 2.3% and 0.0% respectively. Groundnut scored 1.1% and 0.6% in Abujibiha and Rashad localities respectively. Cowpeas, pumpkin and okra are only cultivated in Abujibiha locality with average percentage of 0.6%, 0.6% and 1.1% respectively.

Table 8:

Surveyed households according to type of crop cultivated

Locality	Village	Sorghum	Sesame	Groundnut	Cow peas	Pumpkin	Okra	More than one crop	Total
Abujibiha	Dibaib Gumaa / Gabarouna	9.9%	4.2%		1.4%		1.4%	83.1%	100.0%
	Sambo	4.8%		9.5%			4.8%	81.0%	100.0%
	Tayba	5.6%						94.4%	100.0%
	karima	5.9%	2.9%			2.9%		88.2%	100.0%
	% of total	7.2%	2.2%	1.1%	.6%	.6%	1.1%	87.2%	100.0%
Rashad	Algardoud							100.0%	100.0%
	Debaikir	2.1%						97.9%	100.0%
	Tandik	2.6%		.7%				96.7%	100.0%
	% of total	2.3%		.6%				97.1%	100.0%

Source: study survey

Value chain:

The value chain for the agricultural crops (agricultural based value chain) were determined based on the project's recognition of challenges facing women as producers. Adoption of value chain approach will enable better understanding of the farming and production system and means of addressing constrains facing women as small producers (farmers) or product supplier through assessing inputs, farming technologies (means of production), farming practices and storage. In addition to finance, access to financial services and marketing. The small-scale traditional rain fed-farming subsector is the most important in terms of land area cultivated, aggregate production, contribution to the food security and livelihoods of the rural poor, employment opportunities and provision of raw materials to the processing sector. Based on this value chain in most small scale production (small rural producers) as with the targeted area are governed by spot market (local market) transactions that is usually dominated by numbers of small merchants and mediators.

Agricultural production process:

This include description of the production process including factor that positively or negatively affect the process and hence interfere with the value chain and means of addressing each of the selected value chain. Generally, crop types, farming practices are similar for the two localities with minor differences that might be attributed to slight difference in soil types at specific sites.

a) Land ownership:

This is about how land is owned and ownership changed. Based on the survey, land ownership is based on traditional Hikir⁷ System, where land is owned as family property through system of inheritance from grandfathers and within tribal territory. Those who do not own land might hire it or practice farm in benefit share system to be agreed between owner and the land user.

According to the survey, 68.7% at Abjuibiha and 61.5% at Rashad own the land they cultivate while 31.3% and 38.5% at the two localities respectively don't own the land they cultivate (Table 9). Information from table 10 shows that land owned (gifted, by inheritance and other means of ownership) found to be 44% and 11.7% in Abujibiha and Rashad localities respectively. Among those who do not own land 88.3% at Rashad locality and 56% at Abujibiha locality confirmed that they rent the land they cultivate.

⁷ Hikir: is an old traditional system, where land is owned through inheritance since long time by grandfather. It is the common way that land owned in most of Sudan rural areas.

Table 9:

Surveyed households according to land ownership

Locality	Village	Own	Don't own	Total
Abujibiha	Dibaib Gumaa / Gabarouna	77.5%	22.5%	100.0%
	Sambo	57.1%	42.9%	100.0%
	Tayba	73.6%	26.4%	100.0%
	karima	50.0%	50.0%	100.0%
	% of total	68.7%	31.3%	100.0%
Rashad	Algardoud	66.7%	33.3%	100.0%
	Debaikir	91.1%	8.9%	100.0%
	Tandik	55.0%	45.0%	100.0%
	% of total	61.5%	38.5%	100.0%

Source: study survey

Table 10:

Surveyed households according to types of land ownership

Locality	Village	Rented	Gift	Inherited	Other	Total
Abujibiha	Dibaib Gumaa / Gabarouna	27.6%	24.1%	37.9%	10.3%	100.0%
	Sambo	66.7%	8.3%	25.0%		100.0%
	Tayba	62.5%	18.8%	12.5%	6.3%	100.0%
	karima	88.9%	5.6%	5.6%		100.0%
	% of total	56.0%	16.0%	22.7%	5.3%	100.0%
Rashad	Algardoud	80.0%	20.0%			100.0%
	Debaikir	33.3%	33.3%	33.3%		100.0%
	Tandik	92.5%	5.4%	2.0%		100.0%
	% of total	88.3%	8.2%	3.5%		100.0%

Source: study survey

Information obtained during FGDs and from the KI at both localities showed that there are five types of farming land based on location, size and administrative setting:

- **Large Demarcated farms** with average of 1200 Feddan as mechanized rain fed used by those who are relatively well off and some of them are investors from outside the locality.
- Smaller un-demarcated farms of an average of 50 Feddan.
- **Bildat farms** of about 5 – 10 Feddan just at the territory of the houses mainly for production of sorghum groundnut and sesame
- **Gubraka** (1/8 Mukhamas) at the corner of the houses inside the village.
- **Genaina*** an area at the Wadi areas and usually irrigated by pumps as the area is an aquifer.

FGDs with communities confirmed that women practice all farming activities and production in Gubraka and 70% of Bildat and they have the right to sell their production and to decide how to use income. They said they usually spent revenue for family consumption purposes like education cost and sometimes cost of health expenses if needed.

The project may focus on farm activities at the Gubraka and Bildat as these represent main women-based activities and sources of income.

b) Farming practices:

Most of the farming practices are done manually, mainly at Gubraka and Bildat farming, including land preparation, sowing, weeding and harvesting practices. Discussion during the FGDs showed that farmers are willing to use intermediate techniques if this made available and found suitable. This will also help to minimize efforts and time and help farmers to cultivate all the land they have. According to table 11, 35.1% of the households at Abujibiha 42.1% at Rashad cannot afford to cultivate all the land that they have.

Table 11:

Surveyed households according to affordability of cultivating all the land they have

Locality	Village	Can	Cannot	Total
Abujibiha	Dibaib Gumaa / Gabarouna	53.0%	47.0%	100.0%
	Sambo	80.0%	20.0%	100.0%
	Tayba	62.2%	37.8%	100.0%
	karima	92.0%	8.0%	100.0%
	% of total	64.9%	35.1%	100.0%
Rashad	Algardoud	70.8%	29.2%	100.0%
	Debaikir	45.5%	54.5%	100.0%
	Tandik	59.2%	40.8%	100.0%
	% of total	57.9%	42.1%	100.0%

Source: study survey

c) Crop storage:

The majority of farmers at Rashad 84% store some of their products at least a four to six months after harvesting, while only 58.1% do this in Abujibiha. Among those store crops 90.8% at Abujibiha and 95.3% in Rashad locality store in their houses. According to the FGDs and field observation, some of the households use the traditional Sweiba⁸ for storing crops (Photo on the right). Information obtained from extension department showed that the traditional crop storage system might lead to 20% loss in crops stored, in addition to spoiling of about 20-30 of the stored seeds due to insect attacks and to unfavorable storage conditions.



Traditional crop storage (*Sweiba*)

Source: study survey

Livestock and animal production:

According to the results, livestock rearing for cattle sheep and goats represents the second source of income for 22.2% for households in Abujibiha, and 23.8% as an average for total households in Rashad (table 7). Information obtained from KI, and Animal Production Unit and Range and Pasture Administration (RPA), show that the Eastern livestock route pass through the project area, where big numbers of nomadic groups including Hawazma, Shanabla, Selaim, Awalad Himaid and Fulani tribes with their livestock using it in their mobility between the summer and rainy season grazing domains.

*Sweiba is a traditional above ground container for storage of seeds and crops usually made elevated on the ground to avoid running water.

Cattle types in the area are Kenna, Baggara, (western Sudan cattle breads) and Couri (Fulani tribe cattle with long horns), while sheep types include Hamari, Wateesh. Goats include desert type and Nubian goats (Tagar).

According to the FGDs mainly with women, they prefer to keep desert goats as it provides more milk compared to the local Nubian goats that are more adaptive but produce less milk.

Table 12 shows that average total of 26% in Abujibiha locality and 51% in Rashad locality keep goats and less percentage 8.7% in Abujibiha and 5.7% in Rashad keep sheep. Those who keep cattle are also limited to 7.1% at Abujibiha locality and 4.1% at Rashad localities. The FGDs showed that most of goats are raised by women. The results also showed that an average percentage of 75% in Abujibiha and 86.9% in Rashad sell livestock to earn money (figure 2).

Table 12:

Surveyed households according to type of animal owned

Locality	Village	Camel	Cattle	Sheep	Goats	Poultry	Other	More than one animal type	Total
Abujibiha	Dibaib Gumaa / Gabarouna		5.3%	5.3%	31.6%	5.3%		52.6%	100.0%
	Sambo	5.9%	5.9%	17.6%	23.5%	17.6%		29.4%	100.0%
	Tayba		8.6%	5.7%	22.9%	5.7%		57.1%	100.0%
	karima		11.1%	16.7%	16.7%	33.3%		22.2%	100.0%
	% of total	.8%	7.1%	8.7%	26.0%	11.0%		46.5%	100.0%
Rashad	Algardoud	3.7%	7.4%	14.8%	48.1%			25.9%	100.0%
	Debaikir			11.4%	34.3%	2.9%		51.4%	100.0%
	Tandik	.8%	4.5%	2.3%	56.1%	3.8%	1.5%	31.1%	100.0%
	% of total	1.0%	4.1%	5.7%	51.0%	3.1%	1.0%	34.0%	100.0%

Source: study survey

Figure 2:

Surveyed households according to selling of their animals



It is concluded that households are willing to keep desert goats as they produce milk as well as to keep more goats as rangeland as a source of feed for livestock considered reasonable by majority of them.

Because women are the households members that is taking the lead in goats keeping and poultry as stated during FGDs with women, this represents an opportunity to adopt an intervention of providing goats for women through a revolving fund or other suitable financing arrangement. Also to provide women with small sized poultry cages and basic skills on keeping and handling poultry. IDPs families may receive priority as they are out of their original land and having limited access to farming lands and for them raising goats represent a support of women.

Policies and regulations:

Policies and regulations related to value chain are those governing and regulating farming or livestock production system, their marketing or those governing provision of services or exchanging benefits. Generally, for the value chain selected for this study, the study found no remarkable regulation that influence the value chain linkages, and this because the selected crops and activities are mainly within small production framework, where most of the value chain linkages are within the targeted localities. There are some fees and taxis to be paid for products transport out of the locality but mainly for sorghum, sesame and honey at the checkpoints, other fees are those small locality-based to paid as market fees, and that producers already know and are familiar with. These fees usually paid as cost of the services provided at the market yard

Actors and services providers:

Inputs providers:

According to the survey, inputs providers are mainly those who sell seeds, mainly for vegetables including Okra and tomatoes. For sorghum, groundnut and sesame, farmers use their local seeds types, which are usually kept from previous season that usually stored at houses and subjected to post harvest diseases including seed borers.

Providers also sell herbicides, insecticides, solid and liquid fertilizers. Those surveyed in Abujibiha and Rashad market are professional agriculturist. They sell and describe the use, but there is a need for agricultural extension work to equip farmers on the right way of using agrochemical to ensure proper use.

Agricultural extension services:

The survey showed that the majority of the farmers did not receive agricultural extension services (91% in Abujibiha and 84.4% in Rashad), in addition to this, 81.1% and 89.1% in Abujibiha and Rashad did not receive support in crop protection problems.

Table 13:

Surveyed households according to receiving of agricultural extension services and receiving support

Locality	Village	Agricultural extension services			Crop production support		
		Received	Did not receive	Total	Received	Did not receive	Total
Abujibiha	Dibaib Gumaa / Gabarouna	3.3%	96.7%	100.0%	15.5%	84.5%	100.0%
	Sambo	5.6%	94.4%	100.0%	14.3%	85.7%	100.0%
	Tayba	13.0%	87.0%	100.0%	22.0%	78.0%	100.0%
	karima	17.6%	82.4%	100.0%	24.2%	75.8%	100.0%
	% of total	9.4%	90.6%	100.0%	18.9%	81.1%	100.0%
Rashad	Algardoud	3.2%	96.8%	100.0%	12.9%	87.1%	100.0%
	Debaikir	23.9%	76.1%	100.0%	18.8%	81.3%	100.0%
	Tandik	15.6%	84.4%	100.0%	9.3%	90.7%	100.0%
	% of total	15.6%	84.4%	100.0%	10.9%	89.1%	100.0%

Source: study survey

Crop protection services:

Information obtained from the State, Abujibiha crop protection office is the oldest office in the area. It is equipped with agricultural inspector and two assistants and one telecommunication technician. The office lacks some necessary equipment including sprayers and means of transport to the field. According to the survey, American Bollworm that affect sorghum at the milk stage in addition to the *Locusta Migrotaria* and problems of birds, mainly the weaver *Quelia qualia eThiopica*. Fruit flies are the main pest for the horticultural crops. Umdam (Fungal Disease) is one of the main sesame diseases and make hard and empty. Agro-chemicals are sold in stores in Abujibiha and Rashad markets.

Veterinary services:

Veterinary authority it is a department within the Ministry of Production and Economic Resources that is responsible for providing animal health and animal production services. There is a veterinary hospital in Abujibiha equipped with necessary equipment in addition to animal production laboratory for the production of cheese, yoghurt and ghee supported by Solar Power System this laboratory was established in 2015 with a support from FAO.

Financing services:

According to the FGDs, farmers are not organized into groups that are linked with financing. Information also showed that more than 60% of the small farmers mainly those cultivate less than 30 Feddan are those receive financing. The results in table 14 shows that only 15.1% of the surveyed group in Abujibiha locality and 7.8% at Rashad indicating that small percentage of the representing households farmers receive loans. High percentage of those received loans is in form of Shail (Shail is a traditional system through which big merchants provide loan in exchange for purchasing specific crop under cultivation at a fix price for specific unit of production). Although there are a number of commercial banks at the localities e.g. Eneil Bank, but most of farmers prefer traditional loan system because farmers are not able to fulfill the ordinary commercial banks collateral system conditions.

Table 14:

Surveyed households according to receiving loans

Locality	Village	Received	Not received	Total
Abujibiha	Dibaib Gumaa / Gabarouna	25.8%	74.2%	100.0%
	Sambo	-	100.0%	100.0%
	Tayba	12.5%	87.5%	100.0%
	karima	6.5%	93.5%	100.0%
	% of total	15.1%	84.9%	100.0%
Rashad	Algardoud	6.5%	93.5%	100.0%
	Debaikir	14.6%	85.4%	100.0%
	Tandik	6.8%	93.2%	100.0%
	% of total	7.8%	92.2%	100.0%

Source: study survey

FGDs with women and as confirmed by the meetings held with ABSUMI and Baraah Micro Finance Institutions showed that women in the two localities hat are among those receive loan from these institutions mostly in form of solidarity groups.

Agricultural Bank of Sudan Microfinance Institution (ABSUMI) is the initiative of the Agricultural Bank of Sudan within a cooperation frame with Bank of Sudan (BoS) and International Fund for Agricultural Development (IFAD). The initiative targets poor rural households mainly women that possess knowledge and skills, while lack of other production assets mainly financial support. The financial services usually provided in form of loan for small producers in amount range between SDG 10,000 to 25,000 to be repaid in an installment of 50% and the remain 50% at the end of the 8th month with a marginal profit of 3%. The system depends on solidarity groups' collateral, which is different from ordinary commercial banks collateral system.

Bara'ah:

Is a community owned micro finance institution emerged from the previous IFAD South Kordofan Rural Development project. Registered in 2011 and have received support from Islamic Development Bank (IDB). Bara'ah assisted in building good infrastructure. Bara'ah provides loans to individual as well as groups based on solidarity group collateral. It also has a training center that is ready to provide venues for events and trainings.

Selected value chains:

Sorghum:

Sorghum is the main crop grown in the area and most areas of central, northern and eastern Sudan, and represents the staple food for the majority of the people of the two localities. According to the information obtained almost more than 90% of the farmers grow sorghum as a main crop. Farmers in the two localities plant four dominant varieties are planted including:

Kulum: Relatively big size yellow color with relatively big size of grains it is the most preferable variety for family consumption. In addition to its resistance to weeds and relatively early mature and with high productivity ranging producer 15-18 sack (90ka) per Feddan has number of sub varieties (e.g. Dug Sadrak which produce 6-11 sack per Feddan.

Tabat: white grains, relatively small with a productivity of 5-10 sacks (70 ka)/ Feddan. A farmer avoids farming big area by this variety because it attract birds that affect productivity.

Wad Ahmed: this is one of the famous white yellow grain varieties produced by Agriculture Research Corporation (ARC) it has a productivity about 50 – 10 sacks (70 ka) Feddan.

According to information obtained from surveyed households, Table 15 shows the use of sorghum production. Majority of surveyed households use their sorghum production for family consumption with average percentage of 72.0% and 67.7% in Abujibiha and Rashad localities respectively while percentage of 32.3% and 27.3% are using their sorghum production for both family consumption and selling in Rashad and Abujibiha localities respectively. Selling the whole production of sorghum is found in Abujibiha locality with percentage of 0.7%. This result indicate that, most of the sorghum production cultivated by the surveyed households' is home consumed as a staple food.

Table 15:

Surveyed households according to use of sorghum production

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna	81.3%	18.8%	100.0%
	Sambo	70.0%	30.0%	100.0%
	Tayba	61.4%	38.6%	100.0%
	karima	68.8%	31.3%	100.0%
	% of total	72.0%	28.0%	100.0%
Rashad	Algardoud	35.5%	64.5%	100.0%
	Debaikir	74.5%	25.5%	100.0%
	Tandik	70.4%	29.6%	100.0%
	% of total	67.7%	32.3%	100.0%

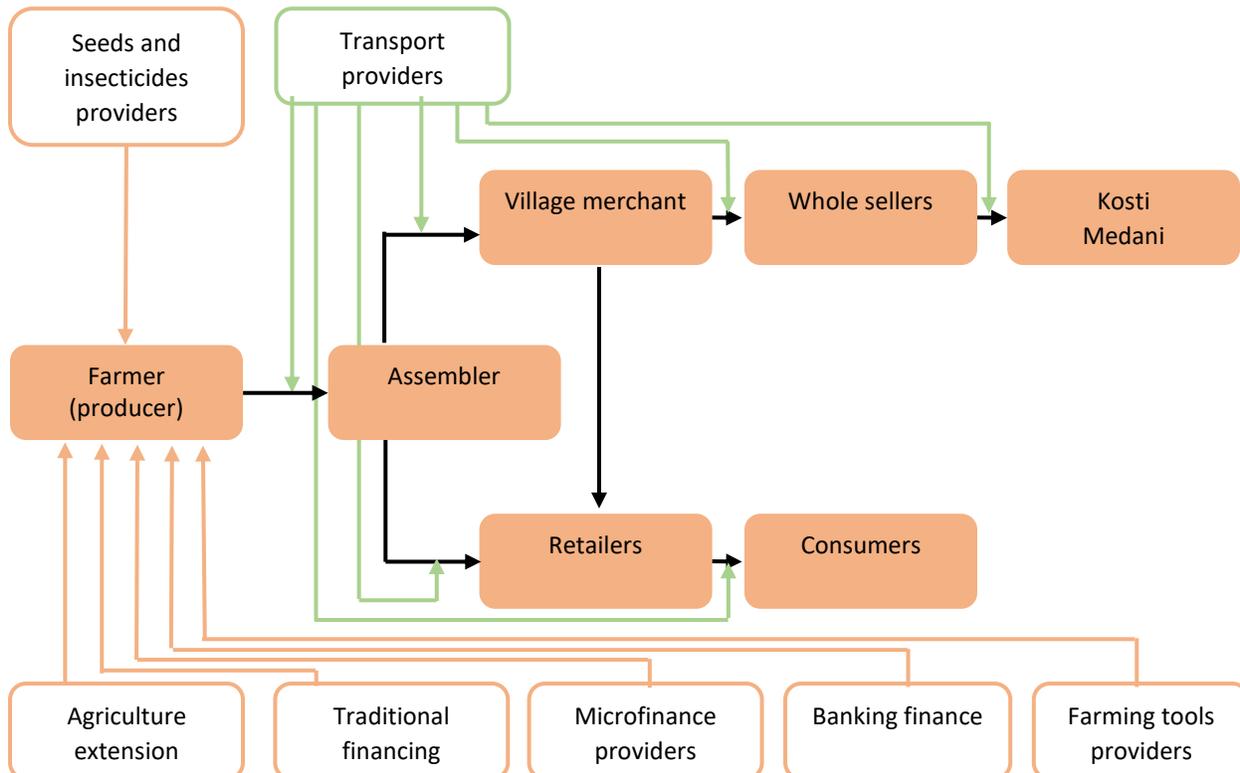
Source: study survey

The following table shows cost of production/Feddan:

Seeds/feddan = 1 malwa	= SDG 100
Soil preparation harrowing/feddan	= SDG 2,000
Seed broadcasting/feddan	= SDG 500
Weeding/fedddan manually with herbicides	= SDG 300
Harvest (cutting) /feddan	= SDG 4,000
Threshing cost	= SDG 100/sack (70 kg) + SDG 20 price of empty sack

Figure 3:

Sorghum value chain map for the two localities



Farmers sell their sorghum product to assemblers or directly to village markets, who in turn sell to whole sellers who transport sorghum to cities in central Sudan assemblers and village market may sell to retailers who are sorghum consumers.

During the FGDs with communities and with women groups, majority of women farming “Bildat” grow sorghum within a family production system aiming to secure sorghum for the family unit, then farming and selling surplus in the year of the good production to earn some money.

Sesame:

Sesame is grown in the targeted area where farmer grow 0.5 – 1 Feddan based on the total land holding size. All the farming practices of Sesame are usually done manually. Three types of Sesame are planted included:

- *Kabary*: light red color, produce relatively more oil and higher productively compared with other varieties used mainly for oil and Family consumption.
- *Ali Mahadi and Abushura* White color, low productivity compared with *Kaby* and mainly used for making sweet and other industrial purpose.

Sesame planted in an area of 1 - 1.5 Feddan. Farmers prefer to plant the white sesame as it is required for industry of sweets and other food-based product there are other red types like Kabari but not preferred by farmers.

Table (16) shows the use of sesame production by surveyed households. An average percentage of 63.1% and 14.3% of surveyed households in Abjibiha were using their sesame production for selling and family consumption respectively while in Rashad locality 44.4% and 30.2%% use their production for family consumption and selling respectively. However, average percentage of 25.4% and 22.6% of surveyed households use their sesame production for both family consumption and selling in Rashad and Abjibiha localities respectively. Sesame is mainly produced for seed oil. It is considered one of the important cash crops. Farmers during the FGDs showed that sesame is a harvest that can be easily sold and for this, they prefer to store it and to sell it at a time when they need money.

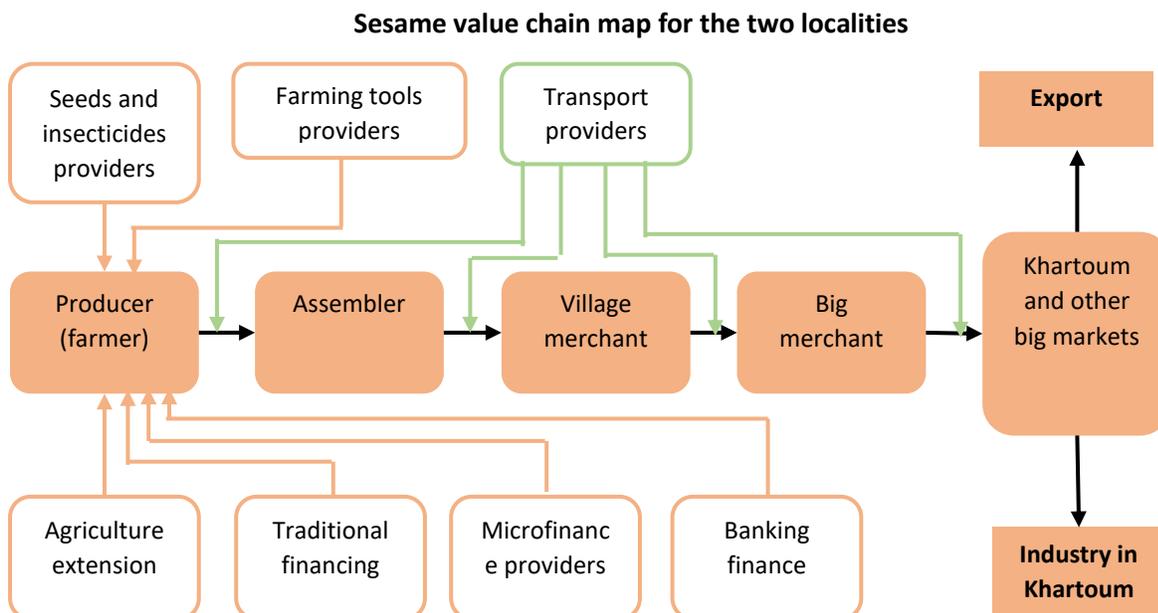
Table 16:

Surveyed households according to use of sesame production

Locality	Village	Family consumption	Selling	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna	15.6%	66.7%	17.8%	100.0%
	Sambo	22.2%	77.8%		100.0%
	Tayba	13.0%	52.2%	34.8%	100.0%
	karima		57.1%	42.9%	100.0%
	% of total	14.3%	63.1%	22.6%	100.0%
Rashad	Algardoud		20.0%	80.0%	100.0%
	Debaikir	33.3%	48.1%	18.5%	100.0%
	Tandik	61.3%	16.1%	22.6%	100.0%
	% of total	44.4%	30.2%	25.4%	100.0%

Source: study survey

Figure 4:



Farmers sell sesame to assemblers who sell to village merchants and few amounts for retailers who sell to households consumers at the locality. Village merchants sell to wholesalers who sell to pre-processing investors who in turn sell to local industries (sweets, oil pressers and other sesame-based food industries including bread making). Some of the pre-process investors export sesame outside.

The following table shows the cost of production/feddan:

Seeds 2 Kg	= SDG 150
Soil preparation	= SDG 350
Weeding	≈ SDG 300
Harvesting/feddan	≈ SDG 1,200
Productivity/feddan	≈ 4 Quntar
1 sack (70 Kg)	= 2 Quntar
1 Quntar	= SDG 3,500

Groundnut:

Groundnut is dominantly planted in Rashad locality where soil is light and suitable for growing this crop compared with Abujibiha. There are three main varieties of groundnut planted in the targeted area:

- Gibaish: variety with big grain but highly infected by seed borer that usually seen as bores and white pupation, especially with groundnuts when infected by *Bruschidus upperatus*. According to the extension departments, the loss may reach 20% of the production.
- Sodari: with small size grain.
- Baladi: local type is one that local farmers prefer to cultivate as it produces more oil and more groundnut cake for animals in addition to it is tolerance to low rainfalls.

Table (17) shows the use of surveyed households' of their production of groundnut. Majority of correspondents 81.3% in Rashad locality are using their production for family consumption and selling while correspondents in Abujibiha locality scored only 33.3%.

Table 18:

Surveyed households according to use of groundnut production

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna		100.0%	100.0%
	Sambo	38.5%	61.5%	100.0%
	Tayba	43.8%	56.3%	100.0%
	karima		100.0%	100.0%
	% of total	33.3%	66.7%	100.0%
Rashad	Algardoud	3.6%	96.4%	100.0%
	Debaikir	11.1%	88.9%	100.0%
	Tandik	21.6%	78.4%	100.0%
	% of total	18.7%	81.3%	100.0%

Source: study survey

Groundnut (*Arachis hypogea*) is an important oil crop grown in central, eastern and western regions of Sudan. It is mainly produced for its seed oil, which is important cooking oil in Sudan.

The following table shows items for cost/one Feddan

Seeds= 10 malwa X SDG 200	= SDG 2,000
Ploughing	= SDG 1,200
Sowing	= SDG 500
Weeding twice	= SDG 2,000
Harvesting	= SDG 1,000
Empty sack (for packing)	= SDG 30
Selling:	
Production	= SDG 10 Sacks 90kg /Feddan
Price per sack	= SDG 1,700 SDG

According to the information collected from the market and from oil presser owners that the farmers sell their product to the village merchants who usually invest in groundnut pressing for oil producers rather than selling groundnut in kind. Purchased the groundnut from farmers with a price of 1,800 SDG, they transport groundnut to the presser with a cost of (groundnut with husk) SDG one sack/35 malwa.

The oil pressers owner press the groundnut with a cost of 50 SDG for de-husking 200 SDG for pressing totaling 350 SDG for each sack (100 kg). In addition, to 50 SDG price for an empty Jerrycan. One sack produces (one Jerrycan of 4 Gallon and ½ sack of groundnut cakes. The merchant sell one jerrican of oil with about 2,200 SDG and the groundnut cake (½ sack) with SDG 700. This means that the merchants will get a profit of about SDG 700/ per sack. Information showed that no fees are paid at the locality level for selling oil.

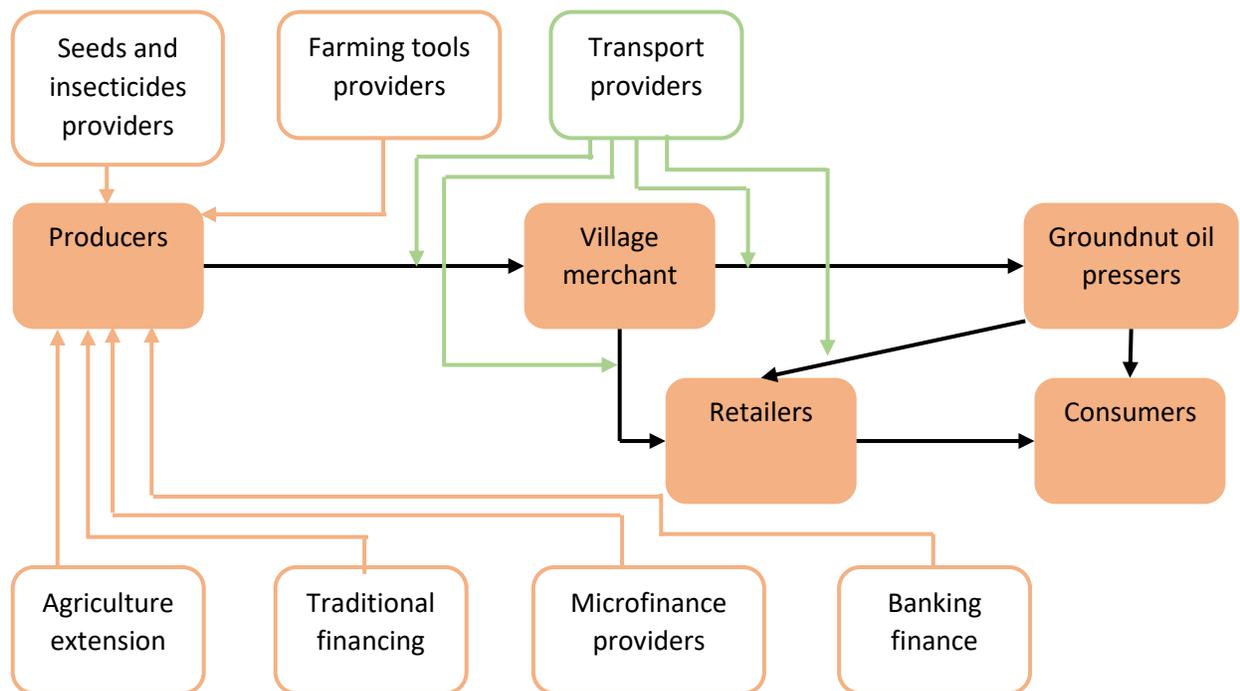
It is noted that groundnut farming attract youth groups as it is considered a rewarding business and highly demanded by the oil pressers working in the area (*small motorized pressers*) The produced oil is usually consumed at the locality level. The village merchant might pay cost of transport from oil presser location to the nearby market with a cost of around 20 SDG/ per jerrican.



Photos showing motorized oil presses at Rashad locality

Figure 5:

Groundnut value chain map for the two localities



There is a need for focusing on improving the value chain of sorghum as women intensively involved in its production focusing mainly on agricultural practices (farming, harvesting and storage), organizing producers, access to finance and promoting marketing skills through availing marketing information and improving storage conditions.

According to the information obtained percentage of 47.2% at Abujibiha and 63.7% at Rashad use groundnut for family consumption and sell surplus production (table 19). During the FGDs, surveyed groups confirmed that planting groundnut is rewarding practice.

Table 19:**Surveyed households according to use of groundnut production**

Locality	Village	Family consumption	Selling	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna			100.0%	100.0%
	Sambo	38.5%	23.1%	38.5%	100.0%
	Tayba	43.8%	12.5%	43.8%	100.0%
	karima		66.7%	33.3%	100.0%
	% of total	33.3%	19.4%	47.2%	100.0%
Rashad	Algardoud	3.6%	35.7%	60.7%	100.0%
	Debaikir	11.1%	30.6%	58.3%	100.0%
	Tandik	21.6%	13.6%	64.8%	100.0%
	% of total	18.7%	17.7%	63.7%	100.0%

Source: study survey

Cow peas (Lubia):

According to the survey findings including FGDs that cow bean (white bean) is widely used as a food by the people living in the project area, it is consumed as boiled beans or cocked with other ash made material called (Cambo). It is an important protein source for the majority of the households. The information obtained showed that some groups have the attitude not to plant this crop, though they use it as a food material. There are three types of white beans in the area:

- Dahab Elgoz (gold of sand) brought to the area within previous food security project and is the most preferred type, usually planted in small areas (in gardod soil) and usually by women in Gubrakas.
- Ein Elgazal (Gazalla eye): according to the information obtained from extension unit, that this variety is brought from central Sudan (not preferred as Dahab Elgoz because it has black small piece that float when cooked and people don't like this).
- Garn Elkabish (sheep horn) is the traditional type in the area also less preferred. Although Dahab Elgoz is preferred type but some of the women prefer to plant the local type (Garn Elksbish) because it is resistant to seed bores.

Percentage of 61.3% and 48.4% of surveyed households' use their production for family consumption in Abujibiha and Rashad localities respectively while 51.6% and 38.7% use their cow beans production for family consumption and selling it in Rashad and Abujibiha localities respectively (table 20).

Table 20:**Surveyed households according to use of cow pea production**

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna	76.9%	23.1%	100.0%
	Sambo	66.7%	33.3%	100.0%
	Tayba	70.6%	29.4%	100.0%
	karima	43.5%	56.5%	100.0%
	% of total	61.3%	38.7%	100.0%
Rashad	Algardoud	7.1%	92.9%	100.0%
	Debaikir	75.0%	25.0%	100.0%
	Tandik	50.0%	50.0%	100.0%
	% of total	48.4%	51.6%	100.0%

Source: study survey

Cowpeas come among the most important summer adapted food grain legumes in Sudan. According to the FGDs Cowpeas as a legume, constitute major diet in rural areas. Cultivars grown by farmers are landraces known as Beladi. Although a number of improved cultivars were released to farmers, farmers still cultivate their local landraces.

The following table shows cost of production/ Feddan for cow beans

Seeds 3kg (Malwa)	= SDG 140
Weeding	= SDG 200
Harvest	= SDG 400
Harvest (2 sacks /70 kg)	= 30 Malwa

All production consumed locally where women sell their product to retailers and consumers with an average price of 140 SDG for one Malwa. The price may go up to SDG 300 for one Malwa.

Cowpea is a crop that is planted by women and constitutes a mean of income for them. Effort may go towards improving its production and storage conditions.

Local Soya bean (Abu gawi):

Soya bean is planted in Rashad locality since 1998 as the soil is light compared with Abujbuha, it is mainly introduced by Barnu, Bargu and Fulani tribes mainly at Gardood, Grawid and Tandik villages. Cultivated by women and sold by them in the local market. Used boiled or grinded and used as (Tamia⁹), usually planted in areas of 1-1.5 Feddan by farmer women. All farming practices done manually seeds used are of local types.

Table (21) shows surveyed households use of their soya bean production. Percentage of surveyed households use their soya bean production for family consumption scored 66.7% and 16.4% in Abujibiha and Rashad localities respectively, while 83.6% and 33.3% use their production for both family consumption and selling in Rashad and Abujibiha localities respectively. According to the FGDs soya bean is usually cultivated together with other crops.

Table 21:

Surveyed households according to use of soya bean production

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna			100.0%
	Sambo	50.0%	50.0%	100.0%
	Tayba	100.0%	.0%	100.0%
	karima	50.0%	50.0%	100.0%
	% of total	66.7%	33.3%	100.0%
Rashad	Algardoud	5.9%	94.1%	100.0%
	Debaikir	28.6%	71.4%	100.0%
	Tandik	17.3%	82.7%	100.0%
	% of total	16.4%	83.6%	100.0%

Source: study survey

⁹ Tamia is a kind of Falafel, where grinded paste if the bean is mixed with some spices made in small pieces then fried in oil.

The following table shows items and estimation cost per Feddan

Cost of seeds 1 sack/70 Kg	= 2,500 SDG
Soil cleaning	= 500 SDG
Ploughing + sowing	= 500 SDG
Weeding	= 1200 SDG
Manual harvesting	= 600 SDG
Productivity/ Feddan	= 15 – 17 /sack/ 90 Kg
Price and selling/ sack (70 Kg)	= SDG 2500

Production usually consumed locally, while 30% of it send to nearby traditional mining areas in the locality, as those working at the area of traditional gold mining prefer it.

There is no serious insect infestation, or pest disease facing farming of Abujbaiha bean. Usually women do not use any agro-chemical or fertilizers.

Pumpkin:

Pumpkin is usually planted in area of about 1-5 Feddan/farmer, by farmers (mainly at wadi) total area in Abu Gbaha is about 2000 Feddan. Famers use local seeds, one Feddan produce about eight lorry load that usually sold by famers with about 20,000 SDG (one lorry load contain about 4,000 piece of Pumpkin).

Table (22) shows percentage of surveyed households use their production of pumpkins. Majority of surveyed households with percentage of 94.1% and 83.0% reported that they use their pumpkin production for family consumption and selling in Abujibiha and Rashad localities respectively, while 17.0% and 5.6% use their production for family consumption in Rashad and Abujibiha localities respectively.

Table 22:

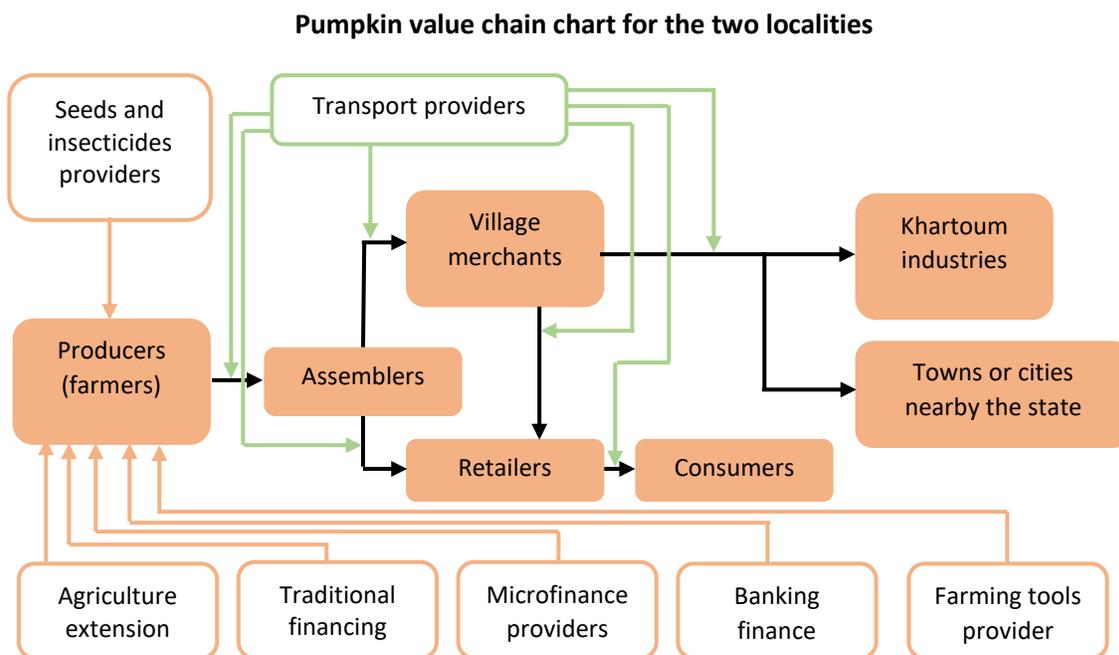
Surveyed households according to use of pumpkin production

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna		100.0%	100.0%
	Sambo		100.0%	100.0%
	Tayba	7.1%	92.9%	100.0%
	karima	5.6%	94.4%	100.0%
	% of total	5.9%	94.1%	100.0%
Rashad	Algardoud		100.0%	100.0%
	Debaikir	23.1%	76.9%	100.0%
	Tandik	15.8%	84.2%	100.0%
	% of total	17.0%	83.0%	100.0%

Source: study survey

It is usually planted without thorough cleaning from the field after harvest which may attract fruit fly which affect mango trees and also cause damage and loss of pumpkin production of about 20%.

Figure 6:



Okra (lady fingers):

Okra is planted twice a year during the rainy season and winter. Seeds used are of local type. Farmers plant about half feddan that usually brings about 20,000 SDG. Okra is usually sold in containers of different sizes. According to the FGDs, farmers (mainly women) plant Okra using seeds brought from outside the area and sold in the market. They usually plant it in gardens, where water is available during summer period. The farmers themselves do all farming operation for Okra production manually, including soil preparation, sowing, weeding and irrigation in addition to harvesting. The product is usually sold outside town like Kosti and Elobied.

Okra is one of the vegetable that is used fresh and dry and constitutes one of the main food for the majority of Sudanese people in what is called (Weika). It is even sold packed in groceries and super markets in Khartoum and in all towns and cities of Sudan.

The survey result (Table 23) indicates that, 64.0% and 35.7% of surveyed households are using their okra production for households in Rashad and Abujibiha localities respectively while those who are using their production of okra for both family consumption and for sale scored 64.3% and 36.0% in the two localities respectively.

Table 23:

Surveyed households according to use of okra production

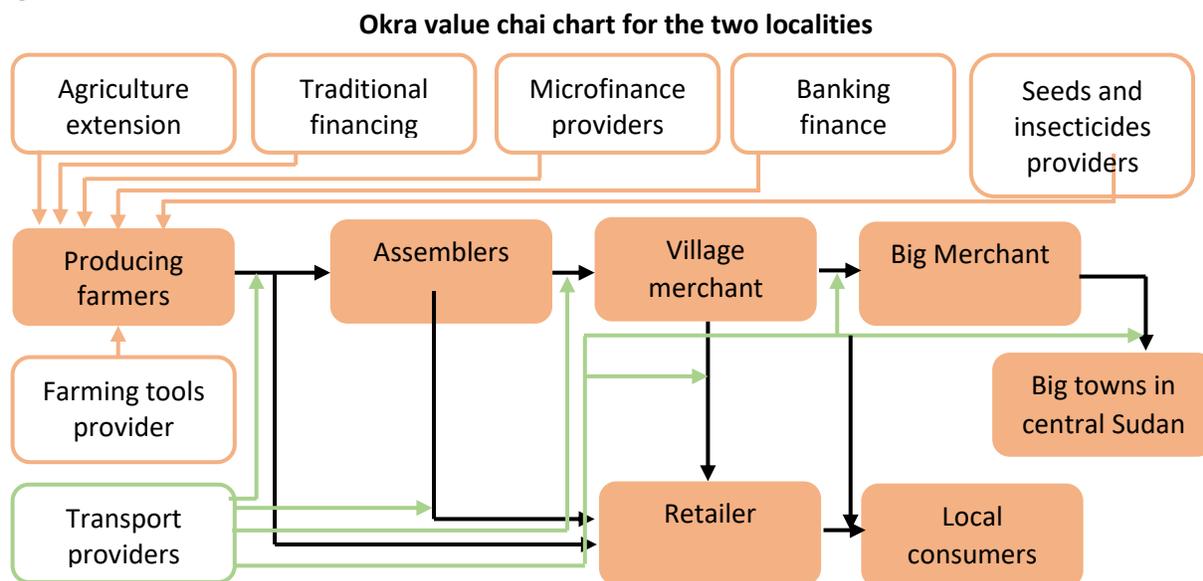
Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna	37.5%	62.5%	100.0%
	Sambo		100.0%	100.0%
	Tayba	35.3%	64.7%	100.0%
	karima	37.5%	62.5%	100.0%
	% of total	35.7%	64.3%	100.0%
Rashad	Algardoud	50.0%	50.0%	100.0%
	Debaikir	50.0%	50.0%	100.0%
	Tandik	68.5%	31.5%	100.0%
	% of total	64.0%	36.0%	100.0%

Source: study survey

Okra is the most traditional popular vegetable in Sudan, where both cultivated and wild types of okra are known.

The okra value chain map (figure 7), shows that assemblers buy Okra from farmers and sell to village merchants who sell to retailers or big merchant who transport and sell okra to nearby towns.

Figure 7:



Lemon:

Lemon is one of citruses planted in the area. According to the information obtained from the Extension Dept and from the director of the State Agricultural Directorate (SAD), the interest among farmers to produce Lemon has dropped by about 20% than used to be in spite of the good revenue that could be obtained. This because growing Lemon is facing number of challenges including:

- Lemon require more water compared with other trees and susceptible to termite infections
- Subjected to diseases and infections include (leaf gummosis and white termite)

Table (24) depict 100.0% and 95.2% of surveyed households are using their lemon production for both family consumption and selling in Abujibiha and Rashad localities respectively while 4.8% and 0.0% are using their lemon production for family consumption in the two localities respectively.

Table 24:

Surveyed households according to use of lemon production

Locality	Village	Family consumption	Family consumption and Selling	Total
Abujibiha	Dibaib Gumaa / Gabarouna		100.0%	100.0%
	Sambo		100.0%	100.0%
	Tayba		100.0%	100.0%
	karima		100.0%	100.0%
	% of total		100.0%	100.0%
Rashad	Algardoud		100.0%	100.0%
	Debaikir	20.0%	80.0%	100.0%
	Tandik	2.1%	97.9%	100.0%
	% of total	4.8%	95.2%	100.0%

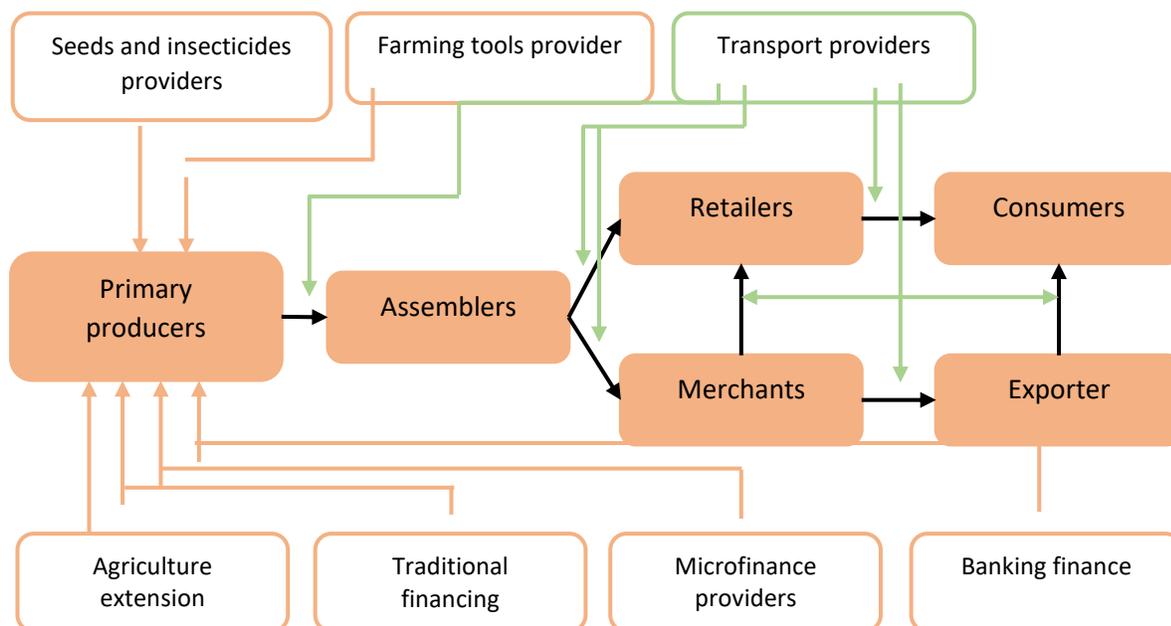
Source: study survey

According to the information obtained, farmers has no positive culture towards proper horticultural practices for Lemon as they do not use verified seedling sources that should be produced based on proper horticultural practices and not the locally produced seedlings, and instead they use local seeds to produce seeding. Lemon production can reach 2 sacks (70 Kg)/tree/season), lemon tree usually produce from 3 years old to 15 or 20 years old.

Results showed that farmers culture do not favor growing of lemon. They either sell lemon to assemblers who sell it to mediators or directly to mediators who transport Lemon and sell it to another mediators in big towns or to exporters in Khartoum who dry Lemon and send it abroad mainly to Saudi Arabia (figure 8).

Figure 8:

Lemon value chain map for the two localities



Lemon is a promising product and for this, efforts may:

- Raise awareness about the economic value of lemon.
- Enhance use of verified seedlings.
- Link farmers with agricultural extension and crop protection.

Honey:

Honey is one of the products that the two localities produce, where 70% of the producers are from the area and mainly men. They practice traditional means of production that mainly based on collecting honey rather than using prepared hives for this purpose. According to the information obtained from the market, there are three type of honey identified based on from where honey is collected:

- Mountain honey – collected from mountains.
- Trees honey – collected mainly from trees.
- Ground honey – collected mainly from ground moored.

Honey is produced in three seasons

- Darat (end of rainy season) Oct – Nov
- Summer production (mid Feb – end of March)
- Rainy season production (mid June end of July)

People consider the summer type is the best and preferred in the market.

Collectors buy honey from producers as pure or with Wax, they usually purify the honey by using light piece of fabric as a sieve. *Koran* and *Um Saga* are known as main areas for collecting of honey. According to the information collected from Abujibiha market. Honey usually stored in leather container or pots in order to avoid spoilage. Information collected, showed that few women are involved as mediator for selling honey (26.7%) at town level (Table 25).

Table 25:

Surveyed households according to involvement of women in production or selling honey

Locality	Village	Involved	Not involved	Total
Abujibiha	Dibaib Gumaa / Gabarouna		100.0%	100.0%
	Sambo		100.0%	100.0%
	Tayba		100.0%	100.0%
	karima		100.0%	100.0%
	% of total		100.0%	100.0%
Rashad	Algardoud	50.0%	50.0%	100.0%
	Debaikir	20.0%	80.0%	100.0%
	Tandik	26.1%	73.9%	100.0%
	% of total	26.7%	73.3%	100.0%

Source: study survey

Clients prefer white honey than the brown one, while royal jelly amount is limited in the market and not preferred by consumers. Price of pure honey jerrican is 200-250 SDG (1 jerrican of 4 liters = 56). Tax is around 400 SDG / Jerrycan to be paid to the locality and FNC authorities.

What should be noted unlike other areas of the country, producers are mainly collectors for honey from natural bees hive and they do not make hives or put hives in order to collect honey as in other areas of Sudan (example is Kubum area in South Darfur), where honey collectors build hives and put them in trees.

Price of honey:

Jerrican = 4 galoon = 56 bound of honey

Price of pure bound of honey

Producers (SDG 200) → merchant (SDG 230) → consumer (SDG 275 – 300)

Taxes for honey transported outside the locality is SDG 400/jerrican for the locality and Forest National Corporation (FNC).

Results shows that few households at Abujibiha 1.5% and 14.6% at Rashad of the total produce honey (Table 26), while among those produce honey, only 11.8% of total at Debaikir and Tandik in Rashad use traditional hives while only 14.7% of the households among those produce honey and use improved hives and found in Rashad (Table 27).

Table 26:

Surveyed households according to wither they produce honey or not

Locality	Village	Produce	Don't produce	Total
Abujibiha	Dibaib Gumaa / Gabarouna	1.7%	98.3%	100.0%
	Sambo		100.0%	100.0%
	Tayba		100.0%	100.0%
	karima	7.1%	92.9%	100.0%
	% of total	1.5%	98.5%	100.0%
Rashad	Algardoud	11.1%	88.9%	100.0%
	Debaikir	13.5%	86.5%	100.0%
	Tandik	15.2%	84.8%	100.0%
	% of total	14.6%	85.4%	100.0%

Source: study survey

Table 27:

Surveyed households according to type of hive used for honey production

Locality	Village	Traditional hive	Improved hive	Natural hive	Other	Total
Abujibiha	Dibaib Gumaa / Gabarouna					
	Sambo					
	Tayba					
	karima			100.0%		100.0%
	% of total			100.0%		100.0%
Rashad	Algardoud			50.0%	50.0%	100.0%
	Debaikir	25.0%		75.0%		100.0%
	Tandik	10.7%	17.9%	71.4%		100.0%
	% of total	11.8%	14.7%	70.6%	2.9%	100.0%

Source: study survey

Honey is collected either close to villages as stated by 34.3% of the total among the producer or far from the villages by 57.1% (Table 28). Percentage of 51.5% sell the honey they collect while 48.5% use it for consumption indicating the amount they produce is not big, while 71.4% of households who sell honey sell it inside their villages (table 29).

Table 28:

Surveyed households according to the place where they produce honey

Locality	Village	Inside village	close to village	Far from village	Total
Abujibiha	Dibaib Gumaa / Gabarouna				
	Sambo				
	Tayba				
	karima		100.0%		100.0%
	% of total		100.0%		100.0%
Rashad	Algardoud			100.0%	100.0%
	Debaikir		20.0%	80.0%	100.0%
	Tandik	10.7%	39.3%	50.0%	100.0%
	% of total	8.6%	34.3%	57.1%	100.0%

Source: study survey

Table 29:

Surveyed households according to selling honey and where they sell it

Locality	Village	Selling honey			Where do they sell			
		Sell	Don't sell	Total	Inside village	Surrounding villages	Town market	Total
Abujibiha	Dibaib Gumaa / Gabarouna							
	Sambo							
	Tayba							
	karima	100.0%		100.0%	100.0%			100.0%
	% of total	100.0%		100.0%	100.0%			100.0%
Rashad	Algardoud	100.0%		100.0%		50.0%	50.0%	100.0%
	Debaikir	25.0%	75.0%	100.0%			100.0%	100.0%
	Tandik	51.9%	48.1%	100.0%	83.3%	16.7%		100.0%
	% of total	51.5%	48.5%	100.0%	71.4%	19.0%	9.5%	100.0%

Source: study survey

According to the result obtained, 50.0% at Abujibiha and 56.5% at Rashad consider honey collection a rewarding activity. It is noticed that 50% of surveyed at Elgardud are involved in selling honey (Table 30).

Table 30:

Surveyed households according to profit gained from honey production

Locality	Village	Rewarding	Not rewarding	Total
Abujibiha	Dibaib Gumaa / Gabarouna			
	Sambo			
	Tayba			
	karima	100.0%		100.0%
	% of total	50.0%	50.0%	100.0%
Rashad	Algardoud	50.0%	50.0%	100.0%
	Tandik	57.1%	42.9%	100.0%
	% of total	56.5%	43.5%	100.0%

Source: study survey

There is a need to improve production of honey through adoption of appropriate types of hives (possibly traditional one) with using safe smoke maker to avoid occurrence of wildfires. In addition to training producers in honey collection and improve marketing skills.

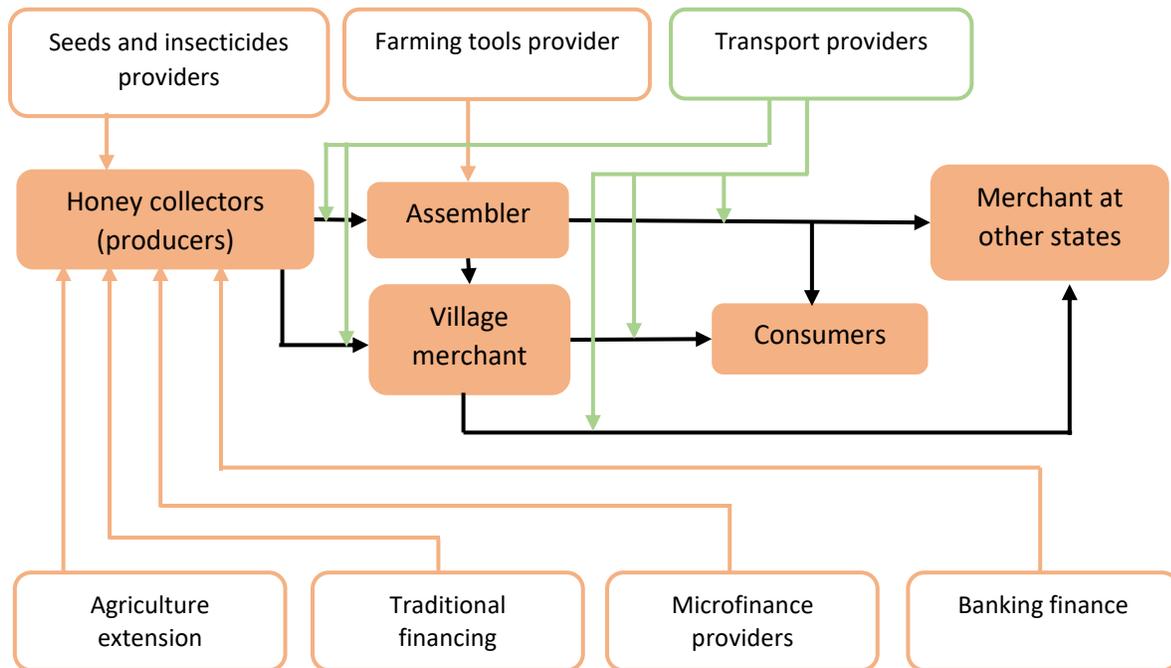


Photo showing tradition hive

Collectors sell honey to assemblers, who sell it to village merchant or consumers. Assemblers also sell honey to merchants in other states (figure 9).

Figure 9:

Honey value chain map for the two localities



Income Generating Activities (IGAs):

Women make essential contributions to the households' economy in South Kordofan State, particularly the visited villages and their communities in Abujibiha and Rashad. They often manage complex households and pursue multiple livelihood strategies for their families. They are engaging in a wide range of economic activities extending from farming to many other off farm income generating activities (IGAs) such as processing and preparing food, engaging in trade and marketing (see pictures to the right), caring for family members and maintaining their homes. All of these activities could be defined as essential to the wellbeing of rural households of the visited areas in Abujibiha and Rashad of South Kordofan.



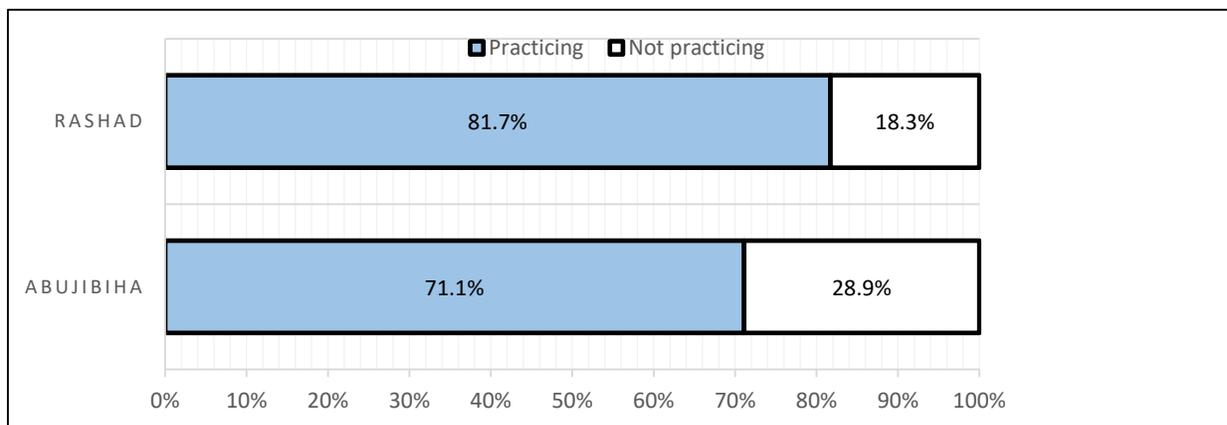
Other IGAs products are mats, hats, pottery in form of pots, coffee cups and jugs (See pictures below), which as stated by women usually sold inside and outside their villages directly to consumers, while sometimes via mediator who take these products to towns and big centers nearby.



During the fieldwork in the visited areas, FGDs showed that almost 70% of the women and girls at the targeted areas are engaged in IGAs. These IGAs activities included mainly handcrafts, food, tea and coffee making, petty trading, pottery, tailoring and thatched making. Percentage of 71.1% and 81.7% of the surveyed households in Abujibiha and Rashad localities respectively reported that at least a member in the households is involved in IGAs (figure 10).

Figure 10:

Surveyed households according to practicing IGAs



Source: study survey

Males and females practice all of these off-farm activities. Those practiced by females found to be 32.9% and 46.9% at Abujibiha and Rashad locality respectively (table 31).

Table 31:

Surveyed households according to the gender of the person practicing IGA

Locality	Village	Male	Female	Total
Abujibiha	Dibaib Gumaa / Gabarouna	72.2%	27.8%	100.0%
	Sambo	58.6%	41.4%	100.0%
	Tayba	67.6%	32.4%	100.0%
	karima	65.4%	34.6%	100.0%
	% of total	67.1%	32.9%	100.0%
Rashad	Algardoud	64.3%	35.7%	100.0%
	Debaikir	51.2%	48.8%	100.0%
	Tandik	52.7%	47.3%	100.0%
	% of total	53.1%	46.9%	100.0%

Source: study survey

Results from the surveyed areas showed that funding of IGAs is limited, where 96.6% and 95.6% at Abujibiha and Rashad localities did not receive loans (Table 32). This situation raises the need to enhance means of supporting mechanism to encourage accessibility for financing through formation of women and linking households with loan providers.

Table 32:

Surveyed households according to receiving loans for IGAs

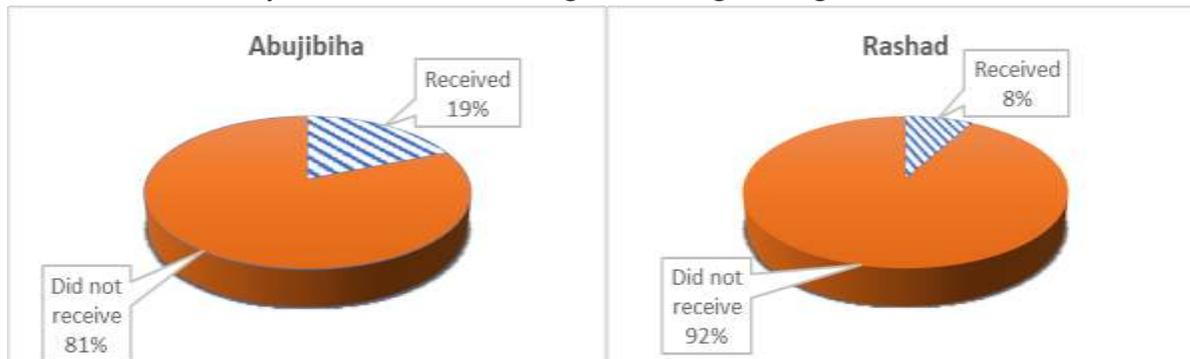
Locality	Village	Received	Did not receive	Total
Abujibiha	Dibaib Gumaa / Gabarouna	7.4%	92.6%	100.0%
	Sambo		100.0%	100.0%
	Tayba	2.9%	97.1%	100.0%
	karima		100.0%	100.0%
	% of total	3.4%	96.6%	100.0%
Rashad	Algardoud		100.0%	100.0%
	Debaikir	5.0%	95.0%	100.0%
	Tandik	4.6%	95.4%	100.0%
	% of total	4.4%	95.6%	100.0%

Source: study survey

The FGDs with women showed that no training has been received to improve the best practices of IGAs. This is confirmed by the survey in figure 11; where 81.3% of the households in Abujibiha and 92.0% in Rashad localities haven't received any training related to IGAs this situation raise the need for training IGAs practitioners for improving their skills and diversifying their products.

Figure 11:

Surveyed households according to receiving training related to IGAs



Source: study survey

Input needs for IGAs such as thatched and tailoring are expensive and sometimes not available at the village. This may imply the need to organize group in order to bring the inputs from whole sellers outside the village with relatively cheaper prices compared to when purchased by individual women.

Market and marketing process:

Women constitute absorbable component of the market scene in the two localities, where they are involved as sellers and buyers. They sell food, tea and coffee as well as vegetables and other family consumption items including sorghum and beans, they also sell handmade material, handcraft and pottery products. Girls from Hawsa tribes sell food materials, boiled egg, trees fruits Nabag (fruit of Sidir tree), Gonglaiz (fruits of Boabab tree), Gidaim (fruit of Crewia tenax tree) and Laloub (fruit of Heglige tree), in addition roasted groundnut. They also sell what is called Halook which is regenerating Dalaib tree (*Boracsus aethiopianum*) which is considered as negative practice as it reduce the natural recreation of this important tree that play vital roles in fixation of water courses banks.



Abujibiha market is a two days per week market (Monday and Thursday). It is a typical small town market where shops are built of brick and corrugated iron. There are small locality offices for collection of fees and taxes in addition to organization of selling and building process and related hygiene aspects. Market visitors as seller and buyers are from nearly 30 surrounding villages and village cluster bringing mainly agricultural products and other family consumption items, number of artisan, blacksmith and petty traders are practicing their jobs during the market days.



Remarkable existence of women was noted mainly selling vegetable and spices in addition to handicraft products and pottery products on the ground. Girls are also observed mainly from Hawsa tribe selling thatched handicraft and Halook in addition to roasted and boiled groundnut and groundnut butter.



Although Rashad market is smaller than Abujibiha market, the items supplied and sold in both markets are almost the same. There is also no difference in the presence and the way women supplied their products.

However some items are produced more in Rashad locality, such as pottery products, groundnut and soya beans, but also sent and sold in Abujibiha market.

Livestock market yards is separated from the main market yard, but within the market area and accessible to all category of livestock sellers and buyers. Type of animals are supplied in Abujibiha and Rashad are mainly cattle, sheep and goats. The payments and transactions process between sellers and buyers take place in the main market area late afternoon after finishing the selling and buying process at the livestock market yard.

Men are the mainly actors in livestock market. Generally, women do not participate in the livestock market as sellers and rarely buying directly from the market.

CONCLUSION AND RECOMMENDATIONS FOR PROJECT ACTIONS

Conclusion:

The study concluded that the more than 20% at the two localities are illiterate, practicing farming as a main occupation, while those practice livestock raising are limited. Sorghum, Groundnut and sesame are the main crops contribute to both food security and income earnings. Others crops included Cow peas, Soya bean, Pumpkin and Okra are produced at Gubraka and small areas as Bildat, while Pumpkin grown irrigated Wadi areas. Women dominate farming activities for production of the main crops as they grow them at Bildat.

Value chain analysis showed that a number of challenges are facing crop production process including seeds quality, traditional farming practices (soil preparation weeding, harvesting and storage). In addition to that, agricultural extension and crop protection are not as required. This situation led to low production, relatively low quality and more efforts to be exerted. Addressing of these factors is expected to enhance production, quality and minimize efforts which will positively reflected directly on women economy and indirectly in saving efforts as a mean of empowerment for both girls and women.

Results showed that a number of IGAs are practiced, mainly by girls and women including handicraft, pottery, tailoring and food selling. These activities are facing difficulties of financing, provision of inputs at village level, and if found usually expensive. These IGAs found to be rewarding but need to be sharpened and enhanced through training and organizing women into groups in order to enable smooth handling of inputs and provision financing services. Organization and orientation of farmers and IGAs practitioners and linking them with the existing financing bodies at the two localities is an opportunity to be adopted.

Raising goats and pottery found to be a potential practice for women as contributing to food security and as a revenue and to ensure this arrangement are needed in close collaboration with animal production and vet authorities, communities prefer to keep desert goat and this was validate by veterinary authorities.

Honey collection is practiced within and around the targeted localities. Means of production are in form of traditional collection (Wild). It is observed that honey is sold in poor hygiene manner. There is a need to improve production through adoption of appropriate types of hives (possibly traditional one) with using safe smoke maker to avoid occurrence of wildfires. In addition to training producers in honey collection and improve marketing skills.

Recommendation for project actions:

The project will need to focus on farming as the results showed that it represents the main livelihood activity and source of income. Households' food security and economy especially for women rely on income earned from farming activities, as they found dominating agricultural production at Bildat, Gubraka and small holding size at the Wadi areas.

- The value chain analysis result showed that the following are necessary in promoting farming system:
 - Ensuring provision of proper inputs mainly seeds and tools (intermediate technology using animal drawn implement that suit soil characteristics of the targeted area to be considered).
 - Improving farming practices to ensure reducing effort spent in soil preparation, weeding and harvesting in close coordination with agricultural extension, crop protection and research bodies, where demonstrations, illustrations, exchange visit and farmer field schools may help in this aspect.
 - Assist in organizing the use of agrochemical and enhance adoption of Integrated Pest Management package in close coordination with Crop Protection Department as well as agricultural extension.
 - Improving harvesting process and harvest storage through improvement of traditional storage system (storage conditions), with possibility of applying the idea of community seed stores that has been adopted by number of projects before including CONCERN worldwide in West Kordofan State. Additionally, make use of the experience and lessons learned by the IFAD project that work mainly in seeds.
 - Facilitating organizing of farmers in general and women into groups to assist in getting finance and loans from the existing financing institutions. In addition to build their capacity on group management and group associations.
- Supporting and improving production process, training and marketing of the selected crops as they found contributing directly to the communities' livelihood. Sorghum found to be the main crop as it contribute to food security and households income followed by groundnut and sesame, as both of them contribute to food security but cultivated relatively in smaller areas and more susceptible to diseases and post-harvest and storage infestation compared with sorghum. Other crops including pumpkin, okra, cowpeas and soya beans contribute more to family consumption. Empowering women economic condition and favor their power and their social position. Contributing to family food security through increasing the production of the selected crops, also release a burden from women as they use their own resource to cover food security gaps as confirmed by the information obtained.
- Poultry with local breeds proved to be adopted and good for both egg and meat production as informed by Animal Production Department. Intervention may consider use of simple cages for use by girls and women, provided that vaccination services are already available in addition to extension services.
- It is recommended to promote adoption of improved honey collection means, with traditionally improved hives. The project may exchange community experience with Kabum honey production project that is going on within WVS – Germany project and previous experience of UNEP project in the same area, in addition to training and skills upgrading.
- It is recommended for the project to consider an intervention for providing women with goats (desert types as found preferred) within a revolving fund setting or appropriate financing means.

This is recommended as feeding sources from natural rangeland and crop products is available and veterinary services and advices are accessible at both localities Abujibiah and Rashad.

- There is a need to promote existence of women in markets through improving areas or yards where they sell their goods and provision of shade and promoting hygiene aspects
- It is also recommended to set a process of exchanging information preferably through the production groups making use of existing communication networks. This could be through creating a system of linkage between women or farmers within the production groups.
- It is recommended to improve the handcraft skills through training by professional and possibility to benefit from the Baraa'h Business Development and Experience Center at Rashad locality for sharpening potential skills. According to the information obtained Baraa'h have been already involved in training communities in handcraft before
- The project may be involved in sharpening and diversifying women' income generation activities through training and capacity building and organizing means of exchanging experiences.
- Also recommended to promote formulation of women groups to collaborate on purchasing inputs in quota rather than as individuals through bringing their inputs from nearby towns. This will ensure womenn will purchase products of good quality and less prices
- There is a need for exploring new IGAs opportunities for women such as food processing, drying fruit e.g. *mangodine* and marmalale, which is made from mango and pumpkin.
- IGAs is an opportunity to engage girls if they are consulted and if potential activities are supported.

ANNEXES

Annex 1: Key persons met

CIS staff – Abujibaiha:

Name	Position
FADULALLAH SALIK ABDALLA SALIH	Senior Health and Nutrition Officer (OIC)
MOHAMMED HAMID KHEIRALLA	Senior Agriculture Business Officer
NAHLA IDRIS ADAM OUR ELDEEN	Senior Agriculture and Livestock Officer
KHALID ELHAJ FADUL DARCHEEN	Village Saving and Loan Association
MUZZAMMIL RAHAMTALLAH SULTAN OMARA	Operation and HR assistant

Enumerators:

Name	Affiliation
FATIMA AHMED ALNOUR	FNC – Abujibaiha
AHMED YASSIN HASSAN	FNC – Abujibaiha
HASAN ADAM AHMED MOHAMMED	FNC – Rashad
KHANSA AHMED ALBADAWI AHMED	FNC – Rashad
ISMAEIL ADAM YOUSIF	Graduate – Abujibaiha
MUSA OMER IBRAHIM	Graduate – Abujibaiha
MURTADA OSMAN HASAN	Graduate – Rashad
ABDELHAMID ABDELRHMAN HANWA	Graduate – Rashad
MARIAM MOHAMED OMER	Graduate – Rashad

Name	Affiliation
Ammer Moli Odeer	HAC – Rashad
Dr. Ahmed Khamis Nour Eldin	Veterinary authority – Abujibaiha
Dr. Abdelrahim Hassan Abdelbagi	Animal production specialist – Abujibaiha
Ahmed Osman	Agricultural extension – Abujibaiha
Haitham Abdalla Adam	Turath GO – Abujibaiha
Mohamed Abdalla Abderahman	Ag. Director – Rashad locality
Mohamed Ibrahim Suwar	Rain-fed Dept. Rashad locality
Jamal Eldin Adil	Honey merchant- Abujibiha
Mahgoub Ahmed Hamad	Honey merchant- Abujibiha
Sabir Omer	RPA – Abujibiha
Mahmoud Adam	Plant Protection Dept. – Abujibiha
Hamid Alregeyeg	Agric. D. Abujibiha
Nour Eldin Elbadri	Agric. Extension – Abujibiha
Mohamed Mukhtar Ahmed	Abujibiha locality

ABSUMI

Name	Affiliation
Albana Alnour Kabsur	Baraah Microfinance Institution – Executive director
Adam Mustafa Mohamed	Admin Manager
Hami Elrafeeg	Director of the state agricultural directorate

Mohamadani Mohamed Babikir	Integrated Agriculture and Market Development Project
Iz Alarab	Integrated Agriculture and Market Development Project
Babu Gafim Gabir	Agricultural Engineer – Abujibaiha

FGD – Rashad locality – Algardoud
Name

BASHEER HASSAN BASHEER
ADAM HASSAN MOHAMED
ABDELNASIR MOHAMED ABDALLA
HASSAN YAHYA ADAM ALI

Affiliation

Head of Development committee
Vice Head of youth committee
Vice head of the Development committee
Secretary of the vice head of the development committee
Secretary of the head of the youth committee
Finance manager for women committee
Vice head of the women committee
Head of the women committee
Secretary of the head of the women committee
Vice of the secretary of the women committee
Head of the youth committee
Finance manager of the youth committee
Finance manager of the development committee
Secretary of the development committee

AWATIF ABDALLA SULIMANN
FATIMA RADI BEBI
HAWA ARBAB BILAL
TUMEYA IBRAHIM YAGOUP
ZAHRA ABDELGABAR
HAWA AHMED
MOHAMED ABUBAKR MOHAMED MUSA
ADAM MOHAMED ABDELRASOUL
AMANI MAHADI
AFRAA MOHAMED BAHAR

FGD – Rashad locality – Debaikir
Name

SIRAGELDIN IBRAHIM AHMED
ABDELHAMEED ABDELRHMAN
ABDA BABIKIR
HARAM OSMAN MOHAMED
NADIA OMER AHMED
HRARM MOHAMED HASSAN
FATIMA IBRAHIM
RAWDA ADAM SIDDIG
HAGIR MOHAMED ABDALLA
IDREES ALI BABALLA
NAWAL MOHAMED IBRAHIM
NAYLA IBRAHIM AHMED
MANAHIL ABDELWAHID

Affiliation

Vice head of the development committee
Secretary of the development committee
Vice secretary of the development committee
Finance manager of the development committee
Vice secretary of the women committee
Vice head of the women committee
Women committee – member
Women committee – member
Head of the Horticulture committee
Development committee – member
Development committee – member
Secretary of the youth committee
Development committee – member

FGD – Abujibaiha locality – Dibaiba Gumma/Gabarouna

Name

MOHAMED HAMID GUMAA
MOHAMED ADAM ALI
HUSAIN ALDOMA
ALTAYIEB BAHAELODIN
KAMAL AWAD
FATIMA MOHAMED ADAM

Affiliation

Omda
Community member
Community member
Community development – member
Community development – member
Women committee – member

AMNA AHMED
FEDDAH HAMMAD NIMIR
MARIAM MOHAMED MAHMOUD
TAHINI AHMED ALFAKI

Women committee – member
Women committee – member
Development and women committee – member
Development and women committee – member

FGDs attendees:

Abujibiha – Sambo

Name	Affiliation
ALAMIN AHMED ALBASHIR	
ALI IBRAHIM MAHMOOD	
MOHAMMED SALAHALDIN	
OSMAN OMER ADAM	
AHMED MOHAMMED SOLIMAN	
AHMED ISMAIL	

Rashad - Tandik

Name	Affiliation
AMNA ABASS ALAMIN	
AISHA MOHAMMED ALMALDIN	
FATIMA YOSIF	
AMAL MOHAMMED IBRAHIM	
ASMA ABDALBAGIE	
SWAKIN MOHAMMED	
AMNA YOSIF ISMAIL	
EKHILAS AHMED MOHAMMED	
ADAM MAHLIN MOHAMMED	
SARA MOHAMMED IBRAHIM	
ADAM MAHMOD	
ZINAB ADAM MAHMMOD	
AISHA ADAM IBRAHIM	
MARIAM ALNOUR	

Rashad - Tandik

Name	Affiliation
SAIFALDIN ABDELBAGI	Head of Development Committee
MOUTASAM IBRAHIM	Finance of youth Committee
ADAM IBRAHIM	Secretary of Development Committee
ABOBAKAR AHMED OMER	Vice Head of Development committee
SALMANI MOHAMMED NOUR	Member
ABDALRHIM ADAM MOHAMMED	Member
ABDALRHIM ABDALLA	Member
HAWA HASSAN SHAGAG	Finance Manager of Horticultural Committee
FATHIA IBRAHIM SHAGAG	Finance Manager of Women committee
KHDIGA ISMAIL	Member – Horticultural committee

Rashad – Tandik

Name	Affiliation
HAWA HASSAN SHAGAG	Finance Manger of Horticultural Association

AMNA BABIKR HASSAN MOHAMMED FATIMA YAHIA FATHIA IBRAHIM SHAGAG KHADIGA ISMAIL ABDALRHMAN	Head of Women Committee Member of Youth Committee Finance Manager of Women Association Member of Horticultural Association
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Rashad - Debaikir

Name	Affiliation
HRAM MOHAMMED HASSAN	
HRAM OSMAN MOHAMMED	
NADIA OMER AHMED	
HAWA OMER ALTAHR	
ABDAA BABIKR ADAM	
FATIMA YOSIF	
ASIA ALZAIBG	
HAWA ALNOUR EDRIS	
FATIMA IBRAHIM	
GANDI IBRAHIM EDRIS	
RAWDA ADAM SIDDIG	
NAILA IBRAHIM AHMED	

Abujibiha – Tayba

Name	Affiliation
ALSHEIKH ADAM YOSIF ADAM MAHDI	
AHMED ADAM DAWOD BRIMA	
EDRIS YAHIA MAHMMOD AHMED	
MOHAMMED HAMID HUSSAIN	
ALZAIN EDRIS ALZAIN	
ADAM MOHAMMED ABOBAKR	
ALALEM OMER	

Abujibiha – karima

Name	Affiliation
ALSHEIKH ALGZOLI HROWN	
HAMZA HASSAN YOSIF KRIMA	
ADAM ZKRIA	
RAMDAN OMER ABDALLA	
ABDALRHIM ABAKR OMER	
SOILMAN OSMAN IBRAHIM	
ABDALLA OMER MOHAMMED	
MOHAMMED HASSAN	
AMIN HASSAN MOHAMMED	
HIDR AMIN HASSAN MOHAMMED	

Rashad – Algardoud

Name	Affiliation
TOMIA IBRAHIM YAGOUP	Head of Women Committee

HAWA ARBAB BALAL	Vice head of Women committee
ZAHRA ABDLJBAR ABDELAZIZ	Secretary of Women committee
FATIMA RADI	Finance Manager of Women committee
AWATIF ABDALLA SOLIMAN	Head of Youth committee
HAWA AHMED IBRAHIM	Vice Secretary of Youth committee
HAWAIA HASSAN ALNOUR	Member

Abujibiha – Sambo

Name	Affiliation
HAFSA OSMAN	
HALIMA ABDALRHMAN	
SAAD AHMED	
OM SLMA MOHAMMED	
HAWA ABAKR	
HAWA OMER	
HALIMA ABDELRHMAN	
HAFSA MOUSA	
RASHIDA AHMED	
FATIMA ADAM	
ZAHRA MOHAMMED	
NADIA MOHAMMED	
HAGIR MOHAMMED	
MOUNA MOHAMMED	
ASMA BKHIT	
AMNA OSMAN	
KHDIGA OMER	
HALIMA ABAKR	
AZIZA OMER	
AISHA MOHAMMED	
FATIMA OSMAN	
FATIMA MUSA	
AMIRA GZALI	
AMAL MOAGIN	
AMIRA AHMED	
SALWA ABDALLA	
NADIA AHMED	
ZINAB MAHMOD	
HAWA KHLIL	
MARIAM ABKAR	
NAFISA ADAM	

Abujibiha – karima

Name	Affiliation
HLIMA IBRAHIM HUSSAIN	
SAMIRA ABDELATIF	
AISHA ADAM HUSSAIN	
ZAINAB IBRAHIM HUSSAIN	
HAWA ABDALLA	

KHDIGA ABDELGADIR
AISHA ABDALATIF
MARIA HAMZA
AKRM IBRAHIM
HANAN EISA
MONURA SALIH
MARIAM SALAH
ZOLFA MOHAMMED
AISHA IBRAHIM HUSSAIN

Abujibiha – Tayba

Name	Affiliation
AGABTNA YOSIF ADAM	
FATIMA SIDDIG IBRAHIM	
AISHA HUSSAIN	
FATIMA SHARIF	
FATIMA YOSIF HASSAN	
ZKIA MUKHTAR	
AISHA YOSIF	
AMNA ALTIGANI	
HAWA AHMED	
ZAHRA HASABALLA	
MAGBOLA ISMAIL	
FADILA AHMED	
AMNA ISMAIL	
TSNIM ABDELGIOM	
FATIMA YOSIF ADAM	
HABIBA DAMRI	
UM ALHASSN ALMARDI	
MALKA MOAHMMED SALIH MUSA	
AMNA ABDELRHIM	
LILA ALNOUR	
AZIZA EDRIS ALZAIN	
MARAIM AHMED ADAM	
AZIZA EDRIS	
HAWA ADAM ALI	
AISHA ALZAIN	
SADIA ALZAIN	
ALRADIA MOHAMMED KHLIFA	
JDAA ABDALWHAB	
SAMAR ADAM ABDALLA	
ALRADIA ALSAMANI BRIR	
ASMA YOSIF	
ALRADAI AHMED ADAM	
INTSAR AHMED	
MARIAM AHMED	

Annex 2: Questionnaire

Annex 3: Community checklist

Annex4: Guiding checklist for market and marketing

Annex 5: Guiding checklist for women group FGD

Annex 6: Study team:

Consultants:

- Abdelaziz karamalla Gaiballa (Professor) - Team leader- Natural Resources, Rural livelihood and community development specialist. Has an intensive experience related to community development and been Involved in many assignments for different organizations including UN agencies and International NGOS, included needs assessments, social and environment impact assessments, (evaluations, baseline surveys, project designing, programming, training and capacity building.
- Badr Eldin Osman Yahia - (MSc.) Co-consultant - Natural Resources management, Pastoralism and rural development Specialist. With good experiences of projects related to natural resources and community development including FAO, UNDP, GEF and World Bank projects in Sudan. In addition to regional experiences in natural resources management in Ethiopia. Assignments preformed included Social and environmental impact assessment, baseline surveys, training and capacity building.

Field assistants:

- Yassir Gaiballa. BSc. Forestry, MSc Natural resources and rural development and remote sensing in natural resources. Experience in managing and organizing intensive data collection for numbers of organizations. Data organization and analysis.
- Elbashir Abdalla - Diploma in Information Technology, long experience in assisting and fieldwork supervising, using of modern data collection methods (Kobotoolbox or similar software), worked in number of consultancies for national and international organizations. In addition to data entering and analysis.

Annex 7: ToR