Rapid Assessment Survey for Pastoralist Livelihoods in Abyei Area

March-April 2013

Prepared by Vétérinaires Sans Frontières Germany (VSF-G)
Acronyms:

AAA: Abyei Area Administration
AJOC: Abyei Joint Oversight Committee
CPA: Comprehensive Peace Agreement
FAO: United Nations Food and Agriculture Organization
HH: Household
HLS: Household Livelihood Security
HPG: Humanitarian Policy Group
GDP: Gross Domestic Product
GOS: Government of Sudan
GOSS: Government of South Sudan
IDPs: Internally Displaced Persons
IFAD: International Fund for Agricultural Development
INGO: International Non-Governmental Organization
MP: Member of Parliament
NCP: National Congress Party
PCA: Permanent Court of Arbitration, The Hague
SAF: Sudan Armed Forces
SMOAR: State Ministry of Animal Resources
SPLA: Sudan People Liberation Army (South Sudan Army)
SPLM: Sudan People Liberation Movement (ruling party in South Sudan)
SPSS: Statistical Package of Social Survey
TLU: Total Livestock Unit
UNISFA: United Nations Interim Force in Abyei
UN: United Nations
WASH: Water Sanitation and Hygiene
WSRMP: Western Sudan Resource Management Programme
VSF-G: Vétérinaires Sans Frontières Germany
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Executive Summary:
This rapid assessment was carried out in the Abyei area to understand the current pastoralist livelihood situation and to identify risks and challenges for the people. It is hoped that this assessment will contribute to better programming and policies for implementing partners to effectively address the needs, risks and vulnerabilities of pastoralist communities. Suggestions are made within the framework of a conflict sensitive approach.

The assessment team reviewed available secondary data in Khartoum, El Fula and El Muglad. The team has also consulted some research reports and studies on the area. For collecting the primary data, the team spent 11 days in the Western Sector and visited a substantial number of nomad camps and village settlements. In the field, the team used a hybrid approach combining conventional research methods and participatory data collection techniques such as focus group discussion, meetings with community and systematic observation.

The report provides detailed information on the impact of the secession of South and the oil industry on the pastoralists’ livelihood, environment and natural resources.

The information collected from the field was analyzed by the SPSS. The data collected during the field work and the main findings are discussed and presented in section four of this report.

The following are the main findings and conclusions:

- The literature study reveals that the issue of Abyei has been under discussion and negotiation within the circles of the colonial authorities and the national governments. However, to date no agreement has been reached on the final status of the area. This state of affairs has resulted in the continuous instability of the area governance institutions. The lack of an official civil administration in the area has constrained the work of the UN agencies and NGOs. Consequently, IDPs, returnees and pastoralists have no access to the basic services.

- The civil war in the Sudan has deteriorated relations between northern nomadic tribes and southern agro-pastoralists. Political influences from both sides have made shared use of resources a dangerous and conflict prone endeavor.

- The secession of South Sudan and its implications on the nomadic migration emerged as the main challenge facing the Misseriya pastoralists. Lack of access to pasture and water resources in South Sudan has forced them to keep their livestock in a limited strip of a poor pastureland north of the River (Bahr Al Arab/Kiir). As a result, their livestock is now suffering from lack of sufficient pastures, the spread of infectious diseases, increased infestation with internal parasites and very high tick burdens. Due to the conflict over Abyei many
sedentary Agok Dinka agro-pastoralists have been displaced to the south and are not able to return to their homesteads. The competition over limited resources has increased due to the loss of grazing areas south of the Bahr al Arab.

- Strategies developed by the pastoralists to sustain their livelihood security include expansion in agricultural activities, diversification of crops, selling male animals and replacing them with females and gradual settlement in urban and semi-urban areas.

**The following are the main recommendations:**

- As an immediate intervention investment in the water sector may lessen the livestock mortality rate, reduce congestion and reduce suffering by opening up areas with pasture but without access to water. This would extend the use of available natural resources at a limited level.

- Against all political odds, efforts should be supported aiming at bringing together the traditional leaders of the Misseriya and Dinka Ngok communities to discuss issues of common interest and resolve their problems to enable them share the natural resources of the area and live in peace.

- Support efforts by the representatives of the Misseriya pastoralists and their traditional leadership to negotiate with their counterparts in Unity, Warrap, Northern and Western Bahr el Ghazal States to discuss and resolve migration issues. The disruption of traditional grazing rights and transhumance patterns will remain a serious threat for the nomadic livelihoods of pastoral communities and for peace in the region. The desire to use available grazing lands in now South Sudan will remain under northern pastoralists.

- Grazing of nomadic animals in now South Sudan has created in the past a source of income and shared benefits for both pastoralists and sedentary agriculturists. Pastoralists have paid in many cases for grazing rights and traded milk and livestock against grain and pasture. Manure has been used to fertilize the lands for planting crops. Transhumance is a widely practiced land use in the whole Sahel region. National borders hinder in many countries livestock movement, but ways are always found to overcome this obstacle. So far the secession of the South Sudan should not create an impermeable barrier for livestock movement.

- However, actual political realities may deny access to grazing areas in South Sudan as the South has become a sovereign State which, according to international law, is free to issue policies and laws governing the land use within its own territories. The long-term solution is to find agreements of mutual benefits respecting the new realities on the ground.

- For the time being, assist the Misseriya pastoralists to care for their livestock north of the new international border. Therefore, the construction of new water
sources, especially hafeers and dams, and the development of the pasturelands in their own territory (Sudan) is a feasible and supporting solution for sustaining the security of their livelihoods over the next years. Such efforts should be accompanied by a well-funded pasture rehabilitation and development and animal health programmes that would strengthen and develop the capacity of the State Ministry of Animal Resources in El Fula. This is very important for the sustainability of the programme. Interventions by the NGOs in the field of veterinary services are of high importance and a prerequisite for protecting and sustaining the pastoralists’ livelihood. The present facilities for veterinary services are inadequate both in terms of number and quality of services.

- The exploitation of oil resources in Abyei is affecting land use and should compensate the population through investments in basic infrastructure and services, paid from the oil revenues. Research work on the magnitude of the impact may help to draw more attention to the needs to compensate communities by the oil companies.

- Support peasants in the traditional farming sector by initiating agricultural extension programmes and provision of high quality seeds to assist the pastoralists to diversity their crops and increase their income may be of help as well.

- The present practices of slaughtering animals and leaving behind animal waste need to be improved to ensure food safety and a hygienic environment. Urban centers in El Meiram, El Sitaib, El Dibab, El Muglad, Babanousa and El Fula have a good potential for marketing meat and animal products.

- The use of wasted by-products (such as skins and hides, horns, bones) can create an additional income. Efforts should be made to assist pastoralists, especially women, in processing, handling and storage of animal skins and hides.

- At present, milk products sold at the urban markets in the areas are brought from Khartoum and central parts of Sudan. Investments in dairy development could help to improve market chances for local producers and would help to develop the income from livestock keeping families. Focus should be laid on dairy hygiene (training; equipment such as milk cans, buckets,) and cooling facilities for fresh milk. The development of milk procession facilities (cheese making; yoghourt) could be a way to preserve milk for better market options.

- Altamas Organization for Peace and Development and the State Ministry of Animal Resources in El Fula are two strategic livestock partners in the Western Sector of South Kordofan. It is highly recommended that INGOs continue its present support to these two institutions by provision of funding, equipment and skills training programmes to develop their capacities to deliver effectively. The study revealed that the livestock contributes to the pastoralists’ household cash income by 98%. Support to livestock programmes is, therefore, of high importance to secure and sustain the pastoralists’ households’ livelihood.
• Access to Abyei town and the Dinka villages is limited for the UN agencies and INGOs. The team recommends engaging the Federal and State governments in negotiations to discuss and resolve access issues. One of the lessons learned from this study is that engaging the co-chairs of the Abyei Joint Oversight Committee (AJOC) is of a high importance for access reasons. Another lesson learned is the need for prior coordination with UNISFA on any activity in the area. The possibility of UNISFA providing offices to host the staff of AJOC and the humanitarian wings of Sudan and South Sudan in Abyei deserves to be explored.

• At the levels of the governments of Sudan and South Sudan issues of soft border, natural resource management and resource-based conflicts deserve to be put in their priority agenda.
1. Background:

1.1. Purpose:

The VSF-G national partner Altamas, a local NGO with headquarters in El Fula, is currently implementing food security and livelihood projects targeting pastoralist households in the Western Sector of South Kordofan and Abyei area. The purpose of this baseline survey is to conduct a rapid assessment of the pastoralist livelihood in the Abyei area to understand the current pastoralist livelihood situation, assess the stresses and risks, and underline their livelihood assets and how they are coping with the developing situation. The survey report is expected to document current practices and lessons to inform the future policies aiming at supporting the needy people’s livelihoods. This exercise requires collecting socio-economic data, through participatory and consultative processes in collaboration with different stakeholders, partners, and beneficiaries. This will also help improving project and programme design to support and protect the targeted pastoralist, IDPs and returnees in Abyei area. It is envisaged that the assessment would contribute to improving the overall policies and programmes of the VSF-G and its partners to effectively address risks and vulnerabilities within a conflict sensitive approach in the Abyei area.

1.2. Area:

The initial plan was to conduct the assessment in the area that lies between Bahr Al Arab/River Kiir (mainly Abyei town and the surrounding Dinka villages) and the Misseriya settlements and nomadic camps south of El Muglad. However, realities on the ground have forced the team to change its plan (section 1.8).

1.3. Target:

The primary target groups for this survey are the Misseriya and Dinka pastoralist households, IDPs and returnees in the Abyei area. The survey team managed to cover some parts of the targeted area and population.

1.4. Deliverables:

The expected output of this survey is a written assessment report that highlights the current situation of food security, livelihood systems, problems, risks and challenges facing pastoralists, IDPs and returnees and their coping strategies. It is expected that the report will make specific recommendations and document lessons learned to inform future policy changes and possible effective interventions by Altamas, VSF-G and other partner organizations. For further details on the ToR please see Annex (1).

1.5. Assessment Team:

On 20 March 2013, VSF-G in Khartoum contracted a team leader and a livelihood expert to travel to El Fula and provide technical support to a team of local experts who will be
identified by Altamas in consultation with VSF-G. For the composition of the assessment team please see Annex (2).

1.6. Methodology:

The team leader and the livelihood expert reviewed the secondary data from reports provided by VSF-G in Khartoum and Altamas in El Fula. Some reports and studies on the area have also been consulted and reviewed. Three team members (two in El Fula and one in El Muglad) were assigned the responsibility of collecting available information from the government departments (animal resources, health, water, pasture etc...), UN agencies, INGOs and national NGOs.

For the primary data collection, a hybrid methodology combining conventional methods and participatory techniques such as focus group discussions, community meetings and systematic observation at the field level was employed. This process ensured engaging the local stakeholders through informal meetings and household interviews. The team prepared a checklist to guide the work of the assessment teams in the field (Annex 3) and a household survey questionnaire (Annex 4). The purpose of this hybrid methodology is to minimize the gaps in the collected data as much as possible.

1.7. Process:

On 23 March, the two members of the team who were contracted in Khartoum travelled to El Fula and arrived on the evening of the same day. A two-day training workshop (26-27 March) was organized in El Fula to explain the purpose of the assessment, train the local team members and brainstorm with them on methods of data collection. The opening and closing sessions of the workshop were addressed by the Commissioner of the Locality and the Advisor to the Governor of South Kordofan for the Western Sector respectively. The Commissioner, who is a veterinary doctor, highlighted the importance of the survey and explained that it will assist them in their planning processes. He emphasized his full support to the team.

Following the completion of the field work and the team’s arrival in Khartoum, a data entry expert was contracted. He analyzed the data by using the SPSS.

During the workshop, the check lists and the questionnaire forms were pretested and amended as necessary. At the end of the workshop, it was agreed that three teams are required to cover the following areas:

*El Fula Two-Day Training Workshop:*
a. Team (1) to cover El Muglad, El Meiram and El Sitaib areas. El Dibab and surrounding areas were excluded for security reasons.
b. Team (2) to cover the area of northwestern Abyei (Shigay and surrounding areas).
c. Team (3) to travel to Abyei and then split into two groups (one for Abyei town and surrounding Dinka villages and the other for the Misseriya villages and nomadic camps). On 28 March, the three teams travelled from El Fula to El Muglad where they held preparatory meetings on 29 and 30 March to discuss logistics and travel plans.

The teams started the field work on 30 March and returned back to El Fula on 3 April. The debriefing workshop which was scheduled on 4 April was cancelled due to the expected arrival of the Governor of South Kordofan. Consequently, the Khartoum team left for Khartoum on 4 April.

Table (1) below shows the outcome of the field work of the three teams.

<table>
<thead>
<tr>
<th>Number of settlements visited</th>
<th>Number of village profiles prepared</th>
<th>Number of focus group discussions - community leaders</th>
<th>Number of focus group discussions - women</th>
<th>Number of households interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>19</td>
<td>16</td>
<td>13</td>
<td>190</td>
</tr>
</tbody>
</table>

Table (1): The Outcome of the Field Work

*Preparatory Meeting in EL Muglad:*

![Preparatory Meeting in EL Muglad](image)
1.8. Limitations:

Although Altamas, the government departments, the national security services (NISS), the Commissioner of the Locality, the local community leaders and the Advisor to the Governor of South Kordofan for the Western Sector were all quite helpful and supportive, the team faced serious constraints which would definitely have their negative impact on the final outcome of this assessment. The following are some of the constraints and challenges encountered by the team:

a. Delay in vehicle rental: It took VSF-G a couple of days after signing the contracts with the Khartoum based team members to rent a vehicle because the vehicle rental companies were reluctant to send their cars to areas in South Kordofan State.

b. Exclusion of the Eastern Cattle Migration Route: For security reasons the team was left without any choice but to exclude the areas along and around the eastern murhal.

c. Security escort proposed to be provided by UNISFA was not forthcoming and this made Abyei town and surrounding areas inaccessible. UNISFA military representatives in Al Dayer base, who were met by two members of the assessment team, promised to take the team to Abyei on the morning of the next day to meet UNISFA, UN and INGOs officials there. When the team members arrived on time as planned to be escorted by UNISFA to Abyei town, they were told that the concerned officials will come to Al Dayer to meet the assessment team. Thus, a meeting was held with two military officers representing UNISFA headquarters in Abyei. They were not accompanied by any UN or INGO staff. Hence, as there was no security or other escort available in this risky conflict zone, the team was compelled to drop the Dinka areas from coverage of its data collection teams. This would further impact the geographical coverage of the assessment which included only the Misseriya areas in Abyei.

2. Household Livelihood Security (HLS):

The livelihood security definition has been adjusted many times to cope with many global changes. The use of the household livelihood security (HLS) programming has recently become a unique tool in designing and evaluating projects and informing policy makers. This is mainly because the HLS concept can incorporate a wide range of human development aspects (human basic needs, human rights, civil participation, gender, policies and environment).

In this study the HLS which is defined as the adequate and sustainable access to income and resources to meet basic needs. Thus, access issues and policy environment have been employed. From the data, livelihood profiles are driven through the analytical lenses clustered under the following five main categories:

1- Context, conditions and trends of the study area.
2- Livelihood resources of the household (economic-natural, human and social capital)
3- Institutional processes and organizational structures (government, civil and private sectors)
4- Livelihood strategies of the households (production and exchange activities).
5- Livelihood outcomes (food security, health security, income security, educational security, social net, safety and environmental security).

**Pastoralist Livelihood: Context, Conditions and Trends of Development**

“The problems - declining food supplies, lagging health or educational opportunities, subjection to increasing depredation or deprivation, exclusion from prior rights or resources, recurrent natural disaster, or inaccessibility to opportunities available elsewhere - have sources that are clearly politically as well as economically derived”1.

The development of the traditional livelihood system of Pastoralism is not isolated from the historical development of the country. However, livestock sector was not given the priority like other sectors. The first attempt to address livestock issues was made by the colonial government in 1920 when it started the excavation of hafeers to solve the problem of access to water. The first borehole in El Muglad area was also established by the colonial government around this time.

Within the framework of its first development plan (1946-1951), the colonial government made a major change in its development policy when it established the Committee for Livestock Policy and Animal Services. The Committee was mandated to address the problems facing the livestock, especially water supply and control of diseases. As a result, veterinary services units were established at the level of the capital towns of the provinces.

In 1905, the British colonial admiration issued the 1905 Land Ordinance which amended the 1899 Land Act. The 1905 Act confined the private property of land to the northern and riverian areas and declared the unsettled rain fed areas as government owned. This ordinance and the policy behind it have complicated the situation of land tenure for the traditional small farmers and pastoralists.

After the independence of the Sudan in 1956, the first national government continued the implementation of the second development plan (1951-1956). Most of the budget was allocated for the irrigated schemes such as the Gezira Scheme (Managil Extension) based on the assumption that investment in irrigated agriculture is more profitable than investment in rain fed areas. Consequently, more than 75% of the population who live on the rain fed areas had been neglected by the second development plan although the contribution of the traditional sector to the GDP was estimated at 56%.

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In the third development plan (1960-1970), most of the budget allocated for the livestock sector was used to improve the supply of water including by establishing about 140 boreholes. Approximately 50% of these boreholes were drilled at the pastoralist migration routes. Yet, the expansion of irrigated areas, mechanized and traditional farming have and continued to have negative impacts on pasturelands as many migration routes had been either blocked or diverted. During that period, the railway was extended to Babanousa, Ed-Dein and Nyala in the west and from Babanousa to Wau in the south. This improvement in the infrastructure had resulted in the creation of urban centers such as Babanousa, El Fula and El Muglad in the Misseriya area and Ed-Dein and Nyala in Darfur.

In 1970, the government issued the Unregistered Land Act (1970) which stated that all unregistered lands shall be the property of the government and that the communities, tribes, clans and families have only the right of land use. Practically, this means the concept of the Dar which defines, according to customary laws, the tribally owned lands such as Dar Misseriya, Dar Rezeigat, Dar Hamar, Dar Buttana etc. have become null and void. Further, it means also that all the rain fed areas of Sudan, including the pasture lands and forests, have become a government property. In effect, the 1970 Land Act has deprived the small farmers and pastoralists from the ownership of the means of their livelihoods. This Land Act paved the way for the government to develop large mechanized rain fed farms and irrigated schemes at the expense of the traditional farmers and pastoralists.

Land users can be divided into two groups:

a. Traditional farmers and pastoralists who have an informal ownership as their lands are unregistered.

b. Farmers in irrigated schemes and large mechanized rain fed areas that have a formal ownership as they have licenses for using their lands for a period of 25 years. The size of the farm in these areas is (1,000-20,000) fedans. These registered lands are usually owned by companies, i.e. businessmen and senior government bureaucrats and executives.

The relationship between these two groups of farmers is characterized by continuous tensions and conflicts, in some instances bloody conflicts. Among the two groups, the pastoralists’ rights are the less recognized, if not denied, despite their significant contribution to the national economy. The 1971 estimates suggest that the national herd was composed of 12.9 million cattle, 10.9 million sheep, 7.8 million goats and 2.5 million camels.

In the 1980s, climate change, the drought which hit the African Sahel, desertification and degradation of environment exposed the livelihood systems of the small farmers and pastoralists in the traditional sector to disasters, risk and uncertainties. Many of them were forced to move and join the IDP camps at the peripheries of the urban centers where they depended on relief food provided by humanitarian organizations. The civil wars had
displaced many small farmers and pastoralists in Darfur, Eastern Sudan, Blue Nile and South Kordofan States.

During the 1990s, the livestock sector continued to play a significant role in the national economy. Its contribution to the GDP was estimated at 11% in 1991 and 20% in 1997. It has also been reported that livestock constituted 20.8% in 1991/1992 and 22.4% in of the total exports

3. Contextual Analysis: The Instability of the Abyei Area Governance System

The territories and size of the Abyei area are defined and understood differently by different stakeholders. For Dinka Ngok, Abyei represents the area of the nine Dinka Ngok chiefdoms as defined by the Permanent Court of Arbitration (PCA) in 22 July 2009. For the Misseriya, however, the area is much larger. According to their definition, Abyei area lies from El Muglad in the north up to the 1/1/1956 border between Sudan and South Sudan, i.e. south of Bahr Al Arab/River Kiir. In a telling gesture, they sometimes call their Locality the Greater Abyei Locality.

In 1905 the colonial authorities decided to transfer the Abyei area from Bahr elGhazal to Kordofan Province. It had been reported that in the same year (1905), the Misseriya Paramount Chief Nazir Nimir Ali al-Jula, and the Dinka Ngok Paramount Chief Sultan Kual Arob had concluded an unwritten charter in which they agreed to cooperate and work together for the prosperity of their two communities. According to El-Dibailo, this charter and its consequent contribution to improving the relations between the two communities may have been a factor in the colonial government decision to annex Abyei to South Kordofan.

In 1905, the colonial authorities decided, probably for practical administrative reasons, to transfer the Abyei area from Bahr el Ghazal to Kordofan Province. It had been reported that in the same year (1905), the Misseriya Paramount Chief Nazir Nimir Ali El Jula, and the Dinka Ngok Paramount Chief Sultan Kual Arob had concluded an unwritten charter in which they agreed to cooperate and work together for the prosperity of their two communities. According to El Dibailo, this charter and its consequent contribution to improving the relations between the two communities may have been a factor in the colonial government decision to annex Abyei to South Kordofan.


4 The position of Government of Sudan is that the area which had been transferred from Bahr elGhazal to Kordofan Province in 1905 lies south of Bahr al Arab/River Kiir as stated in the Sudan Government Intelligence Report of 1905 (Eldebailo, 2010, Vol. 1, P. 377-378).

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contribution to improving the relations between the two communities had encouraged the colonial authorities to take the decision of annexing Abyei area to Kordofan Province.

Nazir Nimir Ali Al Jula and Sultan Kual Arob were succeeded by their sons Babo Nimir and Deng Majok respectively. The two chiefs followed the footsteps of their fathers by working in harmony and creating an enabling environment for peaceful coexistence. They managed, using their traditional mechanisms, to resolve conflicts between members of their communities. After the death of these two tribal chiefs, they were succeeded by their sons, Muktar Babo Nimir and Kual Deng Majok. They lived under different and complex social and political circumstances which made their job of achieving and sustaining peaceful coexistence between their communities a difficult task.

In 1949, the British colonial authorities established the Dar Misseriya Rural Council with headquarters in El Fula. In 1953, Sultan Deng Majok decided to join the Dar Misseriya Rural Council and consequently Abyei became under the jurisdiction of this Council. In appreciation of this move, the Misseriya representatives voted, in the first meeting of the Council attended by Sultan Deng Majok, for electing Sultan Deng Majok as chairman of the Council rather than electing their own chief Nazir Babo Nimir.

It seems, the status of Abyei was subject to review from time to time by the British colonial authorities. In 1927, the Commissioner of Bahr el Ghazal Province recommended keeping Abyei within Kordofan Province. In 948, the District Commissioner of the Dar Misseriya Rural Council asked Sultan Deng Majok to reconsider his father’s decision of transferring Abyei from Bahr el Ghazal to Kordofan Province. Sultan Deng Majok reconfirmed his interest in remaining in Kordofan Province. In preparation for the Juba 1947 Conference, the District Commissioner of the Dar Misseriya Rural Council consulted Sultan Deng Majok on the administrative and political status of Abyei. Sultan Deng Majok renewed his interest in remaining in Kordofan Province.

In 1965, a group of educated Dinka Ngok youth under the leadership of Ahmed Deng Majok met in Bahr el Ghazal and discussed ways and means for transferring the administrative and political responsibly of Abyei to south Sudan. After this meeting they visited El Obeid, the capital of Kordofan Province, and informed the authorities of their new position. The immediate reaction of the Kordofan Province authorities was to arrest the members of the Dinka Ngok youth delegation. To achieve their objective, the members of this youth group joined in the same year (1965) the first southern rebel movement which emerged in 1955.

In the early years of the first southern rebellion, Abyei remained quiet. However, the security situation deteriorated rapidly after the fall of General Abboud government in

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6 Kual Deng Majok had actually succeeded his brother who took up the position for a short time before being killed.
October 1964. The year 1965 marked the deterioration of the historical relationship between the Misseriya and Dinka Ngok. This year witnessed the biggest and most bloody conflict in the history of the two communities as hundreds of people were killed. According to the Misseriya leaders, the 1965 attack on their cattle camps was launched by the armed southern rebel movement with support from the educated Dinka Ngok youth who joined the Movement. The 1965 demand of the educated Dinka Ngok youth to retransfer Abyei to the South and their decision to join the rebel movement in the same year indicate that they were not happy with the position of their traditional leadership of keeping Abyei within the boundaries of Kordofan Province and north Sudan. In retaliation, the Misseriya attacked and destroyed some Dinka villages. Thus, with this and subsequent conflicts, gone were the days of peaceful coexistence and brotherhood. It is to be noted that the year 1965 witnessed increased activities by the Anya Nya southern rebel movement (1955-1972) in the area. It could be argued that the history of the relationship between the Misseriya and Dinka Ngok from 1965 to the present time has been a history of continued conflict with only short periods of peace and peaceful coexistence.

The Abyei issue was raised in the peace talks leading to the Addis Ababa Agreement. A provision was inserted in article 3 (c) which reads: “Southern Provinces of the Sudan means the Provinces of Bahr el Ghazal, Equatoria and Upper Nile in accordance with their boundaries as they stood in January 1, 1956, and other areas that were culturally and geographically part of the southern complex as may be decided by a referendum”.

The issue of Abyei came to the surface in 1976 when Dr. Francis Deng submitted a memo on the status of Abyei suggesting the creation of a position of an Assistant Commissioner of the South Kordofan Province to be based in Abyei. The memo was discussed by a ministerial committee that resolved to implement Dr. Deng’s recommendations. Consequently, Justin Aguer, who was recommended by Dr. Francis Deng, was appointed Assistant to the Commissioner of the Province to be based in Abyei.

Naming Justin Aguer as Assistant to the Province Commissioner and his arrival in Abyei to perform his duties renewed the suspicions of the Misseriya who interpreted this move as a preparatory step for conducting a referendum in Abyei in line with the provisions of the Addis Ababa Accord. Their efforts to persuade the Government of the Sudan to reconsider its decision on the Assistant to the Commissioner of the South Kordofan Province did not materialize until 1977 when General Nimeiri began to think of replacing his southern political allies with northern ones. Nimeiri’s regime managed to sign in 1977 a national reconciliation agreement with some northern opposition parties, the Umma Party of Sadig al Mahdi and the Muslim Brotherhood Movement of Dr. Hassan al Turabi. This new political environment enabled the Misseriya to influence the decision-making process in the central government. Consequently and before the end of 1977, Justin Aguer was relieved from his position as an Assistant Commissioner. The Abyei Assistant Commissioner lasted from February 1976 to June 1977 and was then abolished. The period also saw the flare up of a major clash between the two tribal groups in 1977.

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7 Justin Aguer was then the Spokesperson of the Southern Sudan Youth.
Whether conflict was related to the government decision to abolish the post of Assistant Commissioner, or ignited by competition over resources is beyond the scope of study.

In 1980, the Southern MPs raised the issue of the Abyei referendum in the National Parliament (People’s Assembly). However, the Southern Regional Government and the Government of the Sudan had shown no interest in this issue.

In 1981, President Nimeiri established a committee to study the status of Abyei and submit recommendations on the future of the area. The committee recommended the division of the al-Fula Area Council (the name given to the Dar Misseriya Rural Council in 1971) into two councils:

1. Abyei Area Council (including El Muglad and Babanousa).
2. El Fula Area Council.

When the federal system was introduced by the present government, a similar arrangement was made for Abyei as the area was considered part of the Abyei Locality with headquarters in El Muglad. Consequently, an administrative unit was created in Abyei. The Commissioner of the Locality sent an executive officer to head the administrative unit. After the signing of the CPA in 2005, the SPLM Dinka Ngok youth forced the executive officer to leave Abyei and return to the Locality headquarters in El Muglad. The administrative unit was replaced by the SPLM youth committee.

During the period (2005-2008) the parties to the Comprehensive Peace Agreement (CPA) failed to establish the Abyei Area Administration (AAA) as they did not reach an agreement on the borders of the area. In 2008, the SPLM/Dinka Ngok leader, Edward Lino, visited Abyei and declared himself Governor of Abyei. Tensions resulting from his visit and announcement culminated in clashes in Abyei between SAF and SPLA in May 2008. All civilians living in Abyei were displaced. Following these developments the parties to the CPA (NCP and SPLM) held a series of meetings which were concluded by the signing of the Abyei Road Map for the Return of IDPs and Implementation of Abyei Protocol (June 2008).

In the Abyei Road Map, the parties agreed on interim arrangements, interim borders for the area, establishing the AAA as per the 2005 Abyei Protocol and seeking a final settlement through an international arbitration. This time, however, the parties to the CPA disagreed on who is eligible for voting in the referendum which should determine the administrative and political future of Abyei (remains in Sudan or is part of South Sudan).

As a result of the agreed Road Map, the Abyei Area Administration (AAA) was established by a Presidential Decree in August 2009. This is the first time in history for Abyei to be administered by a governance system agreed upon by both north and south Sudan.

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8 See the map of the Locality, Annex (5). Source: Idris, 2006.
The issue was referred to Permanent Court of Arbitration in The Hague. After prolonged proceedings and submissions by GOS and GOSS the court ensued. The PCA announced its decision on the borders of Abyei in July 2009. However, peace and stability in the area were disrupted by clashes between SAF and SPLA in 2011. Following these clashes President al Bashir issued a Decree by which he dissolved the AAA based on the alleged role of its Chairman in the events. Again, all civilians living in Abyei were displaced.

At present, there are no civilian governance institutions functioning in Abyei as the parties have not agreed on percentages of representation in the Abyei Legislative Assembly. In line with the agreement signed in June 2011 in Addis Ababa by the Government of Sudan and the Government of South Sudan, all military troops and police forces were redeployed from the Abyei area. The United Nations Interim Security Force in Abyei (UNISFA) was tasked with the responsibility of ensuring security in the area.

The lack of a governance system in the Abyei has impacted the life of the IDPs, returnees and the Misseriya pastoralists and those residing in the area. The UN agencies and INGOs cannot engage in development programmes in the absence of a civilian administration or government authorities. In the focus group discussions, the Misseriya leaders interviewed by the study teams mentioned that one of the challenges they are facing is the fact they are living in this area in the absence of law enforcement agencies. They told the team that there is no police force and a judicial system. They asked what would happen in case conflict erupted between two or more clans of the Misseriya tribe. Who is going to intervene? There is a strong feeling among the Misseriya community of not belonging to any official authority. The schools in Omkheir, El Shamam and other Misseriya villages are closed due to failure in paying the teachers’ salaries. “When we go Muglad asking for teachers’ salaries we are usually told that our villages are part of Abyei area, while there is no one to talk to in Abyei”, the Misseriya leaders stated. A UN report noted that the “lack of an effective law and order machinery has further complicated the situation”.

During the last two decades, the Misseriya and their livelihood systems have been significantly impacted by three external shocks represented in the ABC report and the PCA ruling on Abyei, the secession of South Sudan, and by the oil industry.

### 3.1. Secession of South Sudan: The Small Blanket

In informal interviews and focus group discussions, the issue of the secession of the South Sudan and its consequent impact emerged as the major challenge facing the Misseriya people and their livelihood systems. In fact, due to political tensions between Sudan and South Sudan, the Misseriya suffered from the possibility of this political development during the two years that preceded the official declaration of the new

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9 The governments of Sudan and South Sudan have not yet agreed on establishing the interim Abyei Area Administration (AAA), Legislative Assembly and, police force.

independent state of South Sudan as they were not allowed to proceed in their annual seasonal migration to their traditional grazing areas in the South.

For centuries, the Misseriya pastoralists were using three main migration routes (western, central and eastern) along which they move with their livestock from their wet season grazing areas to the dry season pasturelands in Bahr el Ghazal, Warrap and Unity States in South Sudan. Before, the second civil war (1983-2005) between the then north and south Sudan they encountered no major problem in accessing the rangelands and water sources in the south. During the years of this war they managed to broker agreements with the Dinka and Nuer traditional chiefs. As result of these agreements they were able to continue their seasonal migration to the south. However, after the signing of the CPA in 2005, disputes over the future status of Abyei; the north-south border areas and finally the secession of South Sudan, have all combined to hinder what was in the past a smooth process of nomadic migration. The carrying capacity of the remaining and accessible pasturelands and water sources cannot sustain the present Misseriya pastoralist livelihood system. As a result, the livestock is now concentrated in a narrow strip of land north of Bahr Al Arab/River Kiir. The following table shows details on the migration routes of the pastoralists in South Kordofan State.

Table (2): Migration Routes in South Kordofan State:

<table>
<thead>
<tr>
<th>Migration Routes</th>
<th>Eastern Sector</th>
<th>Central Sector</th>
<th>Western Sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Migration Routes</td>
<td>5</td>
<td>4</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Longest Route (km)</td>
<td>2450</td>
<td>1540</td>
<td>3020</td>
<td>7010</td>
</tr>
<tr>
<td>Demarcated Routes (km)</td>
<td>550</td>
<td>179</td>
<td>600</td>
<td>1329</td>
</tr>
</tbody>
</table>


Out of the 17 million head of livestock that migrate annually to South Sudan for the dry season rangelands, 10 million are from the Western Sector, i.e. from the Misseriya areas.

A research study conducted in 2006 revealed that “the nomads were found scattered during the dry season, whereas they were found in concentration in five locations during the wet season.” Contrary to the findings of this study, the Misseriya pastoralists have been forced, as result of the secession of South Sudan, to change their traditional pattern of migration and grazing practices. In the past, they were found scattered during the dry season because they had the alternative of moving to places where they could find better

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11 See the migration routes in Annex (5).
12 A statement made by the Governor of South Kordofan, Ahmed Haroun, Al-Sudani Daily, 5 April, 2013.
14 Idris, 2006,
grazing areas and water sources. Compared with the situation in the past years, the numbers of cattle in the areas around Goli, Al Dayer and Mikainees have increased significantly. In the words of Aghbash Ali Alnour, a Misseriya elder, “al Bagar Zadnn, al dholoof lagnn” (literary cattle increased in number to the extent that the hoofs are touching each other). Commenting on their coping strategy under such circumstances he said “al ghutta al dayg bi-a’lim al karfas” (literary the small blanket teaches you how to squeeze your body”). This suggests clearly that the meager the resources, the smaller the area in which the Misseriya would be forced to keep their livestock during the dry season. The concentration of the pastoralists in five locations during the wet season, as mentioned in the 2006 study, is probably due to the abundance of water and grass during this season. Another reason for this concentration is the interest of the pastoralists in being close to the main livestock markets in the area. The rainy season is the best time for selling and buying animals. Animal prices during this season are usually high.

In 2006, the IFAD funded Western Sudan Resource Management Programme (WSRMP) estimated the total production of animal feed from the range and other sources in the Western Sector of South Kordofan at 5,789,000 tons. “The total feed requirement of the 4.8 million TLU in Dar Misseriyya is estimated at 14.4 million tons, assuming that one TLU requires three tons a year. Taking WSRMP production figure of 5.8 million tons, this leaves a deficit of 8.6 million tons, or 59.7% of annual requirements”15. It may be right to assume that the deficit of 60% in the animal feed was compensated in the past by the grazing areas in South Sudan.

On 4 April 2013, the Minister of Defense and the Head of the Political and Security Committee for Negotiations with South Sudan, General Abdulrahim Mohammed Hussein, held a meeting to brief the Walis of the States neighboring South Sudan, representatives of the Sudan Armed Forces (SAF) and security services on the outcome of the talks with their counterparts in South Sudan. In this meeting, the Wali of South Kordofan State, who talked about the common interest and interdependence of the people at the two sides of the border, said that the last survey on animal resources conducted by his State revealed that there are 17 million heads of livestock that need to go for pasture in South Sudan annually for a period of seven months. Many of these animals, he explained, died during the last two years, despite the huge efforts by the government of South Kordofan to provide water services, because the rangelands in the South were inaccessible16.

In the short term, the problem of access to pasture and water sources in South Sudan could be solved if the cooperation agreements signed by the governments of Sudan and South Sudan are implemented in good faith. This may make it possible for the Governor of South Kordofan State (or the expected Western Kordofan State) and the Misseriya traditional leaders to meet with their counterparts in the neighboring States of South Sudan to reach agreements on migration. For example, as a result of the positive environment which followed the signing of the cooperation agreements, the Governors of

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16 Al-Sudani Daily, 5 April, 2013, P. 5.
Western and Northern Bahr el Ghazal have agreed to allow the Rizeigat pastoralists to go to their grazing areas in the south\textsuperscript{17}.

3.2. Oil: The Hyena Tree

Quite often the Misseriya leaders repeat a statement made by their late Nazir Ali Nimir Ali al Jula who was quoted to have said that “for the Misseriya and their area oil is like the hyena tree. This is the name which the Misseriya have given to a certain tree which they think is used by the hyena as a shelter and a hiding place during the hot hours of the day. Although no one has so far claimed seeing a hyena under this tree, they continue calling it the hyena tree. Oil is produced in our area and pumped through a pipeline

Under our feet but we have not yet seen it. It is like the hyena tree”. Late Nazir Ali’s statement suggests clearly that the Misseriya and their area did not benefit much from the oil industry. The HPG 2009 report noted that “like other communities affected by oil exploration, there is profound, pervasive unhappiness in Dar Misseriyya about the impact of the industry on the local economy, and the marginal benefits received from oil extraction, both in terms of labour opportunities and development inputs”\textsuperscript{18}. However, this same report noted that the oil companies have created more than 1,000 job opportunities for the Misseriya youth. Moreover, to address the Misseriya concerns, the Government had established the Western Kordofan Development Authority and the Western Kordofan Development Fund. Both are mandated to implement development projects in the Misseriya area. While, the first constructed many schools and boreholes, the second constructed roads, hafeers and boreholes. The Fund was primarily established to invest the Misseriya share of 2%, from the revenues of oil produced in their areas, in development programmes. These are part of the official efforts to compensate the Misseriya community and develop their area. However, the representatives of the local communities still have the feeling that they have not been adequately compensated for the damage inflicted by the oil industry on their local economy.

Large tracts of Messeria pasture land is appropriated for oil investment: “The Muglad [oil] basin is located in the heart of the Misseriyya area and covers approximately 120,000 km\textsuperscript{2}”\textsuperscript{19}. In fact the area appropriated by the oil companies is much larger if we add the protection buffer zone areas around the oilfields. Adjacent to Difra oilfield there is a protection buffer zone area. According to the Misseriya leaders interviewed by the study team, the size of this area is 100 sq. km\textsuperscript{20}. Members of the local community are not allowed to farm or graze in this area. According to a research conducted in North Kordofan and South Kordofan States “some local traditional leaders estimate that these

\textsuperscript{17} A statement made by the Wali of Eastern Darfur State, Abdulhameed Musa Kasha (AlSudani Daily, 27 April, 2013, P. 2).
\textsuperscript{18} HPG, March 2009, P. 6.
\textsuperscript{19} HPG, P. 19.
\textsuperscript{20} The team was not able to verify the truth of this allegation.
[oil] activities covered 60% of the rangelands of Western Kordofan Sector with various degrees of disturbance”\textsuperscript{21}.

\textit{Oil buffer zone near Difra (access restricted for pastoralist)}

Oil industry, climate change and environmental degradation have all combined to contribute to the deterioration of the pasture resources. In his study on North and South Kordofan, Zaroug reported that “\textit{many of the households believe that there is deterioration in rangeland expressed in disappearance of some good range plants for animals and dominance of less desirable species}”\textsuperscript{22}. A Misseriya elder called Hamoda Hasab Alnabi, who was interviewed by the team in his cattle camp near Goli, counted 15 rich range plants which he believes had disappeared. The disappearance of plant species is attributed by many to the emissions by the oil industry and to contaminants.

\subsection*{3.2.1. Conflict:}

The oil companies adopted a policy according to which they pay financial compensations to individuals who claim the ownership of farmlands appropriated for the oil facilities. This policy has created an environment of competition over the land which was considered in the past under the communal ownership of the Misseriya tribe. During the focus group discussions, the Misseriya community leaders explained that conflict between the Misseriya Zurug (Olad Haiban) and the Falayta (Olad Surur and Mataneen) in the area of the Balila oilfield coincided with the arrival of the drilling machines of the

\textsuperscript{21} Mahgoub G. Zaroug, Western Sudan Natural Resources Management Programme, Natural Resources Management Strategy, 2011, P. 127.
\textsuperscript{22} Zaroug, 2011, P. 93.
oil companies (rigs). In this conflict, hundreds of Misseriya youth were killed, material assets were destroyed and financial assets looted. A dispute over a farmland between two individuals eventually resulted in this significant damage. In some conflicts the immediate reason reported by the local people was the competition over a position of a guard for a borehole established by an oil company. In addition to the invaluable human loss, the Misseriya may lose their cattle stock in the payment of *dia* (blood money). Behind all this, lie the increasing poverty, high rate of unemployment among the youth and proliferation of small arms in the area heightened by the intrusion of oil companies and their control of large blocks of rangeland.

The Rizeigat mediators hosted a reconciliation conference in Ed-Dein to resolve the conflict between three Misseriya clans (22 February-I March 2013). They managed to broker a reconciliation agreement which was signed on the 1st of March by parties to this conflict. The four tables below explain clearly the magnitude of the conflicts in the Western Sector of South Kordofan, especially in regard to the human and material losses. In this conflict alone 200 persons were killed and a total of 15,540 heads of cattle will be paid out as *dia*. During the focus group discussions, the Misseriya leaders stated that the average price of one head of cattle is SDG 2,000. The 15,540 heads of cattle required for the settlement of the conflict and the reconciliation process amount to SDG 31,080,000 (around US$ 6 million).

### a. Table (3): From Olad Surur to Olad Haiban:

<table>
<thead>
<tr>
<th>Normal Dia</th>
<th>75 men X 60 heads</th>
<th>4,500 heads</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Dia Mughalaza</em> (with Penalty)</td>
<td>61 men x 120 heads</td>
<td>7,320 heads</td>
</tr>
<tr>
<td><em>Dia</em> for Three Women</td>
<td>3 women x 30 heads</td>
<td>90 heads</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>11,910 heads</td>
</tr>
</tbody>
</table>

(Tribes also pay compensation for property destroyed during fighting as for example in the Olad Haiban, Olad Surur and Mataneen conflict. In addition to the 12,720 heads of cattle paid as *dia* as shown in table (a) and table (b) above the Olad Surur and al Mataneen (both are Falayta) are required to pay, based on the customary law, a sum of SDG 685,110 being 50% of the cost of the destroyed properties of Olad Haiban in five villages).

### b. Table (4): From Olad Haiban to Olad Surur:

<table>
<thead>
<tr>
<th>Normal Dia</th>
<th>13 men x 60 heads</th>
<th>780 heads</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Dia</em> for One Woman</td>
<td>01 woman x 30 heads</td>
<td>30 heads</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>810 heads</td>
</tr>
</tbody>
</table>

### c. Table (6): From Olad Haiban to Al Mataneen:

<table>
<thead>
<tr>
<th>Normal Dia</th>
<th>43 men x 60 heads</th>
<th>2,580 heads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td></td>
<td>2,580 heads</td>
</tr>
</tbody>
</table>

24
Table (7): Dia for Those killed from Other Tribes: (to be paid by the reconciliation committee established by the Governor of South Kordofan).

| Normal Dia | 4 men x 60 heads | 240 heads |

The mediators, who brokered this agreement, have rightly called for reviewing the policy of compensations adopted by the oil companies. A similar recommendation was made by the Misseriya traditional chiefs in a training workshop on strategic management and conflict management organized in El Muglad in December 2011\textsuperscript{23}. During the focus group discussions, the Misseriya elders informed that conflicts over ownership of land was triggered by competition over compensations given by the oil companies. Conflicts have been reported even within a single household.

3.2.2. Roads:

Concerns related to roads constructed by the oil companies to facilitate the movement of their equipment, supplies and personnel are not new. They could be traced back to the 1970s and 1980s when the Misseriya pastoralists accused the Chevron Oil Company of blocking the natural flow of water to water ponds or as they call them \textit{rgabas}, by the construction of roads without constructing bridges or other drainage systems. The present active oil companies constructed more roads linking the oilfields to the main urban centers in the Western Sector and the rest of South Kordofan State. Researchers conducted in the area and information provided by the Misseriya traditional leaders and political activists suggest that these roads have either blocked or diverted the natural water courses.\textsuperscript{24} The “roads were planned and built without considering the impact on local livelihoods. Pipelines were constructed on farmland and grazing areas, stock routes were blocked, forest areas; farmlands and access to good water sources were all reduced and the flow of water into farm and pasture areas was obstructed”\textsuperscript{25}.

3.2.3. Water:

The problem of the scarcity of water sources and the poor capacity of these sources poses a real challenge which the Misseriya pastoralists have to face. Moreover, the Misseriya leaders who were met and interviewed by the study team have stated that even the water in the few available and accessible sources is contaminated or polluted by oil waste for which the oil companies are to blame.

\textsuperscript{23} The workshop was executed by Partners in Development Services (PDS) under assignment from AECOM/UNDP.
\textsuperscript{24}Idris, 2006.
\textsuperscript{25}HPG, 2009, P. 6.
The two UNISFA military officers who came from their headquarters in Abyei on the 2nd of April to meet with two representatives of the study team have

*Poor sanitation of water source and containers*

Emphasized the seriousness of the water problem which the Misseriya pastoralists and their cattle are facing in the Abyei area. They appreciated the idea of conducting a baseline survey to assess the needs of this community and made it clear that their Force Commander will fully support any effort aiming at providing assistance to the Misseriya pastoralists especially in water and health sectors both for the people and their animals. This year, they informed, UNISFA has allocated US$1.5 million for community services in the area.

### 3.2.4. Environment:

According to information provided by the Misseriya leaders in the focus group discussions, the oil industry and related activities such as the disposal of oil waste and the construction of roads have contributed to the deterioration of an already deteriorating environment. Oil companies, they argued, have destroyed the rangelands and polluted water. This, they believe, has impact on cattle fertility and the rate of abortion among their cattle which they think has increased. They reported new unknown animal diseases locally believed to be related to contamination of water and rangeland by oil.

In addition, to the poor drainage system or lack of it along the roads constructed by oil companies has created swampy areas on roadsides. Clearly, this must has its impact on the local environment. Traveling along El Muglad-El Sitaib-Omkheir-Goli road, one can easily observe many uprooted trees on the two sides of the road. As a result, the charcoal and wood businesses...
have flourished. Heaps of charcoal sacks and blocs and chopped wood are a normal scene along this road.

![Uprooted Trees at the sides of the road](image)

The study team members have the feeling that the impact of oil industry on the local environment deserves a comprehensive scientific and professional research project.

4. **Livelihood Resources of the Household:**

4.1. **Land Resources:**

For the households, the availability of pasture land is guaranteed by custom. Access to land is determined by the traditional land tenure system. According to this traditional land tenure system land is owned by the tribe, clan or family. The Omdas and Sheikhs regulate the use of land. Thus, the right to use the land depends on the relationship of the head of the household with these tribal structures. The pasture, water and forestry are considered as common property. Therefore, households can easily access and benefit from these communally owned resources. Access to land becomes relatively difficult when it is required for permanent residence and farming.

4.2. **Traditional Farming System:**

A distinction can be made between two groups of farmers. The first represents the subsistence farmers who combine millet production for household consumption with herd rearing. The second group produces millet to provide food for the family members and other crops such as groundnuts, water melon, okra, sesame and karkadi (hibiscus) for sale in the local markets to support the family income. The survey revealed that the average size of the household’s farm is 8.7 makhams (Table 8). In the case of those households
who produce millet and other cash crops, the farm is usually divided into 2-5 plots each for a certain crop. The cropping pattern in the farm is as follows: 40% for millet, 43% for groundnut and the remaining area (17%) is allocated for other products.
Table (8): Average farm Size and the main crops in makhams:

<table>
<thead>
<tr>
<th>Crop</th>
<th>Average area /H.H</th>
<th>Average productivity/ H.H</th>
<th>Income from the main crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millet</td>
<td>3.5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Groundnut</td>
<td>3.8</td>
<td>5.4</td>
<td>24</td>
</tr>
<tr>
<td>Karkadi</td>
<td>0.7</td>
<td>1.78</td>
<td>2.7</td>
</tr>
<tr>
<td>Okra</td>
<td>0.3</td>
<td>n.a</td>
<td>3</td>
</tr>
<tr>
<td>Sesame</td>
<td>0.4</td>
<td>n.a</td>
<td>3</td>
</tr>
<tr>
<td>Lubia</td>
<td>0.05</td>
<td>n.a</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.7</strong></td>
<td><strong>n.a</strong></td>
<td><strong>27.7</strong></td>
</tr>
</tbody>
</table>

The information collected by the study team suggests that, in general, agro-pastoralists are found to cultivate and produce more crops than the peasants. This is largely attributed to the differences in the resources of the households and the ability of agro-pastoralists to mobilize more labour.

4.3. The Production and Productivity of the Traditional Farming System:
There is a wide variation in productivity between individual households and between the types of crops cultivated. This could be attributed largely to the type of crop management, cultural factors and the degree of the spread of diseases, insects and birds. The millet average productivity this season is about 50% of the average household productivity during past years due to heavy bird infestation and flash floods.

4.4. Income from the Traditional Farming System:
Table (8) above shows that the average income from selling the surplus crops per household is about SDG 27.7. Most of this income (89%) is generated from selling groundnuts. Other crops such as millet, lubia and okra are produced for subsistence, not for the market. In general, it could be argued that the traditional farming system is contributing significantly to the food security of the household.

Table (9): Estimated Household Income:

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Total income</th>
<th>%</th>
<th>% of total Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundnuts</td>
<td>24</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td>Dura (sorghum)</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Karkadi</td>
<td>2.7</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>29.7</strong></td>
<td><strong>100</strong></td>
<td><strong>.2%</strong></td>
</tr>
<tr>
<td>(agriculture)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Livestock</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cattle</td>
<td>7,500</td>
<td>63.5</td>
<td></td>
</tr>
<tr>
<td>sheep</td>
<td>2,775</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>Goat</td>
<td>1,530</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>11,805</strong></td>
<td><strong>100</strong></td>
<td><strong>97.6</strong></td>
</tr>
<tr>
<td>(livestock)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other sources</td>
<td>253</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>253</strong></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
This table clearly indicates that livestock contributes 98% of the income of the pastoralist household in the study area. The percentage may be particularly elevated this year because of the destruction of most crops by birds leading, according to heads of households, to the low share of agriculture in household budget.

4.5. Livestock Production System:

Table (10) below shows that the average herd size per household in the study area is about 88 heads of animal. However, there is a wide variation between the sizes of herds owned by individual households. Herds are relatively concentrated with some owning large herds, but many have only a limited number of animals. This is compounded by disease and high death rates. Many families may lose all they have because of sudden illnesses.

Table (10): Herd size and off take:

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Average herd size/household</th>
<th>Average annual sale</th>
<th>Average mortality per household</th>
<th>Total</th>
<th>sale %</th>
<th>mortality %</th>
</tr>
</thead>
<tbody>
<tr>
<td>cattle</td>
<td>36.6</td>
<td>3</td>
<td>3.8</td>
<td>43.4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>sheep</td>
<td>22.7</td>
<td>3.7</td>
<td>4.3</td>
<td>30.7</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>goats</td>
<td>26.5</td>
<td>6</td>
<td>7</td>
<td>39.5</td>
<td>15</td>
<td>18</td>
</tr>
</tbody>
</table>

The main challenge facing the growth of the herd size is the high mortality rate due to poor pasture, animal diseases and contaminated water. The study revealed that the mortality rate per year is 9% for the cattle, 14% for the sheep and 18% for the goats.

In regard to the herd structure, the outcome of the survey is that 42% of the herds are cattle, 26% sheep and 32% goats. Livestock is unevenly distributed between households. The study revealed that 36 of the Misseriya households have no cattle, 63% have no sheep and 33% have no goats. The number of animals in the age group of less than one year can be used as an indicator for the dynamics of the growth of the herd. This category is found to represent 12%-21% of the herd.
4.6. Income from Livestock:

![Prices of livestock 2004-2012](chart)

*Prices of livestock 2004-2012*

Based on the average prices of animals in 2012, the average income per household from selling livestock is estimated at SDG11,805. Only 7% of the households stated that there is surplus milk for marketing. Annually, a household generates an income of SDG 180-1700 from milk selling. It is important to note here that the survey was conducted during the dry season, at a time, when milk productivity is usually low. The milk productivity of the Misseriya cows is much higher during the months of the rainy season (July-October). Milk processing interventions are feasible during this season.

4.7. Income and Consumption:

The annual average income per household from sales is estimated at SDG 12,088. This does not include the crops produced by the household for subsistence consumption. Livestock contributes by 97.7% in the household’s sales income, traditional farming (0.2%) and other (2 %.).

In regard to the trends of household expenditure (Table 11), the households in the study area are found spending between 30% and 70% of their income on food. The high share of food in households’ budget is mainly because of the poor millet (the main staple crop) harvest during this season and the high prices of the essential commodities in the local market. The second item of relatively high expenditure is clothing as the households spend 10-20% of their income on it. The nomadic style of life requires minimum expenditure on housing. For example, 6% of the households stated that they spend only 2-4% of their income on housing.
Table (11): Table Household Expenditure Trends:

<table>
<thead>
<tr>
<th>Item</th>
<th>% of H.H used</th>
<th>% from income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>100</td>
<td>30 - 70</td>
</tr>
<tr>
<td>Medical treatment</td>
<td>92</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Clothing</td>
<td>75</td>
<td>10 - 15</td>
</tr>
<tr>
<td>Education</td>
<td>32</td>
<td>2 - 5</td>
</tr>
<tr>
<td>Investment in livestock</td>
<td>20</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Veterinary services</td>
<td>21</td>
<td>2 - 5</td>
</tr>
<tr>
<td>Housing</td>
<td>26</td>
<td>2 - 5</td>
</tr>
<tr>
<td>Taxes</td>
<td>10</td>
<td>1 - 2</td>
</tr>
<tr>
<td>Water</td>
<td>35</td>
<td>2 - 5</td>
</tr>
</tbody>
</table>

Expenditure on education is low, ranging between 2 to 5 % of the total income, an indicator that a large proportion of school aged children does not attend school and of the low priority given to the schooling when food is the primary concern consuming major part of the household budget.

4.8. Pastureland:

The pasturelands are a common property under Misseriya land resources. While in the traditional farming system each farmer has his/her own plot of land, the pasturelands are owned and used by all. Thus, competition over pasture resources has become a source of conflict. Pastoralists in the Western Sector of South Kordofan use 10 migration routes in their movement to and fro South Sudan. Three main routes are used by the Misseriya A’ja’ira (eastern, central and western). The team managed to visit and cover sites along the western and central migration routes.

The pastoralists and their herds in the study area have to move for an average of 180 Km to and from South Sudan during the dry and rainy seasons respectively. The ecological and environmental deterioration has made it difficult for the pastoralists to adapt to changes in their environment. To maximize the benefit, they need to move to areas in which they can find both pasture and water. Conflicts at the State and the study area levels and the weakening of the native administration have reduced the capacity of the pastoralists to manage risks.

In terms of rangelands, the Misseriya pastoralists in the Western Sector have faced serious challenges represented in the expansion in traditional farming (774,000 feddans), mechanized farming (26,1000 feddans), uneven distribution of water resources, and fire which damaged the forests and pasturelands. According to information derived from the household survey, 66% of the households stated that during the last five years the quantity and quality of pasture had witnessed serious deterioration. This season, they informed, the situation has worsened as their movement has been restricted by the government of South Sudan. The exact number of livestock is not known and the given figures result from extrapolation of a livestock census carried out many years ago (1980es). According to some reports, there are 1.8 million cattle, 0.8 million sheep and
0.5 million goats. The number of animals constitutes extreme pressure on the pastures and forest resources if their traditional grazing routes continue to be blocked.

4.9. Forestry Products:

Forestry products play an important role in the livelihood of the pastoralist households. The forestry activities from which the pastoralists can generate income include cutting of wood, charcoal making, wild fruits collection, Gum Arabic tapping and honey harvesting. The outcome of the household survey suggests that 17% of the pastoralist households support their income by forestry products. The average income per household from the forestry products is found to be SDG 20 from honey, SDG 42 from firewood, SDG 99 from charcoal and SDG 92 from Gum Arabic.

Like other traditional activities, the collection of forestry products provides many items for the household consumption. These products include nabag, lalob and ardaib. Some of these products are used also as animal fodder. The unused waste of the forestry products which includes the seeds contributes to environmental conservation.

4.10. The Provision of Veterinary Services:

Parasitic diseases, epidemics outbreaks, inadequate coverage of vaccination campaigns, lack of disease surveillance and reporting systems, inadequate clinical services, shortages in vaccines and expired vaccines are the main factors constraining the livestock production.

In ranking animal diseases according to their importance, 38.8% of the households mentioned diarrhea of unknown causes, 7.2% PPR and 3.7% CCPP as the main causes, under others. In his 2006 valuable research, Dr. Idris Braima stated that the pastoralists ranked the most important diseases as follows (multiple nominations allowed):

- Mixed infection 71%.
- Tick and tick borne diseases 27%.
- Biting flies and trypanosomes 20%.
- Foot and mouth disease and black quarter 20 each.

Table (12) shows the number and distribution of the facilities for veterinary services in the Western Sector. The Director of the Ministry of Animal Resources in El Fula, Dr. Ahmed Khalil, informed that most of these facilities are either not functioning at the moment or are poorly equipped in terms of staffing, buildings and logistics. For example, there are only two veterinary centers, one in Assounut and one in Muglad, which are providing services to pastoralists’ livestock.

The only diagnostic laboratory for animal diseases in the area is currently not functioning as it has no technician. The main services provided by the veterinary centers are animal health services, extension service, animal production, meat hygiene and supervision of
pharmacies. Obviously, the present functioning veterinary service facilities cannot provide the services required for more than 10 Mio heads of livestock.

Table (12): Veterinary Service Facilities in the Localities of the Western Sector of South Kordofan:

<table>
<thead>
<tr>
<th>Location</th>
<th>Vet. Hospital</th>
<th>Slaughter Slab</th>
<th>Vet. Center</th>
<th>Vet. Clinic</th>
<th>Dispensary</th>
<th>Animal Health Community Center</th>
<th>Vaccination Fence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assalam</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Babanousa</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Abyei (El Muglad)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>El Dibab</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>El Meiram</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Lagawa</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Kailak</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Assounut</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>15</td>
<td>2</td>
<td>0</td>
<td>25</td>
</tr>
</tbody>
</table>

The survey revealed that only 10.5% of the households have access to professional veterinary treatment for their animals, while 53.2% informed that they depend on the unskilled private sector for the supply of drugs for their animals. 50% of the households had vaccinated their animals during last year. However, 10% of the households have no knowledge about the location of the vaccination centers.

The fact that 50% of the pastoralists get vaccines and drugs for their livestock from local traders is remarkable. Bringing the private pharmacies, local veterinary drugs stores and local traders under the responsibility and control of the State Ministry of Animal Resources is an issue of high importance. This would ensure a steady supply of essential and most importantly unexpired vaccines. Special attention should be given to the improvement of the cold chain, if present at all.

The Director of the Ministry of Animal Resources informed that according to recognized professional standards, one veterinary doctor is needed for each 5,000 heads of livestock. Thus, more than 2,000 veterinary doctors would be required for providing services to the 10 million heads of livestock in the area. This big population of animals is now served by only 30 veterinary doctors. It is clear that such a figure of vets can't be realistically expected to be employed and a system involving para-Vets as private entrepreneurs or community based volunteers is more a realistic approach.
Table (13): Private Veterinary Pharmacies in the Localities of the Western Sector of South Kordofan:

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Veterinary Pharmacies (managed by Vet. Doctor)</th>
<th>Number of Private Veterinary Stores (not managed by Vet. Doctor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assalam</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Babanousa</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>El Muglad</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>El Meiram</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>El Dibab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lagawa</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Kailak</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Assounut</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

NGOs and FAO have provided training and equipment for some Community Animal Health Workers (CAHWs). However, a few of those CAHWs are at the moment providing services to the local community.

Graph (2) below shows the treatment and vaccination of animals in Abyei area (2001-2010):

The graph shows the irregularity of the vacation and treatment campaigns. While vaccinations have reached higher livestock figures, treatments have been insignificant.

Diseases
The respondents reported that the high number of diarrhea is caused by ingestion or eating and drinking toxic contaminated range plants and water.
Reports and own observations have shown a very high tick infestation on all grazing animals. Ticks cause by itself damages of the skin, create entry points for bacterial and fungal infections, blood loss and intoxication. But the main impact of ticks is the transmission of tick-borne diseases: Theileriosis, Babesiosis and Anaplasmosis are diseases caused by Protozoa.

Internal parasites are equally of importance.

From the infectious diseases Peste des Petits Ruminantes (PPR) and Contagious Caprine PPR.

The high prevalence of diseases could be attributed to the concentration of large numbers of animals in limited areas (crowding effect) which causes as well severe degradation of the pasture resources and extreme pressure on the limited water resources. Poor access to veterinary services including animal health and extension services are the main factors behind the prevalence and spreading of the epidemics, PPR and CCPP.

To be able to provide professional veterinary services and develop the livestock sector in the area, the Ministry of Animal Resources suggests the construction of the following facilities:

**Table 14: Proposed Projects in the Livestock Sector:**

<table>
<thead>
<tr>
<th>Mobile Veterinary Unit</th>
<th>Dispensary (one room)</th>
<th>Demonstration Farm (poultry, milk)</th>
<th>Vaccination Fence</th>
<th>Livestock Market</th>
<th>Monitoring Unit</th>
<th>Loading Fence at Railway Station</th>
<th>Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 (3 for each locality)</td>
<td>30</td>
<td>8 (one for each locality)</td>
<td>30</td>
<td>8 (one in each locality)</td>
<td>8 (one in each locality)</td>
<td>El Fula, El Muglad, Assounut, El Tiboon</td>
<td>24 (3 in each locality)</td>
</tr>
</tbody>
</table>

**4.11. Human Capital: Characteristics of the Household:**

The average number of persons per household in the survey area is 6. Children under five years represent 16% of the population, while the age group 5-15 is 31% of the total population. These two categories together represent 47% of the population. This indicates that the population is relatively young. This characteristic of the population poses a real challenge in regard to human development as 46% of the population falls within the group that needs educational services.

**4.12. Financial Capital:**

There are two bank branches in El Muglad town (the Agricultural Bank of Sudan and Elnelein Bank). The pastoralists and peasants have no access to these formal financial institutions, mainly due to the regulations and procedures governing bank loans. Loans from banks require collaterals (livestock is not considered as such) and the conditions established are beyond the capacities of the poor pastoralists and peasants. The development of the formal rural financial market in El Muglad is very slow compared
with other parts of Sudan because a considerable number of the population is not settled in one place and as such the banks find it difficult to manage loan programmes targeting this category of the population. The informal rural financial markets are represented in family relationships and small shop owners are the main source of short term loans which are mainly for consumer goods and emergencies.

4.13. Health Services:

The provision of basic services (health, education and water) to pastoralists is a difficult task because they move in search of pasture and water for their cattle. Even those who have chosen to settle are found scattered in distant villages. For example, in Abyei locality there are about 60 settlements. The number of people residing in each settlement is 700-1000 persons. In these villages each 3-5 households settle in a separate location called *fareeg*. Living in scattered sites makes the provision and access to services difficult.

In Abyei there are 21 health centers and one hospital in El Muglad. In addition to the El Muglad population, the hospital serves the communities living in the 60 rural settlements of the area. Each health center serves 560-2,500 people. The health centers in the semi-urban areas such as El Dibab and El Meiram are better equipped and staffed than those of the *masiaf* (dry season) settlements. However, the study team noted that in both centers the supply of drugs is irregular and consequently there is scarcity in medicines. Some of the centers in the remote dry season areas are not functioning at the time of the field work.

The results of the household survey show that 58% of the households get their medicines from the private sector. 88% of the households informed that they have no access to health services. In terms of the proximity of the health facilities, members of 31% of the households have to walk 12-17 hours to access the health services. 55% of the households have to walk 2-8 hours to reach the site of the health center. Practically, under such circumstances it is very difficult for children and pregnant women to have access to the health services. Walking distances of 72 hours or 3 days are reported in some cases. It is evident that the pastoralists lack the minimum medical services necessary for a proper health status.

4.14. Education:

The situation of the educational services is by all means not better than the situation of the health services. The illiteracy rate is found to be very high among the Misseriya community. The findings of this study show that 73.7% of the male population and 88.3% of the women are illiterate. Despite efforts by the government and other actors to encourage the education of the pastoralist children, there is still a very big gap in the provision of educational services.
The main problems facing most of the schools in the Misseriya pastoralist villages and settlements are inadequate staffing, buildings and lack of educational materials. The findings of the survey team revealed that only 4% of the children in the school age are enrolled in the basic education. We have mentioned earlier in this report that the category of 5-15 years (the school age) represents 31% of the population. The team member who visited the two basic education schools in Al Askar and Mikainees observed the following:

a. There are only 36 pupils in the two classes of the Al Askar School (23 male and 13 female). The school is run by only one teacher who did not receive his salary for the last three months. To keep the school operational the community has shouldered the responsibility of paying his monthly salary. There are no toilets or drinking water facilities in the school. Thus, each child has to bring with him/her a small container of water from home. The school boys and girls have to walk for 1-2 hours to and from the school.

b. The school in Mikainees has eight classes (six are built with permanent material and two with local materials). There are 318 pupils (218 male and 100 female), eight teachers including three volunteers. The school has toilets (sanitation). The team took note of the fact that UNISFA is currently in the process of rebuilding (with bricks) the two classes which are built from the local materials.

4.15. Water Supply and Sanitation Services:

The main sources of water in the area are underground water, surface water and subsurface-water. In the study area the main sources are water yards (33.7% of the households), uncovered wells (22.1%), rain water catchments (15.3%) and protected wells (28.9%). The available water tankers, water vendors and hand-pumps provide very limited water services. Traditionally, fetching and collecting water for the household is the responsibility of women. The findings indicate that women supply water for 23.3% of the households, boys and girls who are under 15 years of age bring water for 25.8% of the households and for 12.1% of the households water is brought by women and boys under 15. Men are reported to bring water for 2.6% of the households usually when water is far or there is insecurity.

The supply of water for household consumption adds more burden to the pastoralist women. Women and children (mainly girls) spend a lot of time in bringing water. The findings of the study revealed that of the total number of the households interviewed, 27.6% spend less than one hour in bringing water, 46.2% spend 1-2 hours, 14.4% spend 3-4 hours and 11.8% spend more than 4 hours. In addition, surface water sources especially water catchments were in many cases reported by the respondents as contaminated.
Wells are reported to be relatively safe from contamination. However, nomads who get water from a UNISFA water pump reported a yellow discoloration and changed smell the sources of which is not known.

The time spent and efforts exerted by women and children to provide water for their households depend on the distance and type of water source and the consumption of water per household. The results of the household survey show that 30% of the households consume less than 30-40 gallons and 14.7% consume more than 40-50 gallons per day. However, the average per household is very low (4.8 gallons per day). The consumption of 4.8 gallons per day for six persons, which is according to this study is the average for the pastoralist household, is far below the international standards and the average national consumption of the individual.

Water and sanitation is a critical issue. The local community reported some serious water-borne diseases. The majority of the pastoralists are depending on open water sources such as open shaft boreholes, hafeers or ragabas. Humans and animals are drinking water from the same sources. The water containers which people are using for collection of water are very old and lack the basic requirements for human health. Generally, water is used without any treatment.

Solid waste disposal is another challenge. Generally, members of the local community usually defecate at the bushes which are very close to their settlements. The survey data revealed that only 3.1% are using uncovered pits and 2.3% are using unventilated covered latrines. Lack of sanitation is reflected in the high incidence of diarrhoeal diseases among children in the area which was reported with many of the family with young children.

The team observed at all markets surveyed, that animals are usually slaughtered on the ground and under trees. Blood, bones and offal are left behind. The accumulation of huge quantities of animal waste over time creates a suitable environment for the growth of many serious spores and pathogens. The State Ministry of Animal Resources (SMOAR) is not able, due to lack of funds, to implement its plan of establishing twenty slaughter slaps to ensure the minimum requirements of a hygienic environment.

According to the information provided by the water Department in El Muglad (Ministry of Water Resources - MWR), there are 115 water points, 22 hafeers and two dams in the Abyei Locality. Most of the water points (99 in number or 86%), the hafeers (17 or 77%)
and the two dams are functioning. However, nine water points (8%) and five hafeers (23%) need to be rehabilitated.

Table (15) below shows the number and percentage of the water points constructed by different institutions:

**Table (15): Water Points:**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Number of Water Points Constructed</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Water Resources</td>
<td>35</td>
<td>30%</td>
</tr>
<tr>
<td>NGOs</td>
<td>23</td>
<td>20%</td>
</tr>
<tr>
<td>Western Kordofan Development Fund</td>
<td>11</td>
<td>10%</td>
</tr>
<tr>
<td>Western Kordofan Development Authority</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>Oil Companies</td>
<td>14</td>
<td>12%</td>
</tr>
<tr>
<td>War Affected Areas’ Development Fund</td>
<td>15</td>
<td>13%</td>
</tr>
<tr>
<td>Road Construction Companies</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>115</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The report of the Water Department of the Ministry of Water Resources in El Muglad provided information on the productivity of 56 water points. Most of the water points (68%) produce 3,000-6,000 gallons/hour. The capacity of the hafeers is 20,000-30,000 cubic meters. The capacity of the two dams (sudud) in El Wadi and Omkarokoia is 10 million and 5 million cubic meters respectively.

According to this report, the dams are a more efficient method of water harvesting and provide adequate quantity of water to the people and their livestock. The two dams enabled the pastoralist households to produce a variety of vegetables. In addition, many households are engaged in fishing both for domestic consumption and local markets. As a result, the residents of the urban areas such as El Muglad and Babanousa and the local restaurants have now access to fresh fish. However, the report noted that there is a need for technical and scientific supervision to better manage these water sources in order to avoid water contamination.
Table (16) below shows the water sources that require rehabilitation or the construction of new water facilities:

<table>
<thead>
<tr>
<th>Rehabilitation</th>
<th>Construction of New Water Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Points:</strong></td>
<td><strong>All these water points are in the southern part of the Abyei Locality. They serve big numbers of pastoralists and their livestock in the masiaf (dry season) areas.</strong></td>
</tr>
<tr>
<td>1. El Jarar</td>
<td>1. Rihaid Himaidan</td>
</tr>
<tr>
<td>2. Hamid Musa</td>
<td>2. El Madadi</td>
</tr>
<tr>
<td>3. Omdlokma</td>
<td>3. El Idhailim</td>
</tr>
<tr>
<td>4. El Zarafat</td>
<td>4. Faraj Alla</td>
</tr>
<tr>
<td>5. Ghaboush</td>
<td>5. Konga</td>
</tr>
<tr>
<td>8. Juighina</td>
<td>8. Abu Ajbar</td>
</tr>
<tr>
<td></td>
<td>9. Abu Bashar</td>
</tr>
<tr>
<td></td>
<td>10. Ghibaibeesh</td>
</tr>
<tr>
<td></td>
<td>11. Abu Biteekh</td>
</tr>
<tr>
<td></td>
<td>12. El Himaidh</td>
</tr>
<tr>
<td></td>
<td>13. Omalbashar</td>
</tr>
<tr>
<td></td>
<td>14. El Magadama</td>
</tr>
<tr>
<td></td>
<td>15. EL Shurab</td>
</tr>
<tr>
<td></td>
<td>16. El Odham</td>
</tr>
</tbody>
</table>

The State Ministry of Water Resources, NGOs, the War Affected Areas’ Development Fund, Western Kordofan Development Fund and Western Kordofan Development Authority have made considerable efforts to provide water services to the Misseriya pastoralists and their livestock. Yet, the gap is still very big. It is very clear that the present number of water sources in terms of number and capacity is far below the actual need of the more than 10 million head of livestock and the local communities.

The construction of new *hafeers* and dams (*sudud*), which have more capacity for water harvesting, may be the best means for assisting the Misseriya pastoralists to sustain their livelihood security. According to assessments made by the Ministry of Animal Resources, there is an urgent need for the construction of 15 new dams, 40 hafeers and 70 boreholes to meet the requirements of the livestock population in the area. In terms of geographical distribution, the Ministry suggests the construction of 10 dams in the southern part of the Abyei Locality and five in the northern part.

4.16. Labour:

High unemployment is prevalent as expected in agricultural communities because of market seasonality, large size of households, averaging as many as 21 members in some cases, and the lack of employable skills. Job training programmes and vocational
schools could have filled the skills gap. However the non-implementation of such programs and projects combined with an education gap has left the youth with only limited opportunities and may have escalated conflicts.

The skills, knowledge and ability to work play a pivotal role in the livelihood system. Historically, pastoralists have very limited skills and knowledge in fields other than the herds management. In the 1960s and 1970s, as a result of the extension of the railway, considerable numbers of the Misseriya youth were employed as railway workers. Many others were recruited by the Sudan Armed Forces. Some found job opportunities in the Babanousa Milk Factory. These opportunities for alternative livelihood systems represented the first partial shift from herd management to other income generating activities. This initiated a gradual shift from nomadism to Pastoralism and agro-Pastoralism. During the period (1970s-1980s) many migrated to the oil-rich Arab countries abroad. However, money gained from Saudi Arabia, Libya and the Gulf was invested in livestock thus consolidating a nomadic way of life. Nonetheless, the shift away from nomadism continues. Currently, many have developed urban job skills while others have obtained jobs in the growing oil sector. The team believes there is an urgent need for skill imparting vocational training and for the exploration of income generating programs such as microfinance. Microfinance and credit schemes have shown high success ratio among women and could provide alternative income and investment opportunities especially those without livestock. In questions on the classification of priority problems, provision of credit ranked fifth for all herding families, however, many of those with small herds, or those who settled in towns and large villages have given first priority to credit and access to markets. If these credit and markets access schemes are introduced, they could provide a safety valve to many households given the risk prone nature of nomadism at present. High risk is evident with growing environmental pollution, and endemic animal diseases and the lack of veterinary services.

4.17. Social Capital:

There is a high degree of social solidarity among the Messeria and is generally observed in all kin based groups. Solidarity is augmented by present stressful conditions. The team has referred to these bonds as community social capital. Support for the weak and collective action during conflicts and peace is what holding the tribe together.

The tribal system, culture and values constitute important aspects of the Misseriya social capital. At each level of the community structures (tribe, clan, extended family, household etc.) there is a certain type of social capital. The protection of the Misseriya land, pasture, forests, water sources and the herd depends mainly on their social capital and the cohesiveness of the tribe since activities like fazaa or armed pursuit of cattle rustlers could not be undertaken by individual households in the absence of formal legal institutions. The Nafeer of collective mobilization or labour for agriculture is used by 61% of households. Among these 12.1% of the households use nafeer in crop production while the rest resort to nafeer for various other agricultural operations particularly the first weeding. The first weeding is a very labor intensive operation. The nafeer system
provides the labor needs of 11.6% of the households that are headed by women, disabled and sick persons. 4.7% of the households resort to nafeer to build their homes.

The prevalence of animal rustling and strained relations in the area has made fazza as an important activity. Animal rustling is done by armed groups necessitating similar response by nomads. Fazaa is a voluntary collective action. 21% of the households informed that they participate in campaigns for retrieving looted animals. Only 1-5% of the households reported that they were supported by the Zakat Chamber, humanitarian relief organizations, social nets and Pension Fund.

4.18. Shelter:

The pastoralists’ houses or shelters are made of mobile tents constructed from local materials. The gradual shift to agro-Pastoralism and the gradual process of partial or complete settlement have resulted in some changes in the design and construction of the Misseriya homes. A considerable number of households or 43.6% have permanent or semi-permanent huts. The household is divided and some are left in villages during annual transhumance. Straw shelters (rakoobas) account for 30% of homes while another 26.4% live in tents.

4.19. Household Livelihood Security Strategies:

The traditional production system of the Misseriya is under stress. The deterioration of pasture in terms of quantity and quality, cycles of droughts, spread of diseases/pests, shortages of water, lack of basic services and unfavorable macro policies at the national level have led to increased vulnerability among the nomads. Coping strategies include the diversification of herds. There is now a growing trend towards sheep and goat Pastoralism. Coping strategies include higher market turnover of animals. Because of the high death rates many, especially goats, are sold during the lean season. The expansion of agriculture in this predominantly pastoral area is recognition of the high risks associated with a nomadic way of life. Hired labor is used for agriculture while the main family continues its nomadic way of life. This is reflected in expansion of crop production and a more diversified agriculture. The cropping pattern seeks to reduce the impact of distress factors whether environmental or manmade.

4.20. Household Security Outcomes:

Detailed and reliable information on the indicators which can be used in measuring the outcome of livelihood security of the Misseriya pastoralists such as nutrition, health, education and security is either not available or difficult to access.

However, the participatory approach which the team has used to collect information from the field has made it possible to identify the general trends of the livelihood household outcome. The findings of the team suggest that the household outcome has relatively improved. The delivery of basic human capital (education, health, water, labour etc.) had been expanded during the last four decades.
Conclusions:

- The history of the relationship between the two main ethnic groups, the Misseriya and Dinka Ngok, is characterized by continued conflicts, at least since 1965. The majority of the members of the two communities are pastoralists and agro-pastoralists. The security of their livelihood systems is strongly linked to the natural resources of the Abyei area. Access to pasture, water sources, forests and farm lands is an important factor for sustaining their livelihoods. Sharing these resources as it has been the case in the past is the only feasible solution. However, this could not be achieved in the present conflict situation. Many attempts to reconcile the two groups so that they can co-exist in peace have failed. Given their livelihood systems which depend mainly on the resources of the area, they look like the Siamese twins. They cannot continue living as they are without serious problems and any attempt to separate them is both a painful and risky operation. Probably, the cooperation agreements signed by the two Sudanese States may open a window for a short term solution.

- The issue of Abyei has been under discussion and negotiation within the circles of the colonial authorities and the national governments. However, to date no agreement has been reached on the final status of the area. This state of affairs has resulted in the continuous instability of the area governance institutions. The lack of an official civil administration in the area has constrained the work of the UN agencies and NGOs. Consequently, IDPs, returnees and pastoralists have no access to the basic services.

- The secession of South Sudan and its implications on the nomadic migration emerged to be the main challenge facing the Misseriya pastoralists. Lack of access to pasture and water resources in South Sudan has forced them to keep their livestock in a limited strip north of the River (Bahr Al Arab/Kiir). As a result, their livestock is now suffering from the spread of many infectious diseases, internal parasites and very high tick infestation. Investment in the water sector, they believe, and better veterinary services could reduce consequences of the present congestion.

- Community leaders have the feeling that the oil industry has left serious implications on the life of the Misseriya pastoralists and their livelihood systems. There are complaints on the pollution of water and pasture, deterioration of the environment and destruction of forests. The recent bloody conflict between three of the Misseriya clans was attributed to competition over ownership of land which qualifies individuals for compensations by the oil companies. This issue is considered locally as one of the root causes of conflicts. In an attempt to address the concerns of the Misseriya community, the Presidency has established the Western Kordofan Development Authority and the Western Kordofan Development Fund. Both are funded and mandated to embark on development programmes in the area. To ensure the security of their livelihood systems, the
Misseriya households began to engage more and more in agricultural activities. In addition to millet, which is their staple food, they introduced a variety of cash crops in an effort to increase their income. Traditional farming is contributing significantly to the household livelihood security. However, rich pastoralists were found to benefit more from traditional farming because they can afford hiring agricultural labour.

- The average size of the herd per household is 88 heads of livestock. The livestock is unevenly distributed between the households. The findings of this study revealed that 63% of the households have no sheep, 36% have no cattle and 17% have no goats. There is a wide spread of parasitic diseases among the livestock of the Misseriya pastoralists. At present, there are only two functioning centers for veterinary services and one laboratory for diagnosing animal disease which is not operational. Present trend towards diversification of herds should be promoted and endeavors made to reduce mortality particularly of small ruminants.

- In the health sector, the findings show that 58% of the households get medicines from the private sector (local traders) and only at high prices. In many instances the medicines provided by the local markets were found expired. In terms of time spent to access the health services, 31% of the households have to walk for 12-17 hours. This poses a serious problem for children and pregnant women.

- In the study area the main sources of water are water yards (33.7% of the households), uncovered wells (22.1%), rain water catchments (15.3%) and protected wells (28.9%). Together, women and children under 15 are shouldering the responsibility of bringing water for more than 90% of the households. The State Government, NGOs, Oil companies, Western Kordofan Development Fund and Western Kordofan Development Authority have made considerable efforts to address the problems facing the Misseriya pastoralists and their livestock in the water sector. However, there is still a very big gap. Investment in dams and hafeers is found to be more useful.

- Strategies developed by the pastoralists to sustain their livelihood security include expansion in agricultural activities, diversification of crops, selling male animal and replacing them with females and gradual settlement in urban and semi-urban areas.
5. Recommendations:

- Support efforts aiming at bringing together the traditional leaders of the Misseriya and Dinka Ngok communities to discuss issues of common interest and resolve their problems to enable them share the natural resources of the area and live in peace.

- The team recommends supporting efforts by the representatives of the Misseriya pastoralists and their traditional leadership to negotiate with their counterparts in Unity, Warrap, Northern and Western Bahr el Ghazal State to discuss and resolve migration issues. However, access to grazing areas in South Sudan is a short-term solution as the South has become a sovereign State which, according to international law, is free to issue policies and laws governing the land use within it territories. The long-term solution is to accept the new realities on the ground and assist the Misseriya pastoralists to care for their livestock north of the new international border and to negotiate terms for use of pasture in the south. Therefore, the construction of new water sources, especially hafeers and dams, and the development of the pasturelands in their own territory (Sudan) are necessary to ease the pressure on their livelihoods. Such efforts should be accompanied by a well-funded animal health programme that would strengthen and develop the capacity of the State Ministry of Animal Resources in El Fula. This is very important for the sustainability of the programme. Interventions by the NGOs in the field of veterinary services are of high importance and a prerequisite for protecting and sustaining the pastoralists’ livelihood. The present facilities for veterinary services are inadequate both in terms of number and quality of services.

- The team believes there is an urgent need for a scientific research project to assess the impact of oil production on the nomads and their cattle. This research can be conducted by national academic institutions, University of Khartoum for example, in collaboration with official authorities.

- It is highly important to initiate and support WASH programmes. Water sources and water use require better management skills. This can be achieved by training local community representatives to assist them to gain new skills in water management.

- Support peasants in the traditional farming sector by initiating agricultural extension programmes and provision of high quality seeds to help the pastoralists to diversity their crops and increase their income.

- The livestock by-products in the area are of little value due to high losses during processing, handling and storage. Efforts should be made to assist pastoralists, especially women, in processing, handling and storage of milk products and
animal skins. The present practices of slaughtering animals and leaving behind animal waste need to be improved to ensure hygienic environment. Urban centers in El Meiram, El Sitaib, El Dibab, El Muglad, Babanousa and El Fula have a good potential for marketing these products. At present, these milk products are transported from Khartoum and central parts of Sudan and sold to the local consumer with high prices.

- Altamas Organization for Peace and Development and State Ministry of Animal Resources in al Fula are two strategic partners for VSF-G in the Western Sector of South Kordofan. It is highly recommended that VSF-G continues it support to these two institutions by provision of funding, equipment and skills training programmes to develop the capacities in service delivery.

- Access to Abyei town and the Dinka villages is a real problem for the UN agencies and INGOs. The team recommends engaging the Federal and State governments in negotiations to discuss and resolve access issues. One of the lessons learned from this study is that engaging the co-chairs of the Abyei Joint Oversight Committee (AJOC) is of a high importance for access reasons. Another lesson learned is the need for prior coordination with UNISFA on any activity in the area. The possibility of UNISFA providing offices to host the staff of AJOC and the humanitarian wings of Sudan and South Sudan in Abyei deserves to be explored.

- At the levels of the governments of Sudan and South Sudan issues of soft border, natural resource management and resource-based conflicts deserve to be put in their priority agenda.
Annex (1):
Altamas Organization for Peace and Development
In Collaboration with
Vétérinaires Sans Frontières Germany (VSF-G)

Rapid Assessment survey for pastoralist livelihood in Abyei Area

March-April 2013

1. Introduction:

Vétérinaires Sans Frontières Germany (VSF-G) is an International Non-governmental Organization working for the wellbeing of vulnerable pastoralist and agro-pastoralist communities, IDPs and returnees affected by natural or human hazards drought, conflict, emergency threatening or critically endanger human life. As part of its foundation program extension in South Kordofan, VSF-G planning to conduct rapid assessment survey for pastoralist livelihood in the area of Abyei to understand the current pastoralist livelihood situation, assess the stresses and risks underline their livelihood assets and how they are coping with the developing situation, document current practice so that useful lessons can be learned and applied to ensure for more effective policies, aid and recovery programming to support the needy people livelihoods.

2. Background and context of the survey areas

VSF-G and partners National NGOs Mobadiron and Eltamas currently implementing food security and livelihood project targeting pastoralist households in Deleng of South Kordofan, Fola and Muglad in West Kordofan providing livelihood protection and assets based for vulnerable pastoralist and agro-pastoralist households and also providing natural resources protection to reduce conflict among the local community. As traditional seasonal movement of pastoralist they expected to move from west Kordofan to the South Bahar-Elarab, the dry season grazing areas following coming few months, VSF-G planning to conduct rapid assessment survey for the dry season grazing areas in Abyei Administrative Area (AAA), IDPs and returnees to understand the general food security and livelihood situation in the area, assess the stresses and risks and how people cop and make their living, access to livelihood assets, livestock, pasture and water situation, market trends, livestock, crops and other commodities like sugar, oil, etc market supplies, stocks and market prices trends and access in attempt to support the vulnerable pastoralist in these areas.

3. Purpose:

To define quality socio-economic data through participatory and consultative process with different stakeholders, partners, and beneficiaries and inform the design of project / program to support and protect the targeted pastoralist, IDPs and returnees in Abyei area.

4. Specific objective of the assessment:

The specific objective of this survey is to assess pastoralist, IDPs and returnee’s food security and livelihood situation, assess stresses and potential risks facing pastoralist and how currently manage these risks, vulnerability and coping strategies adopted by these groups to offer suggestions for the program development and policy improvement mechanism to address these risks and stresses, strengthen the conflict- sensitivity of the developing projects and programs in the pastoral areas of AAA (considering pastoral needs, interest and fear).

5. Scope and focus of the survey:

The assessment to be undertaken will cover West Kordofan pastoralist, IDPs and returnees of Abyei current livelihood situation, the livelihood assets and strategies that households and individual’s men and women use to survive and protection challenges, institutions and programs that support pastoralist livelihoods.
5.1 Geographic target area for the survey:
This survey will cover Abyei Administrative Area including surrounding villages purposively selected villages, Mading-Ashweing, Ganga, Majak, Ownum (Banton), Setab and Merum.

5.1 Primary Target Group:

The primary target groups for this survey are pastoralist households from both side of Sudan and South Sudan, IDPs and returnees including Misserya Bagara and Dinka Ngok.

6 Expected out puts

The deliverable output of this survey is written assessment report highlights the current pastoralist, IDPs and returnees food security and livelihood situation, problems, risks and challenges facing pastoralist and their coping strategies.

Summary of the survey key findings, conclusion, recommendation and lessons learnt for the policy changes and effective interventions published, disseminated to the partners.

7 Key issues:

- Pastoralist, IDPs and returnees livelihood situation, risks and stresses factors to their livelihood assets including animal diseases, epidemics, animal routs complexes, access for water and pasture resources.
- Pastoralist, IDPs and returnee’s vulnerability and coping strategies adopted.
- Programs and policy improvement to address the key issues.

8 Activities the team has to undertake

8.1 Conduct interview for the local authorities mainly the Agriculture, livestock and fisheries department’s senior staff to assess their current organizations and human capacities, ongoing activities, future plan, problems facing.

8.2 Review secondary data available at the target area including reports, surveys and assessment conducted by government department, UN or NGOs.

8.3 Assess local leader’s structure, perception on the current situations problems facing their communities, what has been done and ongoing efforts to address these problems.

8.4 Conduct meeting with UN, INGOs and local NGOs organizations operating in the area assess their current capacities, ongoing activities and future plans.

8.5 Conduct interview for 50 pastoralist households families including women and men assess livelihood condition, assets based, access, utilization and ownership

8.6 Conduct (8) focus groups discussions one with pastoralist groups from the Northern part (Misserya) and one with pastoralist Dinka Ngog, 2 groups discussions with agro-pastoralist groups one from each side, 2 community leaders groups discussion from both sides and one with fisheries groups. Assess current livelihood situation food production, livestock, crops, pasture, water problems and challenges facing their livelihood one with CARDAs groups assess their problems and challenges to serve pastoralist.

8.7 Conduct market survey for Abyei Market assess livestock, crops, sugar, oil stock, market prices and supplies and access trends (Abyei market).

8.8 Video record or photos as possible.

8.9 Data collection by observation to validate and strengthen justification of the above collected information.

9 Survey design and methodology

Because of the current security situation at the target areas and to better capture indicators and strengthening evidences, the design and methodology could be summarized in the following:

Villages will be purposively selected according to the following criteria:

A) Importance of the livestock among other livelihoods activities, B) Security and accessibility.
Employ stratified random samples selection for HH pastoralist; they will be classified into poor, middle and better off according to local people judgment. Preparation of interviews checklists and other participatory tools such as the Focus Group Discussion (FGD), the Semi-Structured Interview (SSI) and guidelines for this purpose will be designed by VSF-G; in addition one day meeting will be carried to examine the questionnaires, check list guide and test the questionnaires.

Eight types of checklist / questionnaires will be used in the survey as follows:

1. Decision makers / planners survey: this is to assess Agriculture and Animal Resources and Fisheries department’s senior staff, UN, NGOs and other National NGOs partners in Abyei to look for their capacity, current activities, future plans, problems and challenges facing and to have a general information about the livestock population, distribution, management and pastoralist characteristics and distribution Sex, location, number and type of support attended.
2. Focus group discussions to be conducted with Community Animals Resources Agents (CARDAs) to identify their perceptions, problems and challenges they facing and also their suggestions to enhance, peace, animal services and pastoral development.
3. Pastoralist and agro pastoralist focus group’s discussions, Local leader’s focus group’s discussions
4. Pastoralist and agro-pastoralist Households (HH) survey questionnaires to interview (50) HH assess livelihoods situation, income, expenditure, food, health, shelter and educations and urgent needs.
5. Market survey questionnaires food and nonfood stocks, supplies, market prices and access

10  Data collection, analysis and report writing

The assessment will employ both primary and secondary data including UN, NGOs and government reports (annual and semi-annual reports), surveys and evaluation reports. Also the assessment will use observation as part of the tools, in addition to direct interviews key informants using questionnaires formats to be collected from the services providers and target groups and where possible use video records and photos. After completion of the data collection, data will be organized, tabulated and analyzed using SPSS and produce the recommended results and reporting by VSF-G including finding, conclusions and recommendations. The final draft report expected to be submitted within one week after compilation of the field data.

11  Respondent distribution and characteristics

The survey team will visit Abyei Administrative Area and villages around Mading Ashweing, Ganga, Majak, Ownum(Elbanton), Setup and Merum interview 50 HH male and female pastoralist and agro-pastoralist. (The team expected to proceed to Agok to interview IDPs pastoralist households, local leaders, NGOs and government senior staff).

12  Team members and responsibilities

12.1  Team leader:

25 Days for the team leader, responsible for preparation of check lists, questionnaires guides, training enumerators, team management, supervision, contact local authorities, community leader, facilitate meetings, groups discussions and follow up to ensure proper conduct and collection of good quality information, data analysis, debriefing and report writing. The team leader will report to VSF-G CD in Sudan.

12.2  Community mobilizers:

8 Days for two (2) Community mobilizers, they will be responsible for community mobilization, movement, accommodation and advise on security of the team members in the target area.

12.3  Enumerators:

10 Days for (4) Enumerators, they will be responsible for reporting and collection of the household and group discussions interviews information using the check lists and questionnaires guidelines.

12.4  Translators:

4 Days for two (2) Translators, they will attend the group’s discussions and translate questions and responses from Arabic, English to Dinka and vice versa.
## Assessment Mission Team

<table>
<thead>
<tr>
<th>Muglad, Meram, Dibab, Sitaib</th>
<th>Northwestern Abyei (Shigay)</th>
<th>Abyei Town and Pastoralist Cattle Camps</th>
<th>Secondary Data Collection</th>
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</thead>
<tbody>
<tr>
<td>Dr. Ahmed Abdulrahman Abu-Ajob, Vet., Animal Resources, al Fula, Team Leader</td>
<td>Dr. Abubaker Kuku, Vet., Animal Resources, al Fula, Team Leader</td>
<td>Dr. Idris Braima Jadalkareem, Vet., University of West Kordofan, Team Leader</td>
<td>Salah Yagoub al Bushari, Muglad</td>
</tr>
<tr>
<td>Dr. Abdulshafi Adam Mohamed Ahmed, Vet., Animal Resources, Muglad</td>
<td>Ahmed al Tom Hassan, College of Natural Resources, Assalam University</td>
<td>Hassan Hamid Suliman, Pasture Department, Muglad</td>
<td>Ibrahim Bagadi, al Fula</td>
</tr>
<tr>
<td>Miss. Khadija Abdulrahman, Altamas</td>
<td>Omda Alhaj Mohamed Faris, Local Community Leader</td>
<td>Omda al Dudu Mohamed Obaid, Local Community Leader, AJOC Focal Point for UNISFA</td>
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<tr>
<td>Abdallah Ahmed Deng, Animal Resources, Meram</td>
<td>Gadallah El Radi, Technical Support and Supervision</td>
<td>Abaker Mohamed Abaker, Technical Support and Supervision</td>
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<td>Dr. Alsheikh Hassan Osman, Monitoring</td>
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Annex (3)
Altamas - Checklist for Focus Group Discussions

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<tr>
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<td>Administrative Unit:</td>
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<td>Village/Neighborhood Name:</td>
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### SECTION 1 – WILDLIFE

1.1 Is their common wildlife in the area? Circle one
(a) Yes (b) No

1.2 Is their uncommon wildlife in the area? Circle one
(a) Yes (b) No

1.3 If yes for 1.1 and 1.2 circle one of the below answers:
(a) Wildlife is increasing in numbers (b) decreasing numbers

1.4 If the wild life is decreasing in numbers please state reasons:
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### SECTION 2 – MAIN LIVESTOCK PROBLEMS

Tick the existing livestock problems

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<table>
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<tbody>
<tr>
<td>a</td>
<td>Difficult access to pasture and other feeding</td>
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<td>Contamination of pasture</td>
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### SECTION – 3 LIVESTOCK DISEASES

#### 3.1 What are the major livestock illnesses you have experience in your area over the past 2 years?
Rate 1=Non, 2=Minor, 3=Moderate, 4=High, 5=Very high

<table>
<thead>
<tr>
<th>Cattle</th>
<th>Shoats</th>
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<tbody>
<tr>
<td>Name</td>
<td>local name</td>
</tr>
<tr>
<td>a. HS</td>
<td>a. PPR</td>
</tr>
<tr>
<td>b. BQ</td>
<td>c. Sheep Pox</td>
</tr>
<tr>
<td>d. ANTHRAX</td>
<td>b. ANTHRAX</td>
</tr>
<tr>
<td>e. CBPP</td>
<td>c. CCPP</td>
</tr>
<tr>
<td>f. Blood bore diseases</td>
<td>d. Internal parasites</td>
</tr>
<tr>
<td>g. FMD</td>
<td>e. External parasites</td>
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<tr>
<td>h. MCF</td>
<td>f. Enterotoxaemia</td>
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<td>i. LSD</td>
<td>g. RVF</td>
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<tr>
<td>m. Internal parasites</td>
<td>h. Other specify</td>
</tr>
<tr>
<td>n. External parasites</td>
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<tr>
<td>o. Brucellosis</td>
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<td>p. Other specify</td>
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#### 3.2 What are the major livestock illnesses in the area over the last 3 - 10 years?

<table>
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<tr>
<th>Cattle</th>
<th>Shoats</th>
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<td>Name</td>
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<td>e. CBPP</td>
<td>c. CCPP</td>
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<td>f. TRYPs</td>
<td>d. Internal parasites</td>
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<tr>
<td>g. FMD</td>
<td>e. External parasites</td>
</tr>
</tbody>
</table>
h. MCF

i. LSD

j. Internal parasites

m. External parasites

n. Brucellosis

Other specify

<table>
<thead>
<tr>
<th>3.3 Rate the level of veterinary services provided by:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SN</strong></td>
</tr>
<tr>
<td>a</td>
</tr>
<tr>
<td>b</td>
</tr>
<tr>
<td>c</td>
</tr>
<tr>
<td>d</td>
</tr>
<tr>
<td>e</td>
</tr>
<tr>
<td>f</td>
</tr>
</tbody>
</table>

**SECTION 4 – LIVESTOCK MIGRATION**

4.1 Looking back (10 years) according to your opinion is there any changes/deviation in the migratory pattern?

(a) Yes  (b) No

4.2 If yes according to your opinions, what are the main reasons?

(a) Pasture degradation  (b) water scarcity  (c) Insecurity
(d) Increased cultivation at expense of pasture lands  (e) oil drilling structures, gold mining
(f) Pasture contamination  (g) other specify:
(h) ........................................ (i)................................. (j) .........................

4.3 What are the implications created by the above mentioned factors?

(a) Increased frictions among livelihood groups  (b) migration to other areas
(c) Reduced animal productivity  (d) increased animal mortality
(e) Increased morbidity  (f) increased sedentary
(g) Change to other livelihood strategy
(h) Others specify:
(i) ........................................ (ii) ................................. (iii) ................................

4.4 Looking 10 years back what happen to the dry season grazing lands size?

(a) Remain the same  (b) Increased  (c) Decreased

4.5 If the size of the dry season grazing decreased what are the main reasons?

(a) Drought  (b) shortage of water sources  (c) insecurity
(d) Increased cultivation in pasture areas  (e) fencing of large areas due to oil operations
(f) Contamination of pasture  (g) restriction of movement across borders
(h) Other specify: ..........................................................
5.1 Rate the levels of following basic services in your area if any:

<table>
<thead>
<tr>
<th>SN</th>
<th>Type services</th>
<th>Adequate</th>
<th>poor</th>
<th>V. poor</th>
<th>Non</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Water supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Sanitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Veterinary clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>electricity supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Police station</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>Roads building</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section – 6 Market:

6.1 Is there any market nearby?  (a) Yes  (b) No

6.2 If yes, estimate the walking distance?

(a) 1-2 Hr  (b) 2-6Hr  (c) half day  (d) one day

6.3 Market prices:

6.3.1 Can you list important commodities and prices (cash crops, food crops, as well vegetables) in Sudanese pound?

<table>
<thead>
<tr>
<th>Cash crops</th>
<th>Price this yr</th>
<th>Price Yr ago</th>
<th>Food crops</th>
<th>Price this yr</th>
<th>Price Yr ago</th>
<th>Vegetables</th>
<th>Price this yr</th>
<th>Price Yr ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a). Ground nut</td>
<td>(d). Sorghum</td>
<td>(g). Onion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b). Sesame</td>
<td>(e). Millet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c). Cow pea</td>
<td>(f). Wheat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h). Tomato</td>
<td>(m). Water melon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.3.2 Do you see any strange trends over the last years? Why?


6.3.3 Do you think the prices of food commodities will increase or decrease? A- increase  B- Decrease

Why?

(a) Increased production  (b) increased supply  (c) low demand
(d) drop in production  (e) increased demand  (f) decreased supply
(g) low purchasing power.

6.4 What are the main market places and days?

<table>
<thead>
<tr>
<th>Market name</th>
<th>market day</th>
<th>Walking distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.5 Have there been any changes in people selling or buying? Why?
A- Increased purchasing power	 Decreased purchasing power	 Same

6.6 What average market prices for the livestock this year and yr ago?

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Price this year</th>
<th>Price Year ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Cattle (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Cattle (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Sheep (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Sheep (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Goat (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Goat (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Camel (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Camel (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Donkey (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Donkey (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Poultry (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l. Poultry (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m. Camel (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n. Camel (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>o. Donkey (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p. Donkey (F,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>q. Poultry (M,age)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>r. Poultry (F,age)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.7. What average market prices for the livestock products this year and yr ago?

<table>
<thead>
<tr>
<th>Animal product</th>
<th>A. Price this year</th>
<th>B. Price Year ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Milk 1 Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Meat (Cattle) 1 Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Meat (Sheep) 1 Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Eggs (Dosen)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Fish Fresh 1 Kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Fish dry 1 Kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.8 compare the livestock prices this year with last 10 years:
(a) Remain the same  (b) Increased  (c) Decreased

6.9 If the livestock market prices increased state reasons

6.10 if the livestock market prices decreased state reasons;

6.11 Do you barter livestock for water/pasture?
(a) Yes  (b) No

6.12 What is the status of the current Livestock supplies to the local market:  (a) Increasing  (b) decreasing  (d) same as before?
6.13 If the livestock market supplies are increasing or decreasing, state reasons:

---

6.14 Do you think the prices of livestock will fall, rise or remain the same?
a) Increase (b) decrease  (d) Remain
Why?
---

6.15 Have there been any changes in people selling or buying livestock?
Why?
(a) Increasing  (b) decreasing  (d) same as before
Why?
---

6.16 What are the current term of trade (goat/grain) ratio:
---

6.17 Has this changed over the last 2 years? (a) Yes (b) No
6.18 If term of trade change overtime:
a. When?
---
b. How
---
c. why
---

---

SECTION 7 – COMMUNITY PERCEPTIONS, MAIN STRESSES AND PROBLEMS

7.1 List three main problems affected local people livelihood?
1-
---
2-
---
3-
---

7.2 Has this always been the case?  (a) Yes  (b) No
7.3 If no, when and how has this changed and why?
---

7.4 Will these problems become worse, why?
---

7.5 What did people do in the past to overcome these problems?
---

7.6 What are people doing now?
---
Observation:
   a. Village main water sources: observe drainage around water point, water quantities, safety, acceptability, water source protected.
   b. Water containers: storage capacities and cleaning
   c. Water storage: storage capacities and cleaning
   d. Solid waste management, disposable sites created and in use
   e. Environmental health, vector control activities
   f. Average liters/person/day collected from all sources for drinking, cooking and hygiene.
   g. Sample of HH numbers present at specific day, quantities of water collected, quantities of water consumed that day.
   h. Evidence of water, vector borne diseases, diarrhea, malaria
Annex (4)

Household Survey Questionnaire

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Location</th>
<th>Location Details</th>
<th>Educational Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>مشهد المحلي</td>
<td>المرحلة التعليمية</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>الوحدة الإدارية</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>القرية / الحي</td>
<td></td>
</tr>
</tbody>
</table>

Information about the family

<table>
<thead>
<tr>
<th>Reference Number</th>
<th>Registered Date</th>
<th>Name</th>
<th>Gender</th>
<th>Education Level 1</th>
<th>Education Level 2</th>
<th>Age</th>
<th>Type</th>
<th>Village</th>
</tr>
</thead>
</table>

1. a = (0 - 5), b (5 - 15), c (15 -30), d (30 - 45), e (45 - 60 and more)
2. 1 = illiterate, 2 Khalwa, 3 Primary school, 4 secondary, University.
الثروة الحيوانية

<table>
<thead>
<tr>
<th>نوع الحيوان</th>
<th>1- أقل من سنة</th>
<th>2- 2 سنة</th>
<th>3- 3- 4 سنة</th>
<th>4- أكثر من سنة</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

الزراعة

<table>
<thead>
<tr>
<th>نوع حيازة الأرض</th>
<th>إجمالي العائد</th>
<th>المكلفية المباعة في السوق</th>
<th>المنتج خلال سنة</th>
<th>المحصول الأساسي</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

المساحة المراعية للقطعة

<table>
<thead>
<tr>
<th>نموذج القطعة</th>
<th>القطعة الأولى</th>
<th>القطعة الثانية</th>
<th>القطعة الثالثة</th>
<th>القطعة الرابعة</th>
</tr>
</thead>
</table>
مصدر الدخل الأخرى

<table>
<thead>
<tr>
<th>النشاط</th>
<th>الدخل</th>
<th>الفترة الزمنية</th>
<th>الإنتاج خلال سنة</th>
</tr>
</thead>
<tbody>
<tr>
<td>قطع الاهالب</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>الفحم</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>صيد السمك</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>صيد الحيوانات البرية</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>لين طائر</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>روب</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>غابة</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>أخرى</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

dعم الاجتماعية

<table>
<thead>
<tr>
<th>النوع الدعم</th>
<th>السنة من الحاجة الكلي</th>
<th>الفترة الزمنية</th>
<th>المبلغ / الكمية</th>
</tr>
</thead>
<tbody>
<tr>
<td>زكاة</td>
<td>ملحوظة</td>
<td></td>
<td></td>
</tr>
<tr>
<td>الإغاثة</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>التحولات من الاقرب</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>الحصول على القروض</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>أخرى</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>النفير / الغرض منه / عدد الافراد المشاركون / الإنتاج الكلي من النفير</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>الفزع / الغرض منه / عدد الافراد المشاركون / الإنتاج الكلي من الفزع</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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الصور المنزلية

عدد الغرف من المواد الثانية: 
عدد القطاعي:
عدد الخيم:

المعدات الزراعية: 
المعدات صيد:

هل حدث تغيير في حجم القطع خلال 5 ل10 سنة:
زيادة في القطع: 
نقصان في القطع: 
بقي على حاله: 

إنتاج اللبن من الحيوان:
زيادة: 
نقصان: 
بقي على حاله: 

المنصرفات مع الترتيب: -
( % )
( % )
( % )
( % )
( % )
( % )
( % )
( % )
( % )
( % )

المصروفات المدرسية
الضرائب
المواصلات
العلاج
لاستهار:

في السكن: 
شراء حيوانات:
مدخلات انتاج: 
علاج حيوانات:
اخر/ حدوى:

ماهي المشكلات الرئيسية التي تواجه القطع مع الترتيب:
الأمراض والوبائيات:
الحصول على الماء:
الحصول على المرعى:
 الوصول الى الأسواق:
الحصول على السلفيات:

ماهي الأمراض الرئيسية التي تصيب القطع:

1
2
3
4
5
قارن بين نفقات الحيوانات خلال هذا العام وقبل 10 سنوات:

<table>
<thead>
<tr>
<th>زيدات</th>
<th>نقصان</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>ثابت</td>
<td></td>
</tr>
</tbody>
</table>

وضع الأسباب:

- انتاج اللبن:
- زيدات:
  - نقصان:
  - ثابت:
- ثابت:

هل توجد خدمات بيطرية في منطقتك؟

لا

هل تطعت الحيوانات خلال هذا العام؟

لا

هل كانت الأجبة بلا فكفاء تعالج الحيوانات؟

لا

هل كانت بلا لاما؟

لا يمكن الوصول إلى الجرعة.
لا أستطيع دفع التكاليف.
لا أرغب في ذلك.
اخر.

ما هي المصادر الأساسية لمياه الشرب للإسرة؟

1. شبلية مياه.
2. دوانكي.
3. حفار غير مغاطة.
4. طاكر.
5. رود أو خيران.
6. إبار محمية.
7. تجمع مياه امطار.
8. اخر.

من المسؤول عن البحث عن المياه؟

الرجال:
النساء:
اطفال ذكور دون ال15: اطفال إناث دون ال15:

الوقت الذي تستغرقه في البحث عن الماء؟
ساعة: دقيقة.

هل يتم معالجة المياه قبل الشرب في المنزل؟
لا

ماذا تفعل لجعل المياه صالحة للشرب؟

1. تصفية الماء بقطعة من القماش.
2. تركه لفترة حتى يبرد.
3. الغليان.
4. إضافة كلورين.
5. استخدام فلتر.
هل تستطيع أسرتك على الحصول على المياه بسهولة؟

نعم .......................................................... لا

اذا كانت الإجابة لآذكر الأسباب ..

 المسافات طويلة ...........................................

كمية الماء غير كافية ..........................................

غير أمنة ......................................................

التكلفة عالية ........................................................

اخرى .............................................................

كم متوسط استهلاك الأسرة من الماء يوميا؟

كم جالون في اليوم؟

هل تدفع للمياه؟

نعم .......................................................... لا

اذا نعم كم؟ ....................................................

صحة البيئة ؟ المراحيض؟

سلف تفكك؟..................................................

حفرة محدّسة بناءة نهائية ..................................

حفرة بمستوية ...................................................

حفرة بدون مستوية ...............................................

لا توجد مراحيض ..............................................

هل تشارك الاخرين في استخدام المراحيض؟

نعم .......................................................... لا

اذا نعم كم من الأسر تشارك في مراحيض واحد ؟

هل أصيباطحالك أقل من 36 شهر بالانسال خلا ل الثلاثة الاسبوع الأخيرة؟

نعم .......................................................... لا

هل أصيب احد افراد اسرتك بالملاريا خلال الثلاثة الاسبوع الأخيرة؟

نعم .......................................................... لا

الصحة:

هل توجد مستشفى أو شفخانة بمنطقةك؟

نعم .......................................................... لا

اذا كان الإجابة لا كيف تتحصل على العلاج؟

الشراء من مصادر خارجية

علاج تقنيي

الجمع بينهما .

لا انتف علاجا

هل طعتم اطفالك خلال هذا العام؟

نعم .......................................................... لا

اذا كانت الإجابة بنعم هل دفعت للتطعيم ؟

نعم .......................................................... لا

ماهي أقرب مستشفى او شفخانة بمنطقةك؟ ( ساعات المشي )

هل يمكنك الحصول على الدواء المطلوب بسهولة؟

نعم .......................................................... لا
إذا كان نعم هل تدفع نقود للاستشارة الطبية والدواء؟
إذا كانت الإجابة نعم هل تستطيع توفير هذا المبلغ؟
Annex (5)

Map of Abyei Locality