

# Assessing Livelihood and Social Services in Wad Banda Locality, North Kordofan State, Sudan

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## Abstract

The main objective of the study is to assess livelihood and food security situation in Wad Banda Locality, North Kordofan State. The study used both quantitative and qualitative analysis. Primary data were collected through field survey conducted on June 2013 using questionnaire, group discussions, interview and observation. Agriculture considered as main livelihood activity for the majority of people in the area, besides animal raising, traditional gold mining recently, and taping of *Hashab* trees (*Acacia Senegal*) for Gum Arabic. In addition to that many people especially youth migrate to outside Sudan specially Libya and few of them migrate to Gulf countries. The study revealed that rain variability is the main problem facing farming activities in the area, besides traditional agricultural practices. The study recommends that more researches are needed for modernization of traditional rain-fed agriculture and traditional livestock system.

## Keywords

Livelihood, Traditional Agriculture, Social Services

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## 1. Introduction

The Millennium Declaration set 2015 as the target date for halving the number of people living in extreme poverty. Exceptional progress in some developing countries makes achieving that goal globally a realistic possibility. However, many countries will fall far short, and up to 1 billion people are likely to remain deprived by the target date, (Cervantes-Godoy et al, 2010). Sudan is classified as both a least-developed country and a low-income, food-deficit country, and in 2005 it ranked 141st out of 177 countries against the UN Development Programme's composite Human Development Index. Most Sudanese people are subsistence agro-pastoralists and survive on less than US\$1 a day (WFP, 2007).

### 1.1. Problem Statement

Sudan economy has undergone a major shift over the past two

decades; the main drivers are oil discovery at the turn of the century and expansion in services dominated by telecommunications, transport and construction. Agriculture, which used to be the leading economic sector contributing typically over 40% of the GDP, has lost much ground with a drop of its GDP share to 31.1% in 2009 accompanied with increasing in oil GDP share to 7.2% (CBS, 2009). More dramatic is the deterioration in the contribution of agriculture to the country's exports, declining to about 3% in 2007 down from an average of 74% in the period 1996–1998. Agriculture has almost consistently been disadvantaged in public allocations to various economic sectors. It can be concluded that agriculture, if not discriminatively treated, has not been given the attention parallel to its socioeconomic importance, (Faki et al 2009). In January 2011, the people in southern Sudan have voted for separation from the Sudan and in July

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2011 the Republic of South Sudan (RSS) was officially declared. Accordingly Sudan lost a major part of its oil revenue, which constituted a growing share in its trade, government revenue and GDP (Siddig, 2012). It is more than eight years since the beginning of Darfur Crisis, but the conflict continues. It has been estimated; more than 1.6 million people had been displaced (Young et al, 2005), therefore the livelihood of people in the region is extremely deteriorated.

Sudan has suffered a number of long and devastating droughts in the past decades. All regions have been affected, but the worst impacts have been felt in the central and northern states, particularly in North Kordofan, Northern state, Northern Darfur, Western Darfur, Red Sea and White Nile states. As a result, their population is highly vulnerable to effects of chronic and occasionally acute food shortages, (Taha, 2007).

Khiry (2007) stated that during the last three decades North Kordofan State has experienced catastrophic and frequent drought periods with far-reaching consequences on agricultural and pastoral system, regional economy, traditional family livelihood and environment. The drought of 1984 was the most recent devastating one. The droughts of the 1970s and 1980s triggered short cycles of famines in the State and these effects most vulnerable area farmers in traditional rain fed sector. Severity of drought depends on the variability of rainfall both in amount and frequency.

North Kordofan State suffers from extreme fluctuations in rainfall which generally vary from 150-450 mm/year. Severe climatic conditions and land mismanagement (overgrazing, over cropping, deforestation) have affected vegetation cover in North Kordofan State to become very poor and lost many endemic species (woody, rangeland species) that were once dominant. Furthermore, there is a persistent threat associated with shifting sand as result of bordering the desert zone, (GEF, 2009). Faki et al (2009) mentioned that food poverty in North Kordofan State is the highest among four States included in survey conducted 2008 besides Kassla, River Nile, and Northern state.

Food considered as a basic human need along with water, shelter, education, and primary health care. It has been also called as prerequisite for health. Food security is now listed among social determinants of health. It is clearly a determinant of life, health, dignity and sustainable development, (McIntyre, 2003).

## 1.2. The Objective of the Study

This paper aims to analyze livelihood situation in Wad Banda Locality, North Kordofan State, through:

1. Identifying and describing livelihood activities in the area.

2. Identify and analyze problems facing livelihood activities.

## 1.3. The Research Methodology

Both primary and secondary data were used in this study. The file survey was conducted on June 2013. Quantitative and qualitative data were collected through questionnaires, group discussion, interviews and observation. Hundred household heads were chosen through simplified random sampling. Descriptive methods were used for data analysis and discussion.

## 1.4. Livelihood Activities

Agriculture considered as main livelihood activities for the majority of people in the area, besides animal raising, traditional gold mining recently, taping of *Hashab* trees for Gum Arabic. In addition to that many people especially youth migrate to outside Sudan specially Libya and few of them migrate to Gulf countries. The study showed that the main livelihood activities is farming, about 94 of household heads considered farming as main livelihood activity for them, while 5% considered it as secondary livelihood activity, and only 1% of household not depend on agriculture as livelihood activity either main or secondary activity.

People in the area grow mainly millet as food crop and groundnut as cash crop besides narrow areas of Dura, okra, hibiscus, sesame, beans and watermelon. Rain variability is main problem facing agricultural activities. The area located in the poor Savanna region but in the recent years the problem of drought become more serious in the area, may be as a result of global climate change or by damaging local practices like over cutting of trees for agricultural expansion and for getting building materials, charcoal, and firewood, besides overgrazing because of increasing of animal numbers. Low agricultural productivity is another problem facing agricultural activities because of low fertility of poor sandy soil, traditional farming practices and lack of certified seeds. In addition to that pest from time to time attacks farms and destroy them in the early stage of cultivation like locusts, grasshoppers, rats, bugs, *Abualaid* etc. or in pre-harvest season like birds, locusts, *Maseh* (Pris rape). Plant pathogens and parasite weeds also contributed in decreasing of crop productivity of poor sandy soil like smut diseases, and *striga* sp.

## 1.5. Traditional Farming Practices

The survey revealed that farmer depend on traditional tools in cultivating their lands, they use *Toria* for sowing seeds and *Hashasha* (*Maloud*) for cleaning grasses and preparing suitable plant bed, beside using knives, *Hashasha* (*Maloud*) without stand, and their hands for harvesting their crops. The most difficult task in cultivation is *Elhash* process (cleaning

grasses and preparing plant bed); they use *Hashasha* (*Maloud*) with long stand. Farmer pushes *Hashasha* forward by his hand to clean up grasses and to break down soil. He stays all day going and returning back pushing his *Hashasha*. These distances if extended straightforward they would be hundreds km.

The people who cultivate large area (more than 10 *Mukhams*<sup>1</sup>) depend mainly on casual labor. In past casual labor were available, but recently specially after discovering of traditional gold mines, casual labor become very rare and sometimes not available at all. Nowadays the people in the area think about how to solve the problem of unavailability of casual laborers, some of them think about using tractors, and they ask about the feasibility of ploughs pulled by tractors in poor sandy soil.

## 2. Improved Seeds

Certified seeds were not used in the area for many reasons:

*First:* farmers do not pay much attention for providing new varieties and testing them in the local condition to compare the results with productivity of local cultivars.

*Second:* the role of agricultural research corporation was absent in the area, so there were no certified seeds available in the area tested by research institutions, or if they were available no one know about them.

*Third:* ministry of agriculture which supposed to play leading role in adoption of improved seeds, it is completely absent may be because of unavailability of funds. The researcher interviewed some officers who work in ministry of agriculture in the area, and they confirmed that the offices of ministry of agriculture in the area lack basic facilities for work like means of transportation, work tools, and even they lack offices tools like computers, electricity, etc.

*Fourth:* some seeds distributed or purchased as improved seeds (groundnut seed), but in fact they were not. Some of seed were improved seed but they were grown many times, they lost some characteristics of improved seeds. Some of them were grown nearby with local cultivars, therefore they exchange pollen, and the output was crossing between two cultivars. The group discussion with farmers revealed that few people brought improved variety of groundnut called (*Gibeish*), its productivity little bit better than local cultivars but not much. In fact it can be regarded as improved seed but now it is not certified seed. The field survey showed that very few people in the area provide improved seed of watermelon, and cultivate very small land with them, but the pest is challenging for them especially Bug and Abu-Alaid,

however the people who able to control the pest can gain considerable returns from watermelon production.

## 3. Marketing

Low prices of crops were also another problem facing the people in the area according to the interviewees. They mentioned that in spite of huge increasing in the prices of goods in markets as a result of inflation, the prices of groundnut which considered as main cash crop in the area were very low in the season of 2012-2013. The price of 1 Guntar of groundnut (45 kg) was only 80 SDG.

## 4. Livestock Production

Livestock is second main livelihood activities in the area besides farming. The people in the area raise considerable numbers of sheep, goats, and few numbers of cow and camels. About 17 of household heads studied said that they practice animal raising as secondary activity, while 83% of household heads mentioned that they do not involve in significant animal raising activity. However almost all household practice some kind of house animal raising like goat, cow, and chickens raising.

Poor pastures and shortage of water are main problems confronting livestock in the area. Because of rain variability pastures become poor in some seasons, in addition to that agriculture expansion contributed in reducing available lands for grazing.

## 5. Livestock Production System

Traditional open system of livestock production is dominant in all the area of Wad Banda Locality as well as whole Sudan. The researcher asked the participants in group discussions about the possibility of modernizing traditional open livestock production system to closed or semi-closed livestock production system like farms and ranches in USA, Australia, Europe, and other countries. They mentioned that it is very difficult to change this traditional open system to modernized livestock system in the near future, because it needs very huge investments in ranches and farms infrastructure like fences, sources of water, equipment, etc. But it can be achieved by government intervention by making legislation of livestock production systems, and providing facilities like establishing water resources, providing finance for breeders and technical assistances. Also some breeders do not own lands to establish farms for their animals in case of modernization, therefore agrarian reforms may be needed to solve this problem by redistribution of agricultural lands. However the implementation of land

<sup>1</sup> (1 *Moukhmas* = 7,350 m<sup>2</sup>)

redistribution policies is very difficult because of expected land owners' objection. In case of Wad Banda locality the majority of animal breeders owned land.

Also the researcher raised another question about possibility of collecting small numbers of animals in groups to establish cooperatives and companies, the participants said that the success of establishing companies and cooperatives for farmers in the area is questionable, because of problem of poor administration and the lack of needed awareness and culture to run like this suggested collective work.

As far as improved breeds are concerned, the area lack improved breeds of livestock. The breeders in the area do not pay any concern for provision of new improved breeds to test them in their local condition. And they do not see any problems in their local breeds especially sheep breeds (*Hamari* Sheep) and cows. But in the viewpoint of researcher, researches are needed in the field of improving local breeds of livestock in the area especially for main livestock types, sheep, cows, goats, chickens.

The findings of the study revealed that, veterinary services were not available in the area for animal breeder, although there are vet officers in the main towns.

## 6. Trade Activity

The findings of the study showed that a few people in the area involved in trade activity, about 2% of household heads considered trade as main livelihood activity, while 3% of studied household considered it as secondary occupation, whereas 95% of studied household heads asserted that they did not involve in any trade activities.

## 7. Casual Working Activity

The study revealed that a few people in the area depend partly in casual working to support their livelihood. About 6% of studied household heads emphasized that they engage in casual working activities, and considered it as main livelihood activity, whereas 8% of studied household heads practice casual working activities but they consider it as secondary livelihood activity. However the majority of household heads studied about 86% confirmed that they did not engage in casual working activities.

## 8. Formal Employment

The findings of the study declared that only a few people in the area engage in formal employment activities like teachers and local government administration workers such as tax & fees collectors, about 6% of responded household heads

considered formal employment as main occupation, whereas the majority of responded household heads, 94% affirmed that they did not involve in any formal employment activity.

## 9. Social Services

Social services were very poor in the area. The researcher interviewed many people individually and as groups, and asked them about the main three problems facing the community; the majority of them mentioned: shortage of drinking water, lack of health services, and poor education services. However the orders of these three main problems differ from village to another according to the most pressing problems.

## 10. Health Services

There are only two hospitals in Wad Banda locality, public hospital in Suga-Algamal, and medical insurance hospital in Wad Banda, besides some clinics and health units in main towns, all of them suffer from lack of skillful medical cadres, medicine, equipment and medical tools. Therefore some people in the area suffer from chronic diseases like rheumatism, renal failure, psychological problems, high blood pressures, etc.

The findings of the study showed that about 11% of studied households one or more of members of their family suffer from chronic disease, while 89% of studied households mentioned that no one of members of their families suffer from chronic disease.

## 11. Schooling Services

Schools in the area confronting many serious problems such as shortage of qualified teachers, shortage of schoolbook, shortage of setting seats, and shortage of teacher facilities. In addition to that the majority of schools in the area build with local material (millet straw). Therefore education quality in the area is very low, some pupils who study in six or seven class, and they faces difficulties in reading and writing, the majority of secondary school students enroll in art class as a result of lack of qualified science teachers. Furthermore there are many villages in the area not have schools.

## 12. Water Resources

The field survey revealed that water resources are one of serious problems facing the community in the area. There are two types of motorized water pumps existed in the area. One type called Donkey water pump and other called sunken water pump.

Some villages have motorized water pumps and others have not, therefore some villages bring drinking water from other villages, however the existed water pumps confronting many problems like lack of skillful technician, unavailability of spare parts, and mismanagement. Therefore many of them do not working continuously. Most of these water pumps in the area are established by the government and controlled by collaboration between government and the community; however some water pumps owned by private sector especially in the places where government fail to establish water pumps. The researcher raise question in group discussion in Sallam village concerning the main three problems facing the community, one of the participants answered: (First problem is water, second is water, and third is water).

In north eastern part of Wad Banda locality the area does not suit for establishing water pumps because of underground rock layer (Umgreyat villages). Therefore the people depend mainly on establishing paved water holes (4\*4m or 6\*6m), the holes paved with reinforced concrete and use as water storage. The people in that area collect rainfall water and store it in the paved holes, both people and animals drink from the paved holes. At time when water holes were about to be empty, the people bring water tankers mostly from Elnohood city to refill waterholes with water.

In past people in the area stored water in *Tabldi* trees (*Adansonia Digitata*). The trees were hollowed out and used as water storage. The researcher interviewed some people in the area and asked them about the history of storing water in *Tabldi* trees (*Adansonia Digitata*), they mentioned that the ancestors of *Hammar* Tribe when they arrived to the area in about the seventeen or the eighteen century, they found many *Tabldi* trees had already been caved, but no one know who caved them. However there was legend tells about caving of *Tabldi* trees. It said (there were people live in the area far time ago, they called *Abugunan*, they were very tall, according to the legend those people who hollowed out *Tabldi* trees (*Adansonia Digitata*)).

### 13. Electricity

The findings showed that there is rural electricity station newly established in Wad Banda town, it works for only four hours, while all other areas in Wad Banda locality lack electricity services, however some people in the area brought generators, and they deliver electricity for themselves and for some of their neighbors, therefore in some villages people can enjoy watching television in public places, and a few of them in their houses.

### 14. Transportation Services

The main mean of transportation is animal especially donkeys and camels, however recently car transportation became available between villages particularly on markets days. Land cruiser pick up cars use as means of transportation for carrying people and goods. Western Salvation Road passes across the area; it planned to pass through Elnohood city (North Kordofan), Wad Banda (North Kordofan), Umkdada (North Darfur), Elfasher (North Darfur), Nyala (South Darfur), Zalingei (Central Darfur), and it end at Elgenina in west Darfur. Until now the road is under construction. The road is divided into many parts for the purpose of construction. The part of Elnohood, wad Banda and Elfasher is paved until Elfasher (North Darfur). Only areas near the road can benefit from it, but the majority of rural areas of Wad Banda locality suffer from the lack of paved roads.

### 15. Housing in the Area

The people in the area live in houses build mainly from millet straws called (*Guteia*), they bring wooden sticks and shaped them in conical shapes, and then they lifting up conical shape with wooden pillars, after that, they cover it with millet straws and fixed them with trees bark, plastic rope or metallic wires using long wooden sticks. They surrounded these houses by fences built from wooden sticks and straws. These houses are cool in summer and warm in winter. However people in main towns use both traditional houses and modernized ones.

The researcher asked villagers who participating in group discussions about the chances of changing traditional way of housing to modernized one using baked bricks or cement bricks (block), they mentioned that they have willingness to change the way of housing because recently getting of local material for building traditional houses become very difficult, but modernized houses need financial ability to bring building materials and to pay for builders. Villages' planning is needed to change traditional way of housing; however some villagers do not enthusiastic for villages planning because authorities impose high land fees for villages planning. In addition to that the majority of villagers have small farms called (*Gubraka*) extended at the back of their houses inside the villages.

The *Guteia* house can be improved by using some kinds of wooden pillars that have resistance to termites and woodworm. Also it can be improved by changing it to *Drdur* using base built by mud or baked break.

The study showed that the majority of household depends mainly on normal houses without significant improvement. About 95% of studied households said that they have normal

houses while 34% possess some improved houses, about 8% have some Drdur houses, and only 5% possess some mud or baked break rooms besides normal houses.

**Table 1.** Housing in the area

Types of houses	possess	not possess	average of room owned by household
normal houses	95%	5%	2.36
improved houses	34%	66%	0.5
Drdur	8%	92%	0.08
Mud or baked break room	5%	95%	0.06

## 16. Water Closet (Latrines)

The study showed that almost all households have some kinds of water closet, about 99% confirmed existence of some kinds of water closet or latrines in their houses. Generally water closets or latrines in the area build from local materials, they dig hole in the ground, and then they crowd together wooden sticks over the hole, after that they cover the hole with plastic materials or others leaving narrow opening in the center of the holes, and then they put sand over internal cover.

## 17. Separated Kitchen

The findings showed that about half of studied households 50% have separated kitchen in their houses, whereas the others 50% of them not possess separated kitchen in their houses. However some of what is called separated kitchen only small shelter (*Rakuba*) not prevent even from rains. The people who have no separated kitchen, they use houses where children can sleep.

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