The Road to Resilience

A Scoping Study for the Taadoud Transition to Development Project

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Funded by UK Aid
Acknowledgements

Many people from the Catholic Relief Services (CRS), Tufts University and Ahfad University worked together to make this Scoping Study possible.

Special thanks are extended to Dr. Sarra Rasheid Ahmed Beheiry and Dr. Niveen Salah Eldin Elmagboul from Ahfad University who were very active in both training the data collection team and in forming a part of that team. Their participation provided a critical perspective from the female interviewees that would otherwise have been lost. Prof. Shadia Abdelrahim Daoud and Prof. Awadalla Mohamed Saeed also from Ahfad University provided essential, invaluable background support.

We would like to thank CRS for facilitating the logistics and liaison with the Government of Sudan, and especially for the allocation of their most capable field staff. Mohammed Adam Hamid and Hajer Omer were key in providing this operational support. Abdel-Razig Ahmed Adam not only formed a part of the data collection team, but also provided most of the coordination and liaison services in West Darfur. In addition, Mohammed Abdalla Abdalla (CRS), Mohamed Ibrahim Suliman (CRS), Mahdi Hamdan (WDYO), and Mohamed Abdusamed Emam (TDO) also formed a part of this most excellent data collection team. The team worked very intensely with very long days, actively participating in both the collection of the data and its analysis.

The Ministry of Agriculture provided two individuals, Ahmed Arafat Saliman Shogar and Mohamed Abdalsham who joined the team throughout, contributing an additional technical perspective on the local context.

Cover photo by Sarra Rasheid Ahmed Beheiry
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Acronyms

CRS Catholic Relief Services
DFID SHARP Department for International Development
IDP Internally Displaced Person
MoA Ministry of Agriculture
NGO Non-Governmental Organization
PIA Participatory Impact Assessment
PIPs Policies, Institutions and Processes
SHARP Sudan Humanitarian Assistance and Resilience Programme
SILC Savings and Internal Lending Committees
TDO Trust and Development Organization
WDYO West Darfur Youth Organization
Executive Summary

Darfur has received extensive humanitarian assistance over the past 12 years in response to a complex, constantly evolving context. Both the government and the international community are looking toward moving from a prolonged era of conflict into one of recovery. The inability of all residents of Darfur to achieve sustainable livelihood strategies suited to the extremely variable climate has been at the heart of the on-going crisis. Any durable solutions must include a detailed understanding of the livelihood systems in Darfur, how they complement each other and how they can be structured to not just meet the needs of the full population, but also to allow them to thrive.

Recovery is a major component of resilience, but is often mistakenly assumed to mean a return to a previous state. Imbalances in access to resources necessary to maintain resilient livelihoods for a portion of the population was the fuel that escalated the conflict. A return to the systems in place prior to 2003 is neither possible nor desirable. Recovery in this case must therefore be understood to be when all residents are able to build new, resilient livelihood systems with altered, more balanced institutions that can support and bring together a polarized population.

This Scoping Study is the first of a two-phase data collection process. This phase identifies the key areas for research to be further explored in a second stage. This paper begins with a review of the livelihood systems of the agro-pastoralist populations in the study area just prior to 2003 as a point of reference. Livelihood systems in Darfur have been designed over generations to be resilient to extremely variable, unevenly distributed rainfall. Single dry years were not considered a shock by Darfurians, rather a normal part of the climatic system. In order to live with this variation, most agro-pastoralists planned in terms of two or three-year cycles rather than the one-year cycles outsiders tend to impose on them. Mobile pastoralists developed migration patterns flexible enough to adjust to changes from year to year in the distribution of high quality grazing.

From this point of reference, we then follow the population through their experience of multiple shocks and how they have continuously adapted to them in order to meet their needs at all times. We also look at how families are building new strategies that are resilient in the face of the climate variability that defines the region.

We find that the primary tools households use to reduce vulnerability to future shocks and adapt to current shocks or stresses lies not in subtle changes to core income streams or in the addition of small-scale add-on mechanisms to protect core income streams. Rather, households make major shifts in income streams and informed, proactive and profound choices in the types of income streams: moving in and out of different income streams as the context and their asset base allows in order to maximize both their immediate and long-term outcomes.

The early conflict period saw a fairly comprehensive stripping of assets across the sampled portion of the population with a dramatic shift in the balance of power. In the current context, agro-pastoralists are unable to fully engage in either of the two income streams with the greatest potential: rainy season cultivation and animal husbandry. This is driving them to engage in environmentally destructive,

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1 A major limitation of this Scoping Study was the inability to interview more than a few pastoralists, leading to limited detail of the changes in their strategies.
strategies that put all parts of the population at risk, while still not providing satisfactory livelihood outcomes.

Simplified caricatures of the conflict in Darfur have described two opposed livelihood systems, farming and animal herding, as if they function independently of each other, competing for the same resources. As we look more closely at these populations, we see that they are in fact operating within the same livelihood system, using similar activities, depending on the sustainable management of the same natural resources, only using them in different ways.

The strategies of all engage in both agriculture and animal husbandry in ways that increase overall outcomes and improve resilience. Agro-pastoralists most often focus on cultivation, building large grain reserves to smooth consumption during the drier years that are a normal part of the Sahel’s variable climate. Agro-pastoralists also depend on livestock to protect the grain reserves, selling livestock instead of grain to pay for cash needs in normal years or to meet food and income needs in extreme times when the grain reserves run low. Pastoralists focus on livestock rearing, using agriculture to protect the herds. By cultivating to meet most of their food needs, they do not need to sell as many animals in order to buy food, allowing the herd to grow faster through reproduction. When herds are diminished by disease or theft, pastoralists often turn to agriculture as a way to produce income necessary to buy replacement stock.

This study shows roughly how the livelihood systems of the target population have changed over the past 12 years. It highlights that households are actively selecting particular income streams in a strategic pattern. The next stage of research will need to help us understand which factors are important to households in making these choices. What makes certain income streams more preferable or less risky than others? Which factors allow certain households to engage in specific alternative income streams? Which factors allow a household to move out of low-return income streams and back into more profitable income streams? What are the factors that hinder a household’s ability to move out of the less profitable income streams or to build an asset base? How do the altered relationships between the parts of the population affect these opportunities and choices?

It is clear from our many conversations with people in Darfur that understanding and addressing the forces inhibiting recovery and polarizing the relationships between two parts of the same population are critical components to mapping out a road to recovery. Building structures that allow the full population to have access to and manage natural resources in a way that will provide sustainable and increased benefits to all is the key to developing new resilient livelihood strategies in Darfur.
1. Introduction

The Taadoud project\(^2\) seeks as one of its objectives to improve the resilience of livelihoods in the targeted regions of Darfur. The Feinstein International Center of Tufts University was commissioned by CRS to support the agencies conducting programs under the United Kingdom’s DFID SHARP (Taadoud) funding umbrella to conduct research to develop an understanding of resilient livelihoods in the context of the Taadoud project that will inform the participating agencies as they design and implement resilience-building project activities. The research is intended to be carried out in a way that promotes research partnerships (Tufts is working in collaboration with Ahfad University for Women) and builds the capacity of humanitarian actors in the research techniques of collecting and using qualitative data as well as understanding resilient livelihoods in the current context.

The full Taadoud Resilience study is being conducted in three parts, the Desktop Study, this Scoping Study and a detailed exploration of key factors for resilient livelihoods. The full study is designed so that each of the parts builds on the information gathered during the previous part. The approach to the Scoping Study as well as the particular focus of the interviews was based on the theoretical framework and findings presented in the Desktop Study. The specific factors that will be the focus of the final data collection will be selected based on the results of this Scoping Study.

This report presents the findings of data collected in West Darfur in October 2015. The objective of this scoping study was to identify those factors that are key to resilience in the study area. A second phase of data collection will explore these key factors in more detail.

This report begins with a brief description of livelihood systems in the study area as they were around 15 years ago to form a basis for reference, although livelihoods will probably never again look as they did at that time. The population’s experience of shocks and stresses since then follows, along with a description of the resulting changes in those systems, largely as a response to these shocks. We then review how families are currently adapting to this new context in an attempt to recover the level of resilience necessary to thrive in the highly variable climate of the Sahel.

We hope the findings in this Scoping Study report will be useful on their own, but they represent only a portion of the data collected. The Final Report will present the full, final analysis and findings, to include analysis of data collected in November and December 2015.

2. Methods

This study uses a standardized qualitative approach, the Participatory Impact Assessment (PIA). The PIA has been formalized, tested and validated (Catley, Burns, Abebe, & Suji, 2013). Although the PIA was designed to assess the impact attributable to programs, especially livelihood programs, this study uses the PIA methodology to learn how various shocks affect the livelihoods of households in the Taadoud

\(^2\)The Taadoud project supports conflict-affected households and communities in the targeted localities in all five states of Darfur region to build their resilience. It is one project implemented by five partners in five states and supported by CAFOD as technical lead for one of its components. The five implementing agencies are: Catholic Relief Services (CRS), Norwegian Church Aid (NCA), Oxfam America, United Methodist Committee on Relief (UMCOR) and World Vision.
target population. This information will provide us with a better understanding of how these households assess the risks or threats associated with various shocks and their strategies for maintaining resilient livelihood systems and outcomes in the face of these threats.

The PIA depends primarily on qualitative data to describe a context or situation, while using limited, key numerical data to demonstrate the scale of those relationships.

While qualitative approaches may use fewer human and logistical resources, they do require a much higher level of understanding and competency among the people conducting the interviews. This is often the greatest limitation to qualitative approaches. The PIA approach uses participatory methods in particular that often depend on pictures, diagrams and graphs that can be easily taught to the interviewers as well as quickly understood by the respondents, regardless of their level of education. This allows a more uniform, informative dialogue and facilitates the discussion of complex issues in a simple, easily understood and easily recorded manner.

2.1 Sampling: Site Selection and Household Sampling
Following the structure of the PIA methodology, the study was successful to interview a total of 49 households and 15 focus groups in the 10 selected villages.

The scoping study was originally designed to be conducted in three states in the Darfur region, but was reduced to three localities in West Darfur to ease the difficulties in getting permissions and reducing travel time. This was further reduced to two neighboring localities when the mid-term evaluation was further delayed, overlapping in time with the Scoping Study activities. In the end, the Scoping Study visited Habila and Fora Boranga to avoid conflicting with the mid-term evaluation.

The following ten villages were selected to provide the widest possible variability in the sample with respect to livelihoods and shocks.

**Habila Locality** – Orum, Taweng, Nour El Houda, Gobei and Dar El Salam

**Fora Boranga Locality** – Jameza Sunta, Jameza “B”, Mungaza, Suju and Tunduza

2.2 Participatory Techniques
As explained in earlier Desktop Study, this research views livelihoods from a systems perspective: what people do (their livelihood strategies), the livelihood assets they have access to, and the wider institutional influences on this. A systems approach puts the emphasis on understanding how elements within the particular system interact, the interaction with other systems, and inter-dependence with other systems. Qualitative methods are particularly suited to learning about these types of interactions, inter-connectedness and integration at different levels (from the household and community upwards to national level).

Through both individual household interviews and focus group discussions (divided by gender), enumerators queried Taadoud beneficiaries about their livelihood systems, how these have changed over the past 15 years, the shocks they have experienced, the services provided in the communities, and how these shocks have affected either their households or their communities. The guides for these interviews are attached an Appendices A and B for reference.
2.2.1 Ranking and Piling
The interviewees used small piles of beans to provide weights indicating the proportion each of their current sources of income contributed to the overall household income. They then ranked their sources of income by importance to the household income for the period two years ago (the time just before the start of the Taadoud project) and the period “about 15 years ago” (just before the start of the crisis). The period of “about 15 years ago” will be considered a reference period against which to compare changes in the intervening years.

Similarly, the interviewees weighted the shocks experienced during the past three to five years according to the severity of the impact of each shock. Finally, they ranked the shocks according to the time it took the household to return to their previous levels of income. This proved difficult as many of the shocks are periodic or on-going (like animal destruction of crops) or long-term negative trends (like inflation) and the concept of “recovery” was difficult to apply.

Throughout this process of ranking and piling, interviewees were asked why certain items were ranked or weighted higher or lower than others, as well as any changes from one period to another. In reality though, the format of the interviews very often prompted the interviewees to volunteer this information without the interviewer needing to ask the question. This made the interview process much more interactive and less burdensome for both the interviewer and the interviewee. Instead of having to try to draw information out of individuals, we were more often directing their spontaneous flow of information in the right direction. In one case, at the end of a 2-hour interview, the woman being interviewed was reluctant to end the interview and exclaimed, “We have had a nice talk!”

2.2.2 Livelihood Maps
Two types of systems were mapped out on flip chart paper: community resource maps and individual household livelihoods maps. By keeping the maps in the physical center of the discussion area where individuals could easily point to particular components to illustrate what they were saying, the interview remained focused and took on more of the feel of a discussion than an investigation. This also allowed interviewees to volunteer explanations that the interviewer may not have thought to ask about, providing key new information. The maps used in the focus group interviews were essentially community resource maps with the addition of arrows to indicate the flows of goods and resources, the relationships between different components on the map, and coded symbols to show how these components, relationships and flows changed both over time during the protracted situation (15 years ago, two years ago and present) as well as in response to a shock. The map in Figure 1 is a household community map. As all activities attempted to provide either food or cash for the household, with a few exceptions, this was placed at the center, surrounded by various income streams and expenses. The necessary inputs were also noted along with relationships among the various components and changes in either components or relationships between the three points in time. The map in Figure 2 is an
example of a community map. Near the center of the map is the residential area, separated from the market by a major transportation route leading south to the Gobei market and north to the Fora Boranga Market. Other symbols represent items discussed and their general locations. Long arrows generally show the flows of goods, while the small, colored arrows show changes to the system at given points in time or in response to a shock.

The maps used in the household interviews were much more symbolic and focused on the individual household. The sources of food and income for the household were discussed as they were added to the maps to show the inputs required, how those inputs were shared between sources of income, how the outputs of a single stream of food or income were used or converted into cash, and how the cash was used. Like the community maps, the differences at 15 years ago and two years ago were documented as well as changes due to a particular shock experienced by the household.

2.3 Debriefs
At the end of each day, the team leader met with the full team to discuss the findings of the day and to draw out general observations from the teams, then with each data collection team individually to discuss each household they visited. These discussions served multiple purposes and were a key component of the analysis.

2.4 Probing and Iterative Analysis
During household interviews, household livelihood systems were mapped out as were community resources and flows of resources. Interviewees were then asked about changes from two years ago and from 15 years ago, as well as during particular crises. They were specifically asked about resources (inputs) they use, the sources of those resources, changes in the resources or their sources, dependence on various income activity, expenses for services (health, education, etc.), levels of general wealth and well-being, and market systems. As they described the changes, they often spontaneously offered explanations for the changes, and when they did not, the interviewer asked them about the more significant changes. Reviewing the dozens of maps produced, certain trends began to emerge as well as the reasons or forces behind those trends.
3. Livelihood Systems in the Past

The Scoping Study was carried out in West Darfur, Sudan, in an area bordering Chad. It is a semi-arid region of savannah, lightly wooded with hardy trees. The land is drained by a series of seasonal rivers called *wadis*, which also store significant water under the river beds. The rainy season generally runs from about May to September, with the most regular, substantial rains in July and August. There is very little infrastructure beyond sandy dirt roads, basic water delivery systems (hand pumps and some water yards), a rudimentary network of primary and secondary health care, and primary schools. There are a few secondary schools, all located in the capitals of the localities.

Historically, the residents of Darfur have engaged in a combination of cultivation and animal herding. Agro-pastoral production systems depended primarily on cultivating crops, originally on the basis of shifting cultivation, combined with animal husbandry. Pastoralist livestock production depended on a system of strategic seasonal mobility, with the cattle and camels tracking the northwards green-up of vegetation during the rainy season, and returning south in the dry season. Livestock species included camel, cattle, sheep and goats, with camel pastoralists (*abbala*) associated with the north and cattle pastoralists (*baggara*) further south. Desert sheep as the name suggests were mainly found further north. Camel pastoralism was traditionally associated with a nomadic way of life (with no fixed or permanent residence) although this is rapidly changing, with increasing “sedentarization”: families settling in one place while the herds continue to practice seasonal mobility. The major staple crops are millet and sorghum, often intercropped with okra. Animals have been the traditional export from Darfur to other parts of the country as well as internationally, which indicates their relative quality. More recently, grain has become a more important source of cash income for cultivating households who feel it is too risky to maintain animals.

In 2003 and 2004, large areas of Darfur experienced violent conflict and massive population displacements. For the displaced population, who depended principally on farming, this represented a significant loss of their livelihoods, in terms of restricted access to their farmland and the direct loss of livelihood assets, especially livestock and other accumulated wealth, such as grain stores (Young et al., 2005). In the target area, displaced farming populations began returning to villages in significant numbers around 2008 with a possible surge in returnees around 2011 and 2012. Insecurity continues, but is more localized. After more than a decade since the initial major wave of population displacement, the situation is now referred to as “protracted” by external observers.

As part of the Sahel, Darfur experiences a very high level of climatic variability. This means, for example, the distribution of rainfall in time and space is uneven, unpredictable and changes significantly from year to year. Hence, the Sahel can be described as a “non-equilibrium” environment. In such conditions, it is fairly meaningless to pick a single point in time to represent “normal” or as a “baseline”. For example, if one year has above average rainfall, the following year very commonly has below average rainfall. Two dry years together are not uncommon for parts of Darfur. These non-equilibrium conditions complicate discussions on recovery and “bouncing back”. When speaking of a past period,

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3 See the Desktop Study for a literature based review of the Darfur region.
4 It is argued that “recovery implies a return to conditions that existed at some assumed equilibrium point in the past” (Olsson, 2008)
households seemed to lump years together when they spoke of how the system functioned, but focused on individual years for specific events that happened.

Discussions with respondents used a very general period of “about 15 years ago” as a point of comparison or a “reference period”. Due to the normal variability in the system, it was more appropriate to discuss the livelihood systems themselves and changes to those systems rather than specific outcomes which naturally change from year to year.

Although the period prior to the current situation is somewhat overly idealized, it does show how households wanted their livelihood strategies to function. It explains some of the importance attached to both traditional rain-fed farming and livestock production systems as the optimum systems of production for managing the highly variable climate and unique ecological and geological systems in the Darfur region.

3.1 Agro-Pastoral Livelihood System

By far, the majority of the Taadoud beneficiaries in the area studied are agro-pastoralists with a small number of traders and pastoralists mixed in. Cultivation in the reference period was nearly all rainy season cultivation (mainly okra, millet and some sorghum) with some households active in dry season cultivation (leafy vegetables and onions), though a fair number did grow watermelons.

Many of the community maps and household maps showed that village markets had fewer outside traders during the reference period than they do now. This made it more difficult to sell such goods such as milk, firewood and crops as most people had easy access to these. One respondent reported that in the past, food was not produced for export on the scale it is now, therefore traders did not come to the village markets and demand in these village markets was less.

Prior to the conflict, the agricultural cycle was treated as a two to three years cycle, not a one-year cycle, due to the year-on-year variability in rainfall. On average, rains were good only twice out of every four years, and it was not uncommon to have two drier years together. If rainfall one year was good, they would expect rainfall the following year to be much less. Individual dry years with only partial yields were not considered shocks, just part of the normal cycle and incorporated as part of the normal strategy - just as other wetter areas of the world consider the seasonal variations within a single year.

During a “normal” or “good” year, households worked hard to plant enough to feed their household for three years and the harvest was stored rather than sold. This reportedly took less manpower than it does now because more prime land was available and all land was more fertile. Most report that current yields are approximately half of what they were 20 years ago. Households also could afford to pay for more agricultural labor though they usually used only household labor. A stable household generally sought to keep three years’ worth of grain stored. If a harvest was expected to add enough grain to the stores to exceed about three or four years’ needs, the excess from previous harvests might be sold to purchase animals.

Most households had multiple fields before 2003. Some were near a wadi where they were often more fertile and less at risk for drought, but more at risk for insects and flooding. Others were farther from a wadi, preferably in the sandy goz soil so common in West Darfur. These were generally planted with grain crops that required minimal maintenance. The choice of which crops to plant depended in part on
the type of land in a particular field and the amount of rain usually received in that area. Cash crops were not often reported as being significant sources of income in the reference period, with the exception of groundnuts in a few places.

Agro-pastoralists’ herds usually included both cows and sheep or goats. When reporting losses at the start of the situation, some agro-pastoralists cited some 30 or more cows and slightly more sheep or goats. The animals provided milk for the household and a means of storing wealth. Excess milk was not usually sold, rather it was given as a gift to a needy person or left in the mothers for the baby animals. The reason given for this was “everyone already had milk so there was no one to buy it.” Although a large amount of wealth was stored in the animals, they were not sold on a regular basis and so were not considered as a large source of income.

Discussions with pastoralist men also reported that the current income from animals was less than agriculture, though the pastoralist women we spoke to reported that milk sales provided more food and income than agriculture.

Agro-pastoralist animals (cows, sheep and goats were all mentioned) were sold periodically to meet cash needs to prevent having to sell agricultural products. Prior to the current context, manufactured goods were far less commonly available and such basic services as health care, schools and protected water sources were not present. Therefore, cash needs were minimal. Bartering, buying animals direct from animal owners using grain as payment was not uncommon.

Seasonal labor was a way to earn cash without selling assets, but appeared to be a supplemental, occasional strategy rather than a primary one. Migration for work was used on occasion, but it not always the head of the household. It appeared more often to be an unmarried adult son who migrated for a year or more at a time. The destinations varied widely, for example, Libya, Saudi Arabia, Khartoum/Omdurman, Nyala, El Geneina, and even to Fora Boranga.

Trade was often in the form of selling something created, like shoes (for which West Darfur is renowned), prepared food, peanut oil, or grass mats, rather than petty commerce (i.e. when something is purchased and then resold without adding value). Sale of vegetables in the reference period was not mentioned.

3.2 Livelihood Resilience Strategies in the Past

Stored grain was the very heart of the agro-pastoralist resilience strategy during the reference period. Activities other than cultivation were aimed at protecting this store of grain. All farming households asked, said in past times they tried to keep at least three years’ worth of grain in storage. This agrees with interviews in North Darfur in 2004 and reports from farmers in Dar Sila sultanate in Chad in 20095.

Grain was not freely sold from stores until it was clear how much new grain would be harvested, and the grain sold was not usually from the current harvest. Animals were kept and sold to meet cash needs to protect this stored grain. Groundnuts in some areas were also considered a source of cash as well as oil for the households. They occasionally engaged in coping strategies such as unskilled labor to protect

5 Personal communication with residents in these areas
this grain if they needed cash but did not want to sell their animals, did not have a cash crop handy, or the price of animals was unfavorable.

Pastoralists report the opposite, both for the reference period and now. Herds of animals are their version of stored grain. The purpose of agriculture was and is to provide food for the families so they didn’t have to sell animals to purchase food. One settled pastoralist said he settled because, “When my wife can cultivate more, she asks for less money,” (which would come from the sale of animals). Pastoralists reported that in the reference years most of them tried to keep one years’ worth of grain in storage rather than the three years kept by agro-pastoralists.

![Typical pastoralist settlement in Habila Locality](image)

The strategy of depending on a combination of animals and cultivation provided all sorts of benefits and protections against drought and other shocks. Animals and crops have different exposures and vulnerabilities to a range of normal shocks, and different recovery rates. They are affected by different pests. Animals are more vulnerable to theft and death, and are not good sources of food in hard times. A grain store can be hidden in the ground and eaten during hard times. Animals can move to areas not experiencing drought whereas crops obviously cannot. On the other hand, a household can completely refill its entire grain store in one good year, while rebuilding a herd decimated by drought takes multiple years if ready capital is not available. Selling crops to purchase animals can speed the recovery of a herd while selling animals can slow the depletion of grain stores. In the agro-pastoralist strategy, the loss of animals has effects on resilience far beyond the simple loss of another source of income.

In times of longer-term distress (older respondents mentioned the multi-year droughts of the mid to late 1990s “when even the animals died” as an example) when grain stores were low and terms of trade for animals was also low, they increased migration for labor, gifts and foraging for wild foods (“even digging open termite mounds for their stores of grain”). Sale of firewood was not a major strategy “because everyone had firewood and didn’t need to buy it”.

While this section of the report described livelihood systems as they were reported in the reference period. The following sections describe how these livelihood systems and resilience strategies have come under pressure from a wide range of shocks (see Section 4) and transitioned into the livelihoods people depend on today (see Section 5 – Changes in Livelihood Systems Over Time).
4. Experience of Shocks and Stresses

This section examines the households’ experience of shocks: those which were more common, those which were felt to have the most impact, and why, seeking to understand how these reported shocks affected their livelihood strategies and outcomes. We did not measure specific outcomes; rather we sought descriptions of their experiences to ascertain the dynamics of the impact of the shock and the households’ responses. In doing so, we aim to identify those factors that warrant additional attention in the next phase of data collection.

In addition to describing their general experiences, respondents listed the shocks that had affected their household in the past three to five years. They then weighted the shocks, through the piling technique, by how badly the shock had affected the ability of the household to “get what they needed” or to “get enough food and income to meet their needs.” The data shown here do not include the two pastoralist households interviewed as they appeared to operate in a largely different system with a very different range of threats and the sample was too small to know if they were indicative of other pastoralist households. Including those two households would have muddled the impacts of shocks on the farming households and would not have been very representative of pastoralists. On the other hand, these pastoralists’ explanations of dynamics are considered in the discussion of the data presented here.


Nearly all families interviewed reported losing all assets when they were forced to flee their homes, usually in 2003 or 2004, but sometimes a bit later. Some said their grain stores (often buried in unmarked places) survived the initial attacks, but were quickly consumed and/or sold to pay for living expenses. This initial experience was fairly uniform throughout the study sample, with the exception of respondents in a couple of villages on the outskirts of the larger cities who were not completely displaced. The final phase of data collection will be larger in order to capture more experiences for comparison, but this sample will serve will as a case study to highlight issues to be further explored in the next phase.

Many families who lived near the border fled to Chad to live in host communities or camps. Others fled to market towns such as Habila or Fora Boranga, or to the larger camps like in Kass or Mornei. Most of the people in villages near the border were Massalit, a tribe that straddles the border and those who fled to host communities in Chad appeared to have fared the better than those in IDP camps because they were better able to rent or borrow to land to cultivation. As would be expected, return from Chad was often in phases, and fields rented during the displacement were often retained even after returning and reestablishing their homestead in their home villages.

Time spent in camps was consistently reported to be a very low point, with aid minimal, inconsistent and unpredictable. **Around 2008, with the start of aid reductions, households reported they were at their lowest point;** many returned to their villages ill-equipped to begin their livelihoods, attempting to make a phased transition back to the village. Many had to try multiple times to establish themselves in the face of opposition from groups that had taken control of those areas, losing crops, goods and

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6 Due to logistical constraints, the study sample was confined to almost completely to agro-pastoralists in two neighboring localities. The experience of places or people within Darfur this sample.
animals in the process. While this is now history, it has shaped current livelihoods and resilience strategies, as described later in this report. The data analyzed in the following sections considered a much more recent time period to give a better, more detailed account of their more recent experience of shocks while still feeling the larger, continuing systematic effects of the protracted situation.

![Figure 4.1 Impact and frequency of shocks by type of shock among farming households](image)

**Figure 4.1 Impact and frequency of shocks by type of shock among farming households**

### 4.2 Variable Impact Depending on the Type of Shock

In terms of impact, three of the five highest impact shocks were idiosyncratic shocks, meaning they affected an individual household, rather than all households simultaneously. These included death and illness, and, to a lesser extent, house fires. **Death of a person who had been contributing to the household’s food or income** had the highest impact of all, though it affected relatively fewer households compared to most other shocks listed. The death not only reduced the income and productivity of the house, but also often resulted in needing to support additional dependents previously supported by that contributor. **Illness** was the second highest impact shock and also affected a large proportion of the households, almost as many as were affected by drought. This is very important as idiosyncratic shocks are seldom considered by humanitarian or development agencies yet obviously have a tremendous impact on the well-being and resilience of households.

**Frequently, episodes of illness were accompanied by the sale of productive assets and the permanent loss of an entire income stream.** Part of the severity of this impact is related to its nature. An illness generally requires a very large, sudden and unexpected expenditure of cash for the treatment itself, but also often for transportation. Several households reported that they tried to restart their small animal herds after returning to the village, but then sold them when a member of the household became ill and had since been unable to replace them. Without reserves such as grain stores or animals to sell, households reported taking loans and selling productive assets like water pumps, mobile phone charging equipment, etc. No sales of land were reported. When a household took a loan, they almost invariably
reported trying to take on extra work as labor to pay the debt. Waterborne illnesses and malaria were the most commonly reported illnesses among productive adults.

House fires were surprisingly common and had the third highest impact of the idiosyncratic shocks (fifth overall). The impact of house fires goes beyond the loss of household items such as clothing and furniture. Productive assets such as seed stocks and petty trade inventory as well as food stores are usually kept in the house. Several times households reported losing an income stream because of a house fire, either through direct destruction by the fire or through sale of productive assets to pay for the replacement of goods destroyed.

4.3 Frequency: Numbers of Households Affected
The two shocks affecting the largest number of households were drought and floods, with floods having a slightly lower impact. This widespread impact is not surprising considering the nature of these events. Interviewees said floods had a lower impact because they could often quickly replant in the moisture left by a flood whereas they had to wait a year for another rainy season in the case of a drought. The relative importance of the two climate related shocks, drought and floods, reflects the extreme rainfall variability that is a feature of the region. It is also notable that the two main livelihood production systems are in fact normally adapted to manage this extreme variability; with farming planned over two to three year cycles to allow for drought years, and pastoralist production using mobility to exploit the temporal and spatial distribution of rainfall (and pasture).

“Drought” as thought of by outsiders to the Sahel (including formal early warning systems) is generally a single rainy season that is significantly drier than average. Traditionally in the Sahel though, a single dry year was simply part of the normal agricultural cycle and was not considered a shock and the farming system was designed to take this into account. With the disruption of traditional farming systems, households have fewer resources with which to manage these variations. Normal variations in rainfall have thus taken on the effect of a regular cycle of shocks. Most households reported that 2014 was a “normal” year with sufficient rains and in some cases flooding. Following a normal cycle, the year prior to and following the normal year (2014) are drier years. The harvest in 2013 was far worse than 2015 and forced the sale of numerous assets which have not yet been recovered. In some cases, animals died because respondents could not buy the necessary feed for them and yet no one was willing to buy the animals. Farmers interviewed in Habila estimated that in 2015 they would harvest 50% of last years’ yields, a bit more in parts of Fora Baranga.

Displacement and insecurity was the second highest impact covariate shock, the fourth highest impact overall shock reported, and one of the shocks affecting the most people. Although respondents were asked about shocks happening in the past three to five years, many also reported their initial displacement in 2003 and 2004. So while nearly all households interviewed had been displaced at least for a short time since 2003, our focus on the past three to five years reduces the apparent scale and impact of that shock.

Insecurity takes two forms. One is direct attacks and violence in which people are killed, assets lost or people must flee to another area. A common local strategy for coping with this was to run to Chad and to partially recover on rented land before returning to their villages. Many people had friends or relations in Chad to help them, though some said the subsequent rise in conflict in eastern Chad drove
them back into Sudan sooner than they wished. The loss of all assets and income streams, often complicated by physical injury, was the primary impact of direct conflict. Surprisingly, households reported that once they were somewhere safe, such as Chad, they could immediately begin rebuilding their lives and so the recovery time (and therefore the overall impact) for such a large and drastic shock was minimized in their estimation. Those who fled to camps continued to be affected by insecurity and ironically appeared to have had less access to resources necessary to restart their livelihoods, even if only temporarily. On the other hand, humanitarian agencies appear to have provided more support to IDPs returning from camps than to refugees returning from Chad.

The second form the insecurity has taken appears to have had much more impact on the recovery process due to its very long duration. This is the constant lingering threat of violence and loss of assets, restricted mobility, and limited access to certain livelihood resources such as land. In past times, households cultivated fields farther from wadis during the rains in good years, but also had fields near the wadis for drier years. Now, the interviewees commonly report that they cannot cultivate the fields farther from the wadis because they are “occupied”, the villagers feel more personally insecure there, or the fields are more vulnerable to destruction by animals because it is more difficult to post someone there to protect the fields. They now report they are depending completely on the fields nearer the wadis and villages.

Although villages in the area visited did not report the threat of violence as reducing the collection of firewood and grasses, there were multiple mentions of this threat increasing as one moved away from a village. In one case, a household reported that the future potential of gathering firewood as a source of income was limited to the next year or so as they had already gathered most of what was available in the area where they felt safe. In one village, a man had been killed in his home with impunity two months prior to our visit, reducing people’s willingness to risk going to their fields for about a month and negatively affected yields. At least one other similar recent incident was reported in another village. Interviewees commonly reported fear of keeping animals as a strategy because the presence of animals increased the household’s risk of being robbed or attacked with impunity. It appeared that the presence of the police did reduce this threat somewhat. If the police were physically present very nearby, such incidents were less likely to happen, and the presence of the police was mentioned multiple times as a positive service provided by the government. But if an incident did happen, it was unlikely that any action would be taken either to recover the stolen goods or to find the perpetrators.

Although inflation was commonly referred to indirectly as exacerbating any difficulty and reducing the value of all income streams, it was not often mentioned as a shock in and of itself. When it was mentioned, it was given a moderate impact rating. As perceived, the impact of inflation is not direct and therefore not easy to detect or measure; rather it is often seen as a general contextual factor that affects all aspects of a livelihood strategy. The impact of sudden price increases and the loss of subsidies on food and fuel is therefore probably under-represented in this graph.

Animal destruction of crops was sometimes cited as an independent shock and sometimes as a component of insecurity. Animal destruction of crops was recorded and scored through the piling method only when it was cited as a separate shock, meaning that although it was the fifth most common shock cited, it is likely more common than that. Of all shocks, this is the one that created the most vehement descriptions. Since only two of the 50 households and only one of the 15 focus groups interviewed were pastoralists, we must remember that this data may not sufficiently take into account...
factors leading to or reinforcing the destruction of crops by animals. In the study area, farming villages are generally located near wadis and are usually encircled by a ring of fields in which they grow their crops. The fields are enclosed with rough thorn fences to keep out animals. Few of these farmers now have animals and those that do generally have no more than two or three goats or sheep plus their donkey. In most of the villages visited, clusters of pastoralists have settled out beyond this ring of fields. Some pastoralists have fields of their own either immediately around their clusters of homes or amongst the farmers’ fields. In some villages, both pastoralists and farmers report that “roads” have been designated for the animals to pass safely to the wadis; lack of access to water for the animals did not appear to be a driving factor in continued animal destruction of crops. In nearly every village except those very close to the urban centers, animal destruction of crops was a major issue and a major source of lost productivity. The lost productivity was driven not only by the actual destruction of the crops, but also in limiting the areas farmers could cultivate with reasonable levels of risk. Farmers reported damage from pastoralists intentionally breaking through fences around cultivated fields, especially as the crops neared maturity, to set their animals in the fields, rather than untended animals simply wandered into an unprotected field. In one case, we witnessed a herd of camels working its way through a fenced millet field. According to one respondent, “Animals can eat your crops before your eyes, but you are beaten if you object.” Again, this data is primarily from farmers and may not be giving a balanced view. The men in the pastoralist focus group discussion, when asked about this issue, stated that it was not a problem because the committee set up for resolving such problems negotiated compensation, though the farmers contend that the compensation is rarely paid. This is a key topic to the future resilience of the Taadoud beneficiary population and will be explored in more detail during the next phase of the study.

Cattle grazing in Fora Boranga Locality

Though the impact of floods was estimated as only moderate compared to other shocks, it was the second most frequently cited shock and is now reportedly more destructive than in past times. Considering the drastic measures that have been taken, such as moving entire villages farther from
wadis, it does appear as if this phenomenon is increasing in severity and it is not just the perception of increased severity. The primary immediate impact of the floods was the loss of standing crops. In the longer term, the floods were blamed for destroying fields in multiple ways. Erosion at the edges of the wadis expanded the borders of the wadis into a number of fields. Floods also either deposited sand on fields or stripped away topsoil. Other impacts included several houses that collapsed in floods and the destruction of grain stored within. The increased severity of flooding can be termed an increased exposure to flooding, risking the resilience of households depending on fields near the wadis. On the other hand, these same fields are less sensitive to low rainfall, so it is something of a trade-off. Strategies to minimize exposure to flooding may allow families to capitalize on this protection against drought.

Where the flooding is not accompanied by destructive fast water flow that destroys the fertility of fields, recovery from floods is described as rapid. The retained moisture in the soil from the flooding allows rapid replanting of crops. Still, these replanted crops are necessarily sown later than is optimal and are therefore more susceptible to early cessation of the rainy season if the household does not have access to a pump. A handful of households experiencing floods said that the destruction of their rainy season crops due to flooding encouraged them to launch into dry season (or “winter”) cultivation of vegetables as a cash crop to cover the lost food and income. They were sometimes further encouraged by vegetable seed distributions from NGOs. These households then, for the most part, continued this strategy in the years that followed, feasilby reducing their vulnerability not only to floods, but also in general by building up a new income opportunity to cover cash needs. The location of the land with respect to the wadi, the type of soil, and either the available labor to irrigate from a well or a pump were determinants in whether households could successfully enter into this income stream.

The increased exposure to flooding and their reportedly increased severity is likely part of a larger degradation of the local environment. Wadis carry away the rain that does not soak into the soil. When run-off increases, so does the burden on a wadi and a flood might overwhelm its capacity. All villages visited reported that they depend heavily on the sale of firewood and charcoal and that this was a strategy that was only occasionally used prior to the current situation. Additionally, now that they have less access to the distant fields, farmers are more intensively cultivating the fields nearer the wadis. It is unclear, but comments made by both the pastoralists and villages interviewed lead us to believe that the pastoralist herds are now remaining longer near the villages than previously, depending more on local land for grazing during the dry season. The combination of deforestation, constant cultivation and the increased presence of herds may be reducing the quality of the soil near the wadis and the ground cover of the land beyond that (UNEP, 2007). This then leads to increased amounts of and speed of rain run-off. Not only does this increase flooding, it also carries away topsoil (as reported by multiple households), further reducing the fertility of the affected fields.

Crop pests, though infrequently reported as a shock, were more often mentioned as a constant menace. When reported as a shock, they were reported to have a moderate impact. Government efforts to spray pesticides from airplanes were generally well appreciated, but were not conducted often enough to control the problem, and did not appear to address the different types of pests faced in different areas. At the end of the interview, households and focus groups were asked what types of activities or support would help them become more resilient to the shocks we had discussed. Several households mentioned the need for backpack sprayers so they could spray the fields themselves.
Livestock theft was one of the least often cited shocks and had the lowest impact. Very few interviewees had owned any animals in the past three to five years, the period of recall for the shocks. The low frequency of the response may reflect the low ownership of animals among farmers in the sample. Many interviewees specifically cited the high risk of maintaining animals, and reduced their exposure by not keeping them. Nearly all households in this limited sample had had their herds stolen at the start of the conflict. A good number of households appear to have attempted to own animals shortly after their return to their villages (prior to the shock recall period), but then gave it up after they were either stolen or sold to pay for a sudden expense, usually medical treatment. The pastoralists mentioned animal theft, but the number of animals stolen was generally a small number by comparison to the sizes of their herds, so they considered it a relatively low impact shock. Cows were considered far more likely to be successfully stolen than sheep. They said this was because of the higher value of the cows and the fact that they could be driven to move faster than sheep and so were harder to recover.

The “other” category of shocks included such drivers events as divorce, children marrying and moving away, a husband being jailed, and the theft of a motorcycle (ironically, from a policeman). These individualized shocks had moderate and varying impacts on households.

4.4 The Nature and Duration of Shocks and Implications for Recovery

Discussions with households and focus groups revealed how various shocks affected households and their livelihood strategies. The nature and duration of a shock influenced the impact it had and how fully or quickly a household or community could recover.

**Duration of a Shock** - It was difficult for respondents to say exactly when some shocks like drought or inflation started or ended. Most of the shocks are experienced as prolonged events or acute stresses rather than events with that happen in a moment, like an earthquake or a flood. Examples include displacement, loss of access to land, chronic illness in the family, insecurity and inflation. Others involve a situation in which there is a constant threat that hits households seemingly randomly but repeatedly, such as insect damage and animal destruction of crops. Only a few shocks are discrete or short-term – short illnesses, flood and drought. When evaluating the level of suffering caused by a shock, it appeared that the duration of a shock was as important as its severity. “We lost the whole crop, but it was just one season and we could replant in the next season,” as opposed to, “It is still going on, so how can we recover?” In such an environment, measurements of times to recovery become unclear and imprecise.

At the same time, when asked why households rated a seemingly mild shock as causing much more suffering that a seemingly severe shock, the most common response was the duration of the shock itself. For example, the initial attacks on the villages that destroyed all of their assets and even injuring many of the respondents was very often rated less severe than animal destruction of crops. To households, once the attack was over and they were in a place of asylum, they could begin to recover. On the other hand, the animal destruction of crops is continuous and they do not see a way to “recover” from this constant peppering of smaller shocks. It is something that continues to hinder them and drain their few resources.

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7 It may be that pastoralists are experiencing more theft of animals, a point that will be explored in the next phase of the study.
Repetition of a Shock - Periodic chronic problems, like losses to insects, still feel like unpredictable
shocks to households because they don’t know in which years they will be worse. In some cases, the
threat of a particular shock – especially murders, animal theft and animal destruction of crops – had a
huge impact on the perceived ability or willingness to engage in a strategy, beyond the physical impact
of the incidence of the shock.

Idiosyncratic versus Covariate Shocks – Idiosyncratic shocks tended to be sudden and devastating to the
household. The two highest impact shocks were idiosyncratic shocks which often depleted the
household of both any accumulated wealth as well as productive assets – much more than covariate
shocks. When only one or two households in a community are affected, they usually receive much more
support from other members of the community, but never from external agencies. Covariate shocks
have the opposite effect. At the same time, since households tend to resort to the same types of coping
strategies or adaptations, these strategies may become less effective if everyone is trying to use them at
the same time due to competition.

Suddenness of Onset – The unexpected, sudden shocks (for example, illness or crop destruction by
livestock), appear the most difficult to cope with and people often resort to such negative strategies as
the sale of productive assets. External gifts are common, partial responses to sudden onset shocks.

Requirements for Cash – Some shocks, such as fines or illness in particular, require the payment of cash
in large, unforeseen amounts. This nearly always precipitates debt and/or the sale of productive assets.

Combinations or Overlapping Shocks In a complex protracted emergency, not only is the primary shock
on-going, but there are also usually multiple related and unrelated shocks scattered throughout the
affected period. One often follows another in quick succession, such as the drought in 2013, floods in
2014, then a somewhat dry year in 2015. At times, one shock is the direct result of vulnerabilities left
from the incomplete recovery to a previous or on-going shock, leading to a vicious downward spiral. As
one respondent explained, she lost her crop in the drought so her diet was low, so she didn’t have much
energy to cultivate in the dry season, so she had less money for food, so her diet was even further
reduced, so she fell ill and didn’t have the money to pay for the treatment, so she sold the inventory for
her petty trade business. As we consider shocks, we need to consider them in relation to other past,
current and potential shocks.
5. Changes in Livelihoods Systems over Time

Once an understanding of current livelihoods was developed and agreed upon with the interviewees, households explained the changes to their livelihoods over time – how they were different two years ago and 15 years ago, as well as during particular crises. This involved identifying shifts in livelihood strategies, and the various factors influencing those shifts, including the specific shocks, ongoing stresses and wide-ranging trends. This section focuses on the changes that have taken place and the immediate factors influencing them, including livelihood adaptations. Section 6 describes the implications for recovery.

5.1 Livelihood Strategies: A Shared Yet Limited Set of Options

Households sampled depend on a similar set of livelihood strategies or options, the combination of which varies by household according to their individual asset bases and priorities. Box 5.1 presents a summary of the livelihood strategies available to households, as identified in the discussions with households.

**Box 5.1 Summary of livelihood strategies available to households**

<table>
<thead>
<tr>
<th>Rainy and dry season agriculture</th>
<th>Nearly all households engaged in rainy season agriculture, and in nearly all cases it was their primary source of food and income. Dry season agriculture was seen more as a source of cash than food.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock</td>
<td>included sheep, goats, cattle and camels. Chickens were generally referred to separately</td>
</tr>
<tr>
<td>Trade</td>
<td>covered a range of activities including proper shops, temporary spots in a market for own produce, buying and selling items, and selling processed food such as kisra (a large thin pancake), coffee, oil, and meat (butchers).</td>
</tr>
<tr>
<td>Firewood and charcoal</td>
<td>included collecting and selling firewood, producing charcoal for sale as well as collecting grass for sale. As each has different ecological (sustainability) and economic implications, they will be divided out in the final data collection.</td>
</tr>
<tr>
<td>Migration for labor (remittances)</td>
<td>means leaving the village to work in order to send money back to the household. The mobility required for this limits this strategy to adult men. This includes hub market towns if the worker resides for a time in that town rather than the village and sending remittances back to households in the village.</td>
</tr>
<tr>
<td>Local labor</td>
<td>included daily wages paid for a given task, usually in cultivation or construction, while the person was living in the village. Similarly, transportation involved individual jobs moving goods from location to another for a set fee. Both are very occasional, task oriented, low paying and dependent upon finding someone to hire them so were combined.</td>
</tr>
<tr>
<td>Handicrafts</td>
<td>included a range of items that will be further broken down in the final data collection. On the higher end, skilled individuals produced items such as furniture and grass mats for sale, often in bulk with many having</td>
</tr>
</tbody>
</table>

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8 The importance of the dry season agriculture as a form of adaptation over the past decade was not at first understood and so these two categories were often combined and could not later be separated. This was a lesson learned for the next phase of the data collection where they will be separated.
significant opportunity for growth. On the lower end, women trained either by older women or by NGOs made traditional household items for sale on an individual basis. These latter were time consuming and provided very little income with little opportunity for growth.

Gifts (in cash or kind) are often given in response to a sudden need, and hence are more erratic than remittances. They may be from someone outside the immediate household, such as a son that has married and moved to another compound. Gifts generally depend on networking capacities rather than on the household characteristics such as adult males.

Figure 5.1 shows the relative importance of or level of dependence on different strategies as a source of food and income for different time periods, and so captures changes over time. Three points in time were selected for comparison: about 15 years ago (for a point of comparison for “normal”), two years ago (just prior to the start of Taadoud activities), and now.

![Figure 5.1 Activity as a Source of Income](image)

Currently, agriculture is by far the largest source of food and income, followed by a mix of labor in combination with the collection of firewood, grass and charcoal making (each contributing less than half of the sources).

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9 Six of the interviewees were too young to be able to respond to questions about 15 years ago. As we are comparing frequencies, this difference was corrected for using a conversion factor obtained by dividing the total number of respondents by the number that were able to give data for the period of 15 years ago to allow more comparability between the periods.
of the total share provided by agriculture). Income from trade and animals each contribute less than approximately 10% of the total income, while migration for labor, gifts and lastly handicrafts follow far behind.

Although the same total number of households depend on gifts and migration for labor, migration for labor includes a larger portion of households who depend on it to a greater extent. In other words, gifts are generally at most the third-largest source of income for a household, while remittances are more often a primary or secondary source of income.

The proportion of households depending heavily on agriculture has increased very slightly compared with the past. However, this masks the fact that household agricultural productivity has fallen as a result of smaller areas under cultivation and much lower annual yields per area cultivated. Vegetable cultivation in the dry season is also now much more common.

In contrast to the continuing dependence on agriculture as the major source of income, there has been a major loss of income from livestock, previously the second most important source of income. This trend has continued in recent years. Several households reported that on first returning to their villages, many families immediately invested in animals, but then lost them due to theft, or sales to fill gaps during various shocks, most often illness.

Charcoal and firewood sales as well as local labor are now a much higher priority and rising. Not only are traders now coming from distant markets to buy charcoal and firewood, but also with improving security in this area there is less physical risk. As inflation lowers the exchange value for grains, households are looking for ways to earn cash to protect their grain stores. They report that after trade, firewood and charcoal are the next most profitable opportunities and do not require the start-up capital that trade does.

Trade is fluctuating in type as well as priority. Those with proper shops in the hub-markets maintained them throughout. Two years ago, many households depended on the smallest types of petty commerce. Most that have since dropped trade were previously engaged in the smallest forms of trade and reported that they either sold their inventories to pay for medical care or that rising inflation made it unprofitable.

In the reference period, labor was much less common as a major source of income. Households that depend on either labor or firewood/charcoal now, but not in the reference years, invariably explained that the returns from agriculture and income were sufficient in the reference years, so they didn’t have to resort to these low-paying alternate strategies. The rise of labor in the most recent years though, appears to stem more from increased availability of labor opportunities. In several cases, it was reported that as the general agricultural area has gradually increased over the past few years, agricultural labor opportunities have become more available seasonally. In many, but not all, cases, this appears to be additional income rather than replacement of other sources of income.

Handicrafts have always been, and remain, a major source of income for only a very small set of households. There are two types of handicrafts. One is more of a large-scale business, making grass mats, reed fencing, and simple furniture. The other is small-scale household items like traditional food covers and other such items. The former items were most likely to provide a major source of income, while the latter were usually the very bottom-ranked source of income.
In summary, the major overall trend is the loss of livestock as a major source of income and replaced by activities with less overall potential to contribute to household food and income: the collection and sale of firewood, grass and charcoal, and manual labor.

5.2 Livelihood Assets
Assets are things a household owns or controls, or otherwise has access to. Some assets are accumulated wealth held in reserve for times of need, while others are productive assets used to generate outcomes. They serve different purposes in livelihood strategies with regard to resilience.

During the reference period, the productive assets that appeared to have the most impact on outcomes were animals, land (both the land itself and the resources on that land, like trees and pasture) and household labor. With these assets, households attempted to meet their immediate needs and their longer-term livelihood goals as well as to reduce their vulnerability to shocks, in part by accumulating wealth, or savings. In the reference years, households maintained accumulated wealth primarily in the form of grain stores and animals. These assets provided a reserve that could be drawn on when livelihood outputs (such as food production or income) were insufficient to meet the desired livelihood outcomes (such as food security, health or education).

Nearly all families in this limited study area reported losing all their assets when they were forced to flee their homes, usually in 2003 or 2004, but sometimes a bit later. Some reported that their grain stores (often buried in unmarked places) survived the initial attacks, but were quickly consumed and/or sold to pay for living expenses.

During the initial displacement, households lost most of their accumulated and productive physical assets, leaving them with little more than their household labor (though in some cases this was also lost through death and injury) and social capital to draw on. During the long recovery process as well as during other shocks over the past decade, household labor has remained a key productive asset.

5.2.1 Accumulated Assets
As discussed earlier, households reported that during the reference years they always tried to keep enough grain stored to feed themselves for three years. This grain store and attempts to rebuild it are a key aspect of the recovery process, reducing the household’s sensitivity to shocks. Animals were accumulated mostly to protect these grain stores, being sold to cover cash expenses so that only grain in excess of the three-year target would have to be sold. The loss of the animals as accumulated wealth means that more grain from each harvest must be sold to meet normal cash needs and slows the recovery process. Pastoralists, on the other hand, accumulated wealth in the form of animals and used grain production on a smaller scale to promote the accumulation of animals by reducing the number sold to buy food.

In focus group discussions, the development of a community grain bank was the most commonly cited use of a theoretical “community budget”. It appeared that in the absence of household stores, they were attempting to establish these grain stores at the community level.

5.2.2 Productive Assets
Land and labor are the two productive assets named by households and focus groups as most central to both cultivation and animal herding strategies.
Limited access to land and drop in area cultivated

During the reference period, households reportedly cultivated around four to five times the area they currently cultivate and were more likely to rotate the fields under cultivation. They are now often cultivating during two seasons instead of just one (dry season in addition to rainy season), reportedly due to reduced access to land. “Occupation” of land and “insecurity” in areas where some of their fields are located are the two most common reasons given, though interviewees sometimes said erosion and low fertility made some fields not worth cultivating anymore. Labor was listed as the primary limiting factor in agricultural production only in one village where they said sufficient land was available.

Labor

With the loss of land and livestock, the importance of labor in livelihood strategies increases. This includes the contribution of all household members, women and men, old and young, ranging from manual or physical labor, to the specialized skills and experience needed for agriculture and other livelihoods. Livelihood systems are therefore more sensitive to shocks that affect the labor of the family, such as illness or the loss of a productive member of a family. This was demonstrated in the data on impact of shocks (see Figure 4.1 above), showing that the two highest impact shocks were illness and death. Households also tended to describe the value of different sources of income in terms of the benefits or wages they could expect from one person’s effort during one day.

The interviews strongly suggested that available labor and dependency ratios influenced whether households were perceived to do better, or conversely suffer most. For most types of shocks, households that suffered most were often described as having “many small children”, older parents to care for, not having a man to work, or someone chronically ill or otherwise debilitated. Similarly, households that did better during and after a shock were perceived as having more people who could work, especially an adult male in addition to the head of household who could migrate for labor.10

Marriage - In general, women marry much younger than men. Women often marry in their late teens, while men marry more often in their late twenties. Men remain at home “to work for their fathers” until they marry. There may be elements of a resilience strategy incorporated into this delay related to the dependency ratio. Adult sons may be encouraged to delay marriage to ensure the survival of the

10 The Desktop Study analysis of the Taadoud baseline data found weak and conflicting relationships between the dependency ratio and various outcomes related to resilience. The baseline data dependency ratio considered all individuals below 15 and over 65 as dependents and only those 15 to 65 as productive members. This Scoping Study found a more gradual transition. Children up to about six or seven months are not only non-productive, but require intensive care of productive adults. Children from about six months to about five years can be cared for by another child. From about six to seven years, children can look after siblings for short periods, for example while the mother collects water. From about eight to 10 years, the children accompany adults to assist on tasks. From about 10 to 12 years, the children begin to carry out tasks with more skill and less supervision. By this age, girls are taking on much more of the tasks around the house, freeing up the women to be gone for long periods each day. By about 12 years, children are able to work independently in the fields or watching herds (both boys and girls) and are producing about as much as they are requiring. By about 14 years old, they are almost as productive as an adult and can work for wage labor. By about 16 years old, a person is considered a productive adult.

There are also gender differences. Women spend more time working during a normal day, balancing both household management responsibilities and income generating abilities. Men do not have household management responsibilities, can dedicate more time to activities that produce food or income, and can more easily engage in some higher return activities, such as migrating for labor (versus local labor). Both men and women noted that the loss of a productive male had more of an impact on household income than the loss of a productive female (other than the senior female).
core family in the face of shocks while also building his own “capital” to a point that will ensure the success of his new family when he does marry.

5.3 Policies, Institutions and Processes

Policies, institutions and processes (PIPs) impact livelihoods by mediating the assets a household can access or obtain and accumulate, how they can use those assets, and the returns or benefits they can get for those assets. The wider policy and institutional context was reviewed as part of the Desktop Study while this report reviews how households interviewed interact with these PIPs, and how they are affected by shocks. Shocks can change the way these PIPs function, changing some assets into liabilities, increasing the benefits from some assets while reducing the benefits of others, as well as changing the assets a household can obtain.

5.3.1 Markets

The livelihood maps created by interviewees clearly showed markets as a hub for nearly every source of income. In difficult times, households increased their interaction with markets even further by seeking income strategies that depended on selling of some type of good.

Households reported that although each is producing far less grain than during the reference period, much more of it is being sold because of a lack of other options to earn cash. This leaves an even greater food gap which must also be supplied through the market and which is filled by doing other, less profitable cash-generating activities. Cash-generating strategies that were only infrequently or seasonally used during the reference period, such as local labor and the sale of grass, firewood and charcoal, are in constant use now. With increased market interaction, traders have responded by coming more often to village markets.

The maps also showed that households interacted with different markets in different ways, usually in an effort to get the best returns possible while minimizing the time and cost of traveling to the markets. Local weekly village markets were most often a place to buy such limited household needs as salt, sugar, tea, clothes, etc. Few used these markets to sell firewood or charcoal. If households were selling only a couple of bowls of grain to get cash for that week’s purchases (something that was not done during the reference period), then this might be sold in the local market. Though limited, these village markets are reportedly much larger and more active than during the reference period when households would have to go to the hub markets for all purchases.

Sometimes traders come to the villages to purchase charcoal and firewood, depending on the amount produced in a village. These charcoal traders are a new phenomenon and come from as far as El Obeid and Omdurman.

To sell animals, charcoal and firewood, grasses and significant amounts of agricultural production, households usually still go to the hub markets. Households nearer to more active markets, especially those on the border with Chad, are more likely to engage in petty commerce as a regular source of income, whereas others farther from markets might engage in labor.

The Desktop Study indicated that proximity to a market was linked to positive food security and resilience outcomes, but could not determine exactly what about this proximity provided that benefit. As the maps show, all income strategies are mediated by the markets and the shorter the distance to a
market, the lower the financial and physical cost of interacting with the market. It appeared that proximity to the hub markets played a stronger role than proximity to the village markets. Terms of trade were generally much better in the hub markets and women were much more likely to make the journey to capitalize on that differential if they were closer, foregoing it if they were farther away. At the same time, villages without local markets generally were smaller, more remote and less productive than villages with markets, so the effect of proximity to a village market may be more of an indicator of village productivity than of market interaction.

5.3.2 Traditional Institutions
Traditional tribal structures remain intact for the most part, and include the local level sheikh to the next intermediate level, often known as omda, to the most senior level of leadership, known as shertai, magdum, nazir and amir (depending on the tribe). This tribal administration represents a form of local or customary governance that interfaces with the more formal civil and political administration at the locality and state levels, with a range of responsibilities such as local justice mechanisms, land management, and conflict mitigation and resolution.

Local governance and role of sheik – The village sheikh (the lowest tier of the tribal administration) was usually a member of the group that first settled the village, which in the case of this study sample meant settled farmers. They generally represent the residents of the village as well as the satellite villages associated with the central village when interacting with other groups or with higher-level authorities, both government and traditional. A primary role in relation to livelihoods is the allocation of land. Land for residences, agriculture and grazing are treated differently. Agricultural land is initially allocated based on the ability of a household to exploit the land, though it is often passed down from generation to generation if there is no particular disruption requiring a reallocation of land, as is residential land. Newcomers wishing to settle in the village traditionally requested allocations of land from the sheik for both agricultural and residential land as well as rights to graze the land immediately around the village. Accepting land meant accepting to become a part of the community and to put oneself under the authority of the sheik (Osman, Young, Houser, & Coates, 2013). Pastoralists who had already settled in or near the village before the reference were anxious to express their membership in the village community.

The sheik also played a key role in negotiating disputes and enforcing the agreed settlements. It appears that with the massive displacement of the village populations, much of this system relating to non-residential land at the most local level has been disrupted and has not been fully re-established (Osman et al., 2013). Within the village and among its original members, much of the authority of the sheik remains; it also appears that allocations for residential land in the village center are not a problem, nor is the allocation of land for agriculture in a very tight space immediately surrounding the village or in particular areas near the wadi.

The sheik does appear to have lost the authority to manage land allocations in the larger area around the villages that was used primarily for grazing and dry season agriculture during the reference period. The use of this land by pastoralists does not appear to be negotiated anymore, and newcomers to the area surrounding the village are essentially establishing new satellite villages and not putting themselves under the traditional authority of the sheik.
Ajawid – A committee with representation of both the settled villagers and others using local natural resources but not under the direct authority of the sheik (i.e. mobile pastoralists) has traditionally mediated conflicts that arose, most often in relation to animal destruction of crops. The ajawid served to give voice to pastoralists who might not otherwise have had a voice in negotiations, either for access to resources or in the case of disputes. Taadoud and the MoA have done well in re-establishing these groups, especially in areas where pastoralists have settled.

These ajawid currently negotiate disputes relating to the animal destruction of crops, but are powerless to enforce the payment of the settlements. In every village visited, farmers said the pastoralists either left the area rather than pay the compensation, or they simply failed to pay the compensation while using intimidation to prevent the farmer from seeking to enforce the decision of the ajawid. Although this was the view of the farmers and the sample was not balanced, the consistency of these stories across the entire sampled area lends it a measure of credibility.

A new balance of power has developed since the reference period that is severely hindering both the role of the sheik and the ajawid. One portion of the population now residing in a location is highly armed and refuses to come under the authority of either the sheik or the police, fostering a climate of impunity and taking land rather than negotiating an allocation. The police are less well armed than the pastoralists and individually have nothing to gain by confronting the pastoralists to enforce the verdict of the ajawid so are of limited support.

Condolences – The tradition of extending condolences on the death of a person fosters positive interaction between the groups. When asked for examples of how the villagers interacted with the pastoralists in the settlements on an individual basis (outside of the ajawid), most said making visits to a household when someone died, regardless of which community they belonged to. Although it is a seemingly small thing, it is at least positive and shows there is some civility and adherence to common traditions. If similar traditions can be identified and promoted, it may facilitate more spontaneous positive interactions and lead to more understanding and empathy between the two groups.

Communal or cooperative activities – Nearly all cooperative activities involved informally organized groups that often formed based on a specific need or activity then dissolved until the next similar need. Rotary savings groups were the one exception. With the exception of the ajawid, the few formally organized “committees” mentioned had been organized by NGOs, for example water committees, health committees and farmers associations. Other than SILC and the crop protection committees, which are currently supported by NGOs, these committees had dissolved when the NGOs stopped supporting them.

Working together and helping each other out, developing systems of reciprocity, reduces conflict through shared interests as well as providing a type of insurance and increasing the returns on livelihood strategies. As is often the case in traditional societies, most of the examples of informal cooperative behavior were found among the women. A number of these strategies are described in Box 5.3.2.

Box 5.3.2 Examples of working together and helping each other out

| Safety | When women travel outside of the immediate area around the villages, whether to collect firewood or trade at distant markets, they tend to do so in groups for added protection. |
**Nafir** – This is a traditional strategy based on reciprocity to increase overall production or to prevent the loss of a harvest due to shocks at the household level. When someone cannot complete a task in their fields, he can “call for nafir” and other community members with time available will come to help with that task. The owner of the field is expected to provide a sort of payment in sugar or food to thank them for the support, though the value of the payment is much less than if the person had hired labor. The owner is also expected to reciprocate and help other community members when they call for nafir. Sometimes nafir is spontaneously organized for community members who are elderly or who have recently suffered a shock that reduces available household labor, illness or the birth of a child.

**Rotary savings (sonduq)** – Individuals (usually women) form a group and each time they meet they contribute a given amount into a pot which is then given to a member of the group, the selection of whom is agreed upon by the group. Lump sums of money are usually used for investment or in ways that are more cost efficient than many small sums that come to the same total. Accumulating a lump sum of money is difficult when there are unmet needs every day, but it is hard to get ahead like that. The rotary savings provide that lump sum for investment as well as a sort of insurance for when unexpected expenses come up, such as an illness. Some women reported combining their funds to make purchases in bulk to get a better price. Mostly this was for consumption, but occasionally for petty commerce.

**Gifts** – Neighboring women reported sharing food on a fairly frequent basis. “If I don’t have enough food one day, someone gives me some of theirs. If they don’t have enough one day, I give them some of mine.” Additionally, when someone experienced a shock that did not affect others, like illness or a house fire, they often said that they had received gifts of food, household items and building materials from their neighbors. While these may seem very small exchanges, their regularity can protect assets and smooth consumption, preventing a decline in both food security and the ability to maintain accumulated or productive assets.

### 5.3.3 Access to Basic Services

Services such as health care, education, provision of clean water and police are considered minimum basic services to be provided to all people. They serve to ensure the health and well-being of the population. Their relationship to resilient livelihood strategies became apparent when these were not functioning properly in the study area.

For the localities included in this Scoping Study, basic services are more available now than during the reference period as a result of intensive humanitarian and government efforts, although they appeared to have declined slightly in the past two years as fewer NGOs are maintaining the services and government infrastructure is poorly maintained once installed.

**Health care** – The livelihood maps highlighted the increasing importance of labor and the ranking and piling data demonstrated that households are most sensitive to shocks that affect labor, both related to the health of individuals in the household. The most common illnesses reported among productive members of the household were diarrheal diseases and malaria.

Illness that required travel and multiple nights in another location to access treatment had much more impact than illnesses that could be treated locally due primarily to the non-medical costs. Local health centers, where they functioned, could only treat the simplest illnesses. Any illnesses beyond the most common and easily treated required referral to higher level health care facilities for which both transportation and treatment costs were relatively high.
Because of the very low level of accumulated assets that can be sold for cash, households are extremely sensitive to large, sudden cash requirements like medical treatment because they are forced to either go into debt or sell productive assets. The sale of productive assets reduces their current ability to support themselves and to recover from this and other shocks.

**Water** – Production lost due to the illness of an adult is the second highest impact shock. Diarrheal diseases were among the most common illnesses cited and households often linked an increase in incidence to the loss of use of a borehole.

There was a significant investment in boreholes with hand pumps around the time the displaced population initially returned, but NGO support of these ended about four or five years ago. Only a small proportion are still functioning. The government, through its Water and Environmental Sanitation Programme (WES) also appears to have invested in water yards, but few of these outside of the urban hubs are functioning.

**Police** – Police presence in the villages has reduced the incidence of local conflict and local banditry, facilitating engagement in nearly all income generating activities as well as improving the confidence people have in accumulating non-animal assets. Households reported that if the police were nearby, it deterred theft and violence, though if an incident did occur, the police rarely sought to enforce the law afterwards.

### 5.3.4 Interactions between Pastoralists and Farmers

Significant numbers of pastoralists have recently settled around returning villages. Both the residents in the village center and in the *damras* (pastoralist settlements) are using village institutions such as markets, clinics and schools. Otherwise there is astonishingly little constructive interaction between the two livelihood groups.

The Taadoud conflict analysis describes the problems nicely, but assumes the pastoralists are primarily nomadic and only present during short periods. Discussions indicated that most of the tension between farmers and pastoralists was with the settled pastoralists who now occupy or use land that was previously used for cultivation (though that land was possibly reserved for grazing before the initial expansion of agriculture). The conflict analysis assumes a “long peaceful history” between the two livelihood groups, whereas the interviewees indicated that there were some problems between the two livelihood groups even during the reference period. One difference now is that the pastoralists are settling in larger numbers in close proximity to the towns rather than simply passing through so there is more constant friction. The primary point of friction is the animal destruction of crops. Even more importantly, the arming of the pastoralists but not the villagers has created a huge power differential that is being fully exploited by the pastoralists. Even the police fear to confront them.

The *ajawid* committees supported by Taadoud or the Ministry of Agriculture (MoA) are active and do negotiate fees. This is a positive step, but there is little they can do to enforce payment. Often farmers report they do not even approach the committee for fear of reprisals. It was not possible to speak more with the pastoralists about their side of this dynamic, and this is a limitation of this stage of the work. When speaking to pastoralists who had been settled near a village from before the crisis, they spent considerable time giving credentials to say that were not among the newly settled – that they did have a historical claim/right to be there.
It is important to understand what traditional or formal mechanisms currently exist to allow pastoralists who want to settle to gain a claim to cultivatable land within a reasonable distance to services and markets. Land access issues lie at the heart of the conflict over natural resources. This is therefore a vitally important area for investigation in the next phase of this study.

6. Moving Toward Recovery

From the low point following the mass displacement between about 2004 to about 2008, households reported a very gradual climb to where they are now. When asked to compare their current general well-being with previous times, they rated their current general well-being well below that of the reference period, but much better than immediately after the initial displacement. This study was conducted in the late hunger season/very early harvest of 2015, with households bringing in some green crops and the first of the crops planted earliest in the season. Although we did not directly measure food security, there did not seem to be many households experiencing severe food access issues. Most households in Habila did have a grim outlook on the year ahead though, with no stores and an estimated 50 percent of average yields, though Fora Boranga appeared to be faring better this season.

As we would expect, changes over the past two years are very small by comparison to changes from 10 to 15 years ago. Some households reported being better off now than two years ago, while a handful reported being worse off. For the majority of those who are worse off, the decline was due to idiosyncratic shocks that reduced their human resources or their productive assets. Any improvements were due to a combination of last year’s good harvest, a slow re-accumulation of assets, and entry into dry season agriculture.

Households reported that they engaged in collecting firewood, producing charcoal and unskilled labor to survive until they were able to cultivate, as these activities do not require any initial investment. **Agricultural production is increasing, but remains far below pre-crisis levels and is insufficient to fully support households.** Fields nearest the villages and in many cases between the villages and the wadis are now being cultivated. The fields beyond that are still not accessible in most villages, Orum being the exception to the rule. Access to land (due to insecurity or occupation by others) was the primary limitation to production, with labor being the next limiting factor. In some villages very near the border with Chad, households are renting fields in Chad and either bringing the produce back to Sudan or selling it in Chad.

Nearly all villages stated that their **current populations are far larger than they were during the reference period.** During the reference period, the population was dispersed amongst satellite villages around the main central village. When households from these satellite villages returned, they were too few number to feel safe in their original locations, so they established homesteads in the current village. The areas where the satellite villages were once located are described as being “occupied by new people and animals.”

During the reference period, households had fields far from the village as well as nearby. Now, they can only cultivate those nearby. The increase in the number of households and the restricted access to land...
is reducing overall area that each household can cultivate. It is therefore likely that these fields are being cultivated all the more intensively, potentially exacerbating soil degradation.

According to the small sample of pastoralists interviewed, the pastoralist sheep and cattle graze in the general area around the new, small settlements during the rains, then move in closer to graze nearer the wadis on the crop residues after the harvest and during the dry season. Camels continue to migrate far to the north during the rains and somewhat to the south during the drier times.

Many households who managed to collect a few animals upon return to their villages subsequently lost them to theft or sold them to cover the costs of medical treatment. Not only do the majority of families lack the means to purchase animals, they also attract banditry and so are often considered as increasing risk of violence to the family. **Without animals as a source of cash income, agro-pastoralists’ grain crops must provide not only food for the household but also meet their increased cash needs.** This is a major impediment to the recovery process.

**Access to services such as schools, health care, police presence and clean water is far better now than prior to the crisis.** Many of these services were launched during the height of the push for returns, around 2009 or so, but have since declined even though most villages continue to swell with returnees. Interviewees said the water pumps were very helpful when they were first installed, but stopped functioning shortly after the departure of the NGO that installed them. The police presence was once quite large, but in most cases has reduced to only a handful. Many clinics were built, but remain empty buildings without equipment or staff. Although the overall increase in access to services is a good move, each requires cash from the users and puts even more pressure on their limited cash base.

**6.1 Adaptations to a New Context**

The general context has changed significantly from the reference period. Agro-pastoralists have access to much less land for rainy season cultivation and they have not been able to re-establish their herds. Markets are more integrated now than during the reference period and fee-based services such as education and health care are more available. Without their herds, the agro-pastoralists must depend more heavily on their cultivation for both food and cash needs. Because households do not produce enough to meet these needs and to protect what they do manage to grow, they are engaging in more activities to produce cash, like firewood and grass collection, charcoal production and daily wage labor. Households are therefore much more dependent on the cash economy. More than ever, markets play a mediating role in livelihood strategies.

Both agro-pastoralist and pastoralist households reported a larger and ever-growing number of pastoralist households settling in recent years near the villages. They are not pastoralist drop-outs but continue to own herds. Although a part of the herds continue to migrate, most of the cattle and sheep remain in the area for most of the year. Pastoralists report that they are settling near villages because this allows their wives to grow more grain for food and they can sell their milk regularly at the market, strategies that protect the herd by requiring fewer to be sold. Many of the arriving pastoralists are reportedly coming from East and Central Darfur and are not a part of the same group as those who settled earlier. Most members of the pastoralist families remain in the settlements area all year, especially the women and children. They use services provided in the village, such as the market, health centers and schools. And yet there is surprisingly little direct interaction between the two groups.
Most conflict reported now is localized and relates to conflict over natural resources. The agro-pastoralists interviewed emphasized problems emanating from the destruction of standing crops by livestock. Other sources report that pastoralists complain about the restricted access to crop residues (which are either sold commercially or used for agro-pastoralists herds) and the fencing of rangeland (Osman, 2014 or Young et al.). This is not a new problem, but the dynamics of crop destruction by livestock are very different from the reference period. Local committees and police presence have helped to prevent incidents from becoming as violent as they would otherwise, but have not reduced their frequency or the level of destruction reportedly because the pastoralists remain heavily armed (often better armed than the police) while the agro-pastoralists are not.

These changes have become protracted and are considered somewhat intractable or permanent. To make up for the loss of both agriculture and animals as sources of food and income, households have engaged in numerous other activities that once would have been considered temporary coping strategies to deal with hard times. They are less profitable, less predictable and very often less sustainable for the environment. “Winter” vegetable production may be the one exception. As the crisis has drawn out, these coping strategies have become more like adaptations to a changed resource base. Households recognize that charcoal and firewood production are limited and becoming more difficult/less available each year, but they do not have equally profitable alternatives.

In many cases, the loss of animals as a source of income has been partially replaced through vegetable production in the dry season. Although this was done traditionally during the reference period, it was only done on a very small scale and with a very limited number of crops. It is now a major source of income with a much wider range of crops. These are considered cash crops, grown primarily for sale, either fresh or dried depending on demand and market access. This is a very positive source of income and maximizes the use of the limited amount of land available for cultivation. Currently, most irrigation is done by hand, lifting water out of shallow open wells, which limits this strategy to small fields very near wadis. One of the most common requests was for pumps to irrigate these crops, allowing them to expand the “winter” cropping areas.

6.2 Livelihood Decision-Making: Changes in Combinations of Income Streams

Through the different recall periods, the main changes related to shifts in dependence on different income streams which might be considered either part of the recovery process or, more likely, adaptations to the new context. The patterns of shifting were fairly uniform throughout the study area and indicated common preferences for certain income streams over others. As will be shown by the ranking and piling section below, strategies rarely used in the reference period, or used primarily as periodic coping strategies during the reference period, are now major, constant sources of income among the farmers.

The ranking ran roughly in the following order: agricultural production, animals, trade, firewood and charcoal, migration for labor, local labor, and handicrafts.

Households explained that certain sources of income were much more profitable and reliable or lower risk than others. Their resources, such as household labor and funds, were limited so they would invest as much of these resources as they could in the strategy that was likely to give the most returns for their inputs. If this produced insufficient food or income and they had household manpower remaining, or they had urgent immediate cash needs, they would invest it in the next most profitable source of income. The least profitable sources of income were left for the most desperate times, or when they
had the most urgent need for cash, or to add a bit of a supplement to their income if they had some spare time and resources.

Agricultural production was considered the best return for input and effort, and though much reduced from the reference period, could still be done on a large scale. Inflation has raised the cost of purchasing food though the increase in the prices farmers receive for their production has not risen by nearly as much (partly due to increased taxation on transported goods and cost of transportation). This means that when a household lacks another source of cash at a particular moment and must sell grain for some cash need or to purchase other complementary food, they will lose on the exchange. Therefore, households strive to conserve as much of their harvest as possible. Animals were named as the next most profitable and desirable, but the risks associated with this income stream have all but eliminated it as a source of income. Trade, for those with capital to invest, was considered a steady source of income that was less vulnerable to natural shocks such as droughts or floods, but was more vulnerable to inflation.

Some income streams promoted by vocational training programs (such as tailoring or motorcycle mechanics) were profitable at first, but then quickly became too competitive. At that point, competition left too little opportunity or pushed prices too low. Many reported selling their tools and redirecting their limited labor to their primary income stream – agriculture.

We have much less information about changes in the strategies of the pastoralists in the study area. Those we spoke to did mention a shift in the composition of their herds from cattle to sheep. They mentioned that cattle are more likely to die during drought and require significantly more care than sheep. Sheep are easier to sell, especially in hard times when few people have the means to purchase a cow. They can also graze on a larger variety of plants. They said they still maintain camels, but the camels migrate in a separate herd while the cattle and sheep were grazed closer to the homestead all year, watched primarily by their children, starting at around age 10.

In summary, households described specific strategies for coping with shocks and recovering from them. These strategies were somewhat dependent on the assets and goals of each household, but also imposed on them by the profitability of different income streams, the ability to garner support from local institutions and infrastructure, and the risks of the current situation. These context-driven factors meant that most households had very similar strategies. A closer look at these strategies could help to understand better which factors might be promoted and which barriers might be lowered to promote a stronger recovery and build resilient livelihoods.
7. Analysis of the Taadoud Theory of Change

One of the objectives of this study is to “review the SHARP theory of change in the light of the context specific livelihoods resilience analysis”. The final presentation of the study’s findings will, in part, compare the Taadoud Theory of Change (ToC) to the current context and the target population’s perceptions about what is important to making their livelihoods resilient given the on-going situation and the continual shocks and stresses they are experiencing. This section will examine key assumptions and causal pathways within this ToC.

7.1 Presentation of the Theory of Change

A theory of change explains how certain actions or events will result in the Taadoud project outcomes. Below is the Taadoud ToC as presented in the Taadoud: Transition to Development proposal to SHARP:

The Taadoud consortium believes that by:

- Empowering communities and households with knowledge, skills and responsibilities;
- Strengthening the governance, representation and transparency of community structures;
- Reinforcing and complementing local government and private sector service provision; and
- Strengthening NGO institutional capacity to support community resilience

households will increase their agricultural and pastoral productivity; access financial services; increase market engagement; and increase their adoption of improved health, nutrition and hygiene practices. Greater nutrition and food security will enable community members to innovate and identify adaption strategies suitable to changing environmental conditions. At the same time, communities will reduce their collective risk to natural resource degradation and conflict over natural resources, identify, plan for and respond/adapt to shocks, and be better able to negotiate community access to government services. These results will make household livelihoods secure.

Figure 7.1 is an attempt to present this ToC as a flow diagram showing the causal relationships described in the above paragraph.

Each arrow represents an assumption that achieving the activities or outputs in one box will result in the outputs or outcomes in the following box. In this way, the activities conducted by the project will ripple through the intermediate outputs in boxes A to E, resulting in the outcome in box F, resilient household livelihoods.
Figure 7.1 Causal Relationships in the Taadoud ToC as presented in the Taadoud Proposal to DFID

7.2 The Role of Innovation in an Unstable System

Box A contains the immediate outputs of the project activities. The ToC assumes that achieving these outputs will increase production, returns on production, and utilization of food (Box B). This will then lead to better food security. The ToC then states, “Greater nutrition and food security will enable community members to innovate and identify adaption strategies suitable to changing environmental conditions.”

This order of events assumes that having good nutrition and food security will spontaneously result in innovations and adaptations. Or we may read this as stating that innovation and adaptation depend on first being food secure. If the situation were stable and long-standing, this would likely be the case – to grow from a point of stability would require change and therefore taking risks that are a luxury available only to those who are already food secure. The implied focus is on coping with future shocks and not with current or recent shocks from which the population is still reeling.

The current context, however, is one of instability and profound structural change to the livelihood systems. Past strategies are no longer sufficient to support the entire population, and simply attempting to expand them will not provide food security and may even increase risk of conflict. The order of these boxes therefore needs to be reversed; innovation and adaptation are required to reach a point of food security. New ideas and new opportunities are required, both to become food secure as well as to cope with future shocks.
The most profitable and most preferred income streams in this ecological system remain cultivation and animal husbandry. The limitations of the current on-going situation, though, means that a significant portion of the population are unable to sufficiently engage in these strategies to fully support themselves in a sustainable manner. Rather than becoming more resilient, many of their current strategies are increasing their exposure and sensitivity to future climatic shocks while also leaving less room for coping with future shocks. Innovation by engaging old strategies in new ways as well as in altogether new strategies is key to reaching food and nutrition security.

Although the statement quoted above was intended to address innovation and adaptation at the household level, it is equally relevant at the community level, and a link between Boxes D and E is also recommended.

7.3 Integrating Risk Reduction into Livelihood Strategies
Box B addresses production and utilization of produce while Box E addresses reducing collective risks as well as developing community-level strategies for mitigating or coping with them.

Box E activities are to be accomplished partly through the development of Community Action Groups (CAG) which will analyze the threats and hazards to the community, resulting in a Community Action Plan to address these threats and hazards. The project will fund key activities in this plan, to be carried out by the CAG. Another part of Box E will be accomplished through the ajawid as it negotiates conflicts over use of natural resources.

One of the lessons of the current study is that the primary way individual households reduce risk and adapt to shocks is through their production and earning strategies. For example, a household may avoid raising animals to reduce exposure to theft and loss of assets. This provides a critical, complementary link between Boxes B and E.

7.4 Necessary But Not Sufficient
Both resilience and livelihoods are complex, multifaceted concepts with multiple, simultaneously desired outcomes that may at times compete with each other. They are affected by all sorts of factors, some more than others. We need to consider this ToC as pointing out some of the key necessary elements in building resilient household livelihoods, but these changes alone may not produce that result.

Agro-pastoralist households in most of the Taadoud Scoping Study area report very significant limitations on their ability to engage in their two most promising, effective income streams – rainy season cultivation and animal husbandry. A 10% increase in production from the start of the project is a step in the right direction, as are the other outputs in Box B. These alone are insufficient to achieve the level of production necessary to make most households food secure. Furthermore, they will not provide the necessary surplus beyond consumption and immediate cash needs to allow households to rebuild stores to cushion against the dry years that are a normal part of climate variability, a key component of resilience in Darfur.

We must therefore understand that while the ToC identifies key points, there are many other factors necessary to achieve ‘resilient household livelihoods’. In other words, the activities of this program if
implemented as proposed will likely make households more food secure, less at risk from common
shocks, and more resilient, but there are other components beyond the scope of any humanitarian or
development platform that are preventing them from becoming fully resilient.

Households are entering this program from a very low point, with very unsustainable, insufficient and
unresilient livelihoods, while still feeling the effects of an on-going protracted crisis. The positive,
incremental changes proposed by this program will move the households in the right direction, but
cannot achieve sustainable livelihoods resilient to the most common shocks without outside assistance.
For the near future, they will remain somewhat vulnerable to shocks and even to the normal climate
variability of this region. To protect the achievements of this program as households struggle to build
new, more effective livelihood strategies in this new context, external assistance must continue to form
a part of resilience strategies in most of the Taadoud programming areas. This external assistance
would come in multiple forms, the most obvious being support for short-term needs to protect longer-
term gains for household food security and livelihood resilience.

But direct assistance to protect household food security must be complimented by locally driven,
positive transformations beyond project achievements that address the underlying issues which allowed
the situation to spiral out of control in the first place and continue to polarize the population. Without
profound transformations in the context, most especially in the relationships between two sections of
the population sharing resources, and relationships between communities and the government,
achievements in recovery and positive livelihood adaptations will be at increased risk of losing recent
gains. Boxes A and E begin to address this in a small way, but we must recognize that a much larger
transformational process is underway. For example, the Taadoud program is contributing to this
process by improving the capacities of the ajawids, but further support for enforcement of ajawid-
negotiated solutions is a work in progress.

Promoting joint discussions and facilitating community planning for project activities will allow both
groups to benefit from the shared management of these key resources; more importantly, it will help to
build skills and structures for increasing a common understanding and recognition of the needs of all
members of the community. For example, expanding dry season cultivation without taking into
consideration the needs of the animal herds that may depend on grazing near the wadis during the dry
season may increase conflict. But a planned expansion that includes representation from all those
sharing the wadi land may allow all to benefit, improving chances for the success of the activities while
simultaneously promoting these positive transformations.

7.5 Proposed Modified Theory of Change
While the ToC appears to be sound on the whole, the small alterations suggested above would result in
the following slightly altered ToC.
Box A
- Empowering communities and households with knowledge, skills and responsibilities
- Strengthening the governance, representation and transparency of community structures
- Reinforcing and complementing local government and private sector service provision
- Strengthening national NGO institutional capacity to support community resilience

Box B
Households increase:
- Agricultural and pastoral production
- Market engagement
- Adoption of improved health, nutrition and hygiene practices

Box C
Households have increased food security and nutrition

Box D
Community members innovate and identify adaptation strategies suitable to changing environmental conditions

Box E
Communities will:
- Reduce their collective risk to natural resource degradation and conflict over natural resources
- Identify, plan for and respond/adapt to shocks
- Be better able to negotiate community access to government services

Box F
Increase resilience of household livelihoods

Figure 7.5 Proposed Modified Diagram of Relationships in the Taadoud ToC
8. Discussion and Conclusions

This Scoping Study looked very closely at the agro-pastoralist livelihood systems in two neighboring localities, and how they have been affected by and adapted to prolonged change. A number of major points have emerged from this stage of the study. Each of these points will be used to inform and structure the final stage of this study as well as the full analysis to follow in the Final Report.

The duration of the current situation and its profound impact on the basic livelihood context has forced significant shifts in households’ asset portfolios resulting in adaptations to their livelihood strategies. Adaptation has been key to the survival and partial recovery of most households in the region. These adaptations are not small nuanced changes in a single income stream. Rather the adaptations involve the abandonment of key income streams, enlargement of previously minor income streams, and large shifts in dependence on an array of income streams that were once short-term coping strategies. They less effective and less sustainable than their previous primary income streams, thus reducing overall livelihood outcomes. The shifts among income streams are not random, but are chosen very strategically to maximize outcomes using their remaining available assets within the constraints of the circumstances of that moment. Households are not attempting to simply survive. They are also attempting to recover, to build a bit of cushion that will reduce their sensitivity to a continuous string of small and large shocks.

Prioritizing Income Streams
The potential earnings of alternate income streams and the risks associated with each are key factors in this adaptation. The community and livelihood maps of the agro-pastoralists clearly showed a major reduction in agricultural production and the near-complete loss of animal herding – the two activities that previously provided the majority of their food and income. Overall land available for cultivation has decreased as have yields on the land that remains. The reason these two income streams originally formed such a large part of these livelihood strategies is because they have the best returns on investment in this agro-ecological system. The lost income has been partially replaced through increased dependence on alternate streams of income in a fairly clear and consistent order of priority: (1) dry season cultivation; (2) trade; (3) collection and sale of firewood, grass and charcoal for women and migration for labor for men; (4) wage labor; (5) gifts; and (6) handicrafts. Production of major handicrafts such as tailoring, making grass mats, reed fencing and furniture form major strategies for a few households with particular skill sets, but is vulnerable to competition. Production of minor handicrafts like food covers and jewelry forms only a minor source of income with minimum returns and earning potential.

Costs of Diversification
Diversification of income streams is often considered a way to improve resilience. The logic is that different income streams are affected to different degrees by any given shock. Therefore, by having a variety of income streams, at least some of the income streams will be less affected by a shock and will be able to continue to support the household through the crisis. This assumes that current income is the heart of resilience - that households must continually depend on what they earn at that moment. While this may be true of some households or livelihood strategies, it ignores such insurance strategies as accumulated wealth (grain stores and animals) that can be sold to cover gaps in food or income created by a shock until the primary income strategies can resume. It also ignores the availability of
alternative income streams that can be engaged quickly when needed as another strategy. It is not necessary to be constantly engaged in these less profitable alternate strategies.

The preferred income streams provide higher returns on key investments than activities such as labor and are strategically suited to the local ecosystem. This is why they are preferred. Diverting resources to less productive income streams will reduce the overall productive potential of the livelihood strategy, which will in turn reduce outcomes during non-crisis times. Diversification beyond these primary strategies for the sake of reducing exposure or sensitivity therefore comes at a high cost. Strategies during the reference period instead focused on maximizing the output of primary strategies in good times to build up a buffer for hard years. When the buffer of grain exceeded the amount deemed necessary to cope with the scale of shocks that could be reasonably be expected, then the surplus was reinvested in the form of animals or to improve quality of life. This allowed households to maximize the return on their resources during the non-crisis periods.

This does not mean that there is no place for diversification in resilience. Adaptive capacity in the scoping study area demonstrated the need for a diversity of potential income streams and the ability to shift resources to engage in multiple strategies in a strategic manner. As the most preferred income streams were maxed out due to contextual limitations (e.g. lack of access to land, high risk of investing in animals), households shifted a portion of their remaining resources to the next most preferred income stream, and so on. As they begin to recover, they may continue with the less preferred income streams at first, but gradually shift their resources towards the higher return, more preferred streams.

The more potential strategies that are not in use, the more options households have when a shock hits. The more unused potential income streams they have at the higher end of the preference spectrum, the greater their ability to adapt during a crisis to meet minimum outcomes and to protect productive assets.

Currently, most households are already using a significant proportion of their resources (mainly household labor) in middle- to lower-return income streams because they cannot meet their needs with their limited engagement in the highest return income streams (agriculture and animal herding). When a shock hits, there will be few alternate income strategies available beyond those already in use. In other words, while they are highly dependent on these lower return sources of income, not only is their total income reduced, but they are also less resilient to potential shocks.

Sustainability

Adaptations in the form of shifting to low-return alternate income streams works well in the short-term, but is unsustainable in the long-term for two major reasons.

First, as a result of the unsustainable management of natural resources, which has contributed to degradation of soil systems associated with continuous intense cultivation and flash floods stripping topsoil away, in addition to excessive deforestation associated with the collection of firewood for resale. The increased intensity of cultivation on limited land is reducing its fertility. The unprecedented cutting of trees and grasses coupled with the increased intensity of cultivation of certain activities...
fields reduces the ability of the soil withstand wind/water erosion and to absorb water. The most drought-resistant fields near the wadis – a cushion against the shock of dry years – are among the few fields that are currently accessible but are vulnerable to flooding. Several villages have even relocated farther away from wadis due to this increased flooding, abandoning infrastructure like school buildings. As a result, the returns from villagers’ livelihoods are diminishing while their exposure to multiple shocks are increasing.

Second, as a result of the polarization between the villagers and other land users, particularly pastoralists, the villagers’ access to land and resources on the land is severely restricted, thus prompting further unsustainable land use practices. The villagers are also unable to prevent the regular seasonal destruction of crops by livestock. As a result, local tensions and grievances inevitably mount and work against establishing more conducive interactions – not least because of the inequitable distribution of power and arms in the areas. In essence, it appears that the villagers in particular suffer because of the lack of positive integration between themselves and the pastoralists. Given the current impasse, it is likely that the future resilience of both groups lies in the effective re-integration of agricultural and pastoralist systems in ways that promote mutual benefits for all producer groups. It will be important to identify positive examples of integration at village level upwards, and the positive ways in which these separate production systems interact and positively benefit each other.

In this region, the resilience of local livelihoods will continue to depend on its traditional backbone: the ability of households to engage in the primary activities of large-scale agricultural production and animal husbandry. Hence the sustainability of these activities is fundamental not only to the livelihoods of local groups, but also to the economic development of the region. Creating new value chains (like gum arabic or honey) and supporting new income streams associated with agriculture and livestock, will further enhance resilience and promote wider economic recovery.

References
Annex A – Interview Guide – Household Level

Introductions, explanations of the purpose and estimated time for the discussion (1 ½ to 2 hours).

Interviewers must first complete the consent process (use the appropriate consent form). If there are multiple adults from the selected household responding, for example both the wife and the husband, all adults should give consent individually.

If multiple adults from the selected household are participating, they should be encouraged to confer to give a joint answer. Be careful to ensure that they are indeed conferring and that one is not dominating the responses. If they appear to disagree when they confer, or if one person is dominating the responses, then record the answers separately, noting who gave which answer.

Location Code _____ - _____ - ______
Date _____ - _____ - 2015

Interviewer Identifier _____________
Household Identifier ______________

Total number of adults from the household participating in the interview: 1 2 3 4 5
How many male adults participating in the interview? 1 2 3 4 5
How many female adults participating in the interview? 1 2 3 4 5

1. Sources of income (about 15 minutes)

   a. Ask the interviewees to list their sources of food and income. As they name them, ask them to draw a simple picture to depict the source of food or income (if all interviewees present are literate, then they can simply write a word or two). If there are more than 5 sources, ask them to pick the 5 which provide the most benefit to the family.

   b. Give the interviewees 20 beans or pebbles and ask them to put the amount of beans on the pictures of the sources of food or income in proportion to the amount of benefit they receive now. Record how they distribute the beans or pebbles.

   c. Once the beans/pebbles have been placed, ask the following questions:

      c.2 “Think back to 2 years ago”
      c.2.1 “Which of these sources of income did you not have 2 years ago?
      c.2.2 Did you have sources of income 2 years ago that are not listed here? If so, when did you stop using them and why?”
      c.2.3 “Was the order of importance or benefit different 2 years ago? If so, what was the order then? (they can move the papers to show the order of importance)
      c.2.4 “What are the reasons for these changes?”

      c.3 “Think back even further”
      c.3.1 “Which of these sources of income did you not have 10 or 15 years ago?
      c.3.2 Did you have sources of income at that time that are not listed here? If so, when did you stop using them and why?”
      c.3.3 “Was the order of importance or benefit different at that time? If so, what was the order then?
      c.3.4 “What are the reasons for these changes?”
2. Environmental Effect Incidence and Severity Ratings (about 20 minutes)

   a. Ask the interviewees to name the changes or effects that have negatively affected their household in the past 3 years. As they name them, ask them to draw a simple picture to depict each change or effect, perhaps one picture per piece of paper.
   
   b. As they are drawing each picture, note the year of each effect and whether the effect affected just their household, or most of the households in their community.
   
   c. If there are more than 10 effects, ask them to select the 10 effects that had the biggest impact on the well-being of their families. Keep those selected in the center of the discussion space and put away (but keep) the others.
   
   d. Give the interviewees 50 beans or pebbles
   
   e. Ask the interviewees to put the pebbles on the pictures in proportion to how much they suffered from each effect, putting more beans on the effects that caused them more suffering and less on those that caused them less suffering. Record the answers.
   
   f. When the beans/pebbles are in place, ask the following question:
      
      f.1 “How did you suffer differently for each of the worst 5 effects?”
   
   g. Collect up the beans/pebbles and give them back to the interviewees. Ask them to put the number of pebbles onto the pictures of the effects in proportion to how long it took to recover, putting more beans on those effects that took longer and fewer on those that took less time to recover. Record the answers.
   
   g.1 “What made some effects take longer to recover from and others less time?”

3. Livelihood Diagram (about 20 minutes)

   Provide the simple standard version livelihood diagram of the most important source of income. As you explain the diagram, draw a picture for each item so that illiterate members will be able to participate. Ask them the following question:

   3.a. “How is the diagram different for your own household right now?”

   Modify the map to show these differences as they explain them. They can add elements, take elements out, and change the arrows between the elements. (Black ink)

   Ask them the following question:
   
   3.b “How were each of these diagrams different 2 years ago?
   
   3.c “10 or 15 years ago?”

4. Impacts of Effects (about 20 minutes)

   Place the livelihood diagram where everyone can see them as well as the pictures of the strongest effect and the pictures of the effect that took the longest to recover from. Ask the following questions. The responses may be different for each of the effects, so you will need to take note of which effect each response is referring to.

   a. Referring to the livelihood diagrams, ask:
a.1 “Which elements or arrows grew, became smaller, disappeared, or changed direction?”
(note on diagram)
a.2 “Did new elements or arrows appear or disappear during the effect?” If so, ask “What elements or arrow where they?”

b. “Which elements or arrows were the most important for you to use during each of these effects?”
c. “Which elements or arrows were the most important for you to recover after each of the effects?”
d. “Which changes were permanent?”
e. “Which changes were temporary?”
f. “Are there things you have or can do that helped you, but which many other people don’t?”
g. “and the opposite, are there things other people have or can do that helped them, but which you do not have or cannot do?”

5. Current wealth (about 2 minutes)
a. “How would you identify the wealth of your household (the ability of your household to get what they need) now, compared to most other households in your community?”

<table>
<thead>
<tr>
<th>Poor</th>
<th>Middle</th>
<th>Better off (compared with others)</th>
<th>no answer</th>
</tr>
</thead>
</table>

6. Changes in wealth (about 2 minutes)
a. “2 years ago, were you better off, poorer or the same?”
c. “10 or 15 years ago, were you better off, poorer or the same?”

Thank the participants for their participation
“Thank you very much for participating in this research exercise. We are not designing programs from this information, but we are asking the question so that we can understand your strategies and struggles better. We hope that the information you provided will help those people planning activities to be able to plan the activities that will be the most helpful to you. Now that we are finished with our questions to you, do you have any questions for us?”

7. Programming Options (team leaders only)

Explain the following again before continuing on to the questions in this section:
“We cannot make any promises about future programming. We are only doing research so that if the NGOs or the Government are able to do future programs, they will have your advice to consider.”

a. “Are there any services that are not available now but you would like to help you to do better during the next effect?”
b. “Are there any services that are not available now but you would like to help you to recover better from the next effect?”
c. “If you were given one gift of $100, how would you use it? Would it change the way you would respond to the next effect? If so, how?”
d. “If you were given a gift of $100 each month for 6 months, how would you use it? Would it change the way you would respond to the next effect? If so, how?”
Annex B - Interview Guide – Community Level

**Introductions, explanations of the purpose and estimated time for the discussion (1 ½ to 2 hours).**

**Interviewers must first complete the consent process (use the appropriate focus group consent form).**

The group should be encouraged to confer with each other to give a joint answer. Be careful to ensure that they are indeed conferring and that one is not dominating the responses. If they appear to disagree when they confer, or if one person is dominating the responses, then record the answers separately, noting who gave which answer.

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Location Code____-____-______     Date____-____-2015

Interviewer Identifier________________     Focus Group Identifier________________

Total number of people participating in the interview: 1 2 3 4 5 6 7 8 9 10 11 12 13 ___

How many men participating in the interview? 1 2 3 4 5 6 7 8 9 10 11 12 13 ___

How many women participating in the interview? 1 2 3 4 5 6 7 8 9 10 11 12 13 ___

Roles of Participants (why were they selected for the focus group?)

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1. **Effect Incidence and Severity Ratings** (about 20 minutes)

   a. Ask the interviewees to name the changes or environmental effects that have negatively affected their community in the last 10 or 15 years. As they name them, ask them to draw a simple picture to depict each change or effect, perhaps one picture per piece of paper.
   b. As they are drawing each picture, note the year of each effect
   c. If there are more than 10 effects, ask them to select the 10 effects that had the biggest impact on the well-being of many families in the community. Keep those effects selected in the center of the discussion space and put away (but keep) the others.
   d. Give the interviewees one pile of 50 beans or pebbles
   e. Ask the interviewees to discuss together and to put the pebbles on the pictures in proportion to how much the community suffered from each effect, putting more pebbles on the effects that caused them more suffering and fewer on those that caused them less suffering. Record the answers.
   f. When the beans/pebbles are in place, ask the following questions:

      f.1 “How did the community suffer differently for each of the effects?”
      f.2 “Which types of households suffered more from each type of effect?”

   g. Collect up the beans/pebbles and give them back to the interviewees. Ask them to put the number of pebbles onto the pictures of the effects in proportion to **how long it took to recover**, putting
more pebbles on those effects that took longer and fewer on those that took less time to recover. Record the answers.

g.1 “What made some effects take longer to recover from and others less time?”

2. Create a Community Map (about 20 minutes)

Ask the group to make a simple map on a sheet of flip-chart paper of the community and surrounding area as it is now, to show different services and resources that support their households and their livelihoods.

Ensure they include things like residential areas, farming areas, garden areas, grazing areas, markets, water sources, clinics, schools, major roads, animal migration corridors, and areas that may be used only seasonally. Include also things outside of the community, like other communities, major markets, seasonal distant grazing areas, etc. If part of the community is present only part of the year, add something to show where they go the rest of the year.

Keep this map in the center of the discussion space where everyone can see it and easily point to things on the map.

3. Impacts of Effects (about 20 minutes)

   a. “How was this map different 2 years ago? 10 or 15 years ago?”
   b. “How did this map change during each of the effects listed above?”
      - If they do not mention changes to markets and services, ask these questions:
        b.1 “How did the markets change during each of the effects? How long did these changes last?”
        b.2 “How did the availability, cost and quality of services change during each effect change?”
   c. “Did these changes increase your overall income after the effect, decrease it, or leave it about the same?”
   d. “Which changes made you more secure against the next effect?”
   e. “Which changes made you more vulnerable to the next effect?”

4. Coping with Recovering from Effects (about 10 minutes)

   a. “Which items on the map were the most important for the community to use during each of these effects?”
   b. “Which items were the most important for the community to protect during each of these effects?”
   c. “Which items were the most important for helping the community to recover after each of the effects?”
   d. “Are there things this community has or can do that helped you, but which other communities don’t have?”
   e. “and the opposite, are there things other communities have or can do that helped them, but which you do not have or cannot do?”
5. Changes in wealth (about 2 minutes)

   a. “2 years ago, was this community richer, poorer or the same?”
   b. “10 or 15 years ago?”

Thank the participants for their participation

“Thank you very much for participating in this research exercise. We are not designing programs from this information, but we are asking the question so that we can understand your strategies and struggles better. We hope that the information you provided will help those people planning activities to be able to plan the activities that will be the most helpful to you. Now that we are finished with our questions to you, do you have any questions for us?”

Programming Options (to be asked by the researcher only)

Explain the following again before continuing on to the questions in this section:

“We cannot make any promises about future programming. We are only doing research so that if the NGOs or the Government are able to do future programs, they will have your advice to consider.”

   a. “Are there any services or activities that are not available now but you would like to help you to do better during the next effect?”
   b. “Are there any services or activities that are not available now but you would like to help you to recover better from the next effect?”
   c. “If your community was given a budget of $10,000 (SDG equivalent) to help the community prepare for the next effect, how would you want to use it?”