

# Emergency Market Mapping and Analysis (EMMA)

## Report for the Abyei Crisis



20<sup>th</sup> – 28<sup>th</sup> June 2011



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## **Abbreviations and Acronyms**

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<b>EMMA</b>	Emergency Market Mapping and Analysis
<b>IDP</b>	Internally Displaced Person
<b>NGO</b>	Non-Governmental Organization
<b>NRC</b>	Norwegian Refugee Council
<b>SAF</b>	Sudan Armed Forces
<b>SPLA</b>	Sudan People's Liberation Army
<b>UN</b>	United Nations
<b>UNOCHA</b>	Office for the Coordination of Humanitarian Affairs

## Executive Summary

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Mercy Corps and Norwegian Refugee Council (NRC) conducted a joint Emergency Market Mapping and Analysis (EMMA) between June 20<sup>th</sup> and 28<sup>th</sup>. The assessment was organized as a response to the Abyei crisis and therefore focused on the areas of Agok (southern Abyei) and Twic County in Warrup State as well as the town of Wau in Western Bahr el Gazal State. The assessment also served as an important training for 18 members of staff with the objective of improving the organizations capacity for emergency response in South Sudan.

Three markets were chosen to be analyzed; okra seeds, iron roof sheets and metal for malodas (traditional hoes). Okra seeds were chosen because okra is the most commonly grown vegetable and the most nutritious item grown in the region; with many IDPs missing the key planting season understanding this market has the potential to help inform an intervention to promote food security. Iron roof sheets were selected because there has been interest amongst agencies of using them as an alternative means of shelter since grass, the traditional material used for roofing, is no longer available. Finally, malodas are a key farming input that all households with land use and by following the market chain through to raw materials the findings can provide recommendations for strengthening livelihoods in the target area.

It was clear from the beginning that though the Abyei crisis had created a humanitarian crisis (which was still to stabilize), it was not the primary disruption in the markets; the extended closure of trade roads from the north was. Therefore when interviewing traders the emphasis was on the changes that had come about as a result of these road closures and the maps reflect the situation before and after these closures.

The findings for each market will be detailed later in the report, but several key findings can be summarized:

- For both maloda metal sheets and okra seeds NGOs were found to be a key actor in the market chain, thereby preventing sustainable development of each market. One seed seller in Agok explicitly said that they do not stock okra seeds because NGOs distribute them every year. It is crucial for humanitarian agencies to move beyond distribution in order to grow and strengthen market systems.
- The closure of roads from Khartoum has had a catastrophic effect on all markets as many traders have nothing left to trade. In Wau some traders with a more varied supply chain are prospering, but many others are close to going out of business.
- In the target region, including Wau, there were few market linkages with East Africa with the expense of transportation and insecurity on the roads cited as the most common reason for the reluctance to explore supply lines from the south.

## Context

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Abyei is a relatively small area of land on the border between north and south Sudan and there are competing claims over ownership and access rights between Dinka Ngok and the Misseriya, a nomadic Arab tribe. Both south and north governments claim ownership of Abyei through these respective tribal claims and following the 2005 Comprehensive Peace Agreement the area was governed by joint administration formed in 2008.

Tensions began escalating following the referendum in the south in which the overwhelming majority voted for the south to declare independence from Sudan. A referendum was due to be held in Abyei at the same time in which voters would decide whether the area should join South Kordofan State in the north or Warrup State in the south. No agreement could be reached as to the eligibility of the Misseriya to take part in the referendum and so it was delayed indefinitely. The failure of the referendum heightened tensions in the region leading to frequent clashes between Dinka and Misseriya militias during the traditional migration period (November-May). As the date for South Sudan's independence moved closer, tensions increased as both sides suspected the other of planning to seize control of the area militarily.

On May 21<sup>st</sup> the Sudan Armed Forces, in response to an attack on their troops by the SPLA, mounted a large scale assault in the Abyei area, resulting in the occupation of Abyei town and the land north of the river Kiir. This led to the large scale displacement of most of the population of Abyei town and outlying areas into Twic County and to Agok in southern Abyei. Within 48 hours there was second displacement of people from Agok as fear spread of further SAF advances south, this resulted in a large proportion of residents in the Abyei Area being displaced initially into Twic County in Warrup State. The number of those displaced has been estimated to be 113,000 spread throughout Warrup State, Northern Bahr el Gazal and Wau.<sup>1</sup>

At the time that this EMMA was conducted (June 20<sup>th</sup> – 28<sup>th</sup>) the population movement had not yet stabilized. There were increasing numbers of displaced people returning to Agok, primarily those from Agok or with family in Agok and the surrounding area. There was also evidence of some limited movements of people going further from the region, particularly to Wau. During the EMMA period a peace deal was also reached between the two sides in which SAF forces agreed to withdraw and Ethiopian troops would be deployed as peacekeepers in the Abyei area, this was authorized by the UN on June 27<sup>th</sup>. Despite this peace agreement, it remains unclear what proportion of the population will return to Abyei the Abyei area and particularly Abyei town which has been looted and burned for the second time in 3 years.

The international humanitarian community has sought to respond to the needs of this large displaced community through a prioritization of distribution of NFIs and food. The response has been complicated by the ongoing population movements but in Warrup State WFP has been able to provide short term (2-4 weeks) rations to over 90,000 people displaced from Abyei. Tensions have been reported between the Abyei communities and their host communities who were already in an extremely vulnerable position prior to the crisis (see below). Despite the crisis the markets have continued to function on a limited scale and with very high prices, Agok market has been particularly resilient, in part because of opportunistic traders coming to seek higher prices.

In addition to the current displacement there was also a recent influx of returnees from northern Sudan throughout the south, most of these returnees received some government

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<sup>1</sup> OCHA Situation Report No. 13 16/06/11

assistance to return and started arriving from October 2010 onwards. As of early July, the total numbers of returnees to South Sudan since October was estimated by UNOCHA to be 315,000. Twic County received one of the highest proportions of returnees, over 15,000 by February 2011.<sup>2</sup> This meant that Twic County was already struggling to accommodate a large increase in the population, many of whom were extremely vulnerable. Community relations with returnees have been observed to be positive but there has been increased stress on resources such as food and water. The Abyei crisis has created a second larger wave of population movement into Twic County, any response must take into account the complexity of the host population which includes returnees and the necessity of addressing the needs of all those in this county.

Abyei also received a large number of returnees, 37,000 were recorded as having returned by May 2011, swelling the total population of the area to an estimated 130,000. Many of these returnees were struggling to establish themselves in Abyei town and outlying areas, the May crisis and displacement has compounded their vulnerability.

The closures has a quick impact on Abyei as the road through Abyei was a key supply route to regional hubs such as Wau, meaning that traders in Abyei purchased direct from the trucks coming south from Khartoum. In terms of mapping changes in the markets, the road closures is the crisis against which changes from before and after are measured.

In addition to the recent displacement, in the midst of the traditional lean season (May-August), the North has blocked trade routes with over 3000 trucks currently waiting to head South. Livelihoods in northern and southern Sudan have traditionally been strongly linked, particularly in border areas where trade, cultivation, fishing, transhumant movement, and migration for labor take place. The interaction between different livelihood zones in the north and south has resulted in a high level of dependency among communities. Northern Sudan typically supports food availability in the south through the sale of key food commodities (sorghum, wheat flour, wheat grain, and fuel), and provides profitable marketing opportunities to the producers and traders in the north.

Cereal prices in the southern Sudan markets that are heavily supplied from northern Sudan are significantly above average. In Wau, a market for northern Sudanese goods, prices are 35 percent above the five-year (2006-2010) average. In the medium term, a sustained trade blockade will have serious food security implications particularly in Upper Nile and Unity states that exclusively rely on northern Sudan markets, followed by Warrap and Northern Bahr El Gazal states. Food prices in Abyei also increased dramatically and a wide range of commodities disappeared from the market as traders struggled to find alternative supply routes.

This EMMA therefore looked at the feasibility of market based interventions to assist with improving food security and access to shelter.

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<sup>2</sup> UN OCHA

# Methodology

The EMMA is a rapid market assessment used following the onset of a sudden crisis, usually within 2-3 weeks when there has been some stabilization of the situation. Its purpose is to increase understanding of the most critical markets amongst responding agencies and donors and to assist in informing response activities that work with the market. The process follows a standard 10 step procedure (see Annex I) during which target locations, groups and critical markets are identified. This is followed by the data collection which is designed based on the initial findings, the final steps deal with the data analysis and development of recommendations. More information on the EMMA methodology can be found at <http://emma-toolkit.org/>



This EMMA was conducted jointly by Mercy Corps and Norwegian Refugee Council (NRC) but it also served as a staff training and an important element of building each organizations capacity to respond to various future emergencies in South Sudan. This particular EMMA also consciously veered from the standard approach by choosing to look at markets that would rebuild livelihoods in the medium term as well as responding to immediate needs.

Data was collected between the 23<sup>rd</sup> and 25<sup>th</sup> of June by four teams covering Wunroc, Turalei, Agok and Wau (see OCHA map below). The table below provides an overview of the amount of data collected. Prior to the data collection 12 Mercy Corps staff and 6 NRC staff received training in the first steps of the EMMA process, this included the selection of critical markets. There was then an additional two days of training after data collection in which results were shared and recommendations discussed.

	<b>Agok</b>	<b>Wunroc</b>	<b>Turalei</b>	<b>Wau</b>
<b>Households living in the open/not hosted</b>	20	21	26	21
<b>Households staying with family</b>	10	11	20	10
<b>Host community households</b>	10	11	9	10
<b>Seed Traders</b>	2	0	1	1
<b>Hardware Traders</b>	4	2	1	10 (3 in Kuajok)
<b>Blacksmiths</b>	3	3	1	7 (1 in Kuajok)

Although this EMMA was organized in response to the Abyei crisis it was clear from the start that the crisis would have had little or no impact on regional trading areas such as Juba and Wau. Yet there is a second ongoing crisis that is having a profound effect on markets across South Sudan – the closure of roads from the north. This closure, combined with independence, has created a period of difficulty for many traders but also opportunities to seek new trade routes. Given this, the market surveys focused on analyzing the situation prior to the closure of roads

(January onwards, to varying degrees) compared to now when the roads have been closed for a considerable period of time.

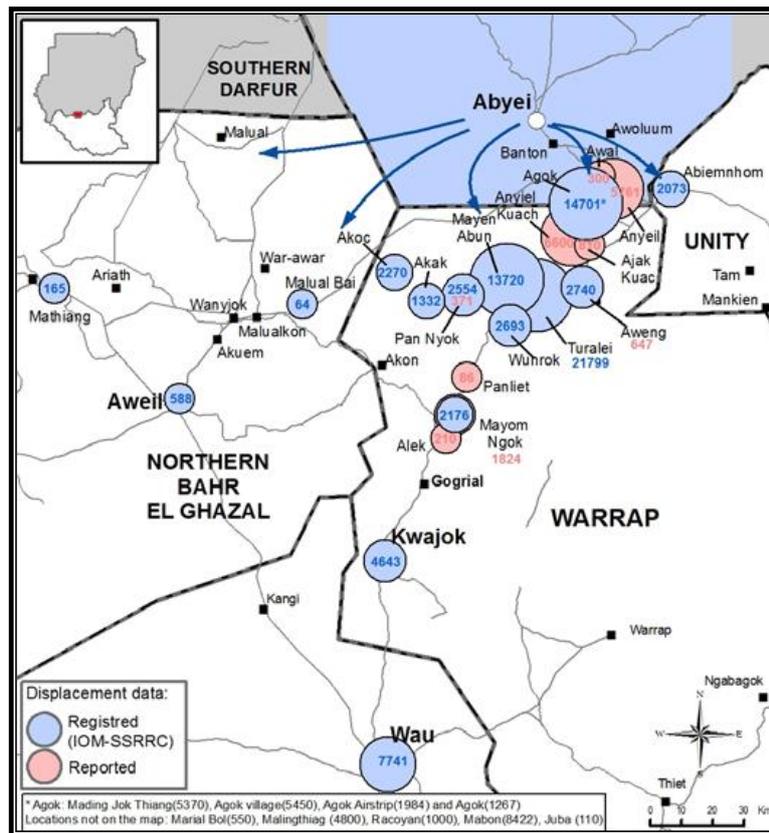
The use of the word crisis in the maps below therefore refers the closure of roads from the north, as this represents the crisis which is having the greatest affect on traders.

### **Limitations**

- The movement of people had not yet stabilized making it difficult to identify target groups and the most relevant market chains. The instability of the region also resulted in the cancellation of one day of data collection in Turalei as the town was attacked and briefly occupied by militias.
- Markets had also not yet fully stabilized from both the shock of the Abyei crisis and particularly the ongoing road closures. With independence just a few weeks away, the issue of roads closures had not been resolved and it is unclear when they will reopen. Market traders in Wau were confident of them reopening, but many of them will be unable to trade for much longer unless they do. This instability in the markets means that recommendations are very dependent on what happens next with these trade routes from the north.
- By focusing on training and capacity building the period for data collection was reduced, meaning that 5 days were used for training and 3 days for data collection.
- The team that was selected for training had a varied range of capacity which at times slowed the process down to ensure all participants understood the methodology. The emphasis on broad participation of a large team had the effect of slowing the process down when compared with an EMMA that is conducted by a small and focused group.

## Target Area and Groups

The map<sup>3</sup> below provides the most up to date figures and locations of displaced people from the Abyei area at the time of the EMMA. It is clear that the displacement has had the greatest impact in Twic County, in northern Warrap as well as an ongoing strain in the very southern area of Abyei around Agok. The EMMA was therefore focused on analyzing markets related to the population in southern Abyei and Twic County with a view to developing recommended interventions that will directly benefit these geographical areas.



Source: UN

Through extensive discussions with the team it was noted that many returnee's to Abyei were north of the river and were already viewed as particularly vulnerable within the general Abyei population and that this had been further compounded by their displacement during the crisis. Many of these Abyei returnees are in Twic County with very limited resources or unclear options for returning to Abyei.

In previous violent clashes in the Abyei area it was noted by various agencies that many people had coping mechanisms in place, most commonly people from north of the river Kiir would have family or even an extra tukul in Agok which they could use in an emergency. These coping mechanisms relied on Agok remaining secure, but in the recent crisis concerns that SAF were moving south lead to a mass exodus from Agok into Twic County and the surrounding bush, and therefore many peoples coping mechanisms failed.

<sup>3</sup> UN OCHA Situation Report No.13 (June 16th 2011)

The result is that large numbers of IDPs from the Abyei, and particularly the area north of the Kiir River, are without shelter in Twic County or are sleeping in overcrowded conditions in Agok. With the onset of the rainy season many of these households face dire conditions and so **displaced households without shelter in Twic and southern Abyei** were identified as the first target group. Of the 138 IDP households interviewed, just over 80% were found to have no source of income, the rate was highest amongst those in Twic County and Wau. Most also reported decreases in expenditure as they had no money to spend or could no longer afford many items, instead becoming reliant on distributions by aid agencies.

There has been evidence that many people with existing coping mechanisms in Agok have started to return as they are without shelter in Warrap State. For those returning, they have missed the key weeks for the planting season and there is a risk of significant food shortages as a result. The sudden arrival of tens of thousands of displaced people from Abyei has had a significant impact on the host community in Twic County. Many host community families took in displaced relations (there is a very strong culture of sharing within Dinka tribes) which put a greater strain on household incomes and expenditures. In Wunroc and Turalei every host households that were interviewed reported an increase in expenditure, on average 42% due to increasing prices and the need for larger quantities of food. As people return to Agok there is the potential that those people will in turn become a host community for people from north of the Kiir. These issues combined meant that the team identified those **host community households (primarily in Twic County) and displaced households with access to agricultural land (South Abyei and Twic County)** as the second target group.



## Critical Market Selection

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In preparation for the EMMA Mercy Corps and NRC discussed possible markets for study based upon each organizations existing knowledge and areas of possible response. The final choice was made by following Step 2 as part of the EMMA training with the involvement of all participants. This involved brainstorming the existing needs based on knowledge at that time as well as both NRC and Mercy Corps strengths and mandates in terms of response abilities. Therefore the criteria for selection were:

- 1) Priority needs of IDPs and host communities
- 2) Items with pre-existing markets in the region
- 3) Mandate of participating organizations

Three items were identified; iron sheets primarily to explore the possibility of their use in an emergency response, as well as two farm input items that are important to the host community and to IDPs when they begin returning to Abyei.

### **Rationale for Selection of Iron Roof Sheets Market System**

Shelter was quickly identified as a key pressing need amongst IDPs as many are living under plastic sheets or trees as the rainy season gets underway. Due to the timing of the crisis, there is no longer grass available that is traditionally used for shelter. NGOs have been distributing plastic sheets on a large scale (14,500 NFI kits including plastic sheets have been distributed, meaning 82% of registered IDPs have received NFIs) and there has been interest from some agencies in using iron sheets to provide more durable shelter solutions as well as latrines for displaced populations. In addition, iron sheets are needed by NGOs and the government for various infrastructure projects.

### **Rationale of Selection of Metal Sheets for Maloda's Market System**

During extensive discussion of agricultural needs of both IDPs and host communities, traditional hoes - *maloda* - were identified as a regular basic need. NGOs distribute East African hoes which are often disliked by beneficiaries and so they take them to local blacksmiths to be reshaped at a slightly lower price to purchasing them (10SDG instead of 15SDG). This suggests that often households have the purchasing power for maloda's because they are valued for subsistence agriculture, especially since NGO often only distribute one maloda per household but it is common for each member of a household to have a maloda.

Previous Mercy Corps projects in Twic had sought to work with blacksmiths but one of the challenges faced was access to raw materials. The focus of this market chain was therefore the raw materials that are used to make maloda's. Analyzing this market chain therefore has the potential to lead to recommendations for both food security and livelihoods in the target areas in the longer term rather than as an emergency response.

### **Rationale of Selection of Okra Seeds Market System**

Okra seeds were chosen with a target beneficiary group of households with access to agricultural land, including host communities and returning IDPs. Okra is normally grown on a small scale, and at times in pots, therefore it also offers an opportunity to be grown by those staying in camps if they are provided with pots. Like maloda's, this market analysis would inform longer term programming rather than emergency response.

Okra is the most common vegetable to be traditionally grown in the target region and has been the focus for many NGOs working on food security because of its nutritional value. It can be grown year round but is traditionally only grown at the same time as staple crops on a small household scale. The seasonal calendar below shows the upcoming year from the crisis May, it shows that the current period of the crisis (May and June) is a vital period for planting and coincides with an annual hunger gap in the region.

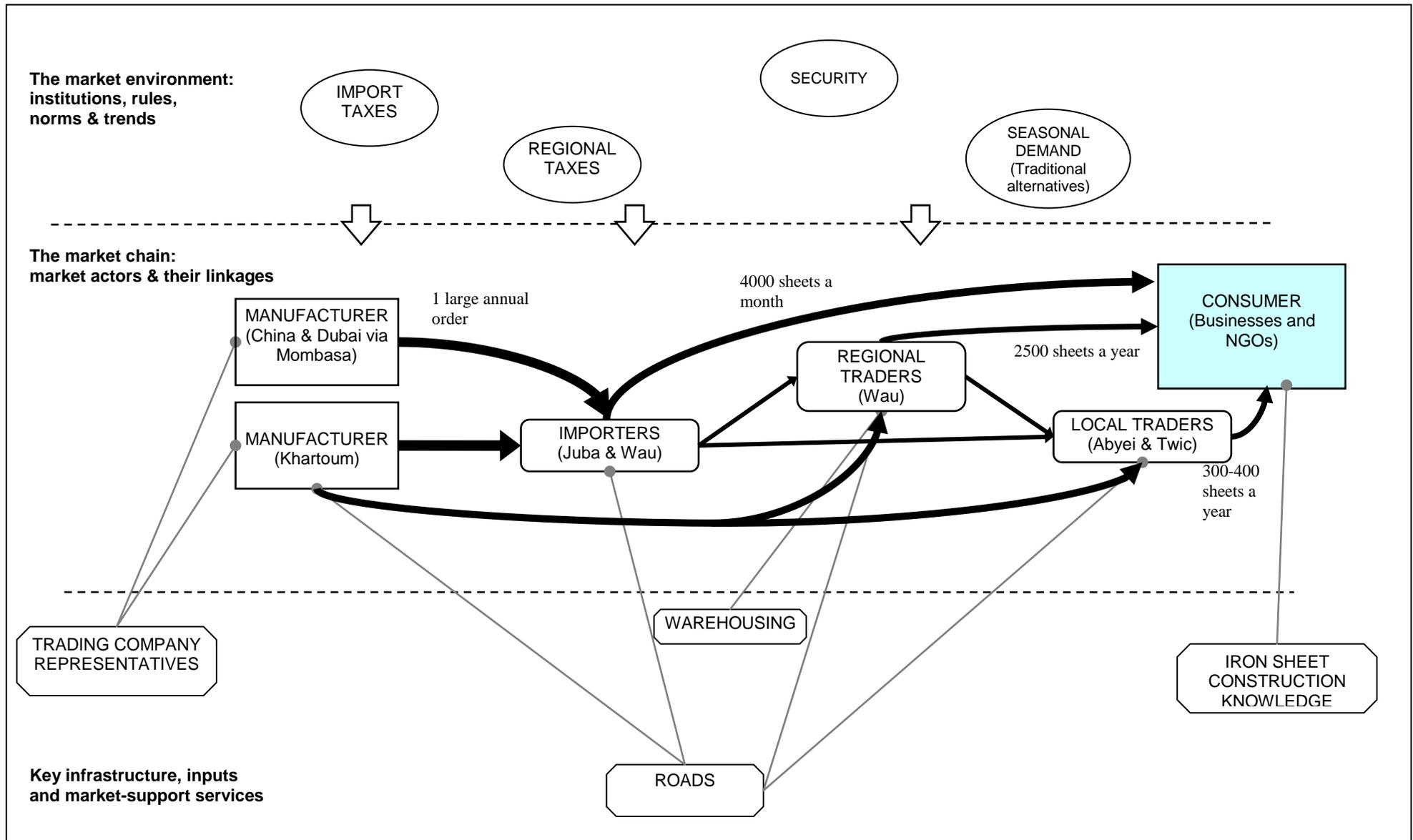
NGOs in Twic County and Abyei have been working on encouraging farmers to plant okra in the dry season, this requires significant behavioral change. If IDPs do begin returning to the areas north and south of the Kiir river then it is likely that they will require additional seeds to make up for missing the first sorghum planting period.

Another reason for interest in this market was that NGOs have been regularly distributing okra seeds in the target area for a number of years; to shift to a market based approach NGOs need to understand if there is a suitable supply chain to bring them to local markets rather than NGOs distributing them year after year.

### Seasonal Calendar – Twic County & Abyei

	M	J	J	A	S	O	N	D	J	F	M	A
Rains	[Blue bar]											
Planting	Sorghum (Large)				Sorghum (Small)							
		Okra			Okra							
Harvesting			Sorghum			Sorghum						
			Okra			Okra						
Food Purchases	HIGHEST DEMAND						LOWEST DEMAND					
Hunger Gap		HUNGER GAP										
Prices	HIGH				LOW				MODERATE		HIGH	
Roads		Very poor/impassable						Adequate				

# Iron Roof Sheet Market-system Map Before the Crisis



## Key Features of Iron Roof Sheets Map: Actors and Market Features

**Manufacturer:** this actor produces iron sheets and supplies the finished product to hardware stores in Wau. They have been split into two geographical locations (China/Dubai and Khartoum) because they act in a different way and have therefore been affected in different ways by the ongoing crisis.

The manufacturers in Khartoum do not arrange transport of good to Wau; instead those buying from Khartoum must store the goods in Khartoum and organize transport themselves. The iron sheets brought in from China and Dubai come through Mombasa before being transported by road to Wau.

**Importers:** this actor represents large hardware stores in Wau and Juba who operate on a large scale by bringing in directly from as far as Dubai and China via Mombasa. These importers also have their own representatives in these locations negotiating deals and ensuring quality. Typically they only make one large order through China/Dubai a year and then more frequent smaller orders from Khartoum. These traders sell to other traders and also direct to customers such as NGOs.

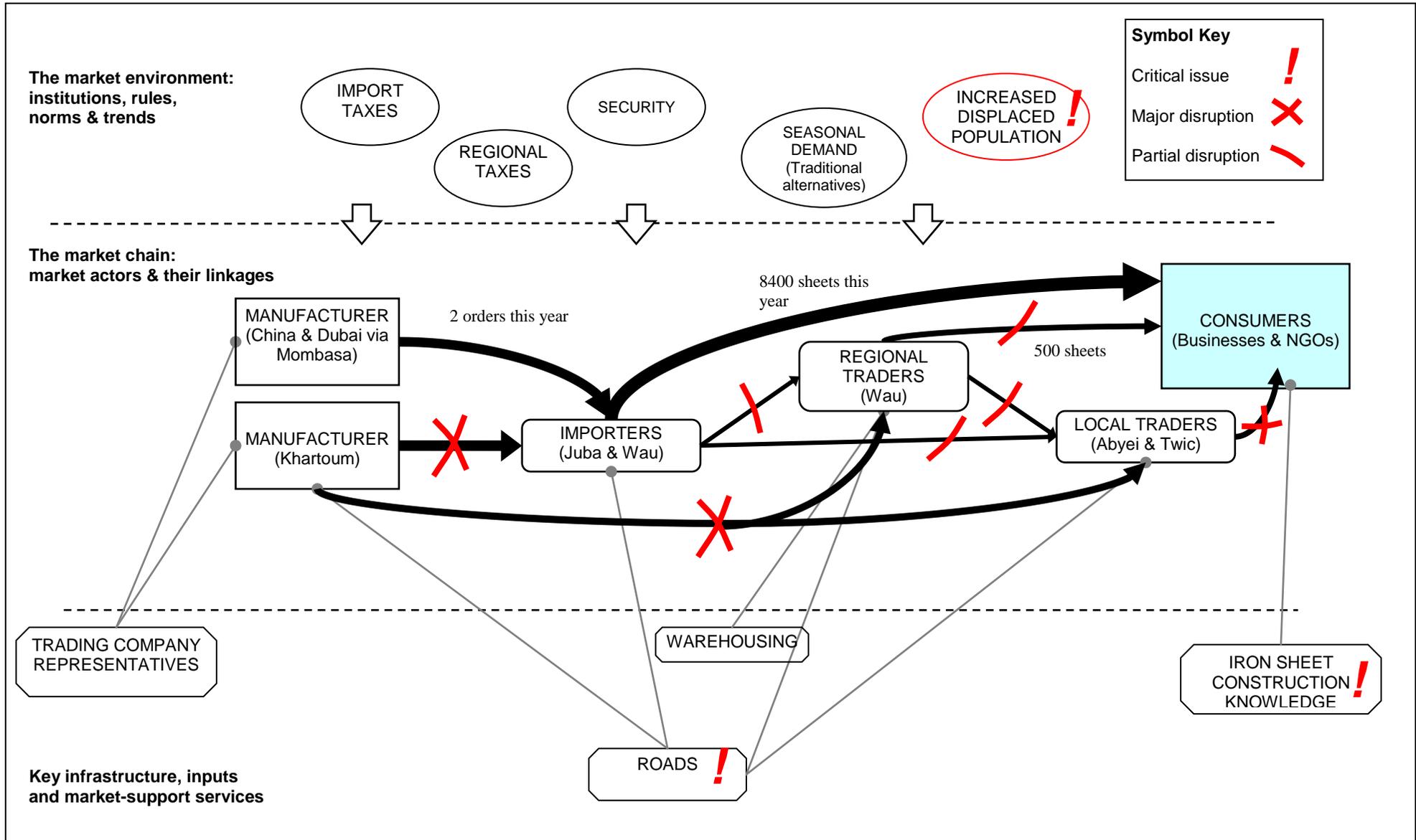
**Regional Traders:** these traders buy and sell iron sheets but on a smaller scale compared to importers. They either buy directly from manufacturers in Khartoum or from importers in Wau. They also sell direct to customers as well as to smaller local traders. They tend to carry more affordable types of iron sheets and sell to clients with fewer resources.



**Local Traders:** these are small scale traders in local markets in the target areas, they sometimes stock iron sheets but usually buy them when there are specific orders.

**Customers:** these are predominately businesses and NGOs and the government who purchase iron sheeting for construction. They purchase from a variety of retailers depending on the quantities needed, including locally when it is available.

# Iron Roof Sheet Market-system Map After the Crisis



## Key Features of Iron Sheet Map After the Crisis

### *Supply Lines From Khartoum*

The closure of roads from Khartoum has completely cut the supply chain from Khartoum to importers, regional traders and local traders. Many regional traders have iron sheets stocked in their warehouses in Khartoum but are unable to transport it, creating frustration and worry because they have money tied up in inventory and therefore lack capital to source from other possible locations.

For importers, the closure of northern roads has resulted in them bringing in a second order from China and Dubai (represented on the map by an increase in the thickness of the line connecting the actors). The assessment found that demand for these iron sheets has increased four fold since the roads closed. The largest trader in Wau, Drup Engineering, reported significant increase in sales of iron sheets as other traders have run out but the demand from businesses and NGOs remains steady. These iron sheets from China and Dubai are more expensive and so fewer regional and local traders are able or willing to purchase these iron sheets from importers, meaning that this line is partially disrupted.

Regional traders have a slowly depleting stock of iron sheets and most are reluctant to look for alternative supply routes because they believe the roads Khartoum will reopen soon. When asked about the alternative of procuring iron sheets from Uganda the consensus from all respondents was that these iron sheets were of an inferior quality and are therefore not in demand.

Local traders in the target areas now have no stock of iron sheets and their ability to restock from Wau is lessened by problems in transportation such as high fuel costs and the onset of the rainy season making roads difficult to travel on. No iron sheets could be found in Agok, Turalei, Wunroc or Kuajok though traders who had previously sold them were interviewed and cited road closures as the key reason for their inability to stock them.

### *Household Demand*

The demand for iron sheets for construction of household shelter remains unclear but given that there is no grass for traditional shelter construction several humanitarian agencies are interested in looking into as an option. Aside from demand issues a major obstacle is lack the technical capacity to build with iron sheets as well as the availability of other components necessary for a shelter, such as long poles.

## Response Options

<b>Activity:</b>	<b>Vouchers to households to purchase iron sheets from local traders</b>
<b>Advantages:</b>	Keeps NGOs from being an actor in the market chain  Promotes the market chain down to local level which will benefit the local economy
<b>Disadvantages /Risks:</b>	Difficulty in identifying beneficiaries due to ongoing movements in IDP and returnee populations  Danger of creating tensions and conflict between communities

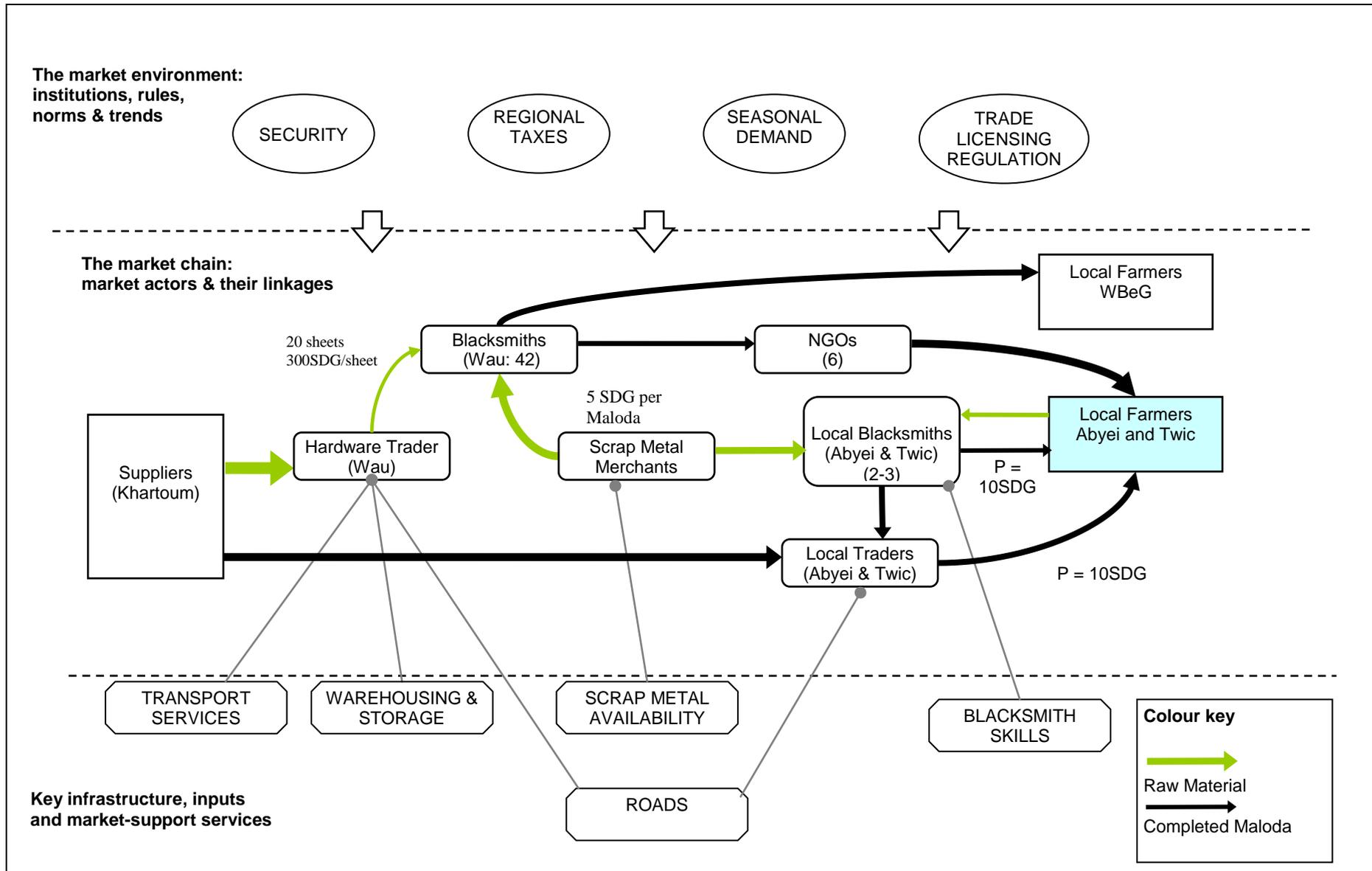
	Beneficiaries lack the technical knowledge to build with iron sheets More than just iron sheets are needed for any construction
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	Quick to set up as long as local traders have the supplies 1-4 months to implement

<b>Activity:</b>	<b>Loans to traders to enable procurement of iron sheets from importers in Wau</b>
<b>Advantages:</b>	Promotes bringing the item to local markets Will lower the cost of iron sheets in local markets
<b>Disadvantages /Risks:</b>	Difficulty in NGOs dispersing and managing loans, preference for a local bank to play this role but none are present in target locations Risk of delays due to transportation issues such as poor road conditions or insecurity
<b>Feasibility:</b>	Low
<b>Timescale:</b>	May take longer to set up and timing dependant on repayment options 3-6 months to implement

<b>Activity:</b>	<b>Construction of storage warehouses for local traders</b>
<b>Advantages:</b>	Ensures local traders can increase supply to meet increased demand Reduces transportation issues as traders can make larger orders
<b>Disadvantages /Risks:</b>	Traders might not use the warehouses for iron sheets May create resentment between traders Only effective if traders have the financial capacity to make large orders to fill the warehouses
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	2-4 months

<b>Activity:</b>	<b>Transportation services for traders</b>
<b>Advantages:</b>	Reduces transportation costs and therefore market prices
<b>Disadvantages /Risks:</b>	Problems with roads, especially in the rainy season may be prohibitive Risk of having a negative impact on existing transporters unless carefully managed
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	Can begin quickly if negotiated with existing transport companies 2-3 months

# Maloda Metal Sheet Market-system Map Before the Crisis



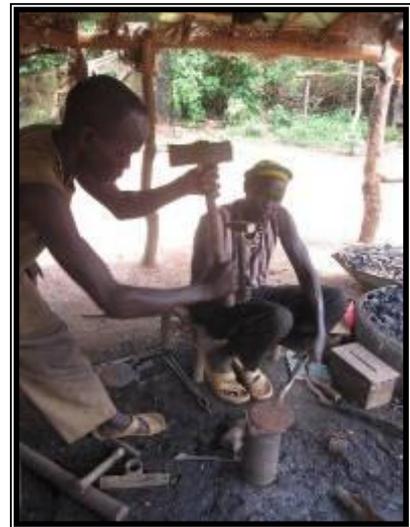
## Key Features of Maloda Metal Map: Actors and Market Features

**Suppliers:** this refers to those who provide both the raw materials and finished products from Khartoum. For simplicity these are combined on the map as the details of how they are produced in Khartoum is not relevant for this analysis which is focusing on the market chain in South Sudan.

**Hardware Trader:** These are retailers who stock metal items and on the market chain this term specifically refers to those traders in Wau. Although there is a large number of these types of traders in Wau only one trader was found to stock the new metal sheets needed by blacksmiths, these were sourced exclusively from Khartoum and, prior to the crisis, only sold in small scale to local blacksmiths in Wau.

**Blacksmiths in Wau:** These blacksmiths are concentrated in two areas of Wau and operate individually and as a cooperative. Prior to the crisis they predominately made malodas from scrap metal with only a small amount of new metal being sourced from hardware traders in Wau.

**NGOs:** EMMA methodology stipulates that NGOs should not appear as actors in the market chain but with this item there is no way of ignoring the fact that NGOs are a key actor in the distribution of tools including maloda's year on year. The majority of NGO hoes are sourced from East Africa and often viewed as inferior and so beneficiaries take them to blacksmiths to be remolded into malodas. It was also reported that when NGOs distribute actual maloda's these are also seen as being of poor quality. There are however several NGOs who do source from the blacksmiths in Wau and therefore this is represented by a thin line on market chain.



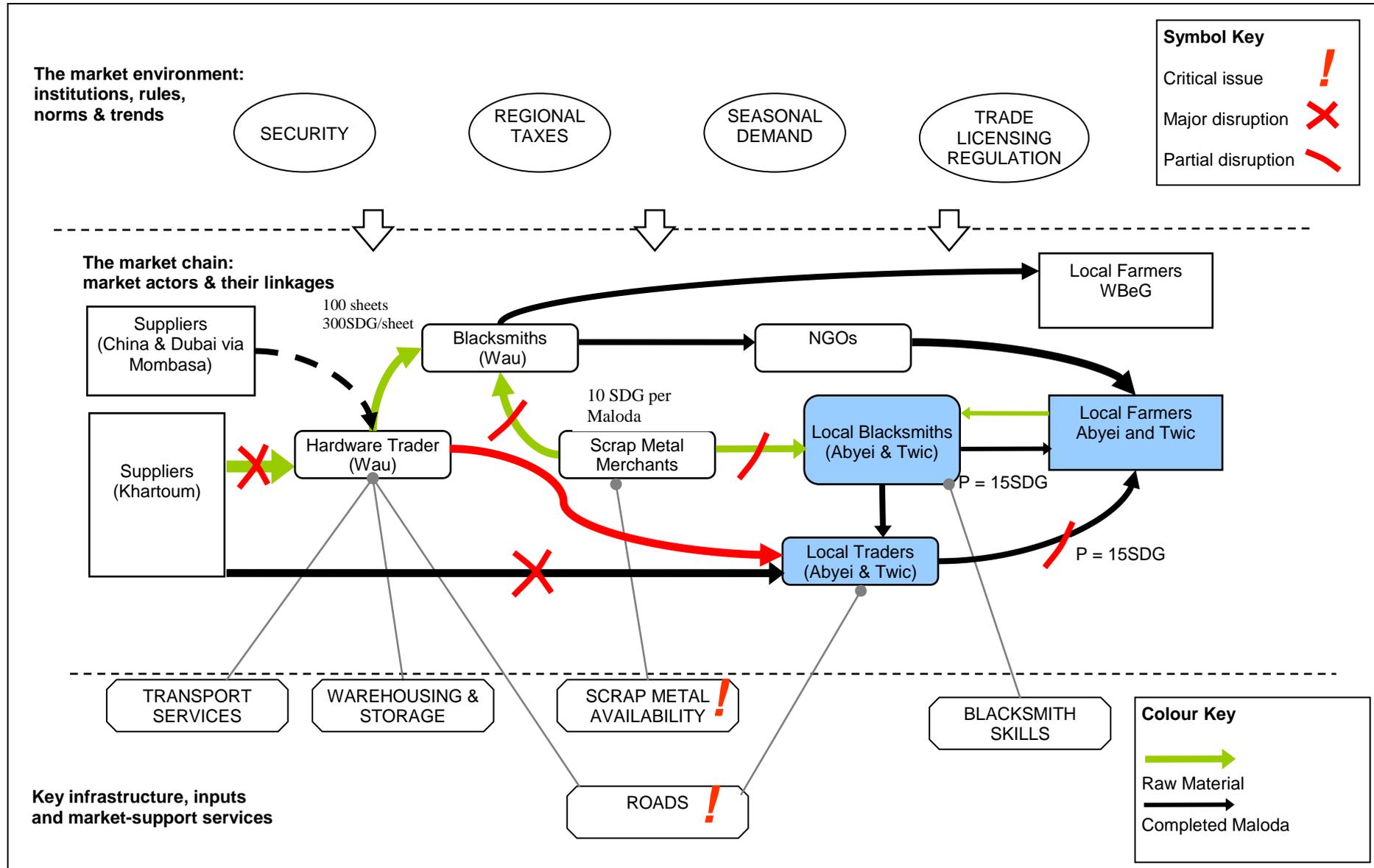
**Scrap Metal Merchants:** This refers to those selling scrap metals both formally and informally in Wau and the target areas. For blacksmiths in both locations this was the main source of raw materials prior to the crisis.

**Local Traders:** these are traders in the target locations who sell metal hardware on a small scale. Prior to the crisis these traders bought finished maloda's from trucks coming from Khartoum through the Abyei road as well as limited numbers from local blacksmiths. They do not stock the new metal sheets since they haven't experienced a demand from local blacksmiths.

**Local Blacksmiths:** these are blacksmiths operating in the target areas, they are not organized into cooperatives and rely solely on scrap metal to produce new maloda's, and this comes from both scrap metal merchants as well as local farmers. Some of these blacksmiths also don't have the skills to make malodas from raw materials, and only serve farmers in sharpening.

**Local Farmers:** This refers to farmers within the vicinity of blacksmiths and local traders. The target group for this analysis was farmers in Abyei and Twic County.

# Maloda Metal Sheet Market-system Map After the Crisis



## Key Features of Maloda Metal Map After the Crisis

The assessment found that demand for malodas has remained steady as it is such a basic necessity for farming. Prior to the crisis it was common for farmers to provide scrap metal to blacksmiths which they would then make into a maloda (this is including the east African hoes distributed by NGOs). It was also found that it is common to have one maloda per household member as all members are expected to work on the land during planting season. NGO distributions rarely take this in to account meaning that most households regularly purchase new malodas in the lead up to the planting season. The assessment therefore found that though a significant number of malodas are distributed by NGOs there continues to be a market for malodas in the target areas.

### *Scrap Metal*

Scrap metal was the primary raw material used by blacksmiths in the target areas and in Wau due to its availability and price. A common finding from discussions with blacksmiths in all locations was that there was a diminishing availability of scrap metal. It is unclear if prices have gone up, but many blacksmiths report that scrap metal is being kept and taken to Khartoum where it gets a higher price. This means that blacksmiths in Wau are increasingly using new metal sheets from hardware traders, thereby increasing the demand, but in Twic County and Abyei there is no access to this raw material.

### *Supply Lines from Khartoum*

There have been considerable changes in the market system brought about by both the closure of roads from Khartoum as well as increase in prices of scrap metal. The closure of roads from Khartoum has effectively cut off the supply route for metal sheets. Only one vendor was found to stock these metal sheets in Wau and reported increased demand from blacksmiths. This vendor still had stock but was unable to restock due to road closures.

However, the after map includes a new actor in the form of suppliers from China and Dubai; a dotted line is used to represent their relationship with hardware traders because they supply other goods. This means that the trade link exists and the possibility exists of procuring new metal sheets from China rather than Khartoum if the roads remain closed.

In addition, local traders in Abyei and Twic who bought finished maloda's from Khartoum have had their supply lines completely cut off. This has meant that a new supply route has emerged (represented by the red arrow) in which local traders are purchasing limited amounts of maloda's from Wau, sometimes via Kuajok in Warrup State.

Prices have generally increased for the finished maloda's (10SDG to 15SDG) due to increase in transport costs and scrap metal. The new metal sheets have not increased in price because they were transported to Wau before the crisis but any new stock are likely to be more expensive because of the increase in transport costs and fuel.

## Response Options

In order to make the market function better priority should be given to removing NGOs as a market actor. This is a difficult task given the significant aid dependency that exists in the target area and would require coordination between NGOs and the support of donors. The fact that many beneficiaries who receive maloda's then pay to have them remolded, and their inexpensive price to buy new, suggests that many recipients may have the means of purchasing their own maloda's. Indeed many already do as usually every member of a household has a maloda but this is often not reflected in standardized distributions.

There is a general agreement amongst agricultural experts that malodas are not the most effective tool for farming and that yields, and therefore food security, could be increased by encouraging

people to adopt new methods. This is an important goal for NGOs engaged in agriculture, but moving people from malodas to East African hoes or ox ploughs requires considerable behavioral change which takes a number of seasons. It is therefore advisable that any response to strengthen the maloda market should also include activities that seek to create this necessary behavioral change since the strengthening of the blacksmith market chain is relevant to many other farm inputs.

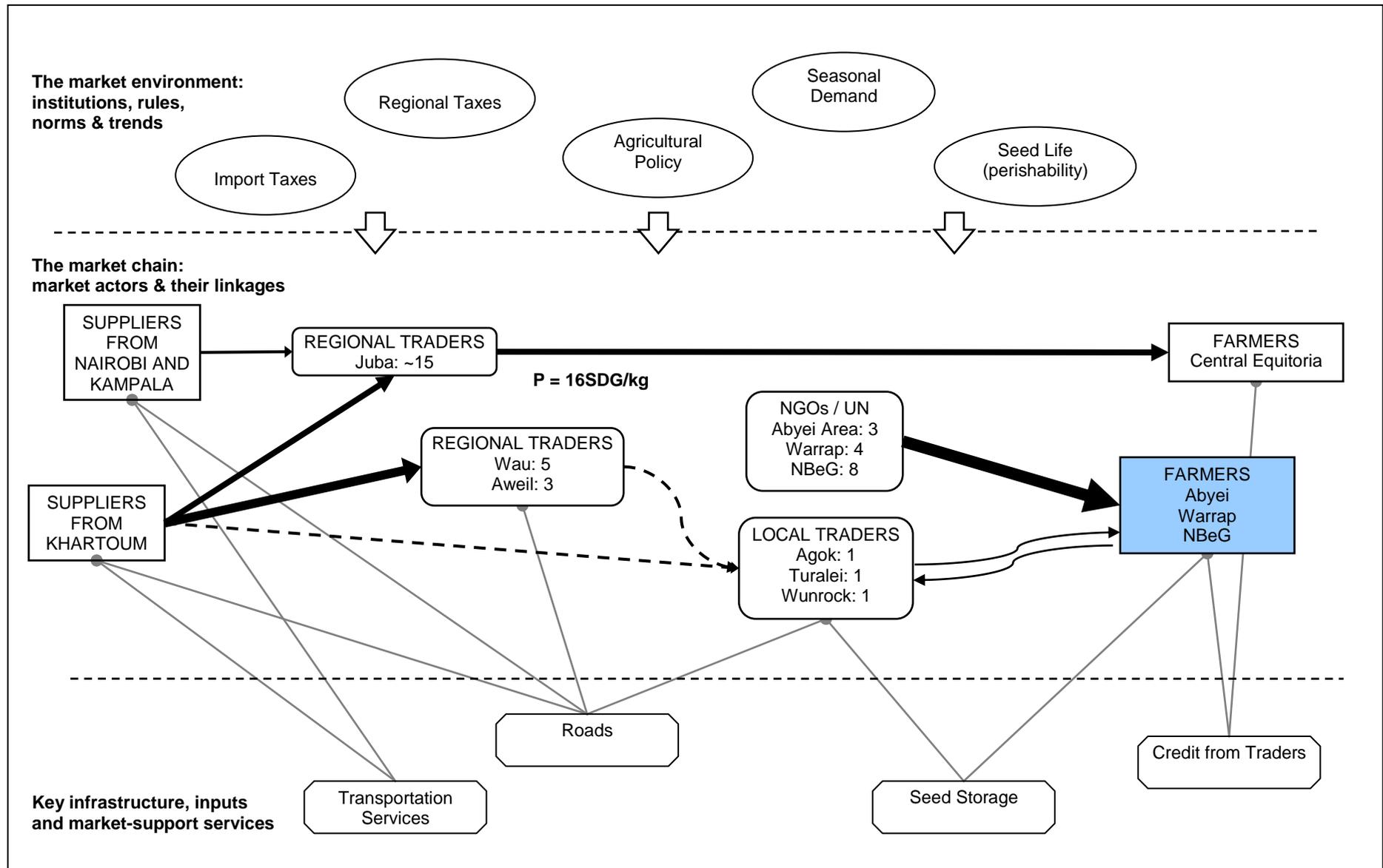
The table below outlines a range of responses options based on the findings of the EMMA:

<b>Activity:</b>	<b>Vouchers to beneficiaries to get maloda's from local traders or direct from blacksmiths</b>
<b>Advantages:</b>	Ensures that there is a market for locally produced maloda's Removes NGOs as an actor in the market chain
<b>Disadvantages /Risks:</b>	Potential for dependency on vouchers
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	3 months

<b>Activity:</b>	<b>Provision of grants to blacksmiths to procure new metal sheets</b>
<b>Advantages:</b>	Ensures market linkages and proves to local traders that there is demand for the metal sheets
<b>Disadvantages /Risks:</b>	Money may be spent on different materials Requires metal sheets to be present in local market
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	3-5 months

<b>Activity:</b>	<b>Grants to local hardware stores to procure metal sheets from suppliers in Wau</b>
<b>Advantages:</b>	Promotes market linkages and minimizes the risk to local traders of investing in metal sheet stock
<b>Disadvantages /Risks:</b>	Risks distorting prices
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	3-5 months

# Okra seeds Market-system Map Before the Crisis



## Key Features of Okra Seeds Map: Actors and Market Features

**Suppliers:** The seeds suppliers have been split into two distinct actors to help represent the gaps that existed in the market chain even before the crisis. Seeds suppliers in Khartoum were providing okra seeds to Juba and Wau, but suppliers from East African countries were only supplying seed sellers in Juba. A trader in Juba also said that he had once had a connection selling to Wau but it ended due to bad business relations.

**Regional Traders:** these have also been split geographically to show the differences in the market chain between regional traders in Juba and those in Wau. These sellers primarily sell seeds to local traders in the area with only small quantities being purchased by smaller sellers in other areas such as Kuajok in Warrup State.

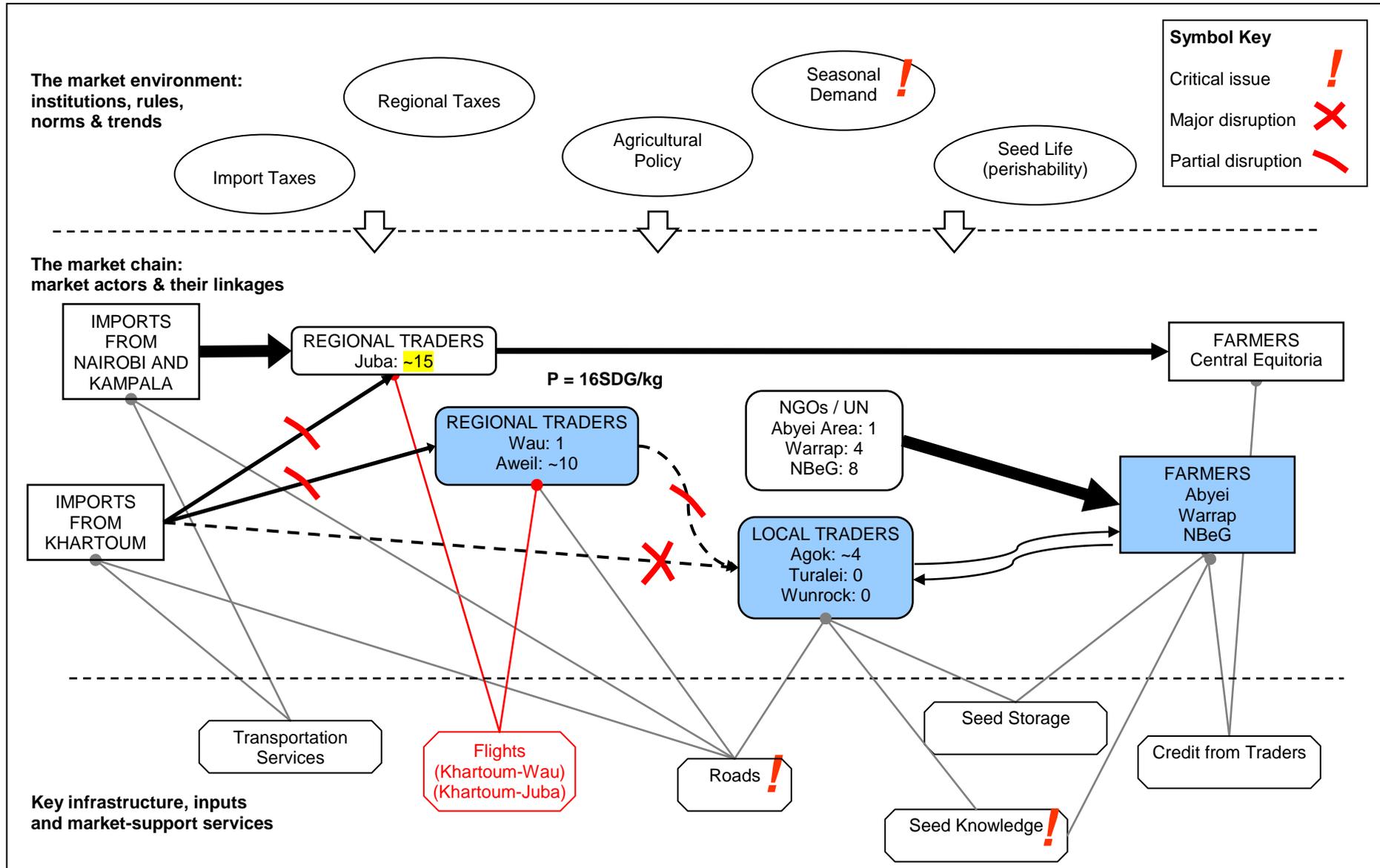
**Local Traders:** these actors sell seeds in the target areas such as Agok and Turalei. Before the crisis there was little evidence that any stocked okra seeds as the demand was met by NGO distributions. A dashed line is used to represent the fact that a trading relationship does exist between regional traders and local traders (who also receive seeds supplies from the north) but they do not trade in okra seeds.

**NGOs/UN:** the market mapping of any seed in South Sudan cannot be done without acknowledging the key role that humanitarian agencies play since they distribute significant amounts of seeds over many years. The majority of these seeds are sourced from outside South Sudan, although some do purchase from traders in Wau, Aweil and Juba.

**Farmers:** this actor was split into two geographical actors to assist in highlighting the disconnect in the market chain. Prior to the crisis a significant proportion of farmers in Abyei and Twic County received okra seeds from NGOs or by storing their own okra seeds between planting seasons. Farmers would also occasionally sell seeds to local traders on a very limited scale.

**Demand:** Farmers grow okra on a small scale during the agricultural season and often retain a small amount of seeds. Although okra can be grown year round there are cultural barriers that mean its harvest is often restricted to June-October, though many NGOs are working to promote dry season vegetable production. Seeds are sold in small quantities at markets in Agok, Turalei and Wunroc but they rarely stock okra because NGOs regularly distribute the seeds in these areas so there is no demand.

# Okra seeds Market-system Map After the Crisis



# Key Features of Okra Seeds Map After the Crisis

## *Khartoum Supply Chain*

With roads disrupted seed sellers in Juba have increased their orders for seeds coming from East Africa but unfortunately there is no market link from Juba to our target populations. Regional traders in Wau have continued to purchase their okra seeds from Khartoum suppliers but have them flown in instead of by road. This creates an extra cost which the only seed trader in Wau said he did not pass onto his customers (price remains 16SDG/Kg) because he knew they could not afford it (emphasizing how much of his trade is to local farmers). The seed trader in Wau had experienced no decrease in demand for okra seeds and expected to sell the same quantity as last year (475kg).

A second seed trader in Wau closed down several weeks before the EMMA took place, none of the nearby traders knew of any reason for this but there is the possibility that the pressure on profit margins proved too great. Before the crisis it is estimated that there were over 5 seed traders in Wau but at the time of the EMMA there was only one, suggesting that they have been significantly affected by the road closures.

At the time of the assessment the road from South Darfur to Aweil in Northern Bahr el Gazal reopened in a limited capacity. A regional trader in Aweil confirmed that he is now receiving seeds from Khartoum via the road through Darfur. Most of his seeds are sold to local farmers but a local trader was found in Agok who had just purchased his seeds from Aweil. The local trader made clear that he purposely choose not to stock okra seeds because he knew he could not sell them in the target area because NGOs distribute okra seeds regularly.

## Response Options

<b>Activity:</b>	<b>Vouchers for farmers to purchase okra seeds from local traders</b>
<b>Advantages:</b>	Removes NGOs as actors in the market chain  Promotes local economy  Continues to promote food security and nutrition
<b>Disadvantages /Risks:</b>	Potential for voucher dependency  Reduces beneficiary knowledge of monetary value of okra seeds  Beneficiary targeting can be challenging, vouchers also need to be reflective of different farmers land size and capacity.
<b>Feasibility:</b>	High
<b>Timescale:</b>	Focus on the planting season, therefore 3-4 months but could be continued through the dry season

<b>Activity:</b>	<b>Grants to local traders to purchase okra seeds from suppliers</b>
<b>Advantages:</b>	Helps remove NGOs from market chain  Reduces risk to local trader of not selling sufficient quantities
<b>Disadvantages /Risks:</b>	Risk of misuse  Roads remain a challenge

<b>Feasibility:</b>	High
<b>Timescale:</b>	3-4 months

<b>Activity:</b>	<b>Micro franchising of seed traders to promote linkages between Juba and Wau and smaller markets in Warrup State and Abyei</b>
<b>Advantages:</b>	Promotes an alternative supply route from East Africa so that seeds are not dependent on the north
<b>Disadvantages /Risks:</b>	Requires NGOs to stop distribution in the target areas  Requires trust between traders and for considerable knowledge amongst those taking on a franchise
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	12-18 months

<b>Activity:</b>	<b>Agriculture training in seed selection, quality and handling for farmers</b>
<b>Advantages:</b>	Increases confidence and knowledge of various seeds  Would compliment a microfranchising approach
<b>Disadvantages /Risks:</b>	Requires local seeds traders to be present and functioning (which they currently are not in Twic County)
<b>Feasibility:</b>	High
<b>Timescale:</b>	6-9 months

<b>Activity:</b>	<b>Information services for traders, run by traders or by government extension workers</b>
<b>Advantages:</b>	Encourages marketing and builds market linkages  Good capacity building activity for local government agriculture departments to be involved in  Potential to utilise mobile technology to make it accessible
<b>Disadvantages /Risks:</b>	Expensive and requires time for behaviour change
<b>Feasibility:</b>	Medium
<b>Timescale:</b>	12-18 months

## Annex I Ten steps in EMMA

The EMMA process can be divided into ten steps, covering the general sequence of activities. However, EMMA is also an iterative process. In practice, activities in different steps will overlap, and we may return to particular steps repeatedly, as our analysis of each market system is revised. This continues until a ‘good-enough’ final picture is achieved.

1. Essential Preparation	Do background research and in-country briefings; consult preparation on the agency mandate, terms of reference and practicalities; identify target population and their priority needs
2. Market Selection	Select the most critical market systems for EMMA to study, selection using various specific criteria; and then identify the key analytical questions that will guide the investigation of each system
3. Preliminary Analysis	Draft initial provisional household profiles, seasonal analysis calendars, baseline and emergency-affected maps of the market system; and then identify key informants and useful leads for fieldwork
4. Fieldwork Preparation	Fieldwork Agree and set the fieldwork agenda; devise the preparation questionnaires, interview plans and information-recording formats needed for EMMA interviews and other fieldwork
5. Fieldwork Activities	Conduct fieldwork activities: interviews and other information activities gathering; this section includes guidance on interview methods and tips relating to different categories of informant
6. Mapping the Market	Mapping Produce final versions of baseline and emergency market the market maps, as well as seasonal calendars and household profiles that describe the situation, and will inform the three ‘analytical’ steps that follow
7. Gap Analysis	Finalize the gap analysis strand: use household profiles, analysis information on priority needs, shortfalls and access constraints in order to finally estimate the total gap which needs to be addressed
8. Market Analysis	Market Complete the market analysis strand: use market maps and analysis data to analyse availability, conduct, performance and thus estimate the capacity of the market system to meet the gap
9. Response Analysis	Response Finish the response analysis strand: make reasoned analysis recommendations, based on the market system logic, feasibility, timing and risks of different options, including cash, in-kind relief or other market support
10. Communicate Results	Consult with colleagues, and communicate EMMA’s results to results wider audiences (donors, agencies); using concise briefings and eye-catching map-based presentations and reports