Rapid Market Assessment

Maban County, Upper Nile State
South Sudan

February 2013

FEG
THE FOOD ECONOMY GROUP

SOLIDARITÉS
INTERNATIONAL

Table of Contents

This rapid market assessment would not have been possible without the financial support provided by ECHO, logistical and administrative support of the Solidarites International teams in Maban & Juba, the hard work of the research team;

Koma Charles Wiri
Lodi Joseph Sartison
Adinan Ibrahim Elisa Juma
Kur John Garang
Lubang Martin Elizara
Lokiden Ezibon Kenyi Luga

All omissions and errors are entirely my own responsibility.

Miles Murray

milesmurray620@gmail.com

1. Executive summary

In 2012 violence in the Sudanese border regions of South Kordofan and Blue Nile States generated huge influxes of people crossing the border to seek refuge and assistance in South Sudan. Over half of the refugees (> 100,000) have settled in Maban County and 58% of the Maban population is now made up of refugees. Four new camps were established in Maban County in 2012 to accommodate these new refugees.

In 2013 SOLIDARITES INTERNATIONAL (SI) commissioned a rapid market assessment and two HEA livelihood baseline assessments in Maban County in order to develop a comprehensive understanding of the livelihoods of refugees and host communities in affected area of Maban County – and ultimately enhance the design of food security and livelihoods interventions that SI and other agencies are planning.

The rapid market assessment was based on the Emergency Market Mapping & Analysis (EMMA) methodology and focused on two locations; Bunj Town and Yusuf Batil Refugee Camp. The market assessment was conducted over a period of 5 days in early February 2013 by a team of 7 people.

Key Findings

F1. Close to Cashless: Host communities have minimal interaction with markets: Most villages are self-sufficient in terms of production of cereals, other food crops and livestock, with significant amounts of exchange of food and labour between households *within* the village and minimal sales in formal markets. Poorer, middle income and better off households earned approximately $0.11, $0.13 and $0.19 per person / day respectively. This clearly highlights how close to cashless this livelihood economy is.

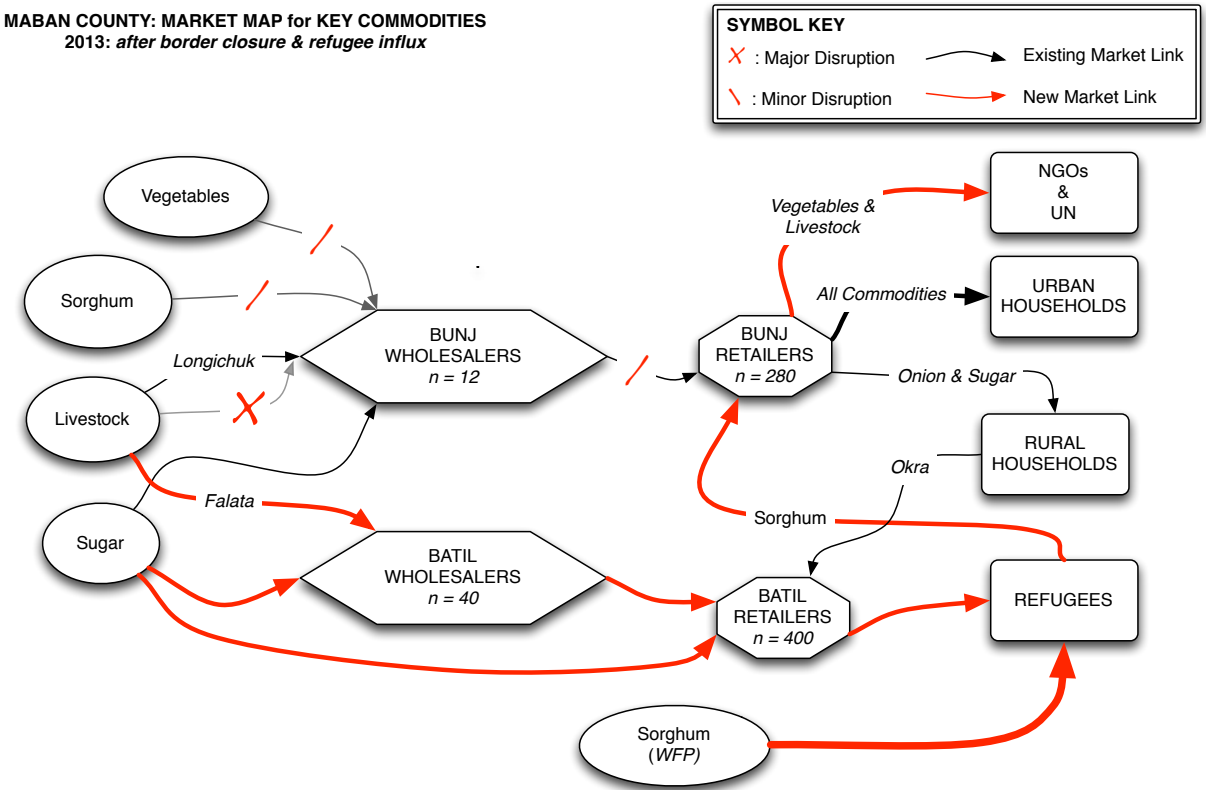
F2. Existing market-systems have grown rapidly in response to increased demand: Bunj was the primary market in Maban County before the arrival of the refugees from Blue Nile State in 2012, however the combination of a predominantly subsistence rural economy and physical isolation meant that Bunj was a relatively small market – with 70 traders and 1 money-transfer agent. It is therefore striking that by early 2013 the market in Bunj had undergone a significant transformation. The arrival of large numbers of refugees and humanitarian agencies in mid 2012 has driven a rapid growth in the Bunj market – which now hosts more than 200 traders and 3 money transfer agents.

F3. Parallel market-systems have developed to supply Yusuf Batil Camp: Interviews with traders in Bunj and Yusuf Batil camp indicate that parallel market-systems have developed to supply Yusuf Batil camp. Larger traders in the camp are sourcing commodities directly from suppliers in regional markets such as Malakal, Renk and Juba, while smaller traders in the camp rely on regular passing trade. There does not appear to be a strong linkage between Yusuf Batil camp and the market in Bunj. It is therefore assumed that the expansion of the market in Bunj has been driven by the demand created by humanitarian agencies and refugees from Doro camp, which is much closer to Bunj than Yusuf Batil camp.

F4. Food aid sales from Doro Camp have substituted for reduced commercial supplies of sorghum: Before 2012 traders in Bunj relied primarily on sorghum imports from Sudan and semi-commercial production in Renk. With the closure of the border in early 2012 imports from Sudan were severely restricted, and commercial production in Renk declined. This led to significant increases in sorghum prices in Bunj and across South Sudan as a whole. However, since mid 2012 when refugees began to arrive in Doro camp they have regularly sold a proportion of the sorghum they receive as food aid from WFP. This new supply of sorghum has in effect substituted for the previous supplies of sorghum from Sudan and Renk. Increases in the price of sorghum in Bunj may have been mitigated by the sale of food rations by refugees.

It is worth noting that the sale of sorghum by refugees comes primarily from Doro camp – due to its proximity to Bunj. The trade in sorghum in Yusuf Batil camp is primarily internal; soon after receiving their monthly food ration households sell some of the sorghum to traders in the camp who store the sorghum and sell it back to refugee households towards the end of a distribution cycle.

F5. **Increased levels of trade in Bunj Market have reduced the power of wholesalers:** In early 2012 a handful of wholesalers in Bunj were able to effectively control the small volume of commodities that were traded in Bunj market. However the arrival of the refugees and humanitarian agencies in mid 2012 has led to increased demand and in turn higher levels of trade – the result has been that that smaller retailers are now better able to access commodities directly from suppliers, rather than through local wholesalers. *The one exception to this general trend is the livestock market-system where reduced supplies to Bunj have increased the power of local wholesalers. Falata pastoralists, who used to supply Bunj, have switched to supplying the larger demand for meat in the refugee camps.*



F6. **Agency interventions appear to be inadequate, poorly targeted and un-coordinated:** Based on available secondary data, it appears that agencies interventions *planned at the beginning of 2013* are:

- *Inadequate to address the assumed need*; many poor households will not receive support from any planned food security & livelihood interventions in 2013.
- *Poorly targeting by wealth groups*: in a number of camps poor, labour constrained, households appear to be targeted for interventions that have significant labour requirements
- *Un-coordinated across the different refugee camps*; while poor households in some camps will not receive support better-off households in other camps will. Access to agency intervention appears to be determined by location (i.e. which camp you live in) rather than need.

F7. **Promoting staple grain production could risk disrupting vital support mechanisms:** Mutual support mechanisms are a defining characteristic of the host community's livelihoods and are vital for addressing the seasonal food deficits for poor households. There is a very real risk that short-term interventions by agencies to increase *staple grain* production could disrupt these existing mutual support mechanism if they result in wealthier households selling their surplus production, rather than sharing it with poor households through barter and communal eating as they currently do. This could clearly have a serious impact on the food security of poorer households.

Response Recommendations

There is the potential for agencies to make greater use of local markets & traders; traders have the capacity to supply goods and services that agencies are currently providing directly. At the same time there is a need for agencies to develop complementary sets of interventions that are tailored to the needs of specific wealth groups.

POOR REFUGEE HOUSEHOLDS: A COMPREHENSIVE & COMBINED PACKAGE OF SUPPORT

R1. Small, Regular Monthly Cash Transfers: Poor refugee households sell a significant proportion of their food aid ration (~15%) to buy essential non-staple foods and non-food items. The sale of food aid represents an extremely in-efficient cash-transfer mechanism, particularly given the logistical challenges associated with delivering food aid to Maban Country – but it is poor households only source of income. Small but regular monthly cash transfers, rather than seasonal cash for work, should be programmed to coincide with monthly food aid distributions. Since poor households spend the majority of their income on non-staple foods cash grants should be combined with support for home gardening.

R2. Cash / Vouchers to support Home Gardening: One of the most striking examples of where greater use could be made of local traders is the support that NGOs are providing for vegetable cultivation in the camps. NGOs are currently sourcing vegetable seeds from Uganda and Kenya, flying them to Bunj and distributing directly to households. At the same time local wholesalers supply large quantities of vegetables seeds to local households. Refugees who have received vegetable seeds are selling un-used seeds to the same wholesaler that supplies seeds to local households. It would clearly be more effective to give households cash or vouchers to purchase vegetable seeds. "Market support" interventions may be required to support wholesalers in Bunj to supply the more remote camps.

R3. Pilot Milk vouchers to protect children's nutrition: The seasonal migration of the Falata pastoralists to Maban during the dry season combined with the local production of milk during the wet season enables a regular supply of milk to the refugee camps through-out the year. This offers the possibility of a targeted voucher system designed to increase the consumption of milk by children and protect their nutritional status. The impact of a milk voucher intervention might be most effective during the wet season when flooding might disrupt deliveries of food aid, but a local supply of milk might be guaranteed. A pilot is recommended to assess the operational feasibility and monitoring the nutritional impact of milk vouchers.

MIDDLE-INCOME HOST & REFUGEE HOUSEHOLDS: FOCUS ON CASH CROPS

R4. Re-think support for sorghum & maize cultivation: Current approaches for supporting sorghum & maize cultivation appear to be based on implicit assumptions rather than specific analysis. There is a real risk that agency interventions could do unintended harm to local seed systems, local producers and community mutual support mechanisms. A fundamental re-think of agency approaches should be taken based on a detailed assessment of local seed systems & cereal market-systems. Market support interventions must be developed to complement investments in production.

R5. Focus instead on strengthening sesame market-systems: Sales of sesame represent a key source of income for rural households in Maban County – and crucially it is one of the few commodities that they sell in formal markets. It does not appear as if the closure of the Sudanese border has affected the sesame market-system but there may still be opportunities for agencies to support and strengthen this value chain. This could offer the possibility of working relatively 'high' up the value chain and therefore benefit a large number of rural households with a relatively small intervention. Crucially sesame might offer the potential for both higher returns than sorghum and maize and could also help to minimize the risk of disrupting existing mutual support mechanism.

2. Emergency context

Violence in the Sudanese border regions of South Kordofan and Blue Nile States have generated huge influxes of people crossing the border to seek refuge and assistance in South Sudan. As of August 2012 UNHCR recorded 200,000 refugees in South Sudan; almost 85% having arrived in the preceding 12 months and particularly since May 2012. Over half of the refugees (> 100,000) have settled in Maban County and 58% of the Maban population is now made up of refugees. Four new camps have been set up in Maban County to accommodate these new refugees; Doro, Gendressa, Jamman and Yusuf Batil Camps.

Figure 1: Refugee Camps in Maban County[1]

At the same time South Sudan suffered crisis levels of food insecurity in 2012. The closure of the border between South Sudan and Sudan in March 2012 resulted in a significant disruption to the normal supply of sorghum from surplus producing areas of Sudan. South Sudan experienced rapid and significant food price inflation as a result of the border closure. This situation was further compounded by weather hazards that reduced local production of sorghum. The combination of these factors resulted in large areas of South Sudan being classified as facing an acute food security crisis (IPC Phase 3).

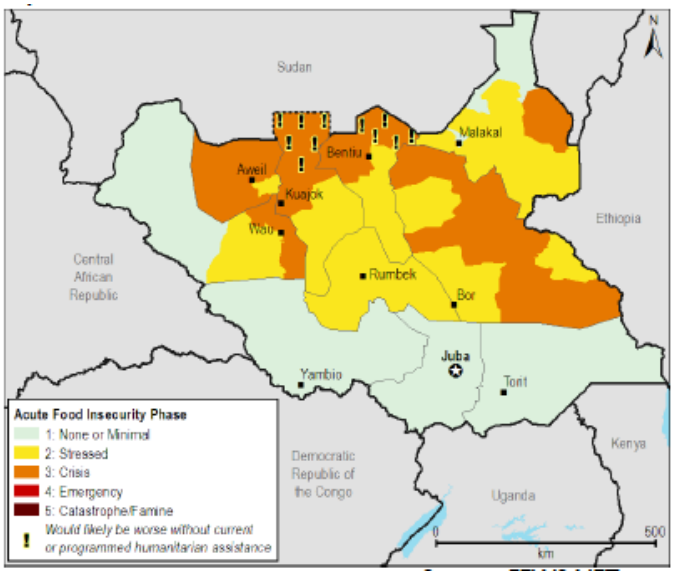


Figure 2: Most Likely Food Security Outcomes July – September 2012[2]

[1] http://data.unhcr.org/SouthSudan/download.php?id=321

[2] FEWSNET South Sudan Food Security Outlook July 2012

3. EMMA methodology

"In recent years, international humanitarian agencies have been re-examining their responses to emergencies. Globally, most organisations now recognise the centrality of markets in sustaining people's lives and livelihoods. However, there has also been a subsequent realization that unless emergency responses (both cash and in-kind) are designed with a good understanding of key markets, they may inadvertently damage livelihoods, jobs and businesses, thus undermining livelihood rehabilitation, foregoing opportunities to lay the foundations for early recovery and development interventions, and prolonging dependence on outside assistance.

Developed for non-market specialists, the EMMA toolkit is designed to be used in sudden onset crises and has the concept of rapid and realistic, 'good enough' analysis at its core. Using a combination of existing tools, from seasonal calendars to market systems maps, the EMMA combines gap analysis (people's uncovered needs) and market system analysis (markets' core value chain, infrastructures and supporting services, and markets' environment and rules) to offer a systemic and comprehensive understanding of the constraints and capacity of critical market systems. Based on this analysis, EMMA offers a series of response recommendations that detail how far the critical markets analysed can help deliver humanitarian assistance, which areas of the market may need additional support in this aid delivery and can further suggest ways in which interventions may strengthen the market systems in the longer term."[3]

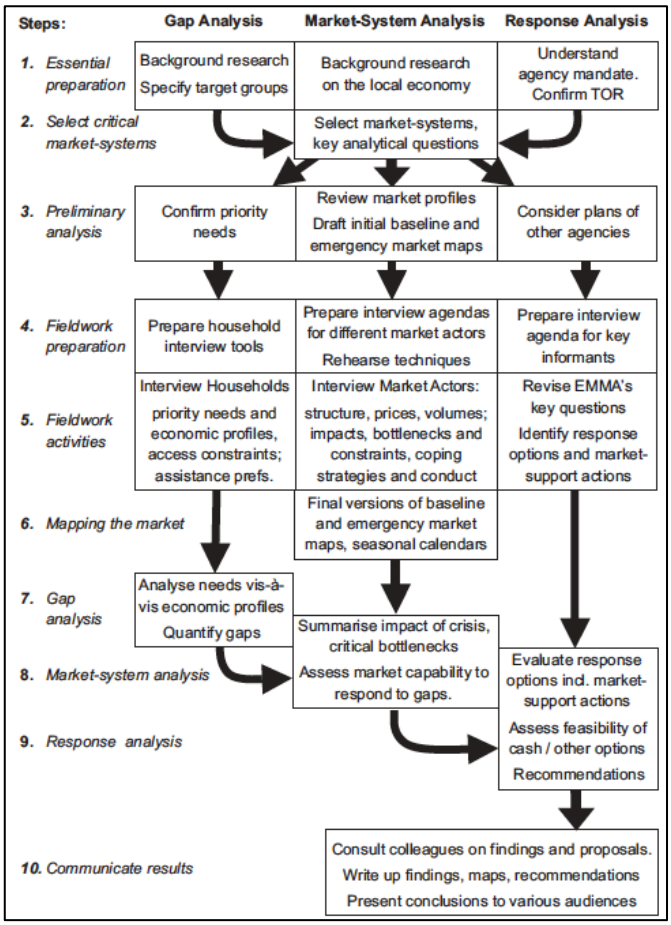


Figure 3: EMMA process flow-chart

The rapid market assessment in Maban County was based on the Emergency Market Mapping & Analysis (EMMA) methodology but because the market assessment was conducted in conjunction with an HEA baseline the fieldwork focused primarily on the 'Market Analysis' strand of an EMMA while the HEA data for the 'Gap Analysis' strand. Unlike a standard EMMA, this rapid market assessment was not preceded by a needs assessment and SI was not planning specific food security or livelihoods interventions; a critical market-system (i.e. commodity) had not therefore been pre-identified. Rather than conducting a more in depth analysis of one or two specific commodities it was decided to focus the rapid assessment on the market chain for a broader range of market–systems in order to understand how markets were responding to the significant changes associated with the arrival of large numbers of refugees.

The rapid market assessment focused on two locations; Bunj Town and Yusuf Batil Refugee Camp. The market assessment was conducted over a period of 5 days in early February 2013 by a team of 7 people; 6 team members and one team leader (Miles Murray). The team members had already worked on one HEA baseline and, with just one day of EMMA training, were able to quickly understand the EMMA methodology and collected quantitative data for three market-systems in 2 locations in the space of 4 days. This level of analysis would not have been possible if it were not for the skills and dedication of the team members – and the training and guidance they received during the earlier HEA baseline. The team members were: Koma Charles Wiri, Lodi Joseph Sartison, Adinan Ibrahim Elisa Juma, Kur John Garang, Lubang Martin Elizara and Lokiden Ezibon Kenyi Luga.

[3] EMMA Review, February 2012, Powell & Brady.

4. The target population

This section provides a brief overview of the livelihoods of the local host and refugee populations. Information presented in this section is drawn from the two HEA baselines that were conducted in conjunction with this rapid market analysis; for further details please see the full HEA reports.

Table1: Overview of target population[4]

Host Community	~ 70,000	Agro-pastoralist	Cultivate sorghum as primary cereal. Significant levels of barter and gathering wild foods
Yusuf Batil Camp	37,000	Refugees	Largely dependent on WFP food aid rations
Doro Camp	45,000	Refugees	Largely dependent on WFP food aid rations. Minimal Livestock ownership
Gendressa Camp	15,000	Refugees	Largely dependent on WFP food aid rations
Jamman Camp	16,000	Refugees	Largely dependent on WFP food aid rations
Falata	n/a	Pastoralists	Migrate to Maban County from Sudan during the Dry Season
Longichuk	n/a	Pastoralists	Migrate to Maban County from neighbouring Counties of Upper Nile State in the Wet Season

Livelihoods & Wealth groups within the population

The following description of livelihoods and wealth groups in Maban draws directly on the two HEA baselines that were conducted in conjunction with this rapid market assessment. Three wealth groups were identified in both the host community and refugees – which reflects the relatively homogenous nature of communities in Maban.

- Host Community

The host community are sedentary agro-pastoralists and while their primary crop is long-cycle sorghum they grow a variety of crops and also gather significant quantities of wild foods. The majority of Maban's households can be classified as classic subsistence farmers, producing sufficient for themselves with limited surplus. Any surplus produce tends to be bartered *within* communities and even the wealthiest households have relatively little interaction with formal markets. As compared with other societies it appears that the fundamental socioeconomic characteristics of Maban society tend to result in less discrete categories of asset ownership, a more "narrow" range of variations in wealth and a tendency away from the over-accumulation of assets by better off households.

Crucially this means that unlike many rural communities poor households are therefore not dependent on the market for the purchase of food. The persistence of a largely subsistence and barter economy is no doubt in part due to the physical isolation of Maban County – and the fact that many, but not all, trade routes are inaccessible during much of the 6 month rainy season when large areas of Maban County are flooded.

Rural households in Maban County can be divided into three broad wealth groups; better-off, medium and poor. Better-off Households produce more than ten 100kg bags of cereal each year (roughly 9 bags of sorghum and 4 to 5 bags of maize – total 1,362kgs of cereals) and own a large number of livestock (~5 cattle, ~5 pigs, ~ 10 shoats). As such better-off households are able to meet their food needs and still have surplus produce to barter. Better-off households will typically barter sorghum with households from their own

[4] Population data for refugees comes from UNHCR Data website accessed 04/02/2013

communities for specific agricultural activities such as weeding or harvesting a field of sorghum. The total annual food & income of a better-off household is worth about SSP 2,250. Better-off households represent about 20% of all rural households.

Medium income households produce 8 to 10 bags of cereals (4 to 5 bags of sorghum and 4 to 5 bags of maize) and own a small number of livestock (2 cattle, 1 pigs, 5 shoats). Medium income households are more or less able to meet their annual cereal requirements – but like wealthier households they still barter a proportion of their sorghum in return for labour from poorer households. Medium income households also earn some income from the sale of livestock as well as fish and honey in some locations. Medium income households represent about 40% of all rural households. Annual income for the middle is SSP 1300.

Poor households will harvest less than five 100kg bags of grain in a typical year; roughly 3 bags of sorghum and 1 to 2 bags of maize. They own a few small livestock (1 pig, 2 shoats) and poor households therefore face a significant cereal deficit every year – and are dependent on bartering their labour in return for sorghum from wealthier and medium income households. Labour therefore represents poor households largest source of "income" – but they also earn money from the sale of fish in some locations. The total annual food & income of a poor household is worth about SSP 800, but in a typical year this is only enough to meet 95% of their total food energy requirement (i.e. 95% of 2,100 kcal). Poor households represent about 40% of all rural households.

- Yusuf Batil Refugee Camp

While all refugee households receive a standard monthly food aid ration from WFP the refugee community can be divided into three broad wealth groups;

Better-off households are characterized by at least one household member who is employed by a humanitarian agency and earns on average SSP 300 / month. There is also a second sub-group of better-off households who own significant numbers of livestock. Better-off households only represent a small percentage of the total refugee population – about 10%.

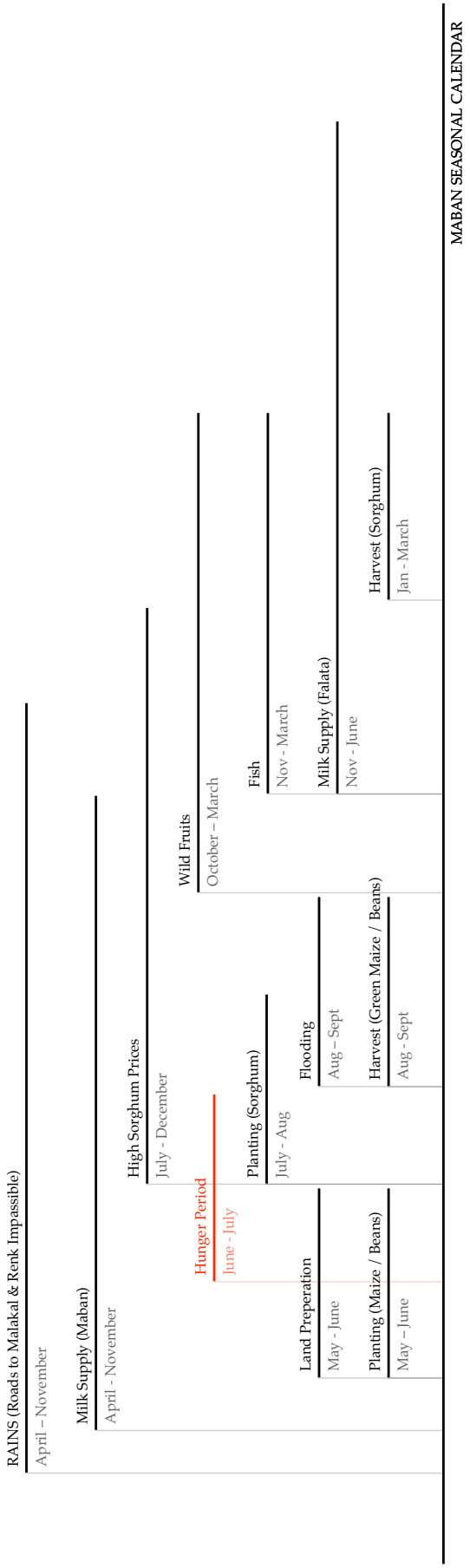
Medium income households depend primarily on the sale of forest products for their income. Within this medium income wealth group there are a broad range of activities from cutting poles for construction, to producing charcoal or collecting firewood. All these activities however depend on having healthy and active members of the households that can undertake these physically demanding activities – and the more lucrative sources of income (e.g. construction poles) require specific skills. Medium income households earn an average of SSP 70/month from sale of forest products (and small amounts from the sale of livestock). Medium income households also sell up to 15% of their rations from which they earn SSP30/month. Medium income households therefore earn a total of about SSP 100 per month. Medium income households represent about 30% of the total refugee population.

The remaining 60% of households are classified as poor. They are not employed and they do not earn an income from the sale of forest products. Poor households therefore depend primarily on the sale of food aid rations to earn an income. Poor households typically sell up to 15% of their rations – from which they earn SSP30/month. Due to the sale of food aid rations poor households are only able to meet about 90% of their food energy requirements (i.e. 90% of 2,100 kcal).

Seasonal calendar

The seasonal calendar below outlines a typical production year for rural host communities. Land preparation begins soon after the start of the rains in April and maize and beans are planted initially. Long-cycle sorghum is planted a few months later in July. Long-cycle, rather than short-cycle, sorghum is preferred in order to reduce losses from birds at harvest time. This is also the period of most acute hunger which is mitigated in August by the harvest of green maize and beans and then by the increased availability of wild foods and fish from October / November. It is interesting to note that milk is available at various times of year; during the wet season rural households consume milk from their own livestock but during the dry season when local milk production decreases an alternative source of milk becomes available due to the arrival of migrant Falata pastoralists with large herds of cattle and shoats.

Figure 4: Maban Seasonal Calendar



5. Gap Analysis

The Gap Analysis presented below is based primarily on secondary data of agency interventions available at the time of the assessment. The Gap Analysis initially quantifies the approximate number of refugee and host community households that face a food deficit; this analysis is based on data from the HEA baselines that were conducted in conjunction with this rapid market assessment. The Gap Analysis then reviews the types and coverage of planned food security & livelihood interventions that are designed to address this gap in household's food and income.

Household Food Deficits

The HEA baseline reports for host community and refugee populations provide an analysis of household production, income and exchange. This analysis, summarized in figure 5, shows that poor households in both the refugee and host community face an annual food deficit; of 10% and 5% respectively. Middle-income refugee households also face an annual food deficit of 5% (equivalent to the deficit of poor host community households).

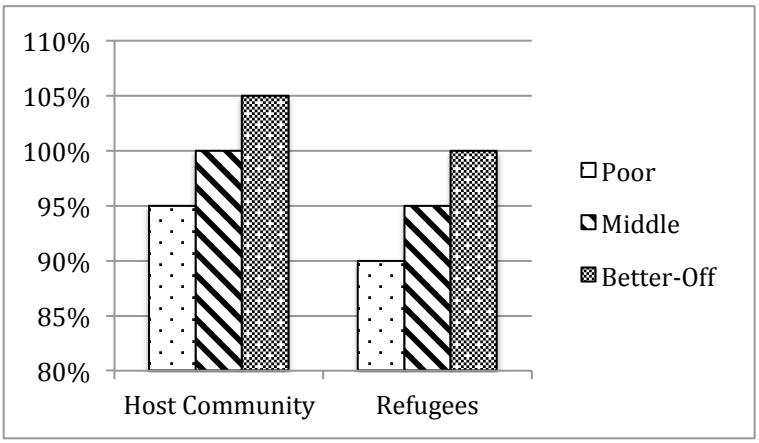


Figure 5: Total Food as a Percentage of Annual Food Energy Requirements

Overview of food security & livelihoods responses planned for 2013

In addition to the monthly distribution of food aid rations agencies are planning a number of food security & livelihoods interventions in 2013. Based on available secondary data[5] table 2 compares the coverage of planned interventions to the number of households in different wealth groups.

Table 2: Summary of Agency Interventions & Population by Wealth Group

	Host	Yusuf Batil	Doro	Gendressa	Jammam
Total Population	**70,000**	**37,000**	**45,000**	**15,000**	**16,000**
Poor (%)	40%	60%	60%	60%	60%
Poor Population	28,000	22,200	27,000	9,000	9,600
Middle-Income (%)	40%	30%	30%	30%	30%
Middle-Income Population	28,000	11,100	13,500	4,500	4,800
Seeds & Tools	17,500	6,000	0	17,500	17,500
Cash for Work	9,300	300	0	0	0
Home Gardening	18,000	6,500	0	0	0

[5] Summary matrix of agencies planned food security & livelihoods interventions for 2013 (2012/Nov/05)

Targeting Wealth Groups – The Theory

While all households could benefit from any agency intervention it is recognized that certain wealth groups will gain more from specific interventions that others. Interventions need to be targeted to the most appropriate wealth group, particularly when resources are scarce. It is assumed that:

- Home Gardening is most appropriate for poor refugee households who are labour constrained and have very limited income with which to improve the quality of their diet.
- Seeds & Tools is most appropriate for middle-income households who have the labour available to utilize these inputs effectively, and maximise the returns from this investment. For middle-income *refugee* households there would be a significant opportunity costs associated with their engagement in what would effectively be a *new* livelihood strategy, so direct support for seeds and tools may be appropriate in the first season. However, for the host community who are already cultivating field crops as a key livelihood strategy the appropriateness of direct support for seeds and tools should be carefully re-examined. In may be more appropriate to support interventions that *strengthen existing* livelihood strategies; such as collective marketing of cash crops such as sesame, or strengthening broader value chains for these crops by supporting traders / wholesalers.
- Cash Transfers would most appropriate for poor *refugee* households whose only source of income is the sale of food aid rations. However cash grants may be more appropriate than cash for work – given the characteristically labour constrained nature of poor refugee households.

Targeting Wealth Groups – Agency Interventions in 2013

When comparing agencies planning interventions *planned at the beginning of 2013* with the population of different wealth groups (as outlined in table 2) a number of key issues emerge:

- *Poor allocation of interventions across the different refugee camps*; home gardening for example is targeted at 6,500 people in Yusuf Batil but there are no home gardening interventions planned for Gendressa & Jammam. Similarly roughly half of middle income households in Yusuf Batil camp are targeted for seeds & tools but 100% of the entire camp population appears (in theory) to be targeted for seeds & tools in both Gendressa and Jammam camps.
- *The scale of interventions is inadequate to address the assumed need*; taking the example of home gardening again 6,500 people in Yusuf Batil camp are targeted for home gardening interventions but there are 22,200 poor people whom it would be appropriate to target.
- *Inappropriate targeting of interventions*:
    - *Cash for Work*: the majority of cash for work beneficiaries are poor household from the host community, rather than refugee camps. Given the near cashless nature of host communities livelihoods and the fact that poor refugee households sell a significant proportion of their food aid rations to earn cash – it would appear that it would be more appropriate to target cash transfers primarily at poor *refugee* households.
    - *Seeds & Tools*: In Gendressa and Jammam camps 100% of the entire camp population appears to be targeted for seeds and tools interventions i.e. all (labour constrained) poor households, all middle-income households and all better-off households (who have a regular income as NGO workers). It would appear to be more appropriate to target seeds and tools interventions specifically at middle-income households; who have the labour necessary to utilize these inputs effectively but do not have a formal income from employment.

Recommendations

- Reduce the coverage of Seeds and Tools interventions in Gendressa and Jamman to target middle-income households only. Poor households who are currently targeted for seeds and tools should instead receive cash grants and support for home gardening.
- Focus *current* cash transfers on *destitute* refugee households (i.e. a smaller sub-set of the poor households), since the scale of planned interventions is in adequate to address the needs of all poor households. Switch modalities from cash for work to cash grants, since destitute households are characterized as being labour constrained.
- Increase the coverage of cash transfers to address all poor refugee households through a combination of; increased donor funding, a re-targeting of cash transfers targeting host community and re-allocation of funding currently allocated for seeds & tools for poor & better-off households in Gendressa & Jammam.
- Increase the coverage of home gardening to address all poor refugee households through a combination of; increased donor funding, a re-targeting of home gardening targeting host community and re-allocation of funding currently allocated for seeds & tools for poor & better-off households in Gendressa & Jammam.

6. Critical market systems

An EMMA normally focuses on one or two "critical market-systems" – and investigates market-systems for different items separately. This means that it is necessary to decide early in the EMMA process (Step 2) which market systems (i.e. which items, crops, products) are critical from the humanitarian perspective. This process of selecting critical market-systems is usually informed by a needs assessment. The table below summarizes the potential market systems that the assessment team reviewed in preparation for the Maban rapid market assessment:

	Host	Refugee	Poor *Host and / or Refugee*	Positive Factors	Negative Factors
Sorghum		✓	✓	+ Key source of income for Refugees	- Host communities do not have significant interaction with sorghum market systems – it is bartered
Meat		✓		+ NGOs are planning to support slaughter facilities in Camps & Bunj	- Not a key source of income for most households
Sugar	✓	✓		+ One of few commodities regularly found in rural areas + Social / Cultural importance	- Limited nutritional value
Okra		✓	✓	+ High nutritional value + Supply of Okra depends on formal market systems + NGO interventions planned	
Coffee				+ Consumed by all households + Social/Cultural significance	
Onions		✓	✓	+ Consumed frequently (weekly) by refugee HH + Dependent on formal market	
Salt					- Minimal expenditure by refugee households
Milk				+ High nutritional value	- Often given as a gift - "no-one can buy milk", it's a luxury

In addition to this review of potential critical markets the assessment team considered the following factors:

- There was no formal needs assessment available that identified critical market-systems
- Solidarites International did not have specific food security & livelihoods interventions on-going.
- Oxfam had recently conducted an EMMA for sorghum in Upper Nile State.

Rather than focus on one or two specific commodities it was decided to structure the rapid assessment to gather information on a broader range of market–systems in order to under how markets were responding to the significant changes associated with the arrival of large numbers of refugees and help to inform potential response options without artificially restricting the range of responses. A broad review of markets was also felt to complement the broad scope of the accompanying HEA.

7. Overview of Maban market-systems

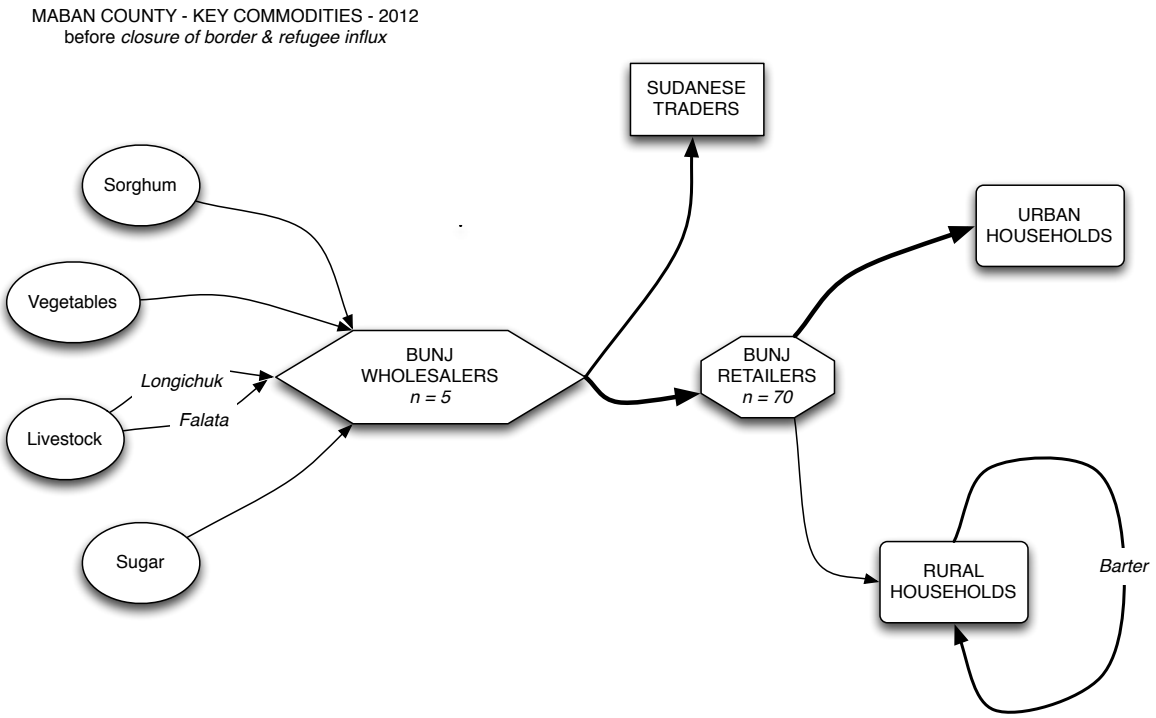


Figure 6: Overview of Maban Market-system in 2012: before border closure & refugee influx

At the beginning of 2012 Bunj was a small market that relied on supplies of essential commodities from Sudan. Because of the subsistence nature of local livelihoods, surrounding rural communities had comparatively little inter-action with the Bunj market; wealthier households with surplus produce (primarily sorghum and pigs) typically barter these commodities for labour from poor households within their own communities. The Bunj market therefore primarily served the small urban population of Bunj. Volumes of trade at the beginning of 2012 were in turn small which contributed to the strong control that wholesalers had over trade.

In March 2012 renewed tensions between the Governments of Sudan and South Sudan led to the closure of their common border. This border closure and the associated loss of income from the sale of oil led to steep price inflation across South Sudan. The closure of the border had an immediate and direct impact on the Bunj market-system since it had been heavily depended on imports from Sudan and prices for all commodities increased significantly

In mid 2012 conflict in the bordering state of Blue Nile in Sudan led to a large influx of refugees into Maban County. The settlement of large numbers of refugees close to Bunj in Doro Camp and the presence of humanitarian agencies generated a significant increase in trade within Bunj – which is clearly illustrated by the rapid increase in the number of retailers in Bunj which is estimated to have increased four-fold in the space of 6 months.

The subsequent settlement of refugees in Yusuf Batil, Gendressa and Yamman camps which are further from Bunj has created a parallel market-system supplying key food commodities to the refugee camps – in particular livestock, sugar and vegetables. The supply-chain for these commodities appears to largely by-pass Bunj; larger traders within the camps place orders directly with regional suppliers in Juba and Renk while significant volumes of passing trade also supply small retailers in the camps directly.

A different picture emerges for sorghum. In Doro camp, which is close to Bunj, households sell a proportion of their food aid rations directly to retailers in Bunj. In Yusuf Batil camp however the trader in sorghum is primarily internal; refugees sell a proportion of their rations each month to traders within the camps who store the sorghum and re-sell it at the end of the month. Critically the sale of sorghum by the refugees from Doro Camp appears to have more or less replaced the previous imports of sorghum from Sudan. Since sorghum is not 'exported' from Maban it is assumed that this new supply of sorghum is roughly equivalent to the previous imports from Sudan. This new supply of sorghum may have insulated Bunj from some of the worst effects of the steep food price inflation seen in other areas of South Sudan. The sale of sorghum by individual refugee households directly to small retailers in Bunj, as well as increased trade in general, has also had the effect of reducing the power of wholesalers that previously used to control much of the trade in Bunj.

The one exception to this trend of increased supply and reduced wholesaler power is the livestock market–system where reduced supply of livestock to Bunj has concentrated power in the hands of a small number of livestock traders. Bunj was typically supplied with livestock by pastoralist Falata from the North in the dry season and by pastoralist from Longichuk, the County bordering Maban to the South, during the wet season. However because of the larger demand, the Falata now focus on supplying the larger livestock market in the refugee camps. With few alternative sources of livestock the supply to Bunj has reduced dramatically and the few livestock traders are now able to control most of this supply, increasing their power over the market.

Both sorghum and vegetable market-systems experience significant disruptions during the rainy season when road access to Maban is severely reduced. While prices increases traders do have alternative supply systems to ensuring access for key commodities during the rainy season.

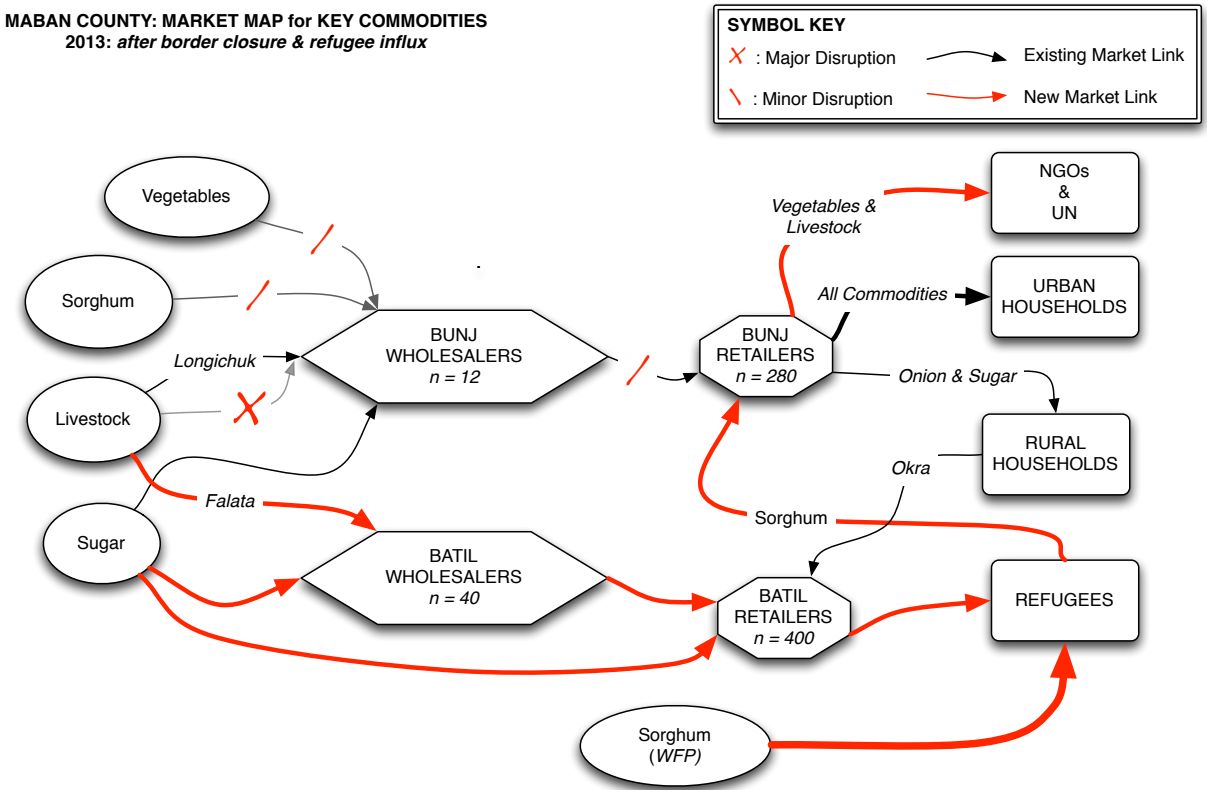


Figure 7: Overview of Maban Market-systems in 2013: after border closure & refugee influx

8. Analysis of individual market-systems

Sorghum Market-System Analysis

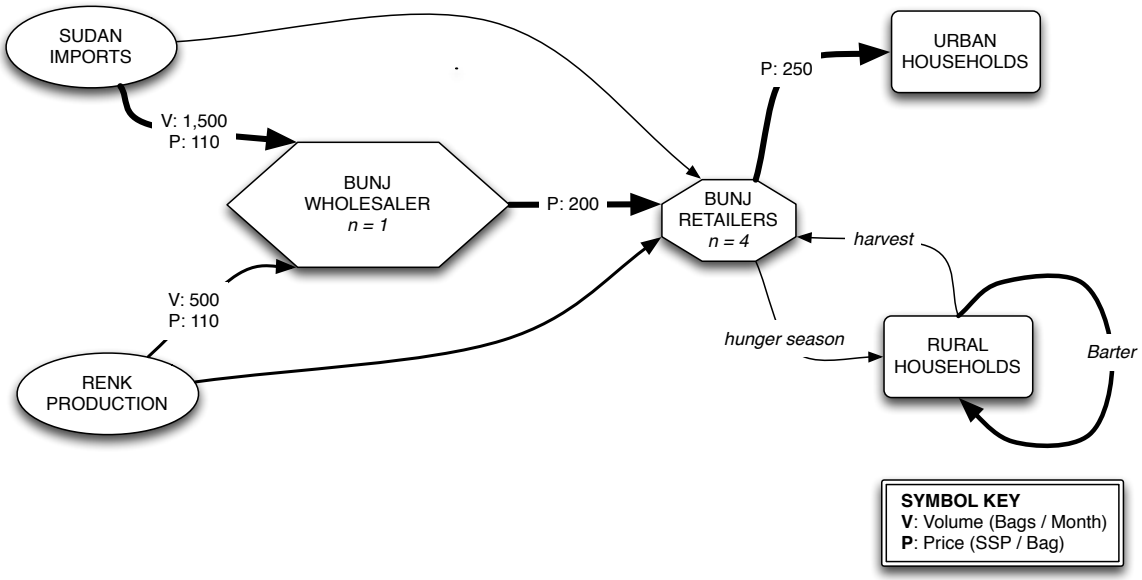


Figure 8: Sorghum Market-system: 2012 *before border closure & refugee influx*

At the beginning of 2012 the sorghum market-system in Maban was essentially composed of two independent systems:

1. Commercial: The primary source of sorghum in formal markets was imports from Sudan. One main wholesaler in Bunj largely controlled both of these sources. This wholesaler would also source sorghum from semi-commercial farms in Renk. The wholesaler had the financial capital and storage capacity (>200MT) to control much of the commercial sorghum market-system

2. Community: A separate market-systems operated within rural communities whereby wealthier households with excess production would barter sorghum for labour from poorer households. Poorer households would labour on the fields of the wealthier household performing season activities such as land preparation, weeding and harvesting. Poor households typically earn about 20% of their annual food energy requirements through bartering their labour.

There is relatively little inter-action between these two sorghum market-systems – with only minor quantities of sales or purchases by rural households in the Bunj market.

After March 2012 with the closure of the border between South Sudan and Sudan commercial imports from Sudan were severely, but not totally, restricted. There continued to be a small supply of sorghum from Sudan smuggled through the town of Kaka. The border closure also affected commercial production of sorghum in

Renk because of reduced access to agricultural inputs. The reduced supply of sorghum to Bunj resulted in significant increases in sorghum prices – a similar trend to that seen in most of South Sudan.

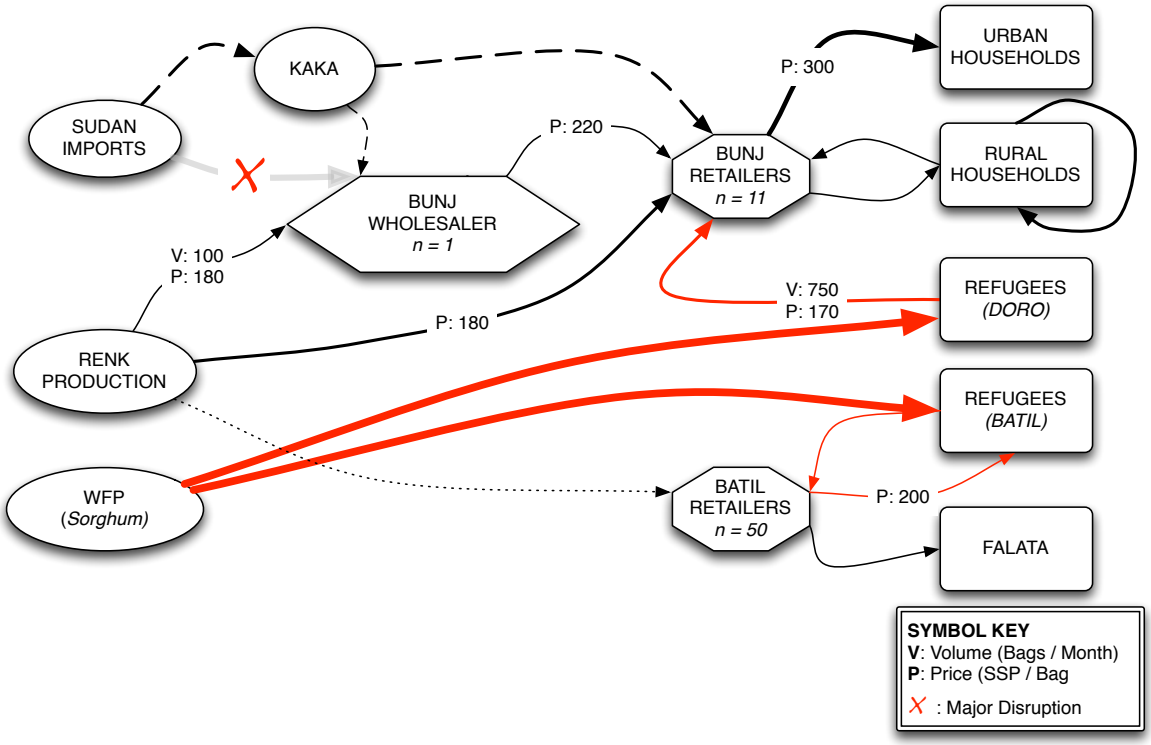


Figure 9: Sorghum Market-system: 2013 *after border closure & refugee influx*

However with the arrival of increasing numbers of refugees after July 2012 Bunj now had an alternative source of sorghum – sales of food aid rations by refugees. It is important to note that the sale of sorghum varied significantly between different refugee camps. Due to its proximity Doro Camp supplies a significant volume of sorghum to Bunj. It appears as if individual households selling directly to small retailers, rather than traders or wholesalers, dominate the supply of sorghum from Doro camp.

The combination of restricted supply of imports from Sudan and the increased local supply of sorghum from Doro Camp has led to a marked changed in the power relationship within the sorghum market-system. The sorghum market-system used to be dominated by a single wholesaler who purchased sorghum directly from suppliers in Sudan and commercial farms in Renk. A small number of retailers would purchase sorghum from passing traders – but this supply was intermittent and the wholesaler had storage capacity to ensure he was able to provide a regular supply. This situation has in effect been reversed over the past 6 months – a growing number of small retailers now appear to hold more power than the wholesaler. These retailers source significant quantities of sorghum directly from refugees but there has also been an increase in passing trade to supplement this supply. The wholesaler now operates more or less like a retailer; his volume of sales has decreased dramatically from 50 bags / day in early 2012 to only 3 to 5 bags / day in early 2013. The wholesaler now sources his sorghum primarily from within Maban rather than Renk or Sudan.

In Yusuf Batil Camp however the trade is sorghum remains largely within the camp itself – although some sorghum is sold or bartered to Falata. Households sell sorghum to traders in Yusuf Batil camp after a general food distribution, the traders store the sorghum and sell back to households towards the end of the distribution cycle. Traders typically buy sorghum for 5 SSP / Mulwa (3kg tin) and sell it at 6 SSP / Mulwa. Sales

of sorghum in the camp are a response to households need for cash income to purchase essential food and non-food items and mirror the typical pattern of resource poor farmers around the world who sell produce after the harvest and purchase from the market again during the hungry season – only in the camp the cycle of sales and purchases is 'compressed' to a monthly rather than annual cycle.

One interesting aspect of the sorghum market-system in Yusuf Batil Camp is the role of wholesalers. The regular sale and purchase of sorghum in Yusuf Batil camp is dominated by a large number of small retailers who purchase directly from refugees, but there is a small group of wholesalers who source small quantities of white sorghum directly from suppliers in Renk. White sorghum sells at a 50% premium to the red sorghum that is distributed by WFP as food rations – and the primary demand for white sorghum therefore comes from better-off households in the camp and host communities.

However over a period of two weeks during September 2012 this informal group of 12 individuals sourced ~70 MT of sorghum from their suppliers in Renk to meet the demand for sorghum induced by disruptions to the WFP food aid pipeline. This represented at least a ten-fold increase in the typical volumes of sorghum these wholesalers sourced from Renk. Because of their established trading relationship the wholesalers in the camp were able to access sorghum on credit. Once the WFP food aid pipeline was restored, and demand reduced, the wholesalers reduced their supply and reverted to their normal trade in white sorghum.

Vegetable Market-System Analysis

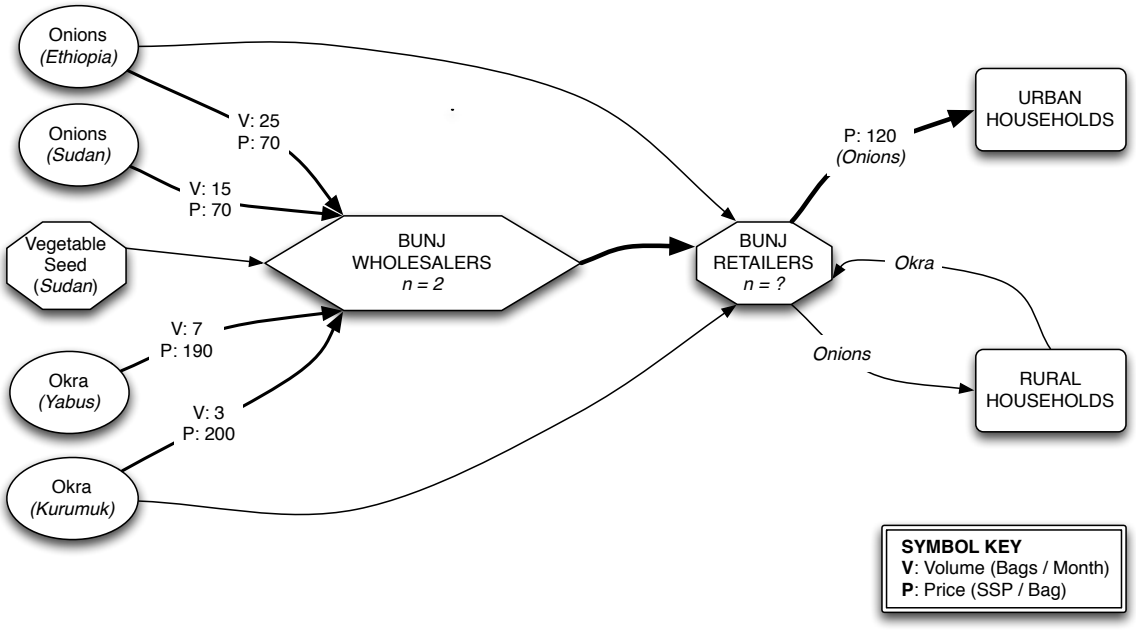


Figure 10: Vegetable Market-system: 2012 *before border closure & refugee influx*

In many ways the pre-existing vegetable market system mirrored the sorghum market-system; rural households cultivated vegetables during the rainy season but these were largely consumed rather than sold through formal markets. The formal vegetable market-system was therefore largely dependent on the supply

of vegetables from outside Maban County; primarily Ethiopia and Sudan. It is worth noting that vegetable wholesalers in Bunj also supplied significant quantifies of certified vegetable seeds from Sudan in response to seasonal demand from rural households in Maban.

With the closure of the Sudanese border supplies of vegetables were disrupted and there was a significant increase in prices. However it is worth noting that the border closure seems to have had little impact on the ability of wholesalers to source certified vegetable seeds from Sudan – no doubt because of the quantities of seed required are relatively small and their value relatively high in comparison to other goods that still cross the border.

After the arrival of the refugees and humanitarian agencies demand for vegetables increased significantly and supply increased in response. As with sorghum, the increased supply led to a relative increase in the power of smaller retailer in comparison to larger wholesalers - although vegetable wholesalers appear to be less affected than the sorghum wholesalers because they have diversified into off-season irrigated vegetable production along the banks of the Yabus River in Bunj.

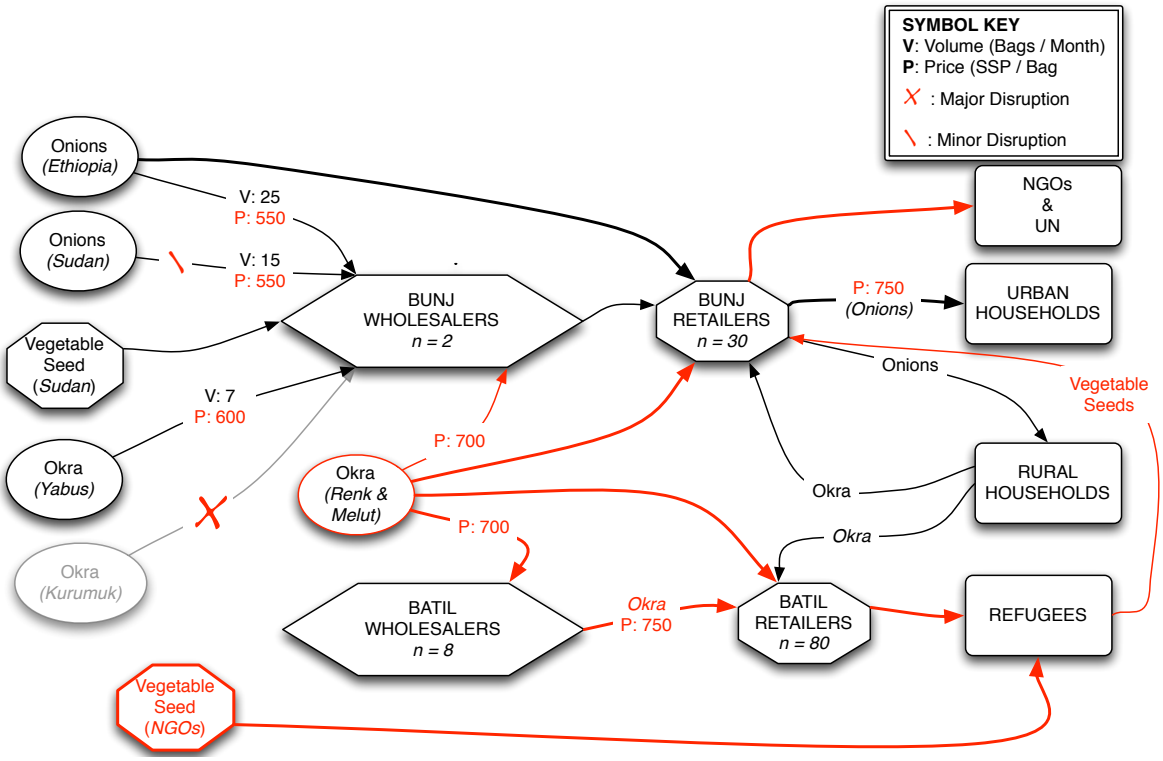


Figure 11: Vegetable Market-system: 2013 *after border closure & refugee influx*

In order to supply the increased demand generated by humanitarian agencies new supplies of vegetables from within South Sudan have been developed in response to the restrictions in supply from Sudan. Increased demand has also stimulated local production within Maban – with increases in irrigated dry season vegetable production along the Yabus River in Bunj.

Market traders in Batil Camp are sourcing their vegetables directly from regional suppliers outside Maban – in effect by-passing the Bunj Market and developing a parallel market-system to supply the camp. Vegetable traders within the camp do source some okra from local host communities neighbouring the camps, but do not source significant quantities of vegetables (onions or okra) from refugee households within the camp.

Livestock Market-System Analysis

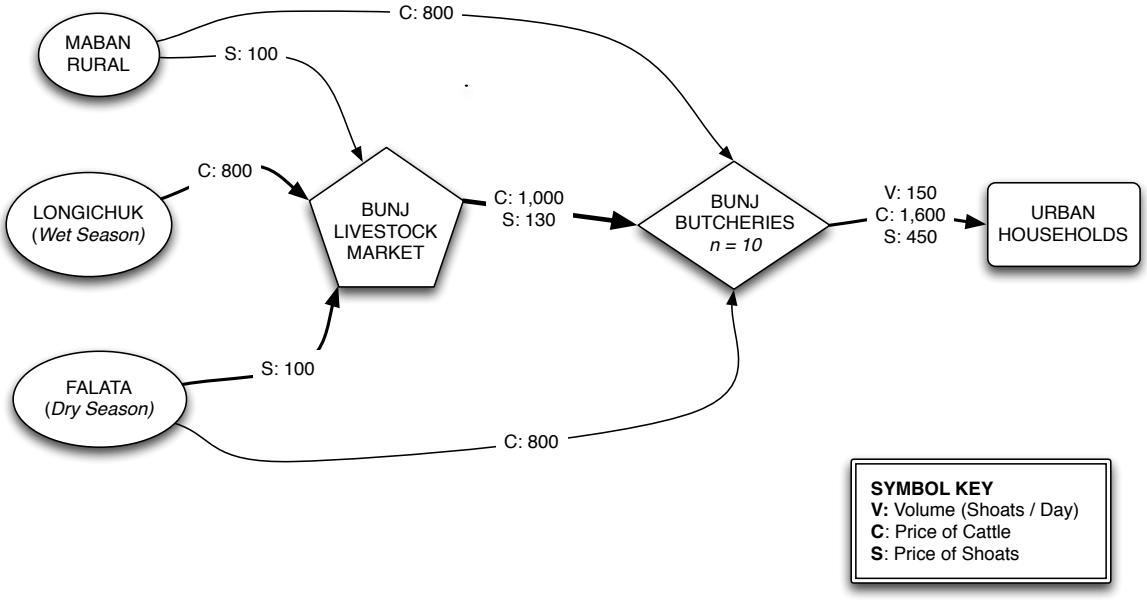


Figure 12: Livestock Market-system: 2012 *before border closure & refugee influx*

Before the closure of the Sudanese border and the influx of refugees the supply of livestock in Maban exhibited significant seasonal differences.

Pastoral Falata migrated from Sudan and settled near Bunj during the dry season. The Falata would supply Bunj with cattle, goats and milk during the dry season. The livestock population of the Falata is in the order of ten times larger than the permanent livestock population of Maban (estimated 200,000 Falata livestock compared to estimated 20,000 cattle in Maban). The Falata have established and formalised agreements with local community leaders and Government (to whom they pay taxes) and would traditionally graze their livestock in the areas where the refugee camps have now been established.

During the wet season pastoral herders from Longichuk would bring their cattle to the Bunj market. Longichuk is the bordering County to the South of Maban – and is characterized by marshes and a pastoral livelihood system. Traders from Renk and Sudan would travel to Bunj to purchase livestock from the Longichuk. Following the closure of the border with Sudan there has been a significant reduction in the number of traders coming from Sudan to purchase livestock.

Rural household in the host community represented a minor source of livestock to the market in Bunj. As with sorghum, trade in livestock was primarily *within* local communities – with pigs in particular being bartered for labour, typically through 'nafirs'[6]. There was a small volume of livestock sales from rural communities to the Bunj market but for most households' livestock sales were not a regular source of income; households would

[6] "Nafir is a mechanism through which large pieces of labour-intensive work can be done in one or two days by a large group of people. Households owning sufficient number of pigs and/or goats will slaughter one or more animals in order to attract workers" Maban Host Community HEA baseline report

typically sell livestock in formal markets only in response to a specific shock or stress, such as an illness in the family, and the associate need for cash.

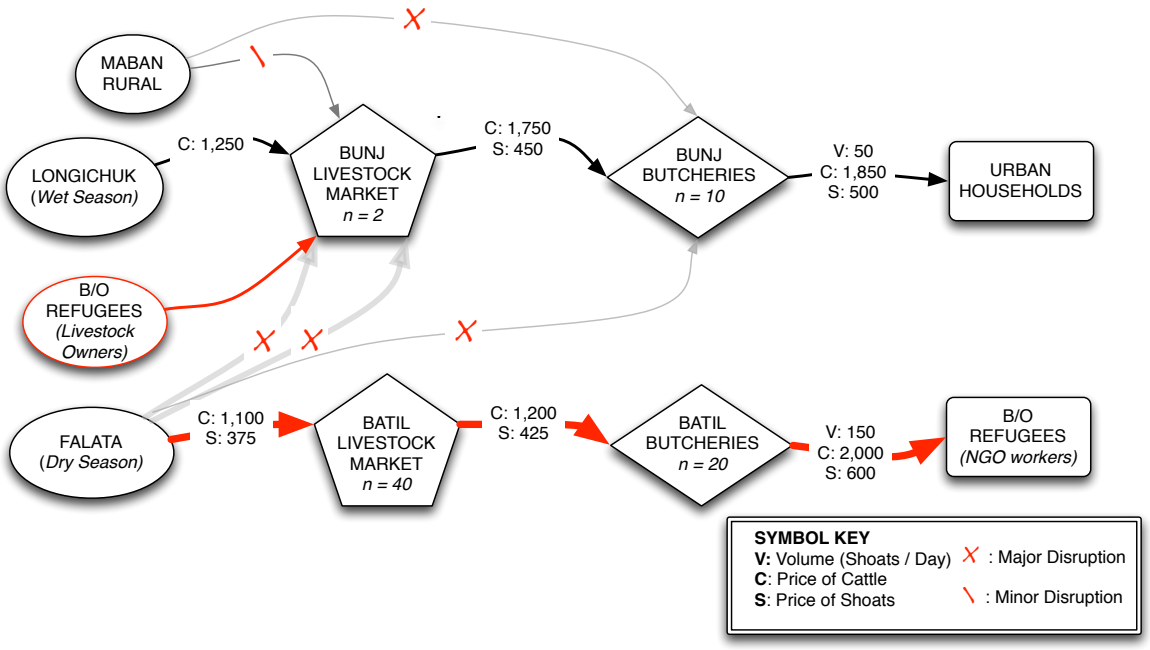


Figure 13: Livestock Market-system: 2013 *after border closure & refugee influx*

The closure of the border with Sudan triggered inflation of key commodities throughout South Sudan – and this was reflected in a significant increase in the price of livestock in Maban. As can be seen from the two livestock market maps the price of cattle in Bunj almost doubled from 1,000 SSP before the border closure to 1,750 after the border closed. There was an associated reduction in demand, which reduced by almost a third.

The arrival of the refugees in mid-2012 did not trigger further price increases but has resulted in significant changes to the livestock market-system in Maban. The closure of the Sudanese border has not affected the seasonal migration of the Falata, but the arrival of the refugees has created a new market for their livestock produce – and crucially a market that has significantly higher demand than Bunj. The Falata have therefore switched from supplying Bunj to focusing their sales in the Batil livestock market.

The reduced supply of meat to Bunj market has affected the power relationship between livestock traders and retailers (butchers) in Bunj. As a result of the reduced supply of livestock the small number of livestock traders / wholesalers are now able to control a larger proportion of the livestock trade and can therefore exert greater control over prices. Before the arrival of the refugees, livestock would be sold direct to butchers when the traders were not able to purchase all the livestock – this direct sale of livestock to butchers has reduced significantly since the arrival of the refugees.

It is interesting to note that while the Falata have switched to focus on supplying the higher demand generated by the livestock market in Batil Camp, refugee households themselves, who are not selling livestock in significant quantities, are choosing to sell their livestock in Bunj where prices are marginally higher; Butchers in Bunj will purchase a cow for about 1,750 SSP whereas the butchers in Yusuf Batil are paying 1,200 SSP.

How are market-systems likely to evolve in the future?

The rapid growth and evolution of local market-systems in Maban County is striking – especially when considering the historically low levels of market engagement by the rural community. It is therefore useful to consider how market-systems might evolve to potential changes in the near future:

- Declining Refugee Income: 30% of the refugee population in Yusuf Batil Camp is dependent on forest products for their primary source of income. After less than a year there has already been a significant depletion of natural resources upon which so many refugee households depend. A significant proportion of the demand for forest products is from NGOs themselves. Over time this demand from NGOs is likely to reduce. There is therefore a very real possibility that over a relatively short time frame the income that refugee households can derive from forest products will decline. Declines in income from forest products would primarily affect the Medium Income Wealth group – and could lead to significant growth in the proportion of households classified as Poor. This might lead to a reduction of the trade in non-essential food products like sugar and meat within Yusuf Batil Camp.

- Increased Sorghum Production: Based on secondary data of planned seeds & tools interventions by NGOs in 2013 there would appear to be a possibility that production of sorghum increases significantly in the near future – especially if current discussions with County authorities result in the allocation of agricultural land to refugee households. This rapid market assessment shows that there have historically be relatively small volumes of sorghum traded in Maban County – and there has not been a history of aggregating surplus production to sell to wholesalers in major regional trading centres such as Renk or Malakal. It is therefore unclear how the local market systems might respond to significant increases in sorghum production. Bunj town historically only had one major sorghum wholesaler – and he no longer supplies significant volumes of sorghum because the direct sale of sorghum by refugees to small-scale traders has effectively eliminated the need for a wholesaler. There is therefore a real possibility that significant increases in sorghum production could not be effectively absorbed by the market-system and this could lead to greater than usual price decreases at harvest time and reduced incomes for producers and potential problems with storage and post-harvest losses.

- Livestock Trade & Services: It is clear that the Falata pastoralists that migrate to Maban from Sudan in the dry season have responded effectively to the demand for meat in Yusuf Batil Camp – this is likely to have a positive impact of the livelihoods of the Falata. Assuming that the Longichuk pastoralists who migrate to Maban from neighbouring counties in Upper Nile State in the wet season respond to market demand in a similar way and switch from supply the Bunj livestock market to focus instead on the larger livestock market in Yusuf Batil Camp they may also experience significant positive impact. It should be noted that the primary beneficiaries of this increased trade in livestock, generated by the new demand for meat and milk in Yusuf Batil and other camps, will be the Falata and Longichuk pastoralists, rather than Maban locals or refugees. However the increased income for Falata and Longichuk pastoralist could in turn provide opportunities to invest in livestock services. It was noticeable that traders in Yusuf Batil camp were supplying veterinary drugs, which was not observed in Bunj. There could be potential to capitalize on this latent demand for veterinary services – by training Community Animal Health Workers (CAHWS) or supporting the establishment of private veterinary pharmacies.

- Relocation of Refugees from Doro Camp: At the beginning of 2013 humanitarian agencies were discussing the relocation of significant numbers of households from Doro camp to a location further away from Bunj. This rapid market assessment has shown that refugees from Doro camp sell a proportion of their food aid rations to small traders in Bunj, but refugees in Yusuf Batil do not. The demand from refugees in Doro has also contributed to the broader expansion of the market in Bunj. Relocation of significant numbers of refugees from Doro to a more distant camp may therefore have an impact on the market in Bunj; reduced sales of food aid might increase the price of sorghum in Bunj and reduced demand might constrain the expansion of the market for other goods and services.

9. Main recommendations and conclusions

The analysis of market-systems in Maban County indicates that local market-systems are dynamic and have responded effectively to increased demand. At the same time it is clear that local livelihoods remain primarily a subsistence and demand is constrained by the limited cash income of both host community and refugee households. There appear to be clear opportunities to make greater use of local market systems to both deliver targeted services and support refugee households – but there will need to be a careful and considered approach to how to engage with markets particularly in order to avoid undermining the mutual support mechanisms that exist within local communities.

POOR REFUGEE HOUSEHOLDS: A COMPREHENSIVE & COMBINED PACKAGE

Small, Regular Monthly Cash Transfers: Poor refugee households sell a significant proportion of their food aid ration (~15%) to buy essential non-staple foods and non-food items. The sale of food aid represents an extremely in-efficient cash transfer mechanism, particularly given the logistical challenges associated with delivering food aid to Maban Country – but it is poor households only source of income and earns them about SSP 30 / month. Small but regular monthly cash transfers of a similar value to poor households current sales of food aid rations, rather than seasonal cash for work, should be programmed to coincide with monthly food aid distributions. Cash grants alone will however be inadequate to prevent the sale of food aid rations by poor refugee households; middle-income households who earn about SSP 70 / month from the sale of forest products also sell a similar proportion of their food aid rations (~15%). Poor households spend the majority of their income on non-staple foods, so cash grants should be combined with support for home gardening.

Switch from direct distribution of seeds to Cash / Vouchers to support Home Gardening: One of the most striking examples of where greater use could be made of local traders is the support that NGOs are providing for vegetable cultivation in the camps. NGOs are currently sourcing vegetable seeds from Uganda and Kenya, flying them to Bunj and distributing directly to households. At the same time local wholesalers supply large quantities vegetables seeds to local households. Refugees who have received vegetable seeds from NGOs are selling un-used seeds to the same wholesaler that supplies seeds to local households. It would clearly be more effective to give households cash or vouchers to purchase vegetable seeds from local wholesalers in Bunj. This should either be in the form of cash or an "open" voucher allowing the purchaser to get any seed or combination of seed they want, rather than a voucher for specific seeds. Some 'market support' interventions may be required to support wholesalers in Bunj to supply the more remote camps.

Milk Collection Centre & Milk Vouchers to protect children's nutrition: Milk production in local host communities is restricted primarily to the rainy season. However, the seasonal migration of Falata pastoralists to Maban during the dry season, with a total livestock population up to ten times larger than that of the local Maban communities, enables a continuous supply of milk through-out the year. This offers the possibility of a targeted voucher system designed to increase the consumption of milk by young children and protect their nutritional status. The impact of a milk voucher intervention might be most effective during the wet season when flooding might disrupt deliveries of food aid, including supplementary food, but a local supply of milk might be guaranteed. During the rapid market assessment it was observed that Falata were supplying milk to teashops and households in Yusuf Batil camp – but no formal market existed, rather individual Falata were selling small quantities of milk (5 – 10 litres) directly to consumers. The construction of a small-scale milk collection centre in Yusuf Batil camp might therefore stimulate the development of a more formal milk market-system. Milk vouchers could then be used to ensure the consumption of milk by young children and protect their nutritional status[7]. A pilot is recommended in order to assess feasibility and monitor the nutritional impact of milk vouchers.

[7] For evidence of the impact of improved access to milk on child nutrition see Sadler et. al. (2012) Milk Matters: The Impact of Dry Season Livestock Support on Milk Supply and Child Nutrition in Somali Region, Ethiopia. Tufts University

MIDDLE-INCOME HOST & REFUGEE HOUSHEOLDS: FOCUS ON CASH CROPS

Since poor refugee households are targeted with cash grants, even of a small value, it is particularly important that complementary interventions, which are tailored to the needs of middle-income households, are also programmed. These interventions are designed to require the investment of greater time and labour by households but should generate greater financial returns. In this way there is an inherent incentive for self-targeting.

Re-think the approach used to promote sorghum & maize cultivation: As outlined in section 5, agencies are currently planning significant interventions to support the cultivation of sorghum and maize in both the host community and refugee camps. If successful this could lead to a large increase in sorghum and maize production – and a significant surplus being available for sale on the market. At the same time this rapid market assessment and the associated HEA livelihood baselines have highlighted the limited engagement of the host community with formal markets and the relatively small volumes of sorghum traded in Maban County as well as the importance of barter and other community support mechanisms, such as communal eating. There has not been a history of aggregating surplus production to sell to wholesalers in major regional trading centres such as Renk or Malaka and it is therefore not clear how the local market systems might respond to significant increases in sorghum production. There is a real risk that increased production could lead to significant reduction in prices for sorghum at harvest time – or disrupt existing community support mechanism. A fundament rethink of the approaches used to support sorghum and maize cultivation is required.

- *Re-think Direct Seed Support*

  Agencies are currently planning direct distribution of sorghum and maize seeds supplied from *external* sources – much as they have done for vegetable seeds. This rapid market assessment has indicated that for *vegetable* seeds the direct distribution of seeds may not be appropriate. While market-systems for sorghum and maize seed were not investigated during this rapid market assessment given that local livelihoods as characterized as being largely cashless it should be assumed that the host community rely on local rather than commercial seed for staple crops, which was regularly observed in local communities. A detailed assessment of local seeds systems is therefore recommended in order to determine how existing seed-systems can be strengthened – particularly to improve the quality of local seeds, before assuming that direct seed support is required. *Indirect* support for local seed systems, particularly for host communities, is more likely to have a positive impact on livelihoods in the longer-term.

- *Re-think Market Capacity:*

  This rapid assessment highlighted that there have historically be relatively small volumes of sorghum traded in Maban County – and there has not been a history of aggregating surplus production to sell to wholesalers in major regional trading centres such as Renk or Malakal. There is therefore a real possibility that significant increases in sorghum production may not be effectively absorbed by the market-system and this could lead to significant price decreases at harvest time and reduced incomes for producers (particularly refugee households who could be expected to sell much of their produce) and potential problems with storage and post-harvest losses. This risk is heightened by recent reductions in the capacity of sorghum wholesalers in Bunj who no longer supply significant volumes of sorghum because the direct sale of sorghum by refugees to small-scale traders has effectively eliminated the need for a wholesaler.

  Agencies must therefore plan for market support interventions to ensure that sorghum wholesalers have sufficient working capital to purchase planned levels of surpluses. Additional support may also be required for storage capacity, since existing systems have evolved to support a regular supply of commercial imports rather than seasonal surpluses.

---

http://sites.tufts.edu/feinstein/2012/milk-matters

- *Re-think the role of Mutual Support Mechanism*

  It is vital that agencies understand the importance of existing mutual support mechanisms with local host communities when designing their livelihood support interventions. The HEA baselines associated with this rapid market assessment have highlighted the importance of not only barter within communities but also communal eating. These mechanisms provide vital direct support for poor households during hunger periods. The effectiveness of these mutual support mechanisms is demonstrated by the homogenous nature of local communities – with relatively small differences between wealth groups.

  There is a real risk that short-term interventions by agencies could disrupt these mutual support mechanisms and have unintended harm to long-term livelihoods. Linking wealthier households to formal markets for *staple grains* in particular could disrupt these established intra-community sharing mechanism and have a serious impact on the welfare of poorer households. It is therefore recommended that agencies who do not have a long term presence in Maban focus livelihoods support on existing cash crops, such as sesame.

Strengthen Sesame Market-systems: Sales of sesame represent a key source of income for rural households in Maban County – and is on of the few commodities that is traded in formal markets. Unlike the honey value chain it does not appear as if the closure of the Sudanese border has affected the sesame market system but there may still be opportunities for agencies to support and strengthen this value chain. This could offer the possibility of working relatively 'high' up the value chain and therefore benefiting a large number of rural households with a relatively small intervention. Crucially sesame might offer a the potential for higher returns to sorghum and maize when cultivated at scale, particularly given the traditional low levels of market engagement by rural households in the sorghum and maize market systems.

Re-establish the Honey value-chain: Honey is a key "non-farm" source of income that helps to diversity household's income and therefore increases household's resilience to flooding and other shocks. Trade in honey has however been affected by the closure of the border with Sudan; buyers from Sudan no longer come to Bunj to purchase honey and traders in Bunj have not yet established alternative markets for honey. Support to re-establish the honey value-chain by linking traders in Bunj with new buyers in Juba, Malakal or Renk would help to support existing livelihoods and by working relatively 'high' up the value chain could benefit a large number of rural households with a relatively small intervention. The immediate impact of this intervention would be to benefit the Maban host communities who already collect honey – but if successful it would be very feasible to extend support to refugee households.

Promote Irrigated Vegetable Production: It is interesting to note that a couple of entrepreneurial individuals in Bunj have invested in off-season irrigated vegetable production in response to the increased demand for fresh vegetables following the arrival of humanitarian agencies in Bunj. There would appear to be scope for agencies to scale-up this innovation amongst the host community. Irrigated vegetable production currently includes; onions, water melons, leafy greens (*kudra*) and okra. There may also be opportunities to support the processing of some vegetables – such as the grinding of okra.