

Market Dynamics and Financial Services in Kenya's Arid Lands

MAY 2013

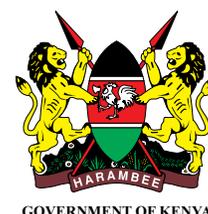


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Humanitarian Aid
and Civil Protection



Executive Summary

Functioning and integrated markets are key prerequisites for using a market-based approach to providing food assistance. For cash or voucher transfers to work, people must be able to buy what they need in their local markets and the markets must have the capacity to respond to increased demand through increased supply rather than through increased prices. An in-depth understanding of the structure, conduct and performance of the markets in the arid lands is therefore crucial. The present study endeavours to provide a comprehensive picture of how markets function in the arid lands and the extent to which they may be able to respond to increased demand for food, even during shocks. Its overall objective is to fill knowledge gaps regarding the market systems, as well as to explore the feasibility of delivery mechanisms in the arid lands.

The study comprises three components; livelihood and gender, market and supply, and financial services. For each component, specialised teams applied a combination of methodologies as summarised below. Field work was carried out from 25th August – 14th September, 2012.

Livelihood and gender

The study covered five livelihood zones in the arid lands: grasslands pastoral, Northeastern pastoral, Northern pastoral, Western agro-pastoral, and Northwestern pastoral. All of these are characterised by very low population density, water scarcity, and low availability of arable land. Agricultural production other than livestock is very low. On the other hand, with 24 million hectares of land suitable for livestock production, the arid lands are home to 60 percent of Kenya's livestock, a resource valued at Ksh 173.4 billion. Livelihoods are based on pastoralism and the generation of income through formal or informal labour and trade, allowing the purchase of food through markets. Significant differences exist among the livelihood zones and one important aspect to consider when planning a transfer to cash-based programmes is the predominance of polygamous households (between 55 percent in the northwestern and 22 percent in the northern livelihood zone); and the extent to which the specific Somali *Hawala* system provides traders with access to (informal) financial services.

Methodology	Livelihood and gender	Market and supply	Financial services
Literature review	X	X	X
Secondary data review	X	X	X
Primary quantitative data collection		1651 traders	
Primary qualitative data collection	61 FGD	112 key informants	56 FGD 18 key informants
Data analysis and cross-reference with existing VAM, livelihood, household economy and WFP beneficiary information	X	X	
Interviews at central level			X

In the areas visited, migration among residents is limited. Most respondents indicated that about 75-100 percent of the population is sedentary, while the sedentary population in a few areas is between 50-75 percent.

Cash is widely used by both men and women. Most households depend to a large extent on markets due to very limited agricultural possibilities. Any effect (positive or negative) that market-based interventions may have on local markets will have direct impacts in particular on those households that are neither wealthy nor so poor that they are included as beneficiaries of food or other assistance programmes.

Both men and women frequent the market centres, the vast majority coming from distances of between 0-30 km. Women frequent markets mostly to buy food, and to engage in petty trade. Men go there to sell or buy livestock, to participate in the *wazee baraza* (council of elders), or to socialise. The *wazee baraza* is an established institution that can be a good vehicle for communicating with men in the arid lands.

At household level, most major decisions are taken jointly. However, men have the final say in “macro” decisions on how household income is spent, which child follows an education, the purchase of larger assets, and the question of whether to start a business. By contrast, women are more in charge of daily life decisions such as food purchases, health care for children, etc.

With respect to spending priorities when it comes to both actual available income and potential cash transfers, women strongly prioritise the purchase of food and, to a much lesser extent, clothing, education and health. Men also prioritise food, but to a lesser degree. Alcohol or *miraa* (qat), livestock, education and clothing are also key priorities for men, in that order.

Both women and men own and use mobile phones and access informal financial services. In cases where having a national ID is needed to access formal financial services, this forms a greater barrier? (limitation) for women than for men.

Access to regular cash transfers increases a person’s access to informal credit, e.g. from traders. On the other hand, beneficiaries of cash transfers attract greater jealousy from non-beneficiaries than if they received food. There is a widespread assumption that there would be less sharing of cash transfers than of in-kind provisions – which is perceived as both positive and negative.

Conclusions

- Women would be the natural recipients of cash/vouchers to meet food needs, as they are normally in charge of family food purchases from the market.
- Women normally access markets as far away as 30 km from their home – double the maximum WFP distance for food distributions

- Transfers involving formal bank accounts may limit access to cash for women, if national ID requirements cannot be met or replaced by other identification.
- Women have equal access to mobile-phone transfers.
- Replacing in-kind food assistance with cash transfers can offer both advantages and disadvantages for beneficiaries in terms of access to traditional safety nets.

Markets in the arid lands

Kenya is a food-deficit country, relying on imports to meet requirement gaps. Per-capita food availability has reportedly declined by more than 10 percent over the last three decades. Most Kenyans rely on markets for some or all of their food needs. Three main market corridors were identified in the arid lands:

- Northwestern corridor: Nairobi-Kitale-Lodwar-Kakuma-Lokichogio, linking with South Sudan.
- North-central corridor: Nairobi-Meru/Nakuru-Isiolo/Samburu-Marsabit-Moyale, link with Ethiopia; and
- Northeastern corridor: Nairobi-Thika-Garissa-Wajir-Mandera, link with Somalia.

There are no significant differences in the conditions and behaviour of markets between these transport corridors. This is due to the fact that the arid lands are homogeneous in terms of population density, infrastructure, market and supply systems, seasonal fluctuations, constraints to trade, traders’ access to services, capacity to meet increases in demand, etc. Both the main and remote markets situated along the main transport highways benefit from significantly better road conditions, modes and frequency of transport than those situated off the main routes. Four types of markets were identified: 1) Nairobi; 2) hub markets in the central region; 3) main markets in the arid lands, and; 4) remote markets in the arid lands. The hubs in the central producing region are large and act as main suppliers to the northern region and other parts of the country. Main markets include the district headquarters and other large markets along the transport corridors. They are formal (local authority controlled) and act as redistributors for the remote markets. For each main market, a number of remote markets were identified, which do not act

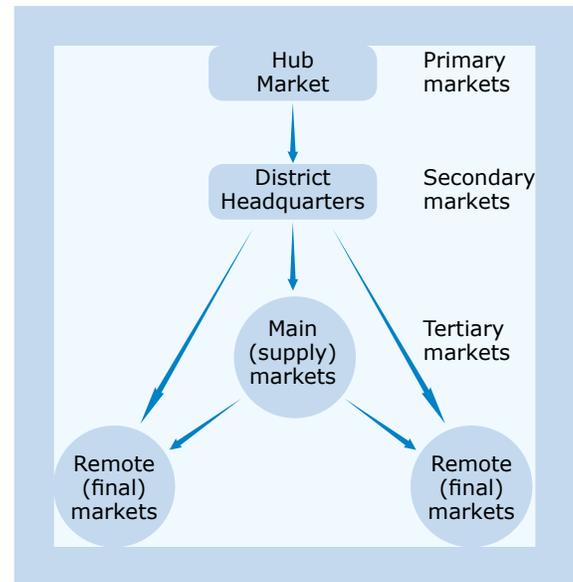
as suppliers for any other location. The flow of commodities between these markets is shown in the illustration. The hub markets and Nairobi are the main suppliers to the largest main markets in the arid lands which subsequently supply other main markets along the corridors and also the remote markets, with district headquarters being the central supply sources.

Four market chains were identified for the study: 1) grains and beans; 2) fruits and vegetables; 3) processed food (rice, sugar, maize meal, wheat flour, pasta, etc.), and; 4) livestock, meat and dairy, which all follow the supply chains described above. Maize is by far the most important staple commodity, not only in the arid lands, but in the entire country.

The role of wholesaling in remote locations is mostly confined to the trade in cereals, beans and processed commodities. It is often controlled by wholesalers from outside the districts, who sometimes also act as transporters. Their influence on food supplies in the remote locations can undermine local traders' response capacity and increase the risk of collusion, hoarding and price increases. Moreover, this structure likely limits the benefits of trade for the local economy.

Competition levels decrease with the remoteness of the market, which weakens the supply network and traders' response capacity, while increasing their vulnerability to supply shocks. Traders in the arid lands are by and large price takers, i.e., they are not influential enough, nor do they have the negotiating power to influence the price of the foods traded. They are consequently vulnerable to price shocks, and likely to pass on food price increases and transaction costs to consumers.

Food is more expensive in remote markets than in the main ones, and more expensive in the latter than in the district headquarters. Likewise, with the exception of the district headquarters, prices are also higher off the main transport corridors than along these routes. Food availability in local markets is generally influenced by seasonal production cycles and undermined by transport conditions. Markets in the arid lands off the main transport routes are more weakly integrated with their respective supply sources than markets along the main highways.



Food availability in local markets is highly seasonal and heavily dependent on transport conditions. **As a result, the choice of a food basket from the local markets that meet household - macronutrients - and diet diversity requirements at an affordable cost can be a challenge.** Maize prices are seasonal with lows observed generally between November and May in all corridors. Maize price volatility is lower in market hubs and district headquarters in all corridors, compared to other markets on and off the corridors. Seasonal factors such as road conditions and transport availability tend to increase the instability and price volatility of remote markets and markets off the corridors. As a result, using market-based intervention in these areas to improve food access of vulnerable households can be a challenge without first improving infrastructure.

The maize price integration analysis suggests that hub markets are integrated with the district headquarter markets, and the latter are, to lesser degree, integrated with some remote markets on the corridors. Price signals are to some extent transmitted from district headquarters to remote markets on the main corridors. Maize prices in hub markets and district headquarters on the main corridors are weakly integrated with the main markets and the remote markets off the corridors. Markets along the main corridors are better integrated with each other than with other markets off the corridors. In order to mitigate

price and supply risks associated with weak market integration, beneficiaries of cash-based interventions should be targeted in the vicinity of large markets along the main transport corridors, notwithstanding issues related to the operational feasibility of such interventions.

The most common factors cited by traders as influencing the resupply time are price and availability of commodities at origin (hub or district headquarters), distance, time and transaction costs from the source to the destination markets. Traders' resupply times and schedules increase with the remoteness of markets off the main transport corridors.

Road conditions and transport capacity are by far the most important trade constraints in the arid lands. Correspondingly, the quality of available transport infrastructure is key in developing markets in these regions. Inadequate infrastructure pushes up prices for staple foods in the arid lands compared to the rest of the country, and reduces traders' capacity to scale up supply, especially in remote markets. Accordingly, improving access in general and road infrastructure in particular are the most effective interventions in developing markets.

Under present conditions, prices on average increase by about 1.3 percent per additional transport hour from the hub market to the district headquarters. Similarly, prices increase by about 1.8 percent for transportation between the district headquarters and remote markets off the corridor.

Limited access to credit can undermine traders' capacity to efficiently respond to sudden increases in demand. Access to credit in the arid lands is very limited and largely confined to informal sources. This is common to all markets, including the district headquarters, though in these large locations formal credit is a relatively more common means of credit.

Conclusions

- In view of planning for cash-based interventions and from a market perspective, it is recommended to target locations with higher market response potential, i.e. the district headquarters and large markets of similar size and characteristics.

Expansion of cash-based interventions to other areas should be gradual. Decision to expand to other locations should follow the development of road infrastructure, especially in relation to supply sources. In this context, close monitoring of market trends and infrastructure development is fundamental.

- From a cost-efficiency perspective, consideration should be given to replacing some of the commodities in the in-kind food basket with a cash and voucher equivalent, while maintaining in-kind provision of others. Of the present WFP food basket, cereals (maize) and pulses (beans) are more easily replaceable than vegetable oil.
- Seasonal considerations for cash-based interventions should also consider a combination of factors including the food security situation, the seasonal food production cycles, the specific livelihood systems, the main periods during which labour and income are mostly generated, and the relative cost-efficiency / effectiveness of the interventions vis-a-vis relief food distribution. When possible, it is recommended to plan conditional activities that actually support the improvement of market infrastructure and functioning: strengthening market-information systems, investing in market-place infrastructure, ensuring security for mobile markets, improving access to credit, etc.

Financial services

Payment systems in Kenya operate through two main platforms: mobile phone -based payments supported by agencies, and bank accounts, supported through bank branches and bank agencies. Over the last five years the growth of M-PESA, combined with the launch of agency banking for banks, as well as for regulated deposit-taking microfinance institutions, has revolutionised payments in Kenya. Today more than 18 million Kenyans access mobile payment services through M-PESA (mainly) or one of the other providers. There are more than 45,000 mobile payment agents countrywide, and more than 12,000 bank agents. The payment system continues to develop. The payments revolution is beginning to influence the arid lands in a more significant manner as of 2012. Most market centres now have connectivity with at least one mobile network. With growing

connectivity, mobile phone ownership and the number of mobile money agents also have increased significantly.

Banking systems have evolved rapidly as well. Most market centres visited by the research team had banking agents. The likelihood of further banking system developments in the arid lands is very high, driven by three factors in particular: (1) the establishment of new administrative units at county level, with all counties having their own budgets; (2) the growing understanding of value chains operating in arid lands; and (3) infrastructure developments associated with improving communications to South Sudan and Ethiopia, and not least in relation to mineral extraction and power generation. The combination of signal coverage and the evolution of supportive banking infrastructure increases the potential for using payment systems to support cash transfers in the arid lands.

Cash-transfer programmes in Kenya are evolving rapidly. Among them: the Government of Kenya's cash transfer programmes (including the Hunger Safety Net Programme) and WFP's cash-for-asset programme in seven semi-arid districts. Each has its advantages and disadvantages, depending on the exact purpose and the location of the transfer recipient.

The situation is dynamic, since network coverage and mobile phone ownership are expanding rapidly in the arid lands.

Security is a long-term issue in northern Kenya. While this may change over time, particularly with the discovery of oil in Turkana and construction of roads to Ethiopia and South Sudan, it is unlikely to change rapidly. This means that cash is limited in the north, and moving cash is expensive. The less cash handling is involved, the lower are risks of leakage, and the lower are transaction costs, in particular costs of liquidity.

The above findings are altogether encouraging with respect to the probability of an e-payment environment developing in the north. Such an environment not only increases the feasibility of providing cash transfers to WFP beneficiaries by significantly reducing transaction costs, but reduces? (CUT: and) the problem of low cash presence in

the arid lands. In turn, an e-payment environment could also benefit considerably from WFP cash transfers being made through e-payments, adding considerable scale as well as new users to the system. An important indirect benefit of electronic WFP cash (or voucher) transfers could thus consist in strengthening this environment, which – at least in the medium-term – is a precondition to economic development in the arid lands.

Transaction size is one important potential hindrance for moving toward an e-payment environment in the North. Many arid lands residents make small daily food or airtime purchases, dependant on their cash flow. In situations where people make many small-value transactions, 'cash is king' and a transition toward an e-payment environment is more difficult, as many beneficiaries cash out the full amount of an electronic transfer immediately rather than making transfers from their e-account.

There is a strong concentration of financial services in major population centres, which are separated by vast distances. In addition, concentrations of services exist near the borders of Ethiopia and Somalia and particularly in Garissa and Marsabit. Cash-transfer agents are concentrated in areas with connectivity. In areas with poor or no connectivity, residents would need to travel long distances to access cash-transfer services. Many agents lack capacity to hold large amounts of cash, and find it difficult to replenish their floats (electronic values), as banks are located far from their trading centres. This can be addressed by increasing agents' capacity, by transferring electronic vouchers instead of cash, or by encouraging beneficiaries and traders to use electronic payment for goods.

The arid lands region has seen the emergence of a number of formal financial institutions over the past five years. However, many of the respondents and communities in general still do not use them. Many people still prefer using informal financial service mechanisms such as shopkeepers, merry-go-rounds and livestock. The reasons for this preference include ease of access and, in the case of livestock, the opportunity to obtain decent returns.

Between 2006 and 2009, the share of people having received any money transfers in the arid lands increased from 11-60 percent. A number of factors

are decisive in considering whether or not to use available money transfer services. These include the risk, the cost, the speed and the convenience of the potential money transfer.

Mobile phone ownership increased by 80 percent between 2006 and 2009, boosting the share of respondents owning a mobile phone from 10.3 percent to 18.4 percent. Findings from the qualitative survey show ownership accelerated the following three years, with more than half of those surveyed owning mobile phones by 2012

Opportunities exist for financial institutions to develop products that will help people accumulate money for seasonal expenses. This can be done by opening channels like bank agents, as residents' income is small and they are unwilling to travel to major towns where bank branches are located. Livestock traders would need credit in March to purchase livestock. Retail traders would also need credit in to stock their businesses, because of high sales during the month of Ramadan.

There is still limited awareness of the services and how they can be relevant for low-income users. Accessibility of financial services is increasing, but it is still a significant issue for customers. People are still learning to trust the new mechanisms. This means educating actual and potential clients is important, and should be built into delivery mechanisms. Building access to sustainable services needs to be carefully considered, especially where there are limited sources of liquidity in an area. Establishing trust in the mechanisms is likely to be important in encouraging the use of payment mechanisms. Such mechanisms include training clients, monitoring agents, and quickly resolving customer problems.

Conclusions

- Connectivity, followed by availability and use of M-PESA, is rapidly expanding in and around trading centres. Bank infrastructure expanded significantly over the past five years, and is likely to improve over time in major centres.
- The distribution of agents – whether bank or M-PESA – varies, and needs to be considered when making choices. However, the WFP programme by itself has the potential to encourage the development of new agency channels.
- Significant operating challenges still exist for agents. These include security, liquidity management, periodic demand for services, and network downtime. Any transition to cash- or voucher-based interventions should take into account such operating challenges by providing sufficient lead time and ensuring that agents receive support and backup.
- It is important to keep cash circulating within the arid lands communities, to reduce costs (of liquidity, security, etc), and to promote electronic payments at individual level and, more significantly, at the level of traders.
- Individual use of financial services is still predominantly informal. Clients may benefit from basic financial education and familiarisation with financial institutions.
- There are seasonal needs for credit to meet peaks of expenditure typically driven by school fees, medical expenses and festivals. This is also likely to create significant liquidity peaks for agents.
- Encouraging the use of financial services includes educating actual and potential clients, building accessible financial systems, and building trust in these systems.
- There is a general move toward the use of national identity cards; however, the level of adoption/acquisition of national ID cards is low in some communities, and alternatives are required for non-Kenyan citizens.
- Signal coverage reaches only around the major trading centres. New payment guidelines require the use of online transactions. Payment system options in remote communities are more limited. Possibilities include voucher programmes, satellite access for agents, and existing food distribution programmes.

Overall recommendations derived from the study

Based on the findings and conclusions of the three study components, one joint set of recommendations has been formulated.

1. When considering cash-based interventions, priority should be given to areas and markets **where market risks are low and most manageable** (in particular low price volatility,

stronger market integration, better road connectivity, higher supply capacity) and **where financial services are available**. This is the case in **district headquarters and a number of selected markets on the transport corridors**.

2. When considering replacing in-kind food provisions with cash or voucher transfers, the possibility of **replacing some** of the commodities foreseen in the food basket, while maintaining in-kind provision of others, based on a cost-efficiency analysis should be considered. Of the present WFP food basket, **cereals (maize) and pulses (beans)** appear to be more easily replaceable than vegetable oil, for example.
3. When considering market-based interventions, the transfer value needs to be **adjusted to normal seasonal price fluctuations**, taking into account cost efficiency. This is particularly important during the **lean season** (July – September).
4. Cash or voucher transfers should be considered only for beneficiaries **living no more than 30 kilometres away** from the market, which corresponds to the 0-30 kilometres range that people report presently covering to reach the market.
5. For a potential cash or voucher transfer, **electronic rather than physical solutions are preferable**, as this will reduce transaction costs, including the cost of liquidity, the time beneficiaries have to spend for collection of the cash and security risks.
6. Decisions on transfer mechanisms should **build on assessments and lessons learned** with respect to existing and piloted mechanisms; and **regular reviews of the dynamic development** going on in the arid lands. Important aspects to consider include the **experience of using different transfer programmes**; the **rapid development of technical solutions and network coverage** in the arid lands; and, for instance, the **requirement for good information and training** and the **ability to swiftly resolve operational problems**.
7. It is important to ensure **reliable and timely monitoring and reporting** on any development in terms of identified risks of a

transition to cash and vouchers. **In particular, that includes changes in local market prices, bottlenecks in food availability, and potential conflicts within households and communities.**

8. A transition to a particular cash transfer should be **preceded and accompanied by intensive communication** with communities and households, including both men and women, as well as traders. Where possible and adequate for the focus group in question, established structures such as *wazee baraza* could be used.

The study also proposes four recommendations to advocate for the Government of Kenya to :

- Continue and accelerate the improvement of **road infrastructure** as the all-decisive factor in further strengthening markets and economic development in the arid lands.
- Strengthen systematic and regular **price data collection** with significant geographical coverage.
- Further encourage increased signal coverage.
- Take the lead in sharing **strategic information** and **increasingly linking the different safety nets** existing and under development.

The map below illustrates the areas and markets which fulfil minimum conditions for a transition to cash or voucher transfers based on the criteria established (markets on the main transport corridors, availability of financial services, and connectivity). Those with green circles would be the first priority areas, and those with yellow circles would be the second priority ones.

The shaded circles around these markets indicate the 30-km radius mentioned in recommendation 4, above. Yellow circles indicate final WFP food distribution points. Based on the Long Rains assessment caseload in August and December 2012 (885,000 people requiring food assistance in the Arid Lands), the approximate number of beneficiaries that could – provided additional operational prerequisites are in place – transition to cash or voucher transfers amounts to about 150,000-200,000.

The results of the study, its main conclusions and recommendations, were presented at a

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List of Abbreviations and Acronyms

ACF	Action Against Hunger International
AML	Anti Money Laundering
ATM	Automated Teller Machine
CaLP	Cash Learning Partnership
CFA	Cash for Assets
CFT	Combating the Financing of Terrorism
CIFA	Community Initiative Facilitation and Assistance
CT-OVC	Cash Transfer for Orphans and Vulnerable Children
CT-PWD	Cash Transfer Program to Persons with Severe Disabilities
CT-UFSF	Cash Transfer Urban Food Subsidy Program
DFID	Department for International Development
ECHO	European Commission – Humanitarian Aid and Civil Protection
EFT	Electronic Funds Transfer
FGD	Focus Group Discussions
FSD	Financial Sector Deepening
FSTA	Financial Sector Trend Analysis
G2P	Government-to-Person
GPRS	General Packet Radio Service
GSM	Global System for Mobile
HSNP	Hunger Safety Nets Programme
IDI	Individual in-depth Interviews
KCB	Kenya Commercial Bank
KRCS	Kenya Red Cross Society
KSh	Kenyan Shilling (1 US\$ equals approximately 83 KSh)
KWFT	Kenya Women’s Finance Trust
KYC	Know Your Customer
MFI	Microfinance Institution
NGO	Non-Governmental Organization
NSNP	National Safety Net Programme
OP-CT	Older Persons Cash Transfer Program
PCK	Postal Corporation of Kenya
PDA	Personal Digital Assistant
PIN	Personal Identification Number
POS	Point of Sale
PRA	Participatory Rapid Appraisal
ROSCA	Rotating savings and credit associations
ROSCA	Rotating Savings and Credit Association
RTGS	Real Time Gross Settlement
SACCO	Savings and Credit Cooperative Organisations
SMS	Short Message Service
UCTP	Unconditional Cash Transfer Programme
UNICEF	United Nations International Children’s Emergency Fund
WFP	World Food Programme

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1. Introduction

Well-functioning food markets are central to ending hunger. Not only must enough food be produced to meet consumption needs, but this food must also be accessible. Food markets link food production and consumption sectors, but they can do much more. When food markets are functioning well, they can create jobs and stimulate economic growth by spurring diversification of food systems based on comparative advantage. This can lead to more equal distribution of income and purchasing power, and thus increase nutritional well-being and enhanced food security. **World Hunger Series: Hunger and Markets (WFP 2009)**

Functioning and integrated markets are key prerequisites for using a market-based approach to providing food assistance. For cash or voucher transfers to work, people must be able to buy what they need in their local markets and the markets must have the capacity to respond to increased demand through increased supply, not increased price. Particularly in structural food-deficit countries like Kenya, markets must be able to efficiently distribute food from surplus to deficit areas, including through importation.

Kenya suffers from cyclical droughts which over the years have hit more frequently and with greater intensity. The arid and semi-arid lands make up more than 50 percent of Kenya's land mass, support over half of its livestock population and some 15 percent of its (5,6million) people. The marketing infrastructure in the arid lands is weak, with markets generally not well-integrated and further limited by poor roads (and high transaction costs) in many remote rural areas.

WFP's response to the 2011 drought was hampered primarily by lack of commodities to preposition before the rains started in October, and exceptionally heavy rains in November that constrained food transport. Because of a series of market/feasibility

studies carried out earlier in the year, WFP was prepared to respond with cash transfers in 14 semi-arid districts. But in the arid/pastoral areas, sufficient market and feasibility information was not available to analyse the potential for using transfer modalities other than in-kind food during the emergency.

An in-depth understanding of the structure, conduct and performance of the markets in the arid lands is therefore crucial to shape food assistance programmes going forward. ECHO has commissioned WFP to lead and coordinate a market and feasibility study to provide a comprehensive picture of how markets function in the arid lands, and the extent to which they may be able to respond to increased demand for food, even during shocks. This will allow for a well-informed discussion of the specific pros and cons of food distributions vs. market-based transfers in the arid lands.

In-kind food distributions are straightforward and have many advantages; for example, when they support the nutritional status of specific target groups (e.g. supplementary feeding programmes, school meals, food and nutritional support for HIV/AIDS-affected households, etc.). Food-for-assets programmes have also amply demonstrated their usefulness. However, there are cases when it may be more practical and effective to provide beneficiaries with cash or vouchers which they can use to gain access to food in the marketplace.

The benefits of cash/vouchers programs are well known. In addition to the classic welfare economics argument that cash transfers provide more satisfaction to beneficiaries than in-kind grants¹, under certain conditions, they may also reduce response time in times of crisis, be more cost efficient than procurement and distribution of food commodities², and mitigate the unintended effects of food transfers. Cash transfers may also allow

1 Greater flexibility in disposing of the grant allows people to reach a higher level of overall 'utility'.

2 The record in Kenya is mixed in this regard, see Jagwe 2011.

beneficiary households to use some of the grant for immediate needs and spend the remainder on longer-term productive assets or investments (health, education). Finally, the local economy may benefit more broadly from this kind of intervention than from food distributions.

The necessary conditions under which cash-and-vouchers transfer programmes may be suitable are equally well known: beneficiaries must have access to efficient markets with relatively ample stocks/rapid supply response capacity; the injection of funds must not lead to local price inflation (harmful to beneficiaries and, especially, low income non-beneficiaries); and, in addition to proper targeting, one must operate within an environment where financial delivery services are widely, easily and safely accessible.

With a view to guide programming questions and decisions, ECHO has devised funding guidelines for the use of cash and vouchers in humanitarian crises,³ including a decision tree.

While these guidelines only apply directly to ECHO funding, they provide a useful structure for the relevant questions to be addressed regardless of the source of funding for a potential intervention. In particular, the guidelines were highly helpful when formulating the research questions to be answered by the present study. These need to explore four specific areas:

- the links between markets and household livelihoods and food security;
- the structure, conduct, and performance of markets in the relevant districts;
- market responsiveness; and
- the infrastructure for delivering food assistance through cash and vouchers.

³ The use of cash and vouchers in humanitarian crises. DG ECHO funding guidelines, March 2009.

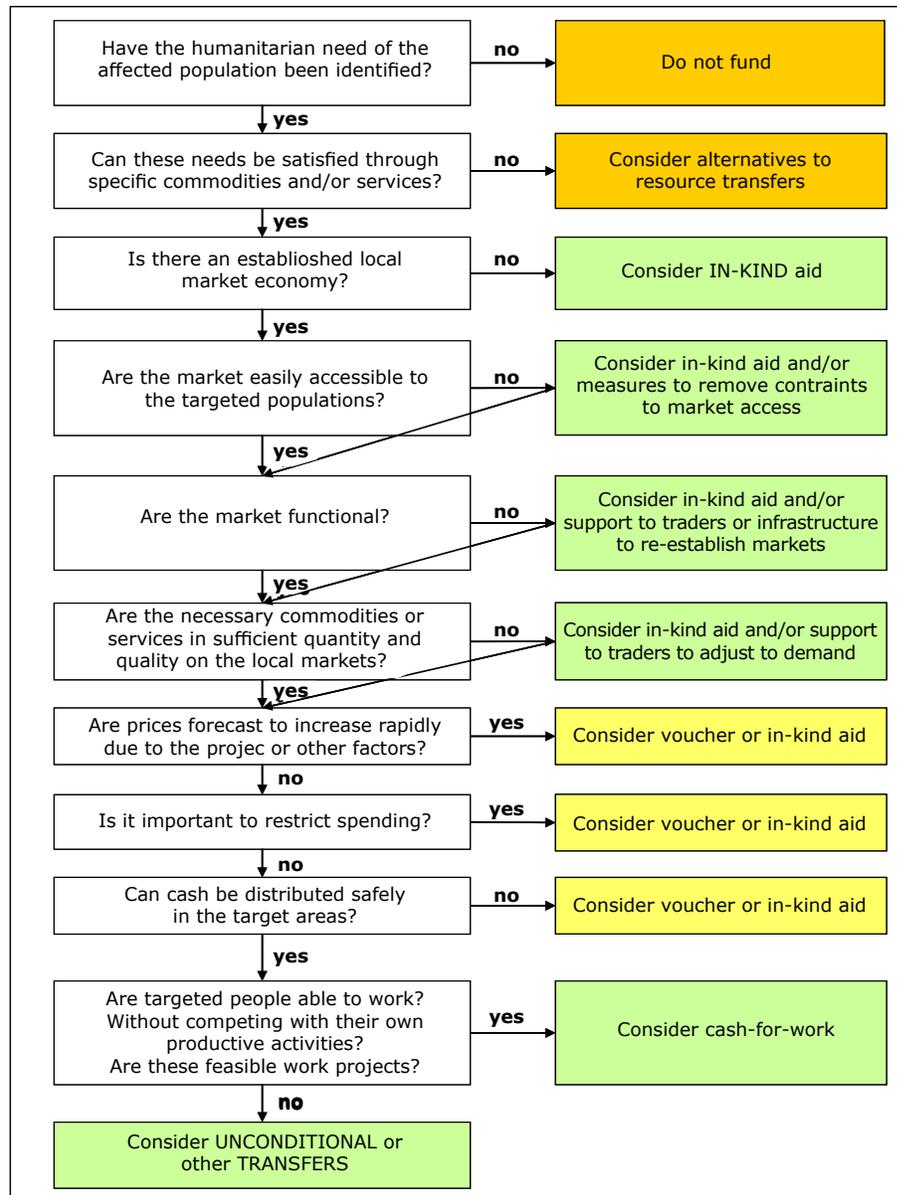


Figure 1: Decision-tree for cash and voucher based interventions

2. Objectives of the study

The overall objective of the study is to fill knowledge gaps regarding the market systems as well as to explore the feasibility of delivery mechanisms in the arid lands. These are considered critical in informing policy and guiding programming to improve humanitarian response to future shocks, and to guide policies that can improve livelihoods and enhance community resilience. The study will also provide a 'market baseline' for the arid lands, against which changes can be measured over time. Overall, the study aims to provide a solid basis for well-informed discussion and decisions on WFP food assistance programming, as well as a discussion of the factors determining these decisions – and ways for the Government of Kenya and its partners to address them.

The specific objectives of the study include the following:

- 1) To analyse the market systems in the arid lands.
 - Traded commodities and seasonal availability in the markets (macro food supply and availability on local markets)
 - Supply and value chains, including production cycles and cross-border trade.
 - Wholesale and retail price trends (real prices, seasonality, volatility and cycles compared to five-year averages)
 - Estimated traded volumes and sales patterns
 - Demand patterns, including seasonal / cultural aspects and trader credit arrangements
 - Household consumption patterns, and dependency on/access to markets (including differences related to gender and livelihoods)
 - The national policy and security contexts, and their effect on market functioning; and
 - A review of existing market-based interventions.
- 2) To analyse the capacity of markets to respond to increased demand.
 - Analysis of market integration, particularly at divisional and remote levels, including analysis of price-time series at divisional level for the study of price co-movement.
- 3) To analyse the infrastructure for delivering food assistance through cash/vouchers:
 - Traders' typology, including a gender disaggregation of functions.
 - Analysis of traders' capacity to respond to increases in demand, including financial and storage capacity, time required to respond and quality controls.
 - Analysis of competition levels, including number of actors, restriction to entrance of new traders, profit margins per type of trader and price-formation mechanisms.
 - Analysis of trade barriers and transaction costs, including an estimate of their impact on supply and trade. Seasonal access to main roads, bridges and markets that impacts on transportation as well as functionality of markets.
 - Availability of financial services (including mobile money and hawala)
 - Availability of mobile phone network, electricity, etc.
 - Level of financial literacy of beneficiaries
 - Types of technologies in use by traders, and
 - A review of the pros and cons of technologies currently in use to deliver cash/vouchers through government and NGO programmes

An important part of these objectives is to analyse and understand the livelihood systems and gender differences, implications and preferences with respect to the different options for food assistance. Such analysis targets both households (how and how much do people rely on markets, including physical access and seasonal differences, main household food consumption patterns, and seasonal demand patterns), and the local area as a whole, which depends not least on the expected relative size of a programme beneficiary population compared to the total population in the market's catchment area.

3. Basic Food Consumption Economics

This section covers some basic partial equilibrium concepts⁴ underpinning the analytical framework for the present study. It also provides a first understanding of how the study components (e.g. seasonal price trends, household consumption patterns, market efficiency) fit together.

From a Kenya food security point of view, endogenous and exogenous shocks manifest themselves primarily through an unusual increase in basic food prices⁵. For both net food consumers and deficit farmers, this implies both a reduction in food consumption (even though the demand curve for basic foods among low-income families tends to be quite price-inelastic), a reduction in the consumption of other goods, and often a switch to less preferred but less expensive foods. For pastoral groups, the shock may have an immediate impact on both the income and expenditure sides of household budgets. A drought may induce massive off-take and a drop in livestock prices at the same time that it drives basic food prices up. This well-known deterioration of the livestock-grain terms of trade renders pastoral groups even more vulnerable to drought-induced crises.

Beyond the smallest scale, most interventions designed to address such a crisis (free food distributions, subsidised food sales, food-for-assets or conditional/unconditional cash or voucher transfers) can have a variety of effects on the "budget constraint line" for food and non-food items of beneficiary and non-beneficiary households, along with local food supply and effective demand. Some are unintended. For example, a large inflow of free or subsidised food can reduce the number of buyers in the marketplace (a reduction in effective demand on the local market), and drive prices below the new equilibrium level (which had risen, consistent with a crisis situation).

In extreme cases, this may incite local traders to hoard local stocks or move them to other markets. Non-beneficiaries then have to turn to a 'secondary market' which may become increasingly expensive. More commonly, the impact of a slight fall in local effective demand (from D1 to D2 in the diagram below), following in-kind food distribution or food-for-assets, is to bring the new market food price down (to P2) at a level between a pre-crisis (P1), and a crisis level (P3).

A cash or vouchers program, on the other hand, is specifically designed to raise beneficiaries' incomes to compensate for the impact of the shock on prices, food expenditures, and consumption, so it increases local effective demand. There are two main scenarios in this case: (a) local supply is infinitely elastic (i.e. the market responds immediately by satisfying demand at the new crisis-equilibrium price, as would be the case in a large, well-integrated market such as Nairobi or some other large city), or (b) local supply is price inelastic.

In the first case (infinitely elastic supply curve), macro factors have pushed a horizontal supply curve upwards, setting a higher equilibrium price. The original demand curve does not change, but the quantity demanded falls. The injection of cash/vouchers increases effective demand to D2 so that quantity demanded can approach, reach or go beyond the original level. However, since the supply curve is flat, this does not induce an increase in the equilibrium price, so the price impact on low-income non-beneficiaries is nil or very small.

In cases where the supply curve is price inelastic, the determinants of local supply are such that the supply curve is defined; quantity supplied on this market cannot increase unless there is a further increase in price. In this case, the original shock

⁴ Some studies of the impact of cash transfers have relied on disaggregated computable general equilibrium models (IPC-IG, 2012) which provide more detailed information, but do not change the basic conditions for market analysis.

⁵ i.e. well above historical seasonal price movements.

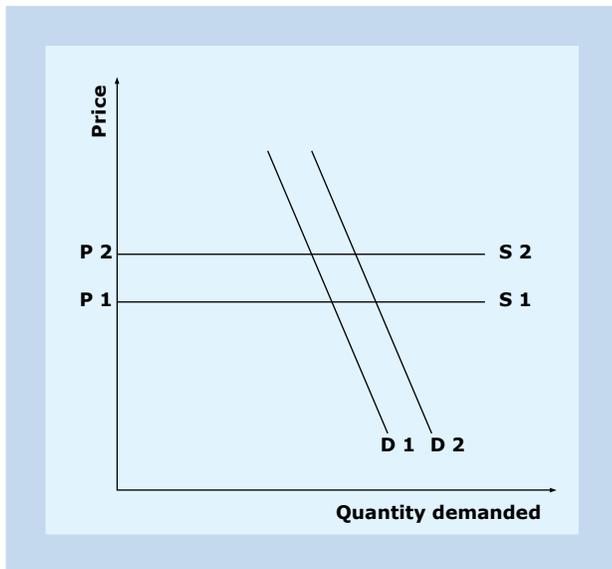


Figure 2: Price behaviour with decreasing demand after in-kind food provision

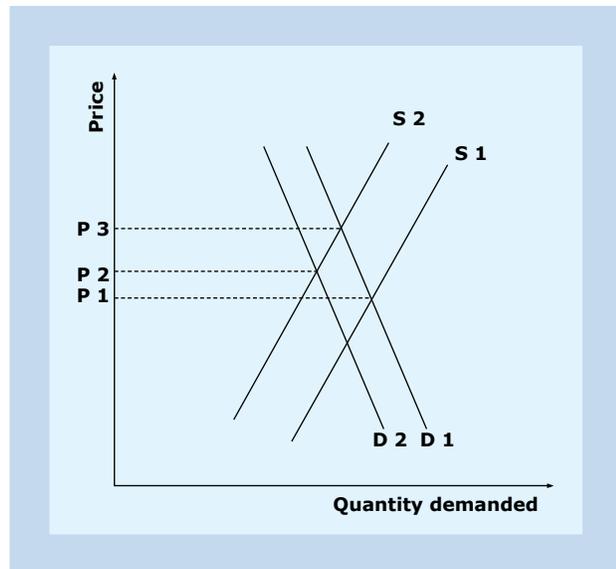


Figure 3: Price behaviour in an infinitely elastic market

has resulted in a leftward shift of the original supply curve (S2, fewer sellers), setting a higher equilibrium price P2 on the basis of the original demand curve, and inducing a fall in quantity demanded. The first impact of a significant cash/ vouchers program would be to increase effective demand. The intersection between the crisis supply curve S2 and the new demand curve D2 would create a new equilibrium price P3, higher than the previous crisis equilibrium price.

This phenomenon is sometimes called “flash inflation”; quantity demanded by beneficiaries may reach or go beyond the pre-crisis level (depending on the size of the benefit), while the quantity demanded by non-beneficiaries would fall to a level even lower than a crisis equilibrium level. This situation can be mitigated by the fact that the price differential between such a market and (lower) prices in nearby markets will induce flows, up to the point where the new price differential is equivalent to transaction costs between these markets. Hence the importance of the responsiveness of a market to cash or voucher interventions, its price integration with other markets, levels of transaction costs, and relative competitiveness.

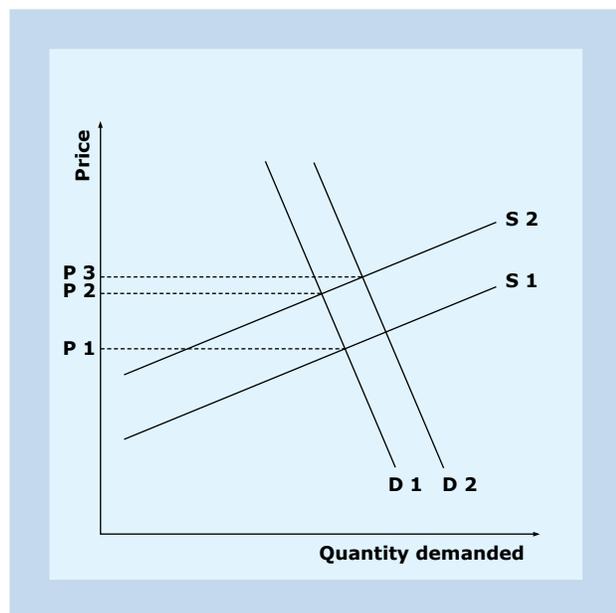


Figure 4: Price behaviour in inelastic markets following increasing demand due to cash or voucher distribution

4. Scope and Methodology

4.1 Scope

The study revolves around three main topics: (1) livelihood and gender; (2) market structure, conduct and performance with a view to market elasticity; and (3) financial mechanisms available for the provision of market-based food assistance.

Livelihood and gender considerations: Will cash or vouchers to the same extent as direct food provision improve food security for WFP's beneficiaries, i.e. the entire household and, in particular, women and children? This depends on many different factors, including the way households earn a living, how gender roles within households are distributed, who accesses and uses cash for which priorities, the degree of financial "literacy", etc.

Market considerations: Will additional purchasing power (either through direct cash provision or via vouchers) stimulate the market and the local economy, or will it just lead to an increase in prices? This depends to a large extent on market connectivity and elasticity, i.e. how markets are linked, and to what extent additional demand can be met with additional supply.

Financial mechanisms: How can cash or vouchers be transferred to beneficiaries, and how would they be able to use them? Which financial services – banks, agents, mobile phones, etc. – are available and accessible for beneficiaries, and at what price?

In addition to this, classic questions of cost effectiveness – including cost efficiency – need to be asked.⁶ These questions concern both the internal efficiency – i.e. which approach can provide the

same social transfer / food value to beneficiaries at the least cost – but also additional potential benefits and costs, e.g. market stimulation and increased local economic activity, beneficiary choice, potential synergies with other interventions, impact on food and nutrition security, etc. In analysing these topics, the study maintains a clear focus on the questions' relevance to decisions that need to be made in terms of food assistance programming, and to the factors underlying and determining these decisions.

4.2 Geographic coverage

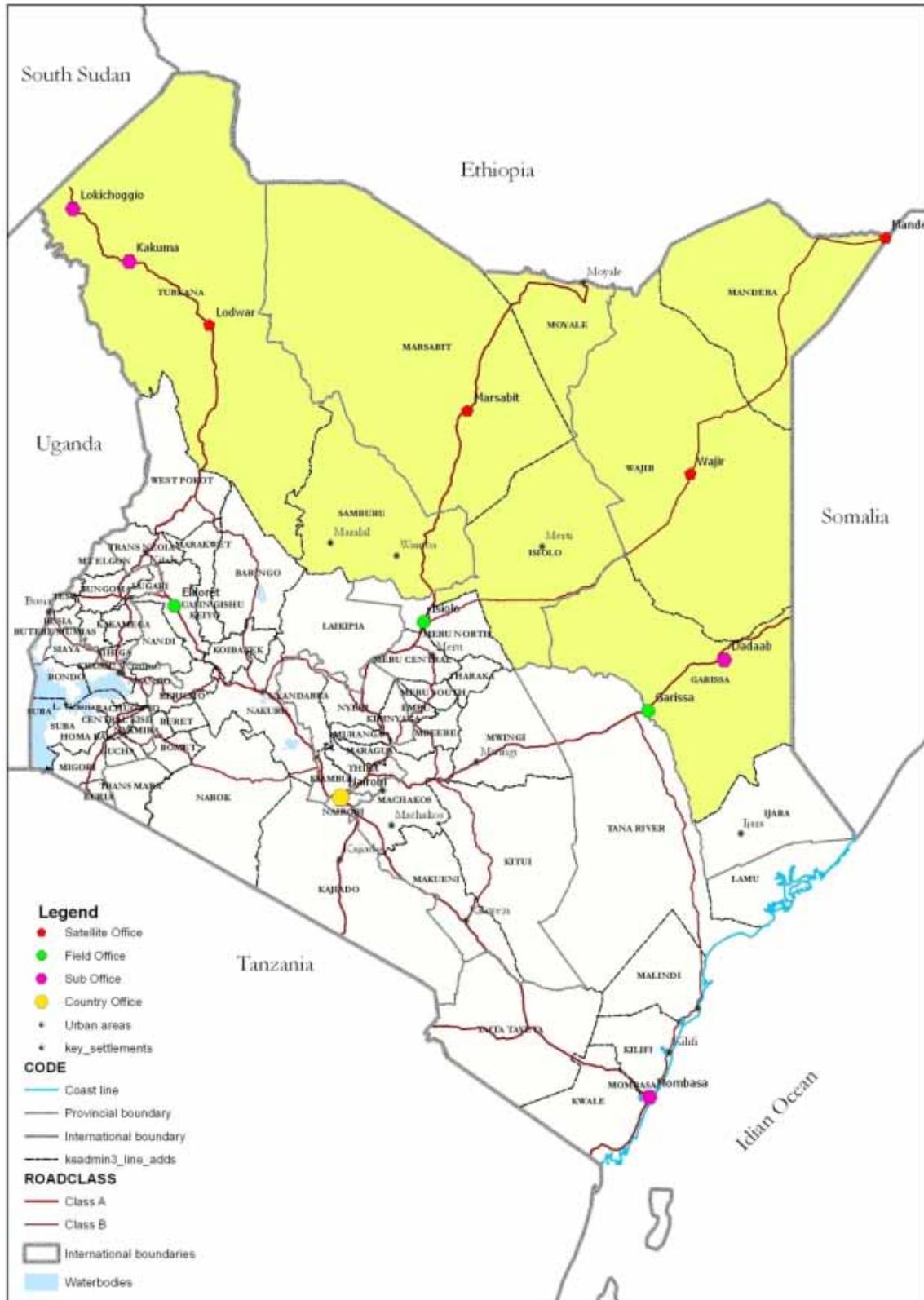
As required information is already available for part of the semi-arid areas of the country (see above), the study focuses geographically on the northern arid areas, as shown in the map. These include the districts of Turkana, Samburu, Marsabit, Isiolo, Moyale, Garissa, Wajir and Mandera.

4.3 Methodology

The study team consisted of WFP staff from Kenya and neighbouring country offices as well as headquarters, supported by a team of consultants specifically recruited for the study.

A specific team was established for each of the three main study groups. The sub-team on livelihood and gender consisted of a consultant and a team of enumerators / interviewers. The sub-team on markets / supply chains consisted of a consultant, several WFP staff, three government representatives, and a team of enumerators. A local company was contracted to comprise the sub-team on financial markets and mechanisms.

⁶ Cost effectiveness refers to an evaluation of alternatives in which all costs and benefits are considered, not all of which can be measured in monetary terms. Cost efficiency forms part of a cost effectiveness review and refers to an evaluation of alternatives that considers only costs and benefits that can be measured in monetary terms.



Map 1: Geographic coverage of the study

Each sub-team applied a number of methodologies, as summarised by the table below:⁷

Methodology	Livelihood and gender	Market and supply	Financial markets and mechanisms
Literature review	X	X	X
Secondary data review	X	X	X
Primary quantitative data collection		X	
Primary qualitative data collection	X	X	X
Data analysis and cross-reference with existing VAM, livelihood, households economy and WFP beneficiary information	X	X	
Interviews at central level			X

Table 1: Summary of methodologies used per sub-team

For its field work, each team developed a set of specific tools that guided its primary data collection:

- The livelihood and gender consultant prepared an interview guide, a background paper and a form to enter responses from focus-group discussions (either exclusively male or female) from all livelihood zones.
- The team on markets and supply chains developed one interview guide for quantitative interviews with traders, and an additional questionnaire for more qualitative interviews with key informants.
- The financial markets team prepared interview guides for two kinds of focus group discussions, i.e. either beneficiaries (mixed, only male or only female groups) or key informants, such as users of formal financial services able to inform on existing financial services in the area.

All data collection tools were tested in July and August, 2012. The recruited enumerators and interviewers were trained during a four-day intensive workshop, which also served to clarify questions and concepts, agree on Swahili formulations, carry out role games, and further test and refine the tools. The actual field work took place between 28 August and 22 September, collecting primary quantitative data through 1652 interviews with traders; and primary qualitative data through 65 focus group discussions for livelihood and gender

aspects; 112 key informant interviews for market aspects; and 56 focus group discussions as well as 18 key informant interviews with respect to financial services. The itineraries and places visited by each field team are provided in Annex 1.

Data collected from the field were entered into software applications, cleaned and analysed. The results from this work were then assessed against information obtained from secondary data, literature review and interviews to arrive at the study's findings, conclusions and recommendations.

A feasibility and response analysis workshop was convened on 27 February 2013 in Nairobi, at which representatives of government, donors, non-governmental organisations, the private sector and the UN discussed the presented findings and conclusions of the study. In particular, participants discussed options for WFP food assistance programming, underlying factors determining the choice of programming options, and how development partners can influence these factors.

The present report incorporates the comments and suggestions highlighted during this workshop. The last section of the report summarises the way forward and proposed priority actions to strengthen the enabling environment for local market and economic development in the arid lands.

⁷ Additional information is provided as relevant in the specific sections for the three study areas.

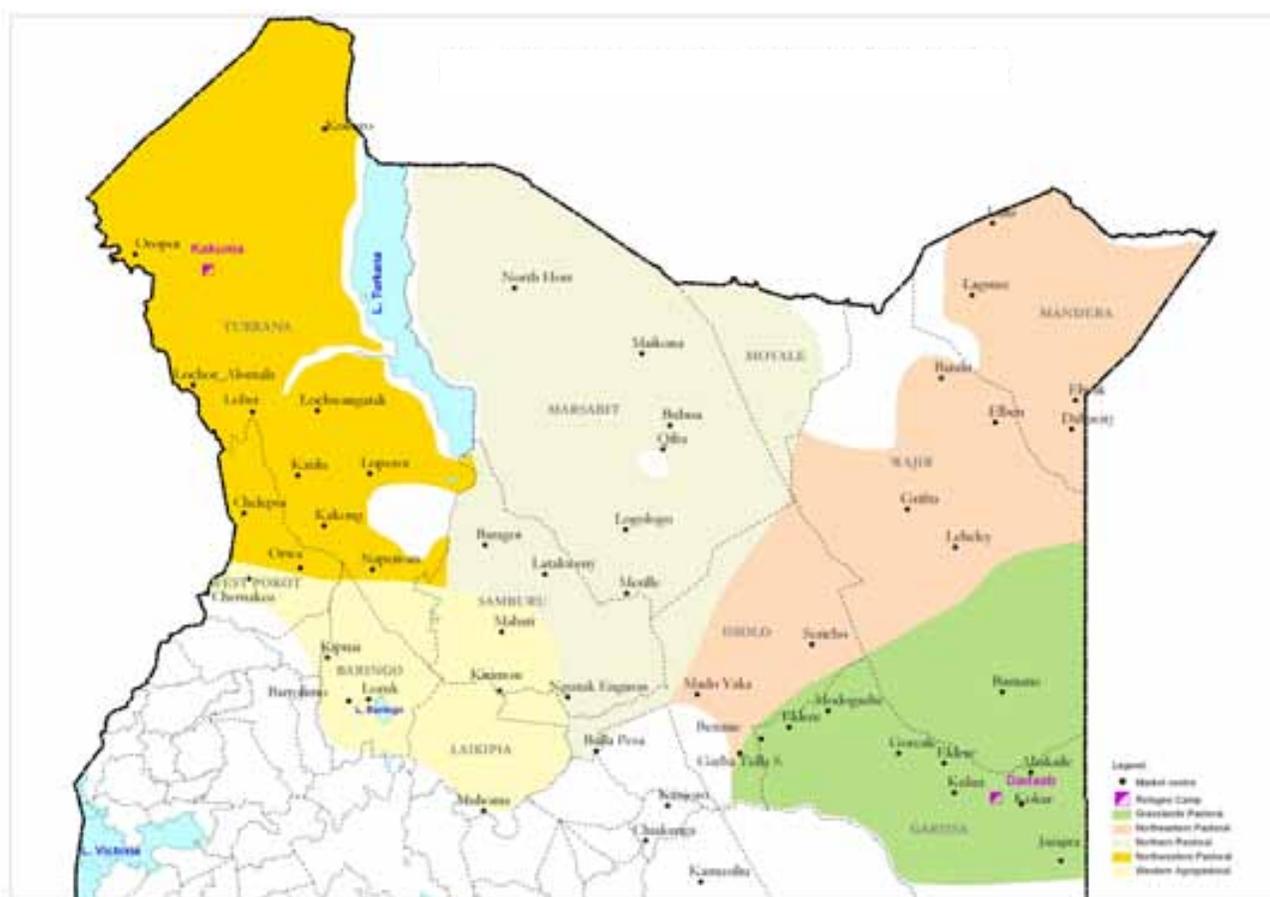
5. The livelihood zones covered

The present section provides a short description of the livelihood zones covered by the study (see map) in order to provide the context in which the analysis took place. Further in-depth descriptions of the zones referred to are available (see Annex 2 on literature used).

The five livelihood zones discussed in the study include:

- Grasslands pastoral
- Northeastern pastoral
- Northern pastoral
- Western agro-pastoral and
- Northwestern pastoral

Generalized Livelihood Zones for ASALs



Map 2: Livelihood zones covered by the study

The main characteristics of each of these zones are summarised below, following a short general description of the study area.

5.1 General description

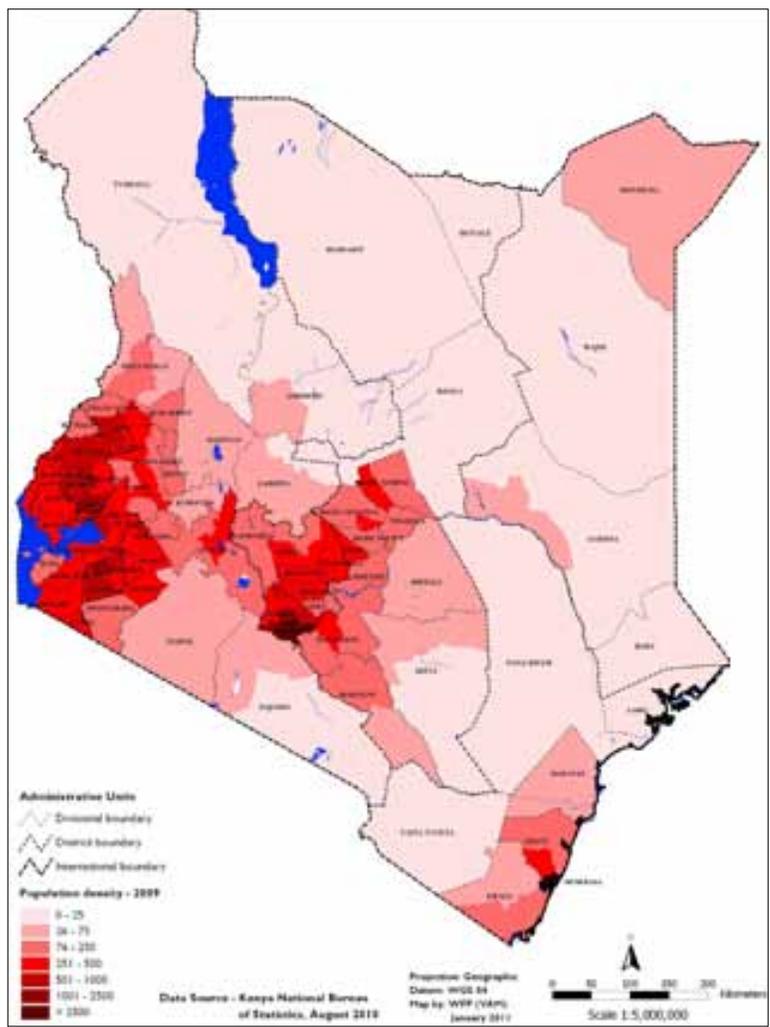
The entire study area is characterised by high temperatures ranging between 23 and 38°C and low rainfall. The population density is very low, as illustrated by the map.

The average population density is 12 people per square kilometre. However, as about 18 percent of the region’s roughly two million people live in urban areas, the population density in the vast rural areas is indeed extremely low.

Due to poor soils and low water availability, agricultural production is extremely limited and concentrated in areas close to water bodies. The main food production is livestock and livestock products, mainly milk.

Due to widespread pastoralism, a large part of the population is nomadic or semi-nomadic. However, this picture is rapidly changing, and many people (in particular women and children) are becoming sedentary. Indeed, information from FinAccess suggests that 75-100 percent of people in the study area are now sedentary.

**2009 Kenya Population and Housing Census
Population Distribution by Administrative Units**



Map 3: Population density in Kenya

5.2 Grasslands pastoral

This zone is a semi-arid featureless plain with high temperatures (between 23 and 35°C) and only 250-300 mm annual rainfall. The prevailing soil types are sandy and loam, the vegetation cover is predominantly shrub grassland. The production year starts with the *deyr* season° C, which begins in October and is the time when the most reliable rains are received. The second rainy season is the *gu* season (April/May to June). The majority of the residents are Somali Kenyans.

About half of the residents are semi-nomadic, while up to 20 percent are semi-nomadic and 20 percent fully settled. There are also small groups of migrant labourers and internally displaced people.

Livestock husbandry is the main economic activity. A typical household owns approximately 20-30 cattle, 30-45 goats, 20-30 sheep and 0-12 camels. The middle-income and wealthier groups generate their entire income from livestock; the poorer households only 40 percent, due to their small livestock holdings. They supplement their living through casual labour, self-employment, such as petty trade and remittances.

Sources of food in this zone include food aid, food purchases, livestock production and school feeding. Most food is bought in the market, with cereal and sugar comprising the major purchases. Relief food covers almost half of the kilocalorie requirement for very poor and poor households, a third for middle households, and a quarter for better-off households. Livestock production (milk and meat) contributes between 0-5, 1-10, 10-15 and 15-25 percent of the total food requirement for very poor, poor, middle and better-off households, respectively. Almost all households have at least one child in school receiving one meal per day. Overall, school feeding contributes between 5-10 percent of annual food needs.

Market access is fairly good in the dry season, but difficult during the wet season.

The main chronic hazards in this zone include livestock and human diseases and water shortages. Worm infestation, tick-borne diseases, and trypanosomiasis in camels are the major livestock

diseases. The common periodic hazards include drought, flood, conflicts and epidemic diseases.

5.3 Northeastern pastoral

This zone, too, is characterised by high temperatures which peak in the months of January to March and September to October. Rainfall is scanty and erratic, with an annual average of 250 mm, falling during the long rains (April – May) and the short rains (October – November). Ethnic groups in the zone include Garreh-Ajuran, Murulle, Degodia, Borana, Samburu and Somali. The majority of pastoralists are semi-nomadic (40 percent) or fully nomadic (30 percent).

Livestock production is the most significant source of income in this zone, contributing between 60-80 percent of the total household income. The average household keeps 5-10 camels, 10-20 goats, 5-10 sheep. Some households have a few cattle. Goats account for 20 percent of household food and 40 percent of cash income. Camel production accounts for 30 percent of household food and is particularly important as it provides milk over an extended period (November - September). The potential contribution of livestock production to food security is often limited by constraints including poor access to markets or low prices; high insecurity and risk of raids even along trading routes; frequent shortages of drinking water for livestock; shortage of pasture and areas to browse; and prevalent endemic livestock pests and diseases.

Most livestock products are produced by households themselves. As agronomic conditions do not favour crop production, up to 80-100 percent of cereals, pulses and vegetables are purchased from the market. Wild foods including fruits, roots and tubers are gathered from the bush and forests.

Small businesses and petty trading contribute approximately up to 25 percent to household income. While petty business is an important coping strategy during periods of stress, and when households meet at watering points, potential gains from business and trading activities are limited by weak financial services and lack of adequate capital, access to markets and expertise.

Food production, formal waged labour and casual labour make minimal contributions to household

income. Sorghum, cultivated during the short and long rains, is the only significant crop produced, generating about 3 percent of household income through sales.

5.4 Northern pastoral

While the temperature range in this zone is similar to the others, rainfall can vary from between 200 mm and 1,000 mm per year. The four major ethnic groups are Borana, Samburu, Burji, Gabra and Rendile/Ariaal. About 80 percent of the population is semi-nomadic, while 10 percent are occasional nomads and 10 percent are fully settled.

A typical household raises 5-10 cows, 20-25 goats, 15-20 sheep, 0-5 camels and 0-1 donkeys. Out of the household livestock production, cattle contribute the most to cash income (40 percent), followed by goats, sheep and camels. Livestock production contributes up to 85 percent of household income, mainly from sales of livestock products like meat, milk, hides and skins. Other income-generating activities include firewood collection, hunting and gathering and casual wage labour. Remittances and gifts can contribute up to 10 percent of income in poorer households.

Between 80-100 percent of the maize, rice, sugar, various pulses, vegetables, cooking oil and beans required by households are purchased in the market. Only meat (30 percent) and milk and dairy products (80 percent) are obtained through household production. Households also rely on wild foods, including fruits, berries, honey, roots and tubers.

Insecurity, poor road infrastructure and low levels of education are some of the underlying factors causing high food insecurity in the zone.

5.5 Western agro-pastoral

The annual rainfall produced during the region's two rainy seasons ranges between 750 - 1,250 mm in the few mountainous areas, and between 250-500 mm in the drier areas. Temperatures range from 24 to 33° C. The zone's population groups include Turkana, Samburu, Maasai, Pokot, Rendille, Borana and other smaller ethnic groups. Most residents are

semi-nomadic, while up to 20 percent are nomadic. There are also small groups of fully settled, migrant labourers and internally displaced people.

The main economic activity is livestock husbandry. A household typically owns approximately 5-10 cattle, 30-40 goats, 20-25 sheep, with some households owning 1 camel, 1 donkey and a couple of chickens. Goats are the highest contributors to household food and cash income. Livestock production contributes up to 85 percent of total household income. The collection and sale of bush products, sale of firewood and charcoal, casual labour, eco-tourism and petty trade account for the rest. Some poor households rely on gifts from wealthier ones.

More than 80 percent of food, including maize/posho, beans, other pulses, rice and wheat, are purchased on markets. By contrast, households produce the bulk of their meat (93 percent) and milk and dairy products (95 percent). Because poorer households have smaller herds which meet only a small part of their food needs, they rely to a much greater extent on markets as well as food aid. All households rely on wild foods during the hunger period – for the poorer households wild foods account for up to 25 percent of their food during the dry season. Overall, crop production contributes to only 20 percent of household income.

Poverty is widespread and literacy levels are low in this zone. Pastoral households face other constraints, including shortage of pasture, browse and water, endemic livestock pests and diseases, and insecurity (raiding of livestock). Drought and arid conditions hampers food availability and access in this zone. Small enterprises are constrained by a shortage of expertise and poor access to capital and markets.

5.6 Northwestern pastoral

The Northwestern pastoral zone has a hot climate, with temperatures of between 24 and 38°C. Rainfall is bimodal, erratic and unreliable. The short rains (April-July) and the long rain season (October-November) combine to an average annual rainfall of 300-400mm. The rain falls in brief, violent storms

resulting in floods. Surface runoff and evaporation rates are high.

The inhabitants of this zone are generally from the Turkana ethnic group. Most people (95 percent of the population) are nomads, while 3 percent are internally displaced and 2 percent are fully settled. Households mainly engage in livestock husbandry, trade, hunting and gathering for food and cash income. Poor and very poor households among targeted beneficiary groups for WFP make up between 35-65 percent of a locality's population (30-40 percent poor, 5-25 percent very poor). These households typically own between 15-40 goats, and no camels or cattle

Most of the food consumed by these households is bought in the market (including mainly maize, but also rice, wheat, fish, beans and sorghum). The wealthier the household, the greater the share that its livestock (and crops farmed during the rainy season) contributes to its food consumption. The poor own such small herds that livestock production accounts for less than 10 percent of their food. They gain additional income from the sale of natural products (charcoal, poles, etc.) and social support. During the hunger season, wild foods are important for all wealth groups.

The poor and very poor cannot depend on pastoralism for their livelihood. Coping mechanisms (including casual labour and sale of natural products – often firewood) are insufficient to cover the food gap. Aid dependency is very high and most households cannot cope without assistance, even during a non-crisis year. Those enrolled in food assistance programmes are able to meet half their food needs through a combination of food distributions, school feeding and food purchased with cash-for-work revenue.

Insecurity is high, as conflicts with neighbouring communities occur frequently. Herds are stolen, and people killed. Essential dry season grazing lands in the north are inaccessible. There are no alternative livelihoods. Education and skill levels are too low to allow for more employment.

In summary, it can be said that the five livelihood zones covered by the study are quite similar. Livestock and pastoralism are the main sources of livelihood, and market infrastructure is generally weak. For this reason, the analysis in the following sections will not be disaggregated by livelihood zones in general. Only when the specific analysis reveals significant differences between the zones, with a view to programming decisions, will these be highlighted.

6. Livelihood and gender

Equal rights and opportunities for women and men is a fundamental principle of all emergency and development programs. Numerous studies have shown that the efficiency and effectiveness of interventions increase when proper attention is given to gender relations. When cash or vouchers are used to improve food security, it is critical to understand the role of men and women in decisions related to household expenditures and food behaviour. For proper design and implementation of interventions in each specific situation it is thus crucial to understand livelihoods and gender roles within the targeted communities to have a clear picture of how the role and status of men and women in different livelihoods would affect the projects and programmes – and how different food assistance options (food provision, vouchers or cash transfers) would affect these roles and livelihoods. The task of good programming is thus to ensure that projects and programs build effectively and efficiently on women's and men's roles with respect to household food security, and that interventions do not have negative repercussions on gender roles and status in given communities. The present study aims to provide the required information as basis for programming decisions.

In light of this, this study was designed to establish the gender and livelihood dynamics in using a market-based intervention. It provides a snapshot of livelihood options among other key variables and their relative importance to different household group categories in the various livelihood zones. The study is built on a total of 59 focus group discussions with either exclusively male or female groups consisting of both current WFP food-aid beneficiaries and non-beneficiaries. Locations were chosen based on the market survey, with a view to complementing the interviews with traders and market key informants. The methodology and selection criteria in the choice of markets and their sampling is explained in the following section.

The section on livelihoods and gender starts out with a brief description of household typologies, before describing the predominant livelihood

strategies presently applied, daily chores of men and women, and the ways households satisfy their basic needs (including the use of markets, barter, etc.). Four subsections examine in more detail the different roles and priorities of women and men with respect to household decision making and control of spending; spending priorities; access and use of markets; and access and use of financial services and e-technology. The subsequent subsections examine the existing traditional safety nets, including the role of debt, and the potential impact of different food-assistance modalities could have on these. Finally, we summarise existing community experiences and challenges of various forms of food assistance, along with community perceptions with respect to market-based interventions. The findings of these subsections lead to a number of conclusions, including an attempt at mapping which potential challenges and benefits need to be considered for each of the programming options in the various intervention areas.

6.1 Typology of household groups

The household is one of several social units that determine production, consumption, and investment decisions. Different types of households are likely to operate from different resource bases and face different incentives and constraints – or depend on different resources and strategies to different degrees. In relation to markets, households are the consumers of goods and services, hence knowing the inter- and intra-household dynamics helps in designing appropriate interventions. Households with different levels of assets tend to pursue different livelihood strategies. And, not least, different types of households are more or less vulnerable and rely to a greater or lesser degree on government, WFP and other assistance and traditional safety nets. While WFP's beneficiary households are well-defined, market-based interventions in particular also may have indirect implications for non-beneficiary households, which are therefore included in the present study.

The most common household types in all the livelihood zones are polygamous (ranging from 20-55 percent), followed by monogamous (24-44 percent), and widow-headed households (8-20 percent). Female-headed households (i.e. households headed by women that have not previously been married) are found in all the livelihood zones (1-12 percent), apart from the Northeastern and Grasslands. Child-headed households (1-5 percent) are found in all livelihood zones apart from the Northeastern livelihood zone, while households with divorced/ separated spouses (1-7 percent) are found in all livelihood zones apart from the Western livelihood zone. Widower-headed households exist in the Northeastern livelihood zone, but are rare since most men are either polygamous or they normally remarry. Child-headed homes are also rare because orphans are usually absorbed into their relatives' households.

Perceptions of the level of vulnerability of different household types vary. Child-headed, widow/widower and single-headed households are considered vulnerable across all the livelihood zones. Widow-headed households are viewed as vulnerable by the community because *"...in this community, men are considered the sole breadwinners of their homes and in their absence, the woman even if she tries would find it difficult to get an income source for her children"* (Woman FGD).

While all household types are viewed positively in all livelihood zones, single women with children are viewed negatively in the entire study area as being a burden to their families, in both economic and moral terms. *"When a girl gives birth at home and she is not married, she is chased away from the parents' home and treated as an outcast because it usually brings a bad picture of the family"* (Young men, FGD).

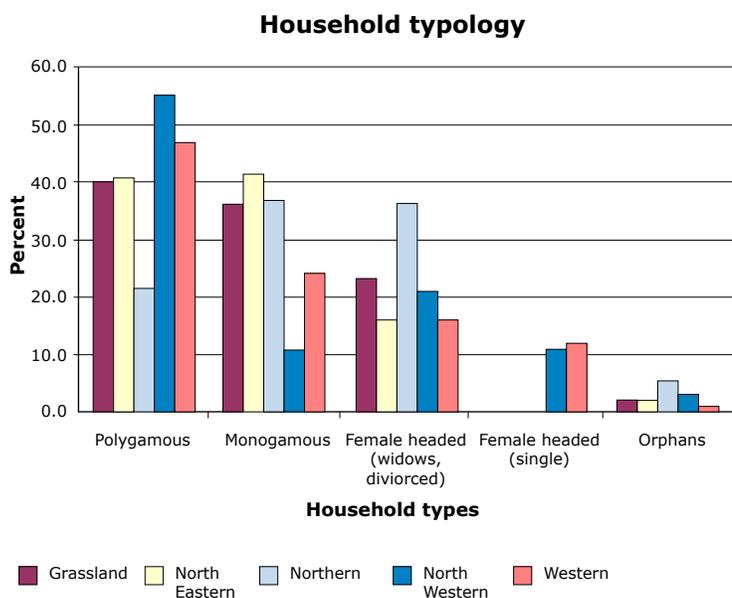


Figure 5: Types of households by livelihood zone

The average household size is 15 people for polygamous households (however, reaching as high as 35 people), 8 people for monogamous, 7 people for widow/widower-headed, 6 people for divorced/separated-headed, 4 people for single-female (i.e. not previously married)-headed households, and 5 people for child-headed households.

Single women thus have to work extra hard to feed themselves and their children, since they are often neglected by their parents and relatives. This difficult position is exacerbated by their limited access to traditional and other safety nets. Being regarded as outcasts, their social capital is low, with limited access to sharing, credit or goodwill as a consequence. While in reality operating as individual or separate entities (with little or no support) during targeting exercises, they are often not regarded as households in their own right, but are seen as parts of larger households (the case is similar for child-headed households). As a consequence, both single- and child-headed households are either not included as beneficiaries (as the larger household is not considered being among the most vulnerable), or only receive a small share of the support provided to the larger household. Child-headed households, however, are considered less vulnerable, as their status is not seen as a moral deficiency and they are more readily supported by extended families and communities.

6.2 Livelihood strategies

The analysis of livelihood strategies looks at the questions of how different population groups generate income in the form of food or cash, and to which extent each of these contributes to household income. This information is critical in terms of understanding how these population groups living at different levels of wealth and in different zones will be affected by a particular hazard, but also to

what extent they depend on external assistance, and how different forms of assistance may affect their livelihoods.

As all livelihood zones covered by the study are predominantly pastoral and no major differences were observed among the types of households, the population groups whose livelihood strategies were analysed in more detail were defined as younger women, older women, younger men, older men, and poor and wealthier households.

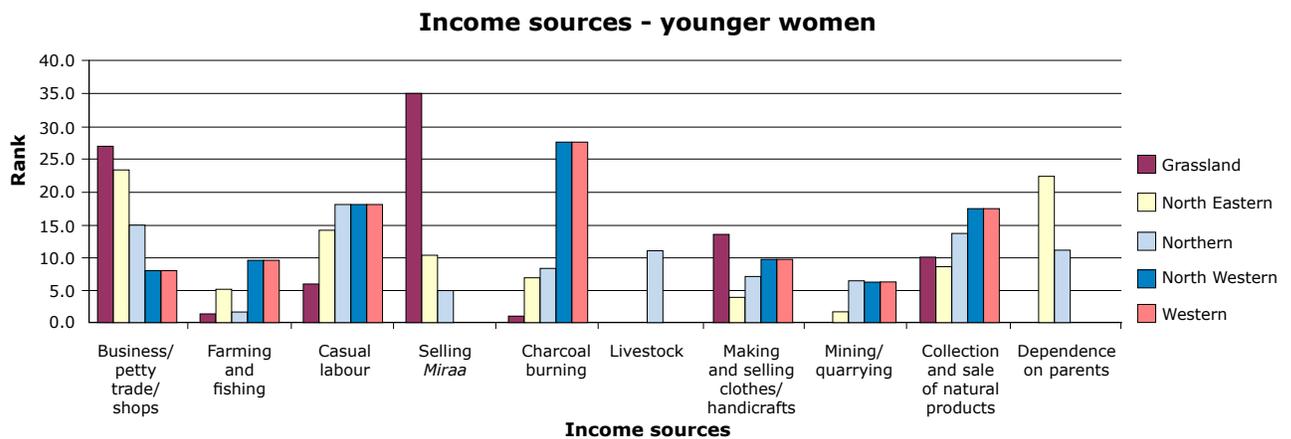


Figure 6: Income sources for younger women

Business and small-scale trade are the most important income sources for younger women in all livelihood zones. That is followed by casual labour, charcoal burning and the collection and sale of natural material (e.g. firewood, water, gum, fruits, etc.), as well as selling *miraa*. Dependence on parents was only mentioned in the Northeastern and Northern livelihood zone. The amount of products they can sell and the income they can

actually generate through these activities depend on local demand, which in turn depends to some extent on the size of the local economy and the cash available. Stimulating the local economy and infusing cash through market-based interventions might therefore have the additional benefit of increasing the income of younger women, even if they are not beneficiaries of food-assistance transfers.

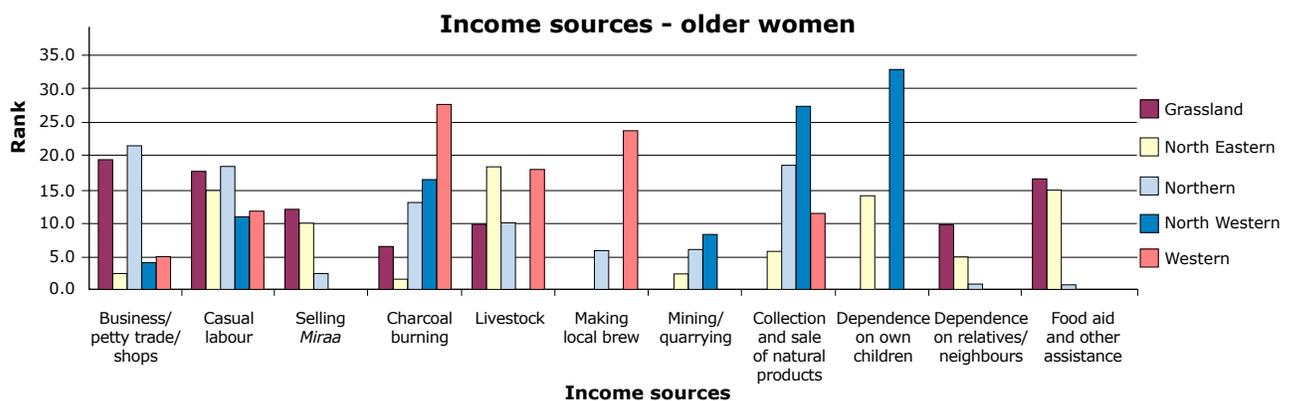


Figure 7: Income sources for older women

Older women depend to a far greater degree on others (their children, families, neighbours), along with food aid or other external assistance, in particular in Northeastern, Northwestern and Grassland livelihood zones. In the Western livelihood zone, by contrast, their predominant sources of income are charcoal burning, making and selling

the local brew, livestock rearing and collecting and selling natural products. While casual labour is important in all livelihood zones, older women pursue business and trade mainly in Grasslands and Northern livelihood zones. The potential positive effect of market-based interventions on older women will thus probably be considerably weaker than for younger women.

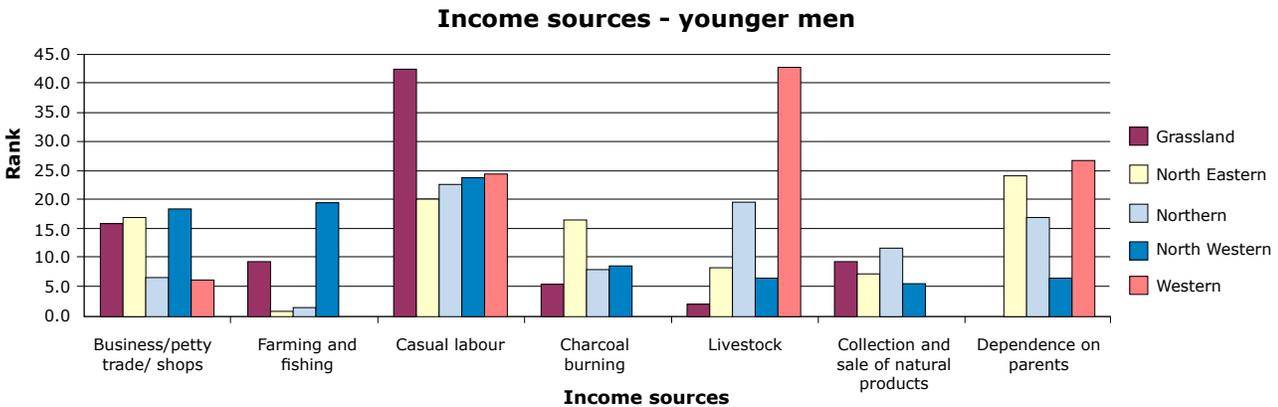


Figure 8: Income sources - younger men

The situation for younger men is quite similar as for younger women – they engage more in casual labour than in trade – but both income sources are among the most important for this group in all livelihood zones. Livestock rearing is the predominant source of income in Western livelihood zones. While dependence on parents is noteworthy in all livelihood zones except Grasslands, farming and fishing also contribute to incomes in Grasslands

and Northwestern livelihood zones. The potential benefits for younger men from stimulating local markets would mainly consist of an expected greater demand for casual labour. Livestock and their products, by contrast, are either consumed by their owners, or sold mainly for “export” to other areas in the country. This income source would thus receive only limited support from a stimulated local market.

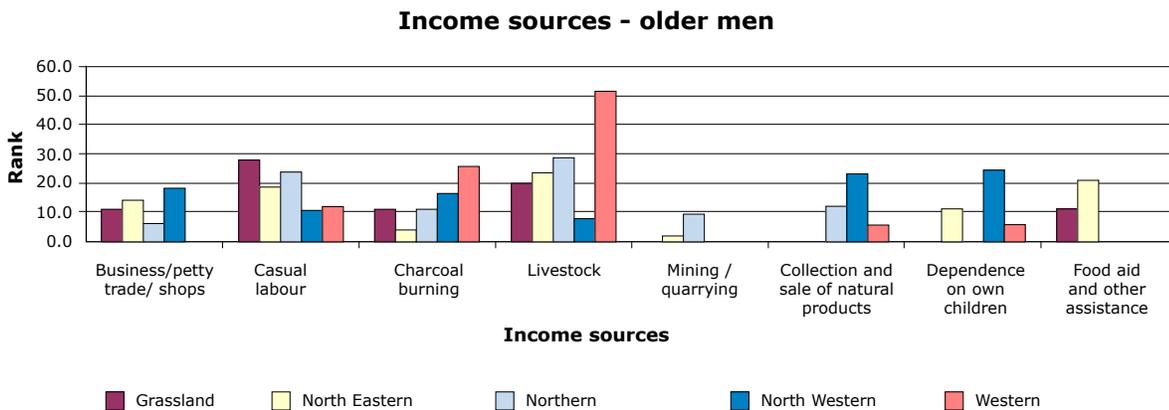


Figure 9: Income sources - older men

The two most important sources of income for older men are livestock and casual labour. Charcoal burning, depending on assistance (children, extended families or external actors), and some petty trade also count, but to a much lesser extent.

Older men would thus benefit from local market stimulation in a similar way as young men, but to a lesser degree, due to their greater dependence on livestock rearing.

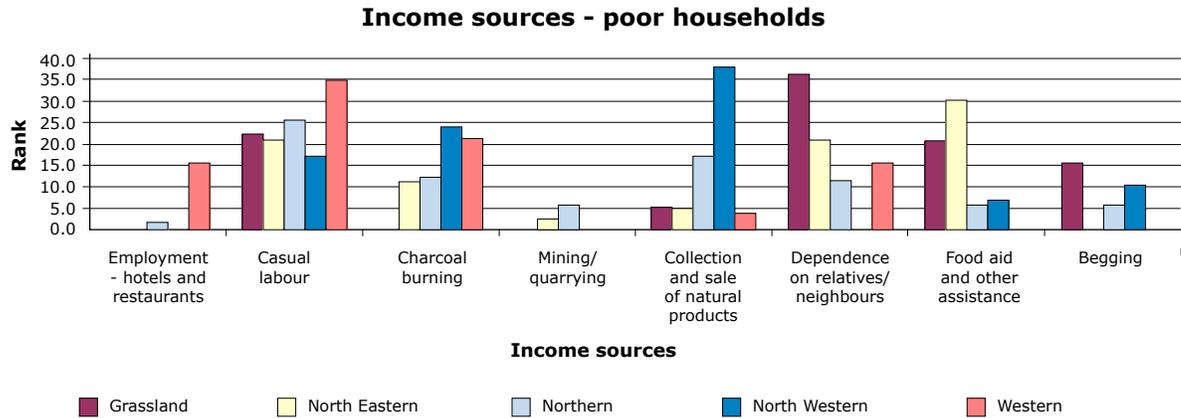


Figure 10: Income sources - poor households

Poor households depend to a striking degree on assistance from others in all livelihood zones but the Northwestern, where their main income sources consist of collecting and selling natural products. The second most important income sources for poor households in all livelihood zones are casual labour and charcoal burning. This sharply illustrates how limited the livelihood options are for poor households in the study area.

Where poor households are receiving assistance from their wider families or the community and are not included in beneficiary lists, they will only benefit from a stimulated local economy to a limited degree. A large part of the livelihood strategies pursued, in particular collection of firewood and charcoal burning, are unsustainable, given the limited natural resource base.

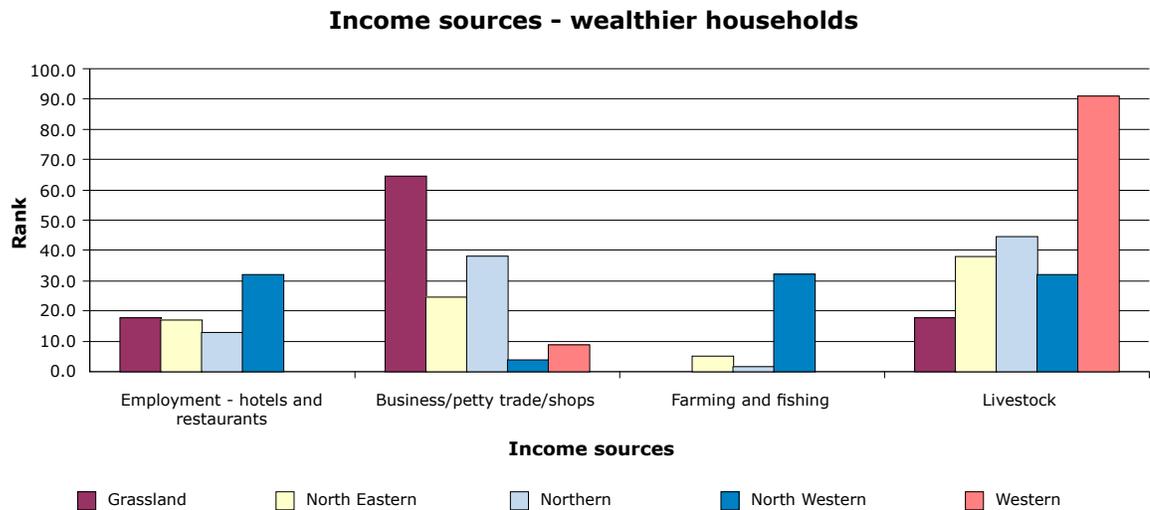


Figure 11: Income sources - wealthier households

In all livelihood zones, wealthier households generate the vast part of their income from livestock or from business and trade, along with formal employment. Business for this group often consists of larger-scale or wholesale operations, compared to the petty trade pursued by the other groups. While wealthier households by definition should not be direct beneficiaries of assistance programmes, this population group – to the extent that they are businessmen – would be able to benefit considerably from a growing local economy.

A general observation is that in all the livelihood zones, women are engaged in a wider variety of income generating activities – which may not be of high return – while men depend more on occasional sale of livestock which can bring a high, but one-off return.

All population groups engage in some sort of

business and trade, and thus can be considered to have basic market skills. Not least, most people in all livelihood zones engage in casual labour as an important contributor to the household income.

6.3 Daily chores of men and women

The daily chores of men and women are not fully congruent with income sources, as the daily chores also include a number of activities that do not generate income. An overview of these chores provides us with insight on the division of labour between men and women, as well as on a number of tasks that are traditionally based on gender. As a result, they will not be easily transferred from one household member to another of different sex, to balance the burden or accommodate the potential additional burden of cash- or food-for-work programmes, for example.

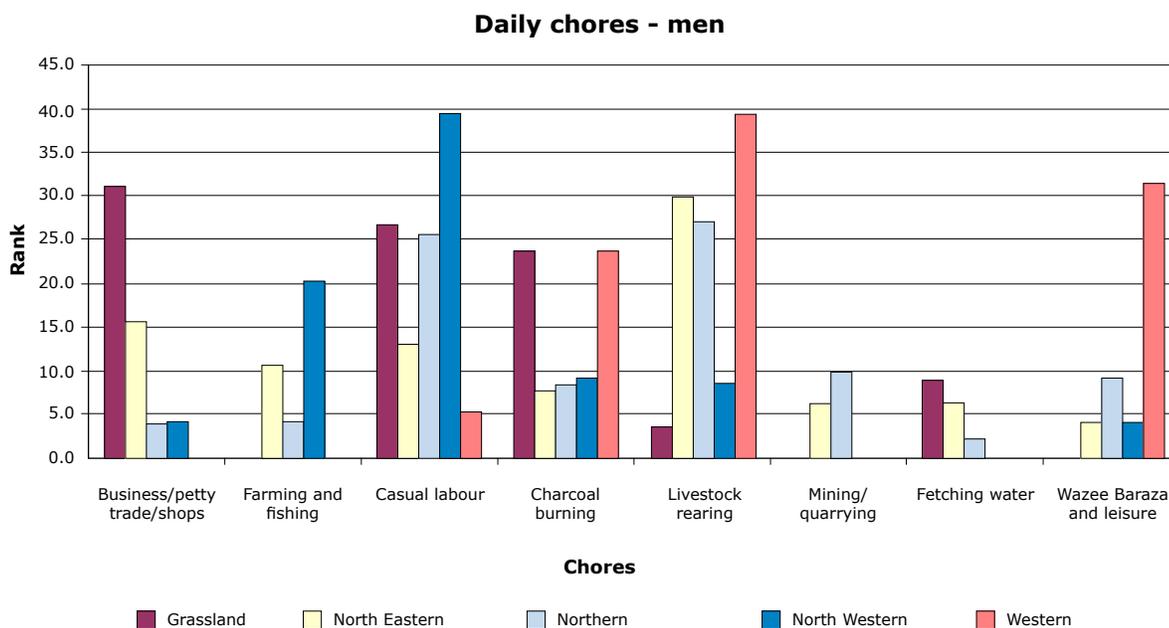


Figure 12: Daily chores - men

Men are responsible for and spend most of their time with livestock rearing, casual labour, business and trade, charcoal burning and, to some extent, farming and fishing. It is noteworthy that both

male and female FGDs mention that they also spend considerable time with *wazee baraza* as well as leisure activities such as story telling, gambling, drinking, eating *miraa*, etc.

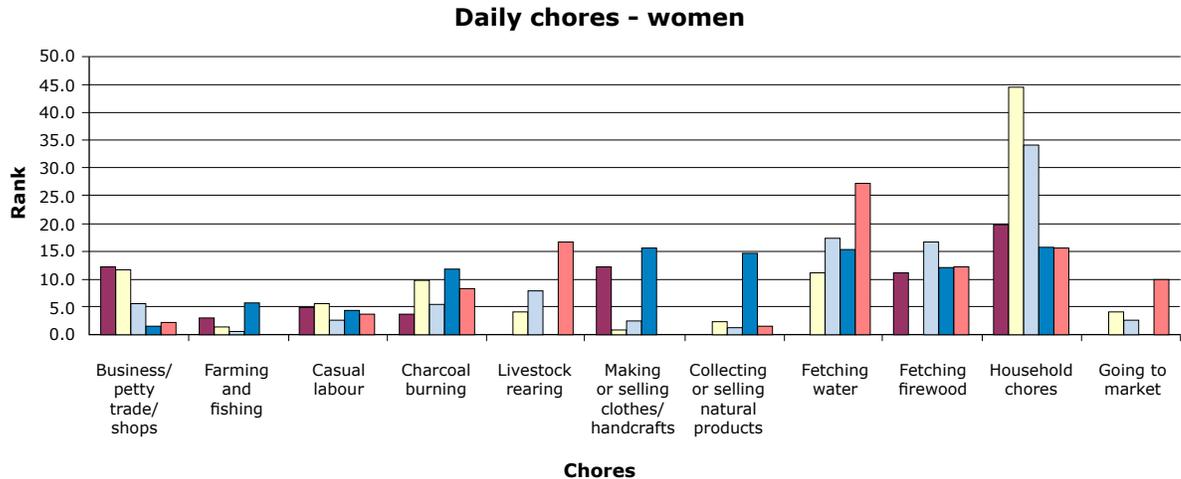


Figure 13: Daily chores - women

By contrast, women's responsibilities cover a far greater range of activities, including household chores (cleaning, cooking, child care), fetching water and firewood, making and selling handicraft, selling *miraa*, petty trade, charcoal burning, and casual labour. Leisure time for women is only mentioned in the Northeastern livelihood zone.

While these various income-generating activities are, in principle, also pursued by men (men will, however, make and sell different kind of handicrafts), this is not the case for household chores like cleaning and child care. Men also rarely fetch water and firewood for household consumption (it is different when firewood is sold or burnt, or water is sold, or water and firewood fetched for others is carried out as casual labour).

These findings imply that women may already be overburdened by their daily chores. Enrolment in food- or cash-for-work programmes would increase their burden even further, if they cannot shift part of their burdens to other household members. By contrast, participation in such programmes would seem to be easier for men, as they are in all livelihood zones normally seeking opportunities for casual labour.

6.4 Ways of satisfying basic needs

All types of households and both men and women in all livelihood zones predominately use cash to meet their basic needs. Credit and assistance from others are additional, but less important sources, except for wealthier ones across all livelihood zones.

However, in the Northeastern and Grassland livelihood zones, the poor and female-headed households rank assistance from others (NGOs, government, relatives) as their main means of meeting basic needs. This implies that these families are heavily dependent on food or other in-kind assistance, such as the sharing of food by better-off relatives.

Only wealthier households can rely on their own produce, although barter trade is an option (though less frequently used) for most households, especially during the dry seasons. In all livelihood zones except the Northeastern, the relative importance of various means of satisfying basic needs changes with the seasons; while cash purchases are commonly used throughout the year, barter, credit

and assistance from others are options that are more relevant during the dry season. Households also mainly use their own produce during the dry seasons.

These findings imply that cash is widely used by all household types – men and women alike – throughout the study area. Both men and women are “financially literate”. Most households depend to a large extent on markets – although the poorest households (who receive a certain share of their income as in-kind assistance) do so to a lesser extent, along with the wealthier ones, who can satisfy more of their basic needs with their own produce. This means that any effect that market-based interventions may have on markets will directly impact all types of households, particularly those that are neither wealthy nor so poor that they are included as beneficiaries of food or other assistance programmes.

This exposure, particularly of non-beneficiary households, to market development, is a specific risk to be assessed, and will have to be taken into thorough consideration when market-based interventions are being planned. In addition, the development of markets and their impact on both beneficiary and non-beneficiary households will have to be monitored closely to identify early on unintentional – or stronger-than-expected – effects of market interventions.

6.5 Gendered access and utilisation of markets

Both men and women frequent the market centres, but for different reasons. Across all the livelihood zones, women mostly frequent markets to buy food, but also to engage in petty trade. Men, on the other hand, frequent market centres occasionally to sell or buy livestock, or to relax and catch up with their counterparts, participate in the *wazee baraza* (council of elders), or engage in other personal or leisure activities.

Depending on the location and the distance to the closest market, they are visited between

daily (on foot) and/or monthly (by semi-public transport). Among the vast majority of focus group participants, market frequency ranges from daily to weekly (depending on distance), covering distances between 0 and 30 km. Access to markets is a challenge for households that live at greater distances. These can range from 30- 35 km (for local ones) to more than 250 km (for distant markets). Transport costs can range up to KSh 2,000 per person, and up to the same amount for luggage, depending on the location of the market and road conditions.

Main obstacles in accessing markets include insecurity (both from humans and wild animals), bad or impassable roads, long distances to the markets, inadequate and costly transport, and lack of sufficient supplies and commodities in the markets (specifically in the Northeastern livelihood zone). Hot weather and long distances pose particular problems for old men and women in all livelihood zones.

Men and women face no significant differences in accessing markets. But with a view to the purpose of going to markets, it appears that women, who buy the household food, have less of a choice NOT to go to the market regularly, for example, in times of insecurity. Where a market-based intervention replaces in-kind food provision, and the nearest market with the adequate commodities is further away than the presently used final distribution point (FDP),⁸ this can entail additional risks (where security is an issue) and costs which would affect women in particular, as the ones responsible for fetching food.

6.6 Gender variations in household decision making and control in spending

Differences in decision-making roles and responsibilities at household level are important aspects to be understood when assessing the impact on food security of different food assistance modalities.

⁸ The maximum distance beneficiaries have to cover to a FDP is 15 km.

Most focus groups interviewed mentioned that most household decisions are jointly taken by men and women. However, there is a rather clear understanding of who is in charge of a decision, in case of doubt. Throughout the study area and across livelihood zones, there is a clear distinction between predominantly male and female decisions. A general rule confirmed by a large number of focus groups is that, in principle, men can decide about anything they like without consulting their partner, while women can take many decisions, but

the more important these are, the more they have to consult their husband. This is particularly true with respect to the question of how money is spent, whether to start a business or to acquire an asset.

“Men make decisions on how money will be spent even if it’s the woman’s properties. When a woman has some money and she wants to start a business, she has to tell the man and the man will decide either to let her go ahead or not. So the man has the final say”. (Elderly man, FGD).

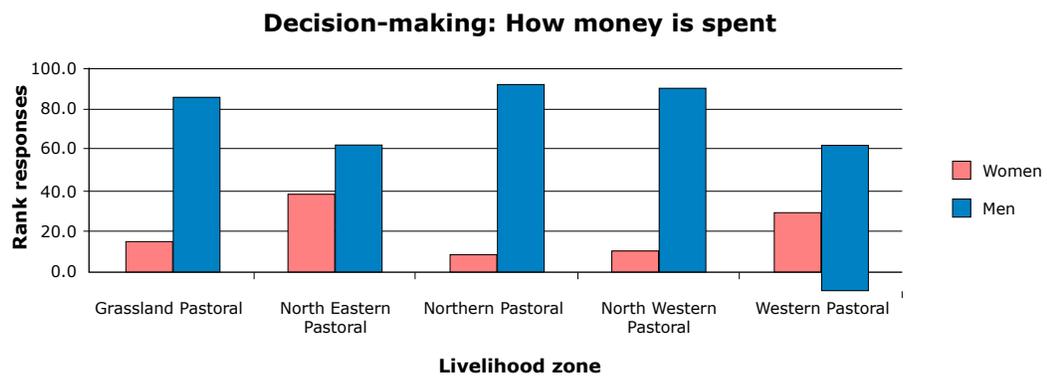


Figure 14: Decision-making: How money is spent

Men are clearly in charge of deciding how money is spent. However, in all livelihood zones women are involved in this decision to some extent, especially in the Northeastern and the Western Pastoral livelihood zones.

That said, it should be noted that even of the overall allocation of available household income to

different purposes is considered a predominantly male decision, in the entire study area the share of household income spend on food is 70 percent (see the figures below). This means that either men prioritize food purchases in the same way as women do (see also further below on spending priorities), or that women wield considerable influence in food-purchase decisions.

HHs expenditure for Non Ben HHs in arid areas (Dec 2012)

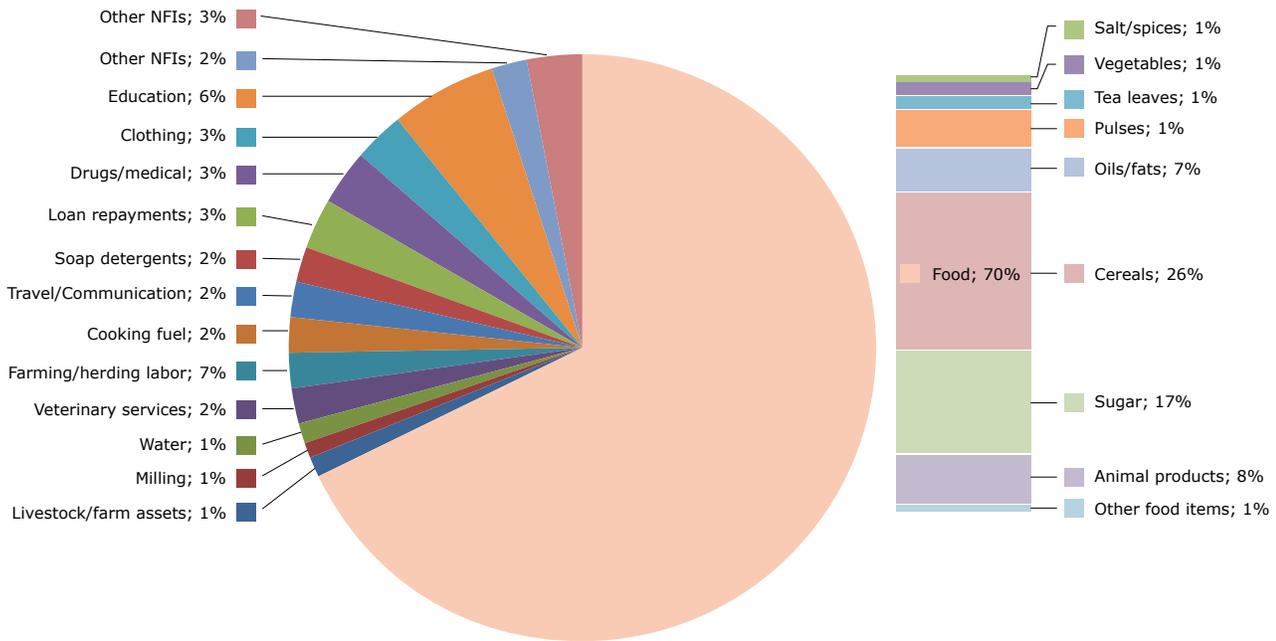


Figure 15: Expenditure patterns for non-beneficiary households in the arid lands

The decision-making pattern is almost identical for the two questions if a business should be started, and if an asset should be purchased:



Figure 16: Decision-making: Business to start

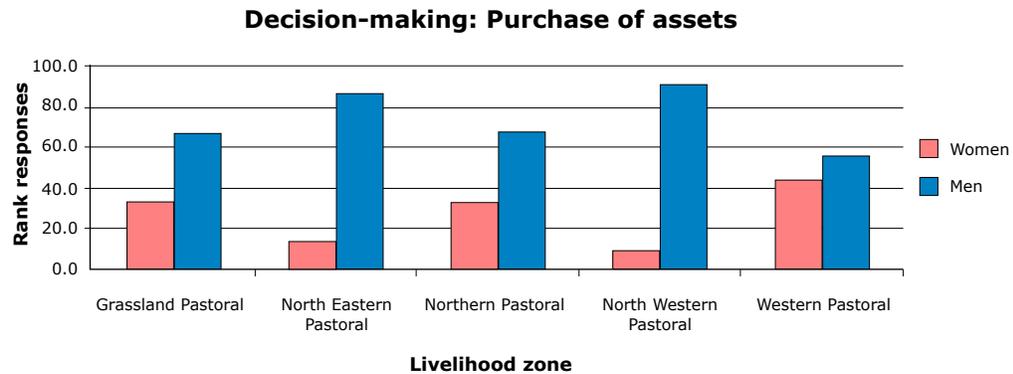


Figure 17: Decision-making: Purchase of assets

In terms of starting a business, an FGD member indicated that “not all families allow women to start income generating activities especially businesses. Men feel that if women engage in business they will be above them.” (Elderly woman, FGD).

While this quote suggests men decide on whether to start businesses, the figure above illustrates that in reality, women are more involved in this decision than in questions of how money is spent or whether to purchase an asset. This fits with the finding that women across the targeted livelihood zones are highly economically active. It is mainly older – in particular male – respondents who

held the above-quoted view. Younger (both male and female) respondents as well as older women indicated that decisions concerning family finances, including starting a business, are mostly taken in a consultative manner. Given this age-related response pattern, it can be expected that the future trend points to women’s increasing involvement in these decisions.

Women have a far more central decision-making role when it comes to “making the household function”, more specifically with respect to questions of what food to buy, who goes to the market, and when and which health measures for children should be taken.

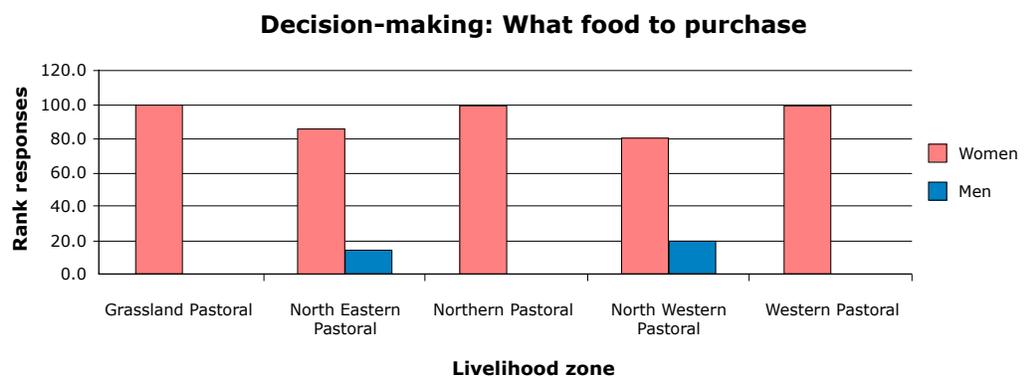


Figure 18: Decision-making: What food to purchase

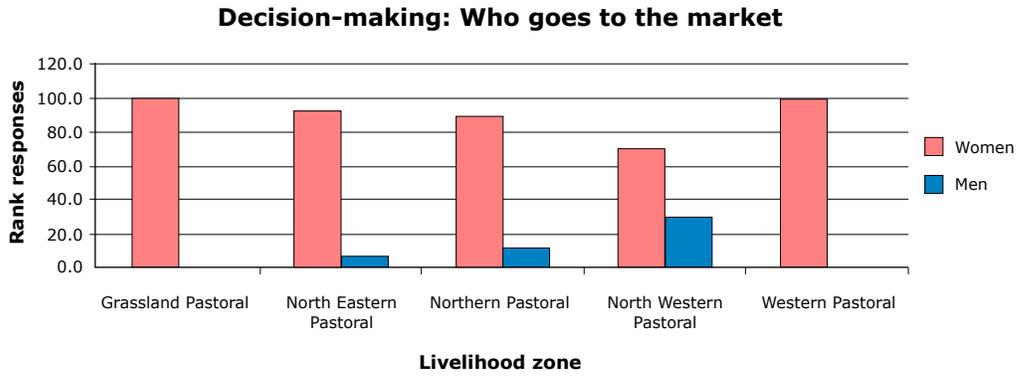


Figure 19: Decision-making - Who goes to the market

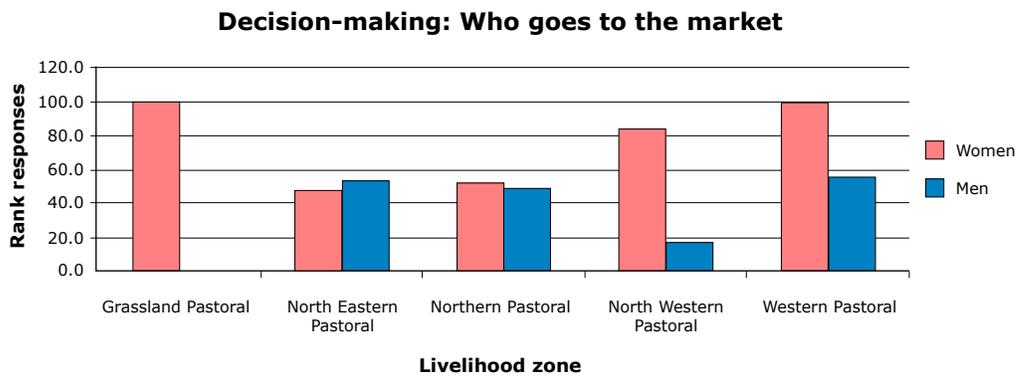


Figure 20: Decision-making: Health seeking for children

Overseeing children’s health care falls in principle within the woman’s reproductive roles. However, only in Grassland and Northwestern livelihood zones is the decision on seeking health care for children almost exclusively a woman’s responsibility. In the other livelihood zones this decision is almost equally shared between man and woman.

Deciding which child should follow which education is highly important with respect to livelihood development. As illustrated below, this is a predominantly male decision, with women’s involvement at an almost equal level only observed in the Grassland livelihood zone.

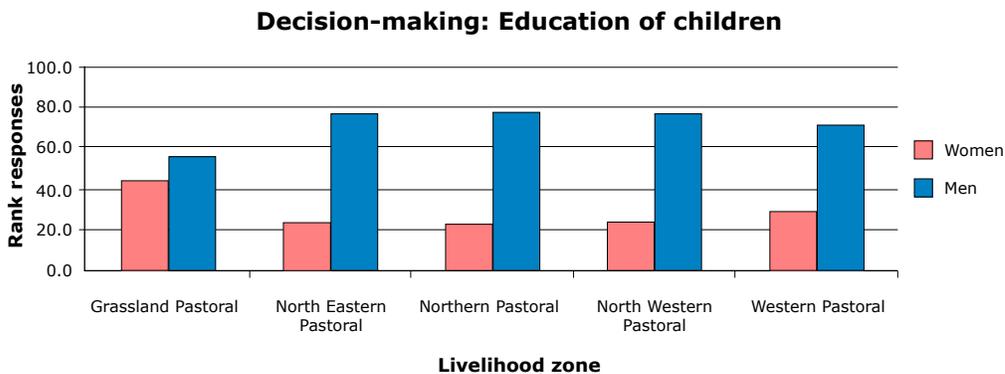


Figure 21: Decision-making: Education of children

This means that programmes aiming – among others – at children’s enrolment in schools (like e.g. conditional food assistance in form of school feeding) need to address men, to convince them that all of their children deserve and require education. By contrast, the focus group discussions also revealed that once the decision on which child should follow which education is made, it is mainly the woman’s responsibility to “make it work”. This means that she is the one ensuring that school fees are paid, that school uniforms are made or bought, and that children actually attend school.

The observed division of decision-making tasks implies that a shift from direct food aid to market-based food assistance may have considerable implications at household level. While provided food falls completely into the woman’s area of responsibility – and providing food to women thus is fully in line with the local division of tasks and responsibilities – the provision of cash (with the

main purpose of purchasing food) falls into both male and female domains – which may give rise to controversies.

Decision-making responsibilities are not the only ones determining the question of which effects the provision of which kind of assistance (food, cash or vouchers) have on food security. The spending priorities of men and women in the different livelihood zones are also important. This aspect will be examined in the following section.

6.7 Spending priorities of men and women

Male and female focus groups were asked two main questions: one about how a hypothetical sum of 3,000 KSh provided as food assistance would be spent; the other on how presently available household income actually is spent. Responses to both questions are almost congruent:

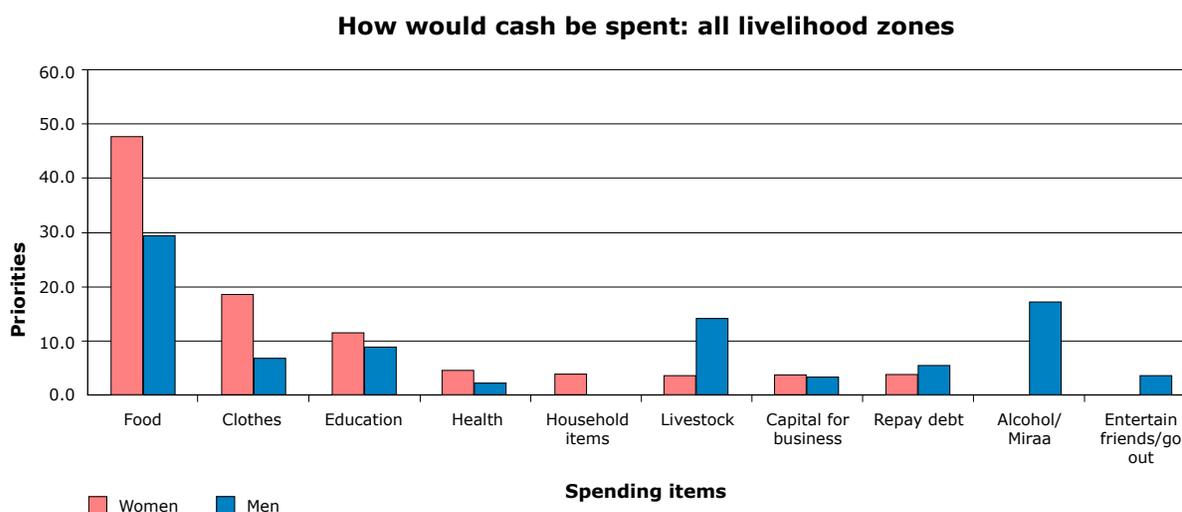


Figure 22: Spending priorities - hypothetical cash assistance

Spending priorities of present income: all livelihood zones

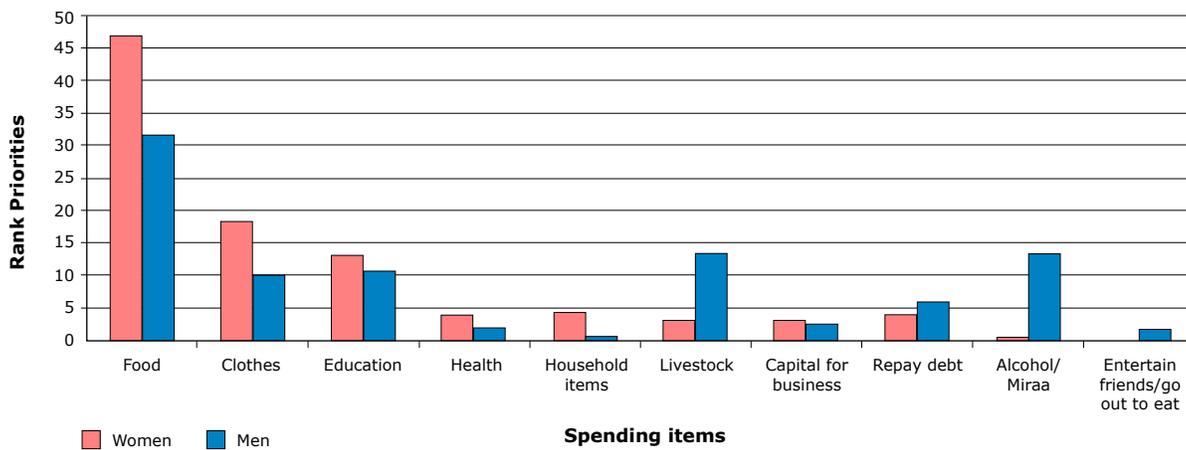


Figure 23: Spending priorities - present income

For women, food is the absolutely overriding spending priority, with an “importance rank” almost as high as the ranks of all others priorities combined. This is followed in decreasing sequence by clothes, education, and, at a far lower level, health, household items, livestock, capital for business and the repayment of debt.

For men, too, food is clearly the highest priority, but less overriding than for women. Of the remaining “productive” priorities, the most important are – in decreasing sequence – livestock, education, clothes, repayment of debt, capital for business and health. It is however noteworthy that men, unlike women, have a number of “unproductive” spending priorities, first and foremost for alcohol or *miraa* (or *kat*), a priority that is in fact only exceeded by food.

This pattern of spending priorities is confirmed by both male and female focus groups, with only minor variations across livelihood zones. It implies that women would use cash predominantly for purchasing food, thus ensuring food security for the entire family, including their children. Where women would purchase other items or services, these would still be used to satisfy basic needs of the entire family, such as education, health and clothes. By contrast, men would use cash for family needs, too, but a sizeable amount would be used for items or services that would neither secure food security nor address other basic family needs.

6.8 Gendered access and use of financial services and e-technology

Financial services and e-technology are revolutionising how people send and receive money in Kenya today. An important aspect to consider when assessing the feasibility and implications of a shift from food provisions to market-based interventions is the extent to which WFP beneficiaries have access to such services, and if there are differences in access between men and women that would have to be taken into account.

In all livelihood zones there are various forms of informal financial services, including rotating savings and credit associations (ROSCAs); income generating groups; and in particular traders or shops giving credit to their customers. The latter are accessed equally by all population groups, while the two former are mainly open to women (since they are the ones who are involved in the women groups running the ROSCAs), and to some extent youths through the youth initiatives recently launched by the government. Widows were reported to have difficulties in accessing these services since they do not have a ‘man’ who would be the natural “guarantor” of incurred debt (see also the following section on traditional safety nets and debt). These informal services are mainly based on trust, since

membership is normally based on people who live in the same place and know each other.

Formal financial services exist in all the livelihood zones. They are, however, concentrated mainly in hubs and main market places, and less so in remote areas and off the main traffic corridors. These services are primarily used by people who are or were formally employed, those in business and beneficiaries of the Humanitarian Safety Net Programme (HSNP), irrespective of gender. Challenges in accessing these formal services – besides physical distance – include the frequent lack of national identity cards (IDs), especially for women in the Northeastern and Grassland livelihood zones, lack of steady income, as well illiteracy and lack of technical know-how, particularly in the case of older people.

Mobile telephones are used across all the livelihood zones, however many places do not have network coverage, forcing people to travel long distances to get a signal. Most women and men own and use mobile phones for communication and even for money transfer services. Challenges to access include poor network coverage, low literacy levels (forcing users to reveal their PIN-codes to others (e.g. MPESA-agents) who can assist), lack of IDs (especially for women), lack of MPESA agents, and insufficient capital. Replacing food provisions with cash transfers at a final distribution point (FDP), even if carried out via mobile e-technology, would have to take into account potential additional costs in terms of time and money spent on transport to and from an appropriate point with network coverage or an MPESA agent.

More specific and in-depth analysis of the potential, advantages and challenges of financial services in the arid lands will be provided in section 8 below.

6.9 Traditional safety nets, including debt

Risk is an important determinant of whether households diversify their sources of livelihood, what economic activities they undertake, what social relationships they negotiate, how they manage their assets, and whether they enter into and can recover from debt. Safety nets are a key strategy for managing household-level risks. The

traditional safety nets found in the arid lands are social arrangements negotiated on the basis of trust between parties well known to each other. In all the livelihood zones covered, traditional safety nets have existed for a long time, but are slowly fading away with the changing economic times, modernisation and, not least, individualisation. The most important safety nets indicated in all livelihood zones are: (1) sharing of food, and; (2) taking debt / receiving goods on credit.

Food sharing between those who have enough and those who cannot cover their immediate needs is probably the oldest and most ingrained safety net throughout arid lands communities. FGDs throughout all livelihood zones confirmed that food is readily and easily shared, in particular among relatives / extended families. As a traditional safety net, it is however linked to the receiving part being considered “worthy” of the support, i.e. living up to the same traditional values that sustain the willingness of sharing food in the first place. As was described in the household typology section, female-headed households (i.e. households headed by unmarried women) in particular are seen as disregarding traditional values, and therefore can be expected to have a harder time than other households in accessing this form of safety net.

Credit or debt is rarely sought in form of borrowing money, but rather in purchasing food or other items. This type of safety net is widely used, particularly during the dry season, and is a common practice stemming from the cultural values and traditions of communities in these livelihood zones. **“Give me your cow on credit and I will pay you back when I get money and if I fail to pay, my children will pay you.” (Elderly women, FGD)**

This safety net is thus entirely based on trust, and the social capital is largely defined by the belief that the borrower is willing to and will eventually repay a debt. While this system is still widespread, it seems to be fading as communities embrace cash systems and livestock numbers dwindle.

While men (can) make such borrowing decisions on their own, women mainly consult their husbands. Both men and women can be responsible for clearing the debt, but traditionally the responsibility ultimately falls on men to ensure that debt is repaid.

“When a man dies without paying debt, the sons repay it **(Young men, FGD)**. Men are viewed as guarantor when taking credit and it’s accessible to those with husbands. So single women and widows find it difficult accessing credit during prolonged drought. **(Elderly men, FGD)**

The table below summarises the main aspects of taking and repaying debt in the arid lands.

Access to credit also depends on the social capital of a person or household. But unlike food sharing – where social capital is based on living up to traditional values – social capital in the case of credit largely depends on the borrower’s willingness and eventual ability to repay his or her debt.

For this reason, the poorest people (which often include female- and widow-headed households), find it difficult to access credit:

“We reject the poor people as they are not of much help to the community or families because they do not have livestock - so when you are in need yourself you will not get help from them because they have nothing to offer.” **(Young men, FGD)**

The possible implications of a transition from food aid to cash-transfers are complex. On the one hand, providing a regular source of cash income can increase a beneficiary’s social capital, as the community knows that he or she is more able to repay incurred debts. On the other hand, a person receiving cash will be less inclined to share than someone receiving food. This means that a cash transfer – if used as intended – might better benefit the targeted households, but may also weaken their social capital – and hence access to traditional safety nets. That is because cash recipients may no longer be perceived as needy, and their failure to share correspondingly will reduce their “worthiness” in benefiting from sharing by others.

By contrast, vouchers may be appropriate to address these various risks; traders will know that beneficiaries can repay their debts, and beneficiaries will mainly use vouchers for food, which can be shared as part of the traditional safety net. However, sharing will also mean that targeted households will not receive the full value of the vouchers transferred.

Livelihood zone	When debt accepted	Source of credit	Who mainly decides to take debt	Who is mainly held responsible to clear debt	Mode of repayment
Grassland pastoral	When in need, food	Shops	Men	Men	Cash, In kind
North Eastern pastoral	When need arises, school fees, food, boost business	Shops, friends, relatives, groups	Both	Women	Cash, In kind
Northern pastoral	When in need	Shops, friends, relatives	Both	Both	Cash, barter, In-kind (services)
North western pastoral	During hunger, sickness, school fess	Shops, friends, neighbours, relatives	Both	Both	Cash, in kind, Barter
Western agro pastoral	During drought, for school fees, hunger	Relatives, neighbours, shops	Men	Men	Cash, barter

Table 2: Aspects of debt in the arid lands

6.10 Community experience with various forms of food assistance

The communities in all the livelihood zones have received food assistance in the form of general food distribution (GFD), food for assets (FFA), and

government relief. Questioning focus groups about their experiences with this assistance helps identify potential challenges and protection issues, which should factor into considering different programming options for future WFP food assistance in the area.

The figure below provides a summary of the main protection issues and challenges communities have experienced with previous food assistance.

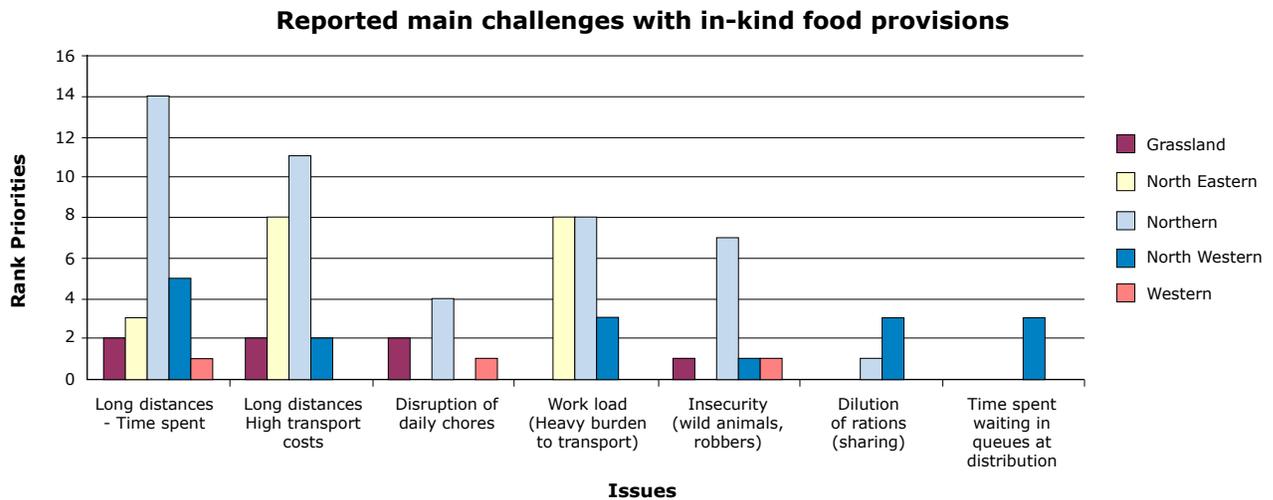


Figure 24: Challenges with food assistance

Every single focus group in all livelihood zones confirmed that food is collected by women. Selling of food is widespread, mainly to buy different, more acceptable food or other needed household items.

Long distances to the food distribution points are a major concern in all livelihood zones. At issue are both the amount of time spent on transport to and from distributions, transport costs incurred (where means of transport are available), and the heavy burden of bulky food to be transported home.

Closely related to the problem of transport is the prevailing insecurity; in all livelihood zones but the Northeastern one, insecurity was mentioned as a serious concern – either the risk of being attacked by wild animals, or by robbers.

Dilution of rations due to excessive food sharing is mentioned as a major problem in the Northwestern and Western livelihood zones. This is partly due to the traditional safety net described above, but also practiced to ease tensions with non-beneficiaries;

envy, jealousy, hatred and witchcraft were among those mentioned in the Northwestern livelihood zone.

At food distribution points themselves, the main challenges mentioned include the time spent waiting in queues (Northwestern); and fights among beneficiaries (Northern, Northwestern and Western). The time spent for transport and at distribution points also disrupts daily chores during distribution days.

These findings imply that final distribution points ideally should be closer to beneficiaries – if the required increase of FDPs is feasible at all. In addition to the challenges described above, several focus groups mentioned that food distribution committees do not provide full rations to beneficiaries, but “take their share”. This calls for monitoring the distributions, or establishing some kind of “complaint channel” for beneficiaries. With respect to the reported pressure of sharing, more communication between implementing partners and

monitors may be required to reiterate the rationale behind targeting and selecting beneficiaries.

Many of the problems related to food distributions could be avoided or at least minimised by introducing cash or vouchers. While beneficiaries would still have to travel to markets to purchase food (and partly to receive cash or vouchers on mobile phones), they can buy food in portions that are practical to transport and not a 25kg bag in one go. They would not have to spend a long time at distribution centres. They would not receive food as conspicuously as with direct food support, and thus be less exposed to fighting at distribution points and to envy and the pressure of sharing with non-beneficiaries. And they would receive the full amount due, without distribution committees having the opportunity to withhold a share for themselves (of course, beneficiaries could still be pressured to pay a share to committees after reception).

On the other hand, cash or vouchers may also pose challenges and raise protection issues. Since all communities except for those in the Western livelihood zone had experienced such assistance (both cash and vouchers, often through the Humanitarian Safety Net Programme (HSNP) or the Kenyan Red Cross), they were asked about their concerns. Where experience with cash and vouchers existed, however, it was quite limited and often from programmes that were implemented on a short-term basis – and came on top of existing food aid. The main programme providing cash was HSNP assistance for the elderly.

While both men and women have been cash recipients, normally women were selected to receive cash or vouchers. In Grasslands, all six focus groups had experience with cash assistance, and none of them reported any problems. Responses for the remaining livelihood zones (Northeastern: 14; Northern: 23; and Northwestern: 10 FGDs) are summarised below:

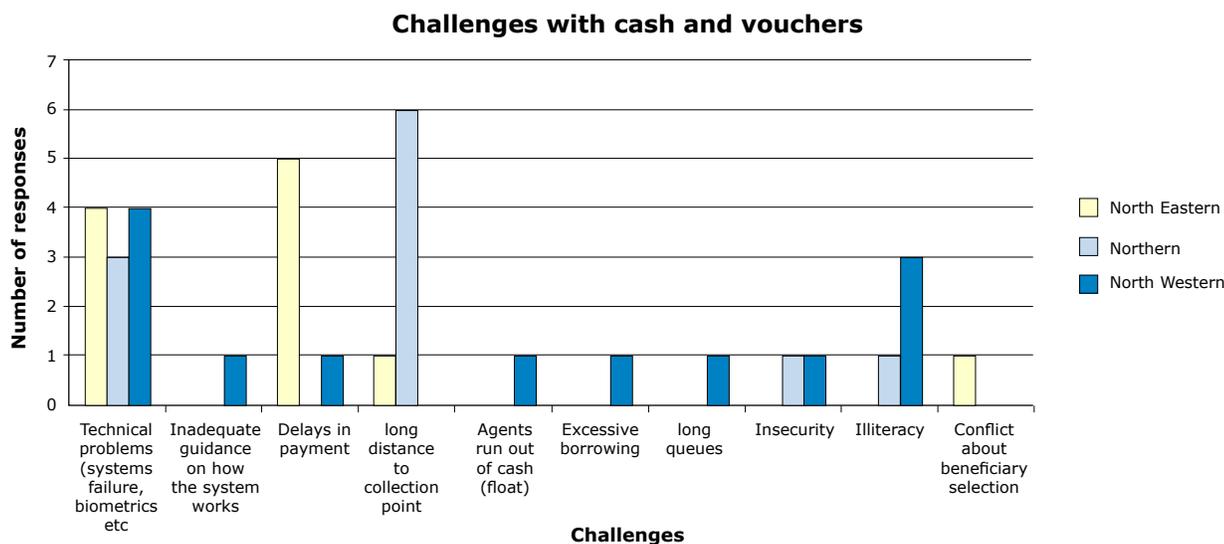


Figure 25: Challenges with cash and voucher assistance

In all zones, respondents cited technical problems as a major challenge. In the Northern livelihood zone, vast distances to collection points were by far the greatest drawback. By contrast, the most serious challenge in the Northeastern livelihood zone were delays in payments.

The responses show there are fewer problems observed with respect to the distribution cash or

voucher assistance than with food distributions. To a certain extent, it will be possible to further reduce these problems, in particular technical problems, as technology advances and lessons learned are incorporated into new programmes. Where cash or voucher transfers use mobile technology, the problem of signal access may be reduced only to the extent that network coverage is ensured. Beneficiaries without network coverage will still

have to travel to the nearest reception point – and all must travel to markets or shops to buy food and other needed items with their cash or vouchers.

6.11 Existing community perceptions concerning the advantages or disadvantages of cash or vouchers as compared to food distributions

Based on their (at times limited) experience, focus groups were asked to discuss and share their perceptions of the potential advantages and disadvantages of cash and vouchers as compared to food distributions. It should be noted, however, that in most cases, cash or vouchers were received only for limited time periods – and in addition to WFP food, not as a replacement. Food provisions, by contrast, are well-known as a long-term means of support. The general perception of cash and vouchers must be seen in this light.

Men and women in all livelihood zones were unanimous in believing that women should be the recipients of cash assistance (as they are in the case of food provisions) because they would spend money wisely to benefit the whole family:

“The woman being responsible for her household would spend cash wisely, putting the interest of the family first. Men are not good money managers, they tend to misuse it on petty things”

(Young men, FGD).

The same could not be expected of men:

“If a woman gets money between 9 and 10 am, she will be home by 12 noon with food for the family, but if a man gets money at 9 am, he will come back home the next day and maybe without food”

(Elderly men, FGD).

“Generally, the majority of men will not channel the money directly to the needs of the family and instead most of them will misuse it on personal stuff like buying *miraa* and cigarettes. Very little money will be used for the needs of the family”

(Elderly men, FGD).

However, while even exclusively male focus groups think that women would spend cash more wisely than men, they also emphasise that men are considered the main breadwinners and their role might change – and suffer, with domestic conflict the result – if cash was just given to women.

The most important potential benefits or disadvantages mentioned by focus groups are summarised below – perceived negative effects being displayed with a negative value of the number of responses.

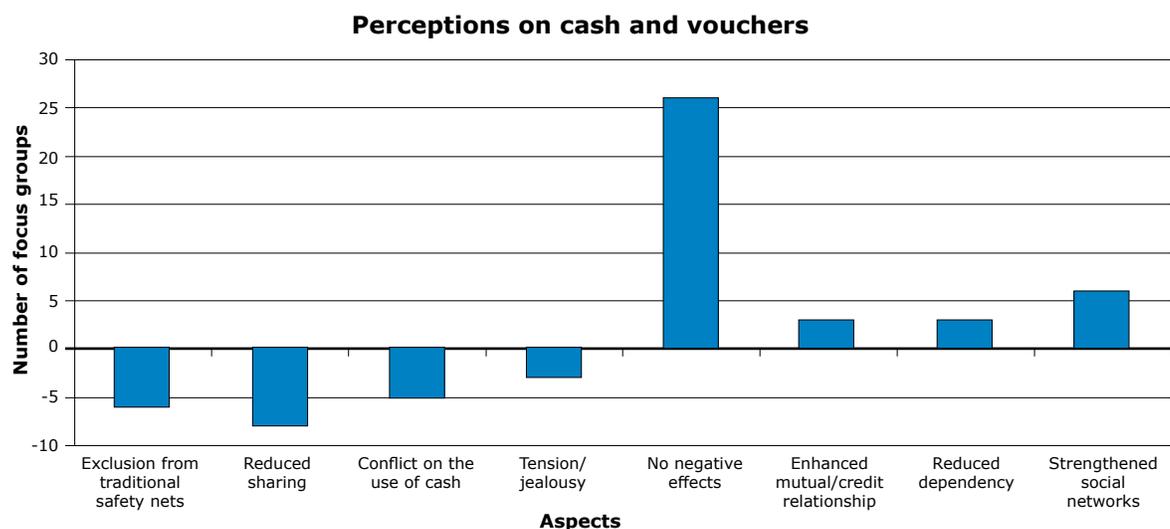


Figure 26: Community perceptions

Communities see a number of important advantages in receiving cash assistance, particularly the increased flexibility to buy the food they like and to purchase other necessary household items, and the reduced problems of transport and pressure to share. Vouchers would have most of these advantages, but would limit beneficiaries to using one or a few traders, who might increase prices. On the other hand, many of the focus groups feared that cash would not last as long as food; traders might increase prices, and the money might be spent on many other, non-food items.

The most common perception, mentioned by focus groups in all livelihood zones, is that cash or vouchers do not have any negative effects as compared to food provisions. However, one focus group in Grasslands suggested cash might trigger domestic conflict and even violence. Yet in the Northern livelihood zone, some believed cash might lead to less sharing, and groups in the Northwestern and Northern zones feared it might cut beneficiaries off from traditional safety nets. At the same time, those in the Northeastern and Western zones mentioned it might enhance mutual and credit relationships and strengthen social networks.

These apparently contradictory assessments confirm the picture that emerged from an analysis of traditional safety nets above. In this respect it appears as if a transit from food provisions to cash transfers will affect beneficiaries' access to traditional safety nets. In other words, while immediate access to simple food sharing among relatives, neighbours or others who are better off may decrease or become more difficult, access to credit from shops and traders will probably increase. This would accurately reflect an ongoing development that has been reported by focus groups, i.e. the shift toward an increasingly cash- and market-based society. This tendency and an increasing / improving access to markets and financial services can be expected to have mutually reinforcing effects.

6.12 Summary of main findings and conclusions

Who are the beneficiaries:

Main findings:

- The vast majority of the population in the arid lands lives in either polygamous or monogamous households. Single-female-headed households are the most vulnerable, as single women have a low social capital.
- For all types of households and both men and women, in all intervention areas, cash is the main means of meeting basic needs. In line with the importance of cash is the significant role of markets as a source of meeting household needs.
- Poor households depend on a wide variety of income-generating activities that do not require significant capital. They often pursue unsustainable activities such as burning charcoal and collecting firewood for sale.
- Men use their time on fewer activities than women (mainly casual labour, livestock rearing, and charcoal burning), and hardly any on activities related to household and family needs.
- Men do not transport home food from the market or from food distribution points. This is not considered their role.
- Men dedicate a considerable amount of their time to *wazee baraza* and leisure activities.
- Household-related chores take up much of women's time; they spend relatively less time on income generation. Women do not have leisure time.

Conclusions:

- All population groups meet most of their basic needs through markets, generating cash income through trade, casual labour, livestock rearing, handicrafts, etc.

- Intra-household targeting may be required to adequately include single- and child-headed households, and to avoid conflicts within polygamous households.
- Applying the same average household size for all types of households may be justified in principle for operational reasons, but may deserve special consideration for polygamous households.
- The *wazee baraza* are an established structure to communicate with men that can be used. Structures or groups must be organised to communicate with women.

Decision making and spending priorities

Main findings:

- Many decisions are taken jointly. In case of doubt, men decide about how money is being spent, which child follows which education, and whether to purchase an asset or start a business (but women are getting more independent).
- Women typically decide who goes to the market, what food to buy, and if and where to seek health services for children.
- On average, households in the arid lands spend about 70 percent of their income on food.
- Women's priorities for spending potential cash assistance are focused on basic family needs, particularly including food, clothes, education and health.
- Men pursue the same priorities, but to a lesser degree. They also prioritise livestock purchases in particular – and not least personal pleasures, including alcohol, *miraa*, eating out, and luxury items.
- The different spending priorities between men and women is confirmed by how income is actually spent.

Conclusions:

- Many decisions are taken jointly by men and women. In case of doubt, men are more in charge of “macro”-decisions, e.g. concerning larger amounts of money. The high portion

of household income spent on food indicates women's role and participation in “macro”-decisions as well.

- Concerning the daily use of money, women are used to making independent decisions.
- The probability that cash assistance is actually spent on food or other basic family needs is higher when women receive and use the transfer. Without additional measures, men would also spend a considerable amount of the cash on “unproductive” items or services.

Access to and use of markets and tools

Main findings:

- Women normally access markets as far away as 30 km from their home – double the maximum distance for WFP's food distributions (smaller quantities to transport).
- Women have access to more forms of informal credit.
- Formal financial services are only rarely used by beneficiaries. Overall, it is less probable that women have national IDs than men (requirement for bank account).
- Just under 50 percent of WFP's beneficiaries – about equal for men and women – own mobile phones and use them for communication and money transfers.

Conclusions:

- Women would be the natural recipients of cash or voucher transfers, as they are normally in charge of purchasing for family needs in markets.
- Beneficiaries normally cover greater distances to markets than to food distribution points – as they frequent markets more often and transport smaller portions.
- Transfers involving formal bank accounts may limit access for women, if national ID requirements cannot be accommodated or replaced by other identification.
- Women have equal access to mobile-phone transfers.

Access to traditional / informal safety nets

Main findings:

- Access to regular cash transfers increases a person's access to credit e.g. with traders.
- Non-beneficiaries are more jealous of cash transfers, and less ready to support beneficiary households than if they received food.

Conclusions:

- Replacing in-kind food assistance with cash transfers can mean both advantages and disadvantages for beneficiaries in terms of access to traditional safety nets.

Protection issues and perceptions

Main findings:

- Beneficiaries report serious challenges with respect to collecting and transporting food rations home. Sharing rations is also mentioned as a challenge concerning food provisions.
- The focus groups interviewed had only limited experience with cash or voucher transfers.
- About half of the focus groups interviewed did not expect negative effects from replacing in-kind food provisions with cash or vouchers.

- Some groups did however feared increased domestic tensions and jealousy on the part of non-beneficiaries.
- Cash transfers would lead to reduced sharing – this is perceived as both positive and negative. Equal number of focus groups feared exclusion from traditional safety nets and hoped cash would help strengthen social networks.

Conclusions:

- From the (limited) experience and perception of interviewed groups, it is difficult to draw clear conclusions.
- There is a risk of increasing social tensions, both within households (between men and women) and within communities (between beneficiaries and non-beneficiaries).
- Cash or voucher transfers will probably lead to less sharing. This can have both positive and negative consequences for beneficiaries.
- Communication campaign will be needed to accompany any transition from food provisions to cash or voucher assistance, to reduce the risk of conflict at household and community level, ensure that transfers are used to satisfy basic family food needs, and reduce the chance (?) that traditional safety nets are weakened.

7. Markets in the arid lands

7.1 Specific objectives of the food market assessment

Understanding market conditions is critical for using cash-based approaches to provide food assistance to the most food insecure and vulnerable. For cash or voucher transfers to work, people must be able to buy what they need at an affordable price in their local markets, and the markets must have the capacity to respond to increased demand through increased supply, at stable prices.

The specific objective of this chapter is to provide an understanding of:

- The consistency of food availability in local markets;
- Traders' capacity to meet increases in demand generated by cash-based interventions;
- The cost efficiency of cash-based interventions compared to other forms of assistance (e.g. in-kind food).

The aim is to provide a comparative gauge of the feasibility and risks associated with implementing cash-based interventions. This will be done by analysing:

- How food is made available in the arid lands, how markets are structured, and which actors contribute to their functioning;
- To what extent the different types of markets and traders are able to respond to an expected increase in demand from transitioning to more cash-based interventions.

Based on the findings of the analysis, a set of recommendations will be formulated with respect to the feasibility of cash-based interventions.

7.2 Specific methodology and limitations

As described in the overall methodology for the study, the market component used a number of different methods to arrive at its results, including an extensive review of relevant literature.

For primary data collection, markets were purposively sampled to ensure that a sufficient number of each kind of markets is covered by the field work. On the basis of existing information and literature, markets were defined according to transport corridors, size and role in the supply chains. In the arid lands, differences among markets depend on whether they are on or off the main transport routes, their remoteness, and the livelihood zones in which they are located (see following section).

A specific questionnaire for traders working in the different markets in the arid lands was developed and tested. In order to triangulate responses at individual trader level, the trader survey questionnaire was completed with a checklist to interview key informants in each market (including market administrators, local government officials, etc.).

Overall, 1,652 traders and 102 key informants were interviewed.

Primary data was collected from August 27 to September 14 2012, at the peak of the dry season in the arid lands. As a result, the quality of responses regarding the availability of commodities such as milk and certain vegetables could be affected. It is worth noting that field work started one week after the end of Ramadan to avoid the unusual demand patterns associated with the festive season.

Nine WFP and government staff supervised the field work throughout the duration of the field data collection. Field work was arranged in five clusters covering Turkana, Samburu-Isiolo, Garissa-Isiolo, Marsabit-Moyale and Wajir-Mandera. Field data was collected by 58 enumerators. Primary data analysis was done using MS Access, SPSS, Eviews and Stata. The results were cross-referenced with existing information on WFP operations and distributions, beneficiary population, etc. The primary data analysis was complemented by a review of secondary data, i.e. price-time series from the National Drought Management Authority (former Arid Lands Resource Management Project

II), the Kenya National Bureau of Statistics and the Ministry of Agriculture.

In general, the findings were in line with the existing literature on market conditions in the arid lands.

Research limitations

A number of limitations are worth mentioning as they could affect the findings of this study:

- The prevailing security situation limited the free movement of field research teams, and initial plans had to be altered in several occasions. However, care was taken to ensure coverage of markets initially sampled with adequate replacements where and when necessary.
- Only spot price data was collected during the study, making it hard to assess price trends, e.g. with respect to seasonality, known periods of food supply or demand fluctuations, etc. This was partly addressed by asking questions on price patterns during the dry and the rainy seasons; and by complementing the point-information of the field data with the price time series available.
- The price data series were rarely complete, and the reliability of the information they contain could not be verified as part of the present study. Price series were used when the series were complete and available for the same markets that were covered by the field study. In other cases, complete data series from comparable markets were used to complement the field data. The price-time series used for the market integration analysis cover a four-year period (2007-2010). Data for 2011 was missing, especially at district headquarters level, which prevented the analysis of more recent trends.
- Not surprisingly, traders were not easily forthcoming with information concerning costs, prices and profits. Hence, where information was provided, it had to be taken with great caution. Triangulation was attempted through comparison with similar information available in the literature. This prevented, for example, the calculation of profit margins. Moreover, traders' responses can sometimes be biased by a number of factors such as the perception

of a potential business opportunity, or the fear that the information could be used by fiscal authorities or competitors.

- Estimates of traded or consumed volumes are not part of the scope of this report. Though they would be undoubtedly useful for programmatic considerations, attempts to estimate absolute volumes have several difficulties: the characteristics of the typical market surveys which only collect spot data with limited recall periods; poor statistical data collection in the arid lands; poor supply chains and limited number of wholesalers; change in the number of traders between seasons; seasonal production cycles, and problems of estimating household consumption of its own production.
- Finally, it is not a secret that part of the food distributed by WFP in the arid lands is being sold by recipients. However, it is very hard to approximate the amount of distributed food being sold, or the price local traders are paying, and thus the influence of these sales on prices and supply levels.

7.3 Overall food availability context

At the national level, food availability is a combination of domestic food production, domestic food stocks, commercial food imports and food aid. Food availability in the arid lands is likewise influenced by national policies and international agreements. This subsection will also explore the role of the National Cereals and Produce Board (NCPB), and the impact of domestic policies and international agreements on food availability in Kenya's northern region.

7.3.1 Constraints to food production

Food availability in Kenya has over time been understood in terms of cereal supply, and food security in terms of having enough maize. Per capita food availability has declined by more than 10 percent over the last three decades. Most Kenyans still subsist on diets based on staple crops (mainly maize) that lack nutritional diversity and have particularly devastating consequences on child development.⁹ High poverty levels have affected

⁹ Kenya national food and nutrition security policy, Agricultural sector coordination unit (ASCU), 2012

household access to food. Most Kenyans rely on markets for some or all of their food needs. While most of the poor live in rural areas, the number of urban poor is rising fast.

According to the Ministry of Agriculture, key constraints to domestic production include declining soil fertility, high input prices, losses due to pests and diseases, climate change, inappropriate land use and inadequate access to credit. Agricultural production systems in Kenya are largely rainfed, making them vulnerable to droughts and floods. The ministry further states that continuous cultivation of soils, loss of forest cover and over-emphasis on maize production have led to a decline in soil fertility and yields in areas with relatively high production potential. However, there is still great potential to increase the area under production, since lands are often unexploited due solely to high input costs. Irrigation and water management techniques in these areas hold great potential in this regard.

In Kenya's arid and semi-arid lands, which comprise some 80 percent of the country and have the highest rate of food insecurity, natural resources are degraded by unsustainable land management practices. This has led to a significant loss of biodiversity, which has adversely affected traditional sources of food, income and other basic needs of many rural communities.

Over the past few years, demand for land for various uses has been increasing. Most of the urban areas have witnessed increased conversion of agricultural and livestock land into settlement areas. Seed producers have been seriously affected by competing land uses, with production of seed maize being most affected.

A significant proportion of the food produced is lost due to post-harvest spoilage and wastage, including in some cases from toxin-causing micro-organisms. Losses are often substantial for grain and produce (fruits and vegetables) along with spoilage of animal products including milk, meat and fish. According to the Ministry of Agriculture, losses of stored maize are estimated to be a staggering 30 to 40 percent per annum. Inadequate storage constitutes a public health threat when people consume spoiled food. It also causes supply fluctuations and exacerbates prices, all of which are key causes of food insecurity and malnutrition.

There is little on-farm and off-farm processing of products in rural areas. Kenya lacks sufficient infrastructure for effective transport, storage, refinement, preservation, distribution and marketing of many foodstuffs.

7.3.2 Overall availability of staple food commodities

According to Ministry of Agriculture, as of October 2012 the national maize stocks stood at 1,743,009 MTs. On the other hand, beans stocks were 234,231 MTs, rice stocks at 34,410 MTs and wheat stocks at 289,636 MTs. The table below shows the expected maize balance sheet as of March 2013.

Stocks as at 31st October 2012 in MTs	17,430,097
Total East Africa imports* (cross border trade) expected between November 2012 to March 2013	54,000
Estimated harvest between November 2012 to March 2013	
a) Balance long rains harvest up to end of 2012	540,000
b) Short rains	585,000
Total available stocks by 31st March 2013 32,466,775	2,922,009
Post -harvest losses 15% (of expected harvests) 1,875,000	168,750
National availability as at 31st March 2013	2,753,259
Expected total exports to East Africa Community region	0
Expected exports outside the EAC region	0
Amount used as seed (1% of household stocks)	27,532
Amount used as animal feeds (2% of household stocks)	55,065
NATIONAL CONSUMPTION at a monthly rate of 334,800 MTs for estimated population of 40 million people for the next 4 months	1,674,000
Balance as at 31st March 2013 (surplus)	996,662

Table 3: Maize Balance Sheet (March 2013)

Through both formal and informal channels, Kenya is closely integrated with other countries of the region (especially with the bordering states of Uganda, Ethiopia, Somalia and Tanzania), all of which suffer from harsh and unpredictable climatic conditions and show structural deficits in their aggregate cereal demand/supply balances.

Total cereal imports have been rising since 1990 for all countries of the sub-region, and even more so for Kenya in recent years, as is shown

in the graph below. Although Kenya has been importing significant amounts of wheat and rice, the proportion of maize in cereal imports appears to be growing. Some of the Kenyan maize imports come from the world market, but most are from the broader south/east Africa region, and from neighbouring nations. As the arid lands are a net food importing region, this adds a second layer of dependency on food imports, further increasing the arid lands' vulnerability to supply shocks.

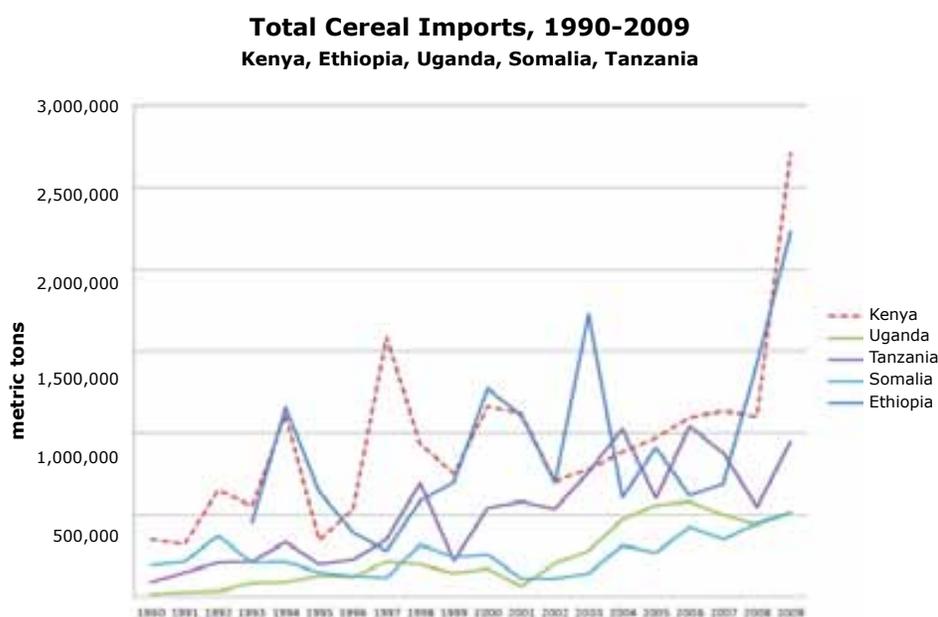


Figure 27: Total Cereal Imports to Kenya (FAOSTAT)

Origin of maize imports to Kenya (FAOSTAT)		
Exporting countries, 2009	Maize (MTs)	%
South Africa	1,048,739	69.5
USA	219,757	14.6
Ukraine	112,689	7.5
India	100,198	6.6
Uganda	15,221	1.009
Australia	5,000	0.331
Zambia	3,022	0.200
Tanzania	2,130	0.141
Italy	801	0.053
Argentina	479	0.032
Pakistan	253	0.017
United Arab Emirates	102	0.007
Ethiopia	22	0.001
Total	1,508,413	

7.3.3 Contribution of the National Cereals and Produce Board (NCPB) to availability

NCPB is a corporate body established under the NCPB Act CAP 338 under the laws of Kenya. The current policy and regulatory framework of the Board, which is categorised as a "Strategic Parastatal", is mandated to carry out commercial grain trading and trade-related services. NCPB follows four official business lines:

- 1) Commercial grain trading in maize, wheat, beans, rice, sorghum, millet, green grams, pigeon peas, etc.;
- 2) Provision of all grain-related services such as warehousing, drying, pest control, weighing, quality testing, and clearing and forwarding of grain batches;
- 3) Leasing out its facilities (stores, houses, offices, grain handling machinery); and
- 4) Agricultural input marketing of fertilisers, seeds, and agro-chemicals under its commercial wing.

NCPB acts like a private-sector player with its own brand names and manages 110 depots, silos and warehouses (see map). Furthermore, NCPB pursues three important social functions on behalf of the government:

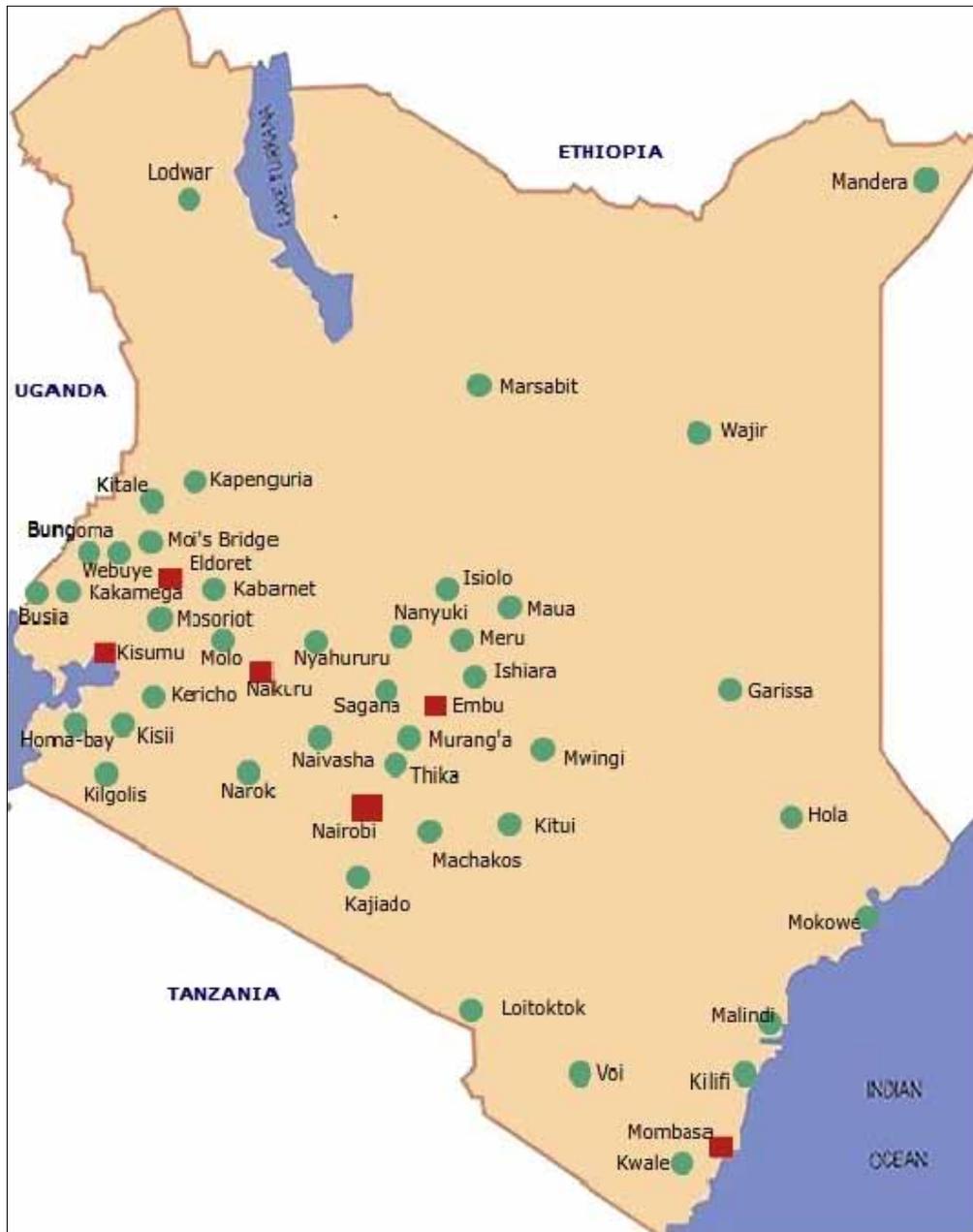
- Procurement, storage and maintenance of Strategic Grain Reserves (SGR):
- Procurement, storage, maintenance and distribution of emergency relief grains; and

- Market intervention by fixing buying and selling prices for wholesale grains in case of either shortage or flooding of markets.

According to the Ministry of Agriculture, the National Cereals and Produce Board (NCPB) has a grain storage capacity of 28 million bags of maize (1 bag = 90kg), but this remains largely underused, with the current use of about 13 percent. It is estimated that NCPB's purchases amount to approximately 7 percent of the nation's total maize production.

The main purpose of the Strategic Grain Reserve is to cushion farmers from the effect of over-supply in periods of good weather and to provide a first line of defence for coping with food deficits. The reserve is mandated to maintain a physical stock of 4 million bags of maize and a cash equivalent of a similar volume. The mix of grain and cash ensures that the government can save lives during emergencies by mobilising food to areas not well served by grain markets. Cash reserves also allow the government to purchase commodities during emergencies in areas with well-functioning markets. Currently, the strategic reserve comprises only maize grain.

The map below shows the network of NCPB depots and offices in Kenya. The map illustrates that there is a clear concentration of activities around the producing areas in the west-central region, with offices in the arid lands limited to the district headquarters.



Map 4: Network of NCPB depots (NCPB)

The NCPB has limited impact on food availability in the markets in the arid lands. Its role in these regions is circumscribed to overseeing the strategic grain reserves used mostly for relief purposes and, to a lesser extent, to subsidising grain sales.

7.3.4 Government development agenda in the arid lands

The arid lands have the lowest development indicators and the highest incidence of poverty in the country. This is partly the result of many years of under-investment in the social and physical infrastructure of the arid districts.

However, since 2003 the government has demonstrated renewed commitment to the arid and semi-arid lands (ASAL). One example is the Economic Recovery Strategy launched in 2003, which recognised 'the important contribution (the ASAL) can make to national development'. These policies found their continuation in the implementation of a new government plan, the Vision 2030.

Kenya Vision 2030 is the country's new development blueprint covering the period 2008 to 2030. It aims to transform Kenya into a newly industrialising, "middle income country providing a high quality life to all its citizens by the year 2030". Vision 2030 was developed through an all-inclusive and participatory stakeholder consultative process, involving Kenyans from all parts of the country.

Vision 2030 is based on three "pillars": the economic, the social and the political. Agenda 4 of the vision includes the following statement: "We recognise that to ensure sustainable peace in the country, poverty eradication and equitable development are essential. We further recognise that issues of inequality, manifested along income, regional and gender lines, remain key challenges for Kenya."

The Ministry of State for Development of Northern Kenya and other Arid Lands was created in April 2008 in line with Agenda 4 of the vision. Its purpose is to fast track the development of the ASAL, reducing inequality and releasing the region's potential.

As observed during the field data collection, road construction is ongoing along some of the main transport corridors, especially between Isiolo and Moyale. This coupled with the incipient development of the extractive industry in the northwest, and the expansion of the mobile money systems could contribute in the medium term to the enhancement of market and transport infrastructure, and hence the reduction of the high food prices in the arid lands.

As this report will show, despite these efforts, **lack of basic transport and market infrastructure**

still continue to be the main constraints to trade in the arid lands. These limitations and the associated transaction costs result in most areas in an inconsistent supply of food commodities, and in much higher retail prices than in other more favoured regions of Kenya.

7.3.5 Trade policy implications for food availability in the arid lands

Agriculture and trade policy distortions often have the effect of compounding supply shocks. Kenya is a food-deficit country even in a bumper harvest year, yet the country levies import duty on food grains which is only suspended on an ad-hoc basis in times of crisis¹⁰.

Kenya's commitments under the East African Community (EAC), Common Market for Eastern and Southern Africa (COMESA) and World Trade Organization (WTO) influence its trade policies. They promote trade openness and tariff reduction, although both the EAC and COMESA encourage the construction of an external tariff wall to encourage regional trade among their members. Both the EAC and COMESA provide Kenya with trading opportunities and incentives? for the growth of semi-protected 'infant industries'.

As a result of these agreements, domestic markets are becoming more competitive as Kenya brings its tariffs in line with WTO, EAC and COMESA requirements. Retaining market share is requiring greater production, transport and marketing efficiencies.

Despite the harmonisation of formal maize import tariff rates, both tariff and non-tariff barriers to regional trade continue to cause domestic maize prices to rise. Given that Kenya is consistently a net maize importer, a policy of restricting imports inevitably harms Kenyan consumers, who bear the additional tax burden. High food prices increase living costs for already vulnerable households – especially in the arid lands of Kenya – who have not fully recovered from devastating effects of past droughts.

¹⁰ The Drought and Food Crisis in the Horn of Africa: Impacts and Proposed Policy Responses for Kenya, World Bank, 2011.

In 2012, the Government of Kenya made the decision to ban genetically modified (GM) food imports into the country “until it can be made absolutely sure that they are safe for public health.” This was followed by a Ministry of Public Health order to public health officials to remove all GM foods from the market. While the assessment of the appropriateness of this measure is not part of this report, it should be mentioned that imported GM foods played a vital role in the past in overcoming the food insecurity situation in Kenya. Moreover, studies conducted by the United States Department of Agriculture¹¹ indicate that the ban had an impact on Kenya’s structural corn deficit.

The measures described above have a direct impact on overall food availability in the country. However, their significance in how food is subsequently made available in the arid lands is, to a large extent, overridden by the bottlenecks generated by the high transaction costs and their impact on the efficiency of food flows from the main supply markets in Kenya to the northern region.

7.4 Market structure in Northern Kenya

7.4.1 Transport corridors

Market chains in the Kenyan dry lands follow transport corridors. These transport corridors are also the main international highways to the countries bordering the arid lands. Three main supply routes were defined to sample the markets for data collection:

- 1) Northwestern corridor: Nairobi-Kitale-Lodwar-Kakuma-Lokichogio; linking with South Sudan.
- 2) North-central corridor: Nairobi-Meru/Nakuru-Isiolo/Samburu-Marsabit-Moyale; linking with Ethiopia.
- 3) Northeastern corridor: Nairobi-Thika-Garissa-Wajir-Mandera; linking with Somalia.

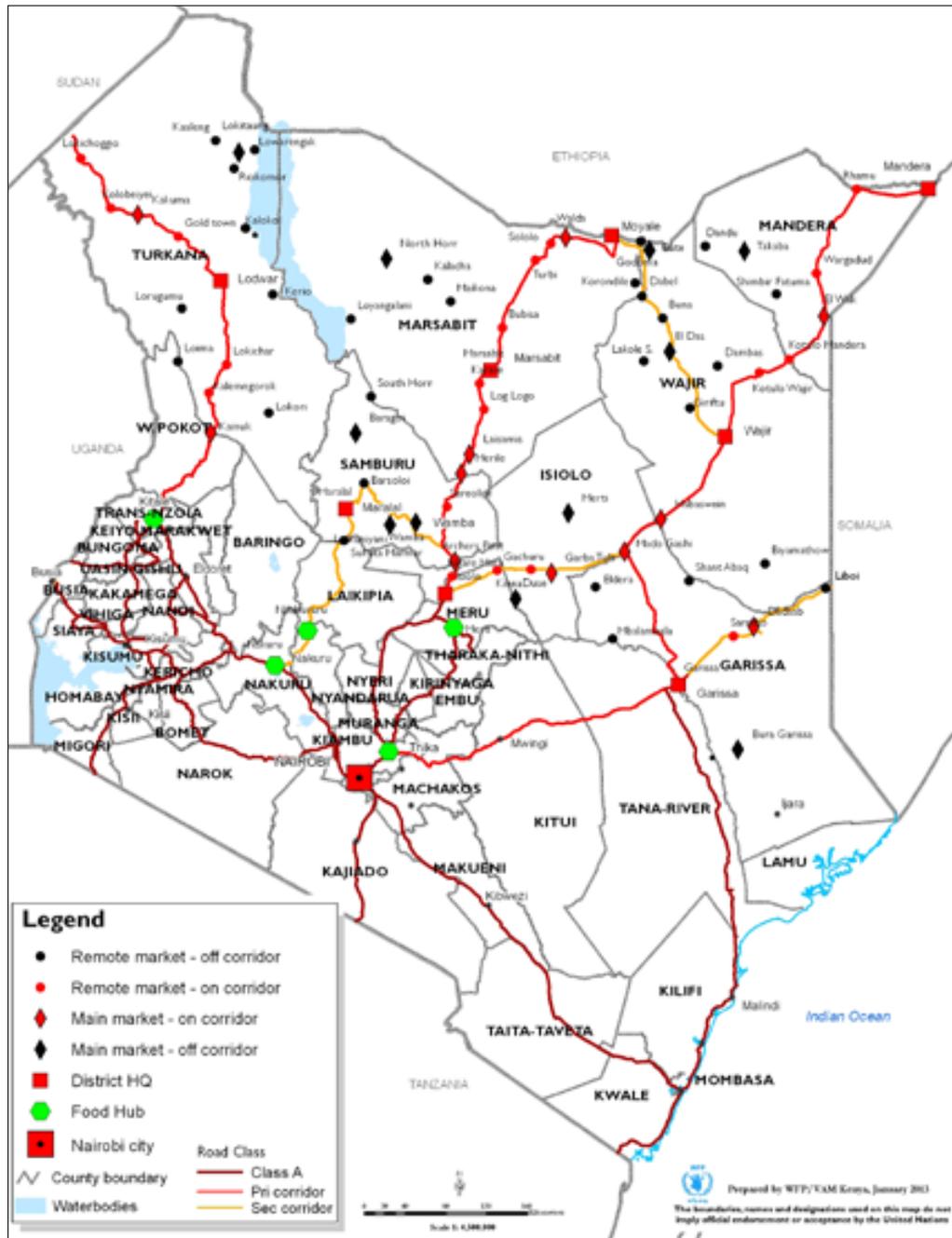
Other secondary corridors that connect Garissa and Moyale through Wajir, Nakuru and Isiolo through Maralal, and Garissa and the border point of Liboi are less relevant in terms volumes traded. The map below shows the studied transport corridors and the different categories of markets.

Field observations, interviews with key informants and preliminary data analysis revealed that there are no significant differences in the conditions and behaviour of markets between these transport corridors. This is due to the fact that the arid lands are homogeneous in terms of population density, infrastructure, market and supply systems, seasonal fluctuations, constraints to trade, traders’ access to services, capacity to meet increases in demand etc. In view of this, and in order to optimise the comparative nature of the study, data was aggregated by type of market (see below for typology of markets), which also benefited from larger samples and hence more reliable findings. When relevant, the analysis is broken down by corridor, for instance to describe the respective links with the hub markets.

Primary data analysis revealed that the main and remote markets situated along the main transport highways benefit from significantly better road conditions, modes and frequency of transport than those situated off the main routes. In order to enhance comparisons between market categories, data were analysed taking this aspect into consideration and when analysis of trends so advise, findings are presented accordingly.

¹¹ Kenya Bans Genetically Modified Food Imports, USDA Foreign Agricultural Service, Global Agricultural Information Network, 2012.

Main Food Transport Corridors and Markets in Arid Areas - 2012



Map 5: Trade corridors identified and studied

7.4.2 Typology of markets

Four types of markets were identified for this study during the planning phase: 1) Nairobi; 2) hub markets in the central region; 3) main markets in the arid lands, and; 4) remote markets in the arid lands.

In order to minimise transaction (mainly transport) costs, most of the commodities supplied to the markets in the arid lands - staples, fruits and vegetables and processed foods - are sourced from neighbouring markets in the producing areas. The ones that cannot be sourced through these producing regions are supplied by wholesalers from Nairobi. These include mostly processed foods such as maize and wheat flour, rice, vegetable oil, sugar, salt or tea leaves. In bad years, when yields in the nearest producing regions are low, the supply lines of more basic products, especially cereals, are extended to Nairobi, as wholesalers in these markets are able to source food commodities from outside the country. In view of this, Nairobi was selected as a category by itself. The fresh fruits and vegetables market of Wakulima, processed food market of Eastleigh, and staple food market of Nyamakima were visited during the data collection.

The hubs in the central producing region are large and act as main suppliers to the northern region and other parts of the country. Kitale, Thika, Nakuru, Meru and Nyahururu were selected for the study.

Markets within the arid lands districts were classified into two categories: main and remote. The main markets include the district headquarters and other large markets along the transport corridors. As per the preliminary sampling assumptions, main markets were those that are formal (local authority controlled) and act as redistributors for the remote markets. Thirty-five markets (including the eight district headquarters) were visited.

Lastly, for each of those main markets, a number of remote markets were identified. With the possible exception of very small settlements in the immediate vicinity, remote markets do not act as suppliers for any other location. Forty-four remote markets on and off the main transport corridors were visited (see list of visited markets in annex).

Food commodities flow into the arid lands following the three main transport corridors described above. The hub markets and Nairobi are the main suppliers to the largest main markets in the arid lands which subsequently supply other main markets along the corridors and also the remote markets. **As shown in Figure 28, the district headquarters are central as supply sources and, they dominate the redistribution of food commodities in the arid lands.**

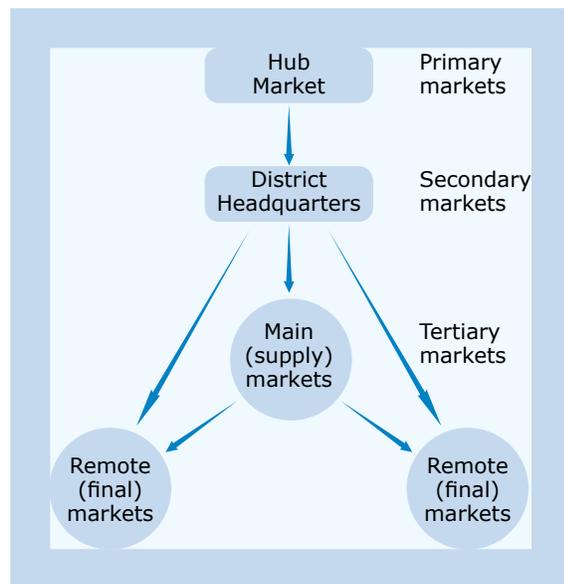


Figure 28: Links between market typologies

Practically all the markets visited during field work operate throughout the year, 92 percent of them daily, 7 percent once a week, and the rest two or three times per week. Most of the markets that do not operate daily are in remote locations and are generally supplied by mobile merchants.

In the next sections, data is analysed, disaggregating between district headquarters, other main markets and remote markets, taking into account whether they are on or off the main transport corridors, so as to obtain clearer market profiles.

7.4.3 Catchment areas

The catchment areas are defined here as the customer base of traders, i.e. the spread of the area within which traders reach out to their customers.

The two figures below show the different catchment areas by type of market and type of trader (percentages are based on the number of responses). Traders were asked about the places of

origin of their customers to estimate the size of the area a cash-based intervention can serve, and also to indicate the extent of its possible impact.

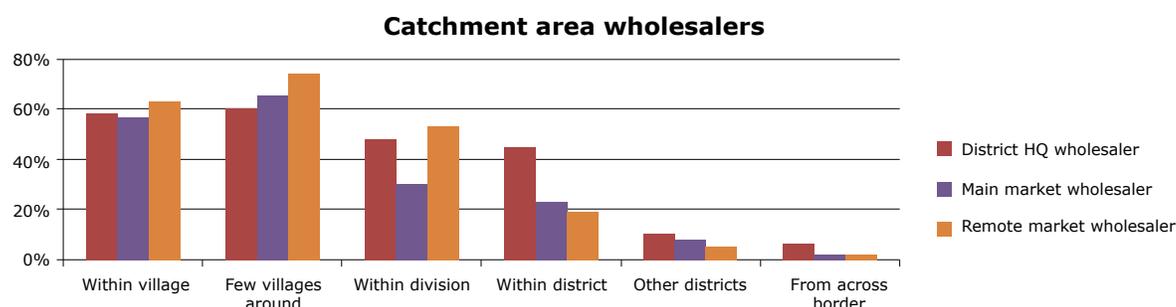


Figure 29: Catchment area of wholesalers

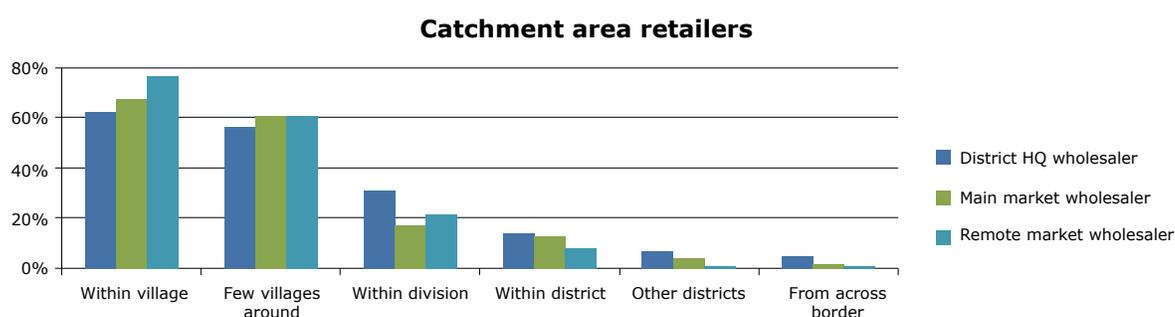


Figure 30: Catchment area of retailers

Although the differences may not be too noticeable, the catchment areas tend to be larger for wholesalers than for retailers across all categories of markets, and they tend to proportionally decrease with the size of the market and the remoteness, especially for retailers. The trend becomes clearer when considering locations within the division and outwards. The majority of both wholesalers and retailers (close to 60 percent) responded that their customer base is within the village or a few surrounding villages. The category defined as 'villages around' includes villages within walking distance, and the respondents somehow assimilate these locations as their own.

A significant proportion of traders also have a larger catchment area. Around 40 percent of wholesalers and 20 percent of retailers responded that they reach out to customers up to the division boundaries and more than 20 percent of wholesalers go as far as

the district boundaries. The customer base of both wholesalers and retailers decreases significantly outside of the district boundaries.

In relation to these findings, it is interesting to note that the catchment areas of a significant proportion of respondent traders (around 40 percent) are wider than the geographical area covered by a WFP food distribution point in the arid lands, which is estimated at 15 km on average. This corresponds to the 'within the village' or 'few villages around' categories defined above, i.e. narrower than the market catchment areas. The 15 km threshold is established by WFP to reduce the opportunity cost of food distributions, i.e. the time taken for the distribution and the effort (time, distance and cost) made by beneficiaries to collect the food. In the arid lands this threshold is established taking into consideration the fact that most of the beneficiaries walk to collect their food entitlements.

In summary, as traders' catchment areas are generally wider than geographical areas targeted by programme interventions, the possible impact of interventions on local market prices can affect people out of the targeted area. It is important to take such a possible impact into consideration for non-beneficiary monitoring activities.

7.4.4 Food and livestock market chains

The links within a market chain define the volumes that are traded and also the price that the end consumers receive, while the number and variety of links affect the efficiency of a supply system. Four market chains were identified for the study: 1) grains and beans; 2) fruits and vegetables; 3) processed food (rice, sugar, maize meal, wheat flour, pasta, etc.), and; 4) livestock, meat and dairy.

Locally produced food

Livestock, mainly goats, sheep, camels and cattle, is locally produced in the arid lands, with a large proportion of the transactions taking place directly between herdsmen and butchers. Livestock markets are predominately assembly markets where local pastoralists and traders from outside the districts converge to exchange livestock, which then is often transported to distant terminal markets in the south of the country. Inadequate infrastructure is often cited as contributing to the inefficiency of livestock marketing in the arid lands.

Goat and camel milk¹² are the most commonly traded locally produced commodities in the arid lands. Milk supply chains are generally very short: producers sell directly to consumers; retailers buy from producers in the outskirts of the towns; or transporters travel to nearby producing villages to collect milk and sell either directly to consumers or to open-air retailers.

Imported food commodities

Imported food is largely trucked from the main supply markets in the Kenyan central region or imported directly from Ethiopia and Somalia.

Maize supply chain: Maize is by far the most important staple commodity, not only in the arid lands, but in the entire country.¹³ Once the maize is harvested, treated and ready for sale, the farmer sells to the highest bidder, depending on available options in the market. The highest bidder differs according to time and season. In surplus season, the government's NCPB offers better deals to farmers. In times of low harvest, private millers pay higher prices. But an average farmer who has no proper storage facilities to store her/his produce for sale later is forced to sell immediately after harvesting, in order to settle cash needs within the household. At farm gate, the maize is either sold to a transporter or directly to assemblers, who are usually fellow farmers or village mates. The village assembler collects larger volumes of maize, even by buying from bicyclists, or people transporting the grain on donkeys and hand-carts. The assembler waits for the wholesaler, who is usually located in the next urban setting. The assembler releases the maize to the wholesaler, who transports it mostly to deficit areas and sells to either retailers or millers. The retailer eventually sells it to consumers in small quantities, per 2-kg tin. When the wholesaler decides to sell to the miller, the millers grind the maize and pack it into various quantities destined for retail chains.

In the informal grain markets, the disassemblers divide up the quantities into manageable and easily afforded weights. The disassemblers sell the maize in various markets. They can also take the grains to millers for grinding, before selling it to consumers in per-kilo amounts.

In all these movements of maize grains and maize flour, the transporter plays a central role all along the supply chain.

The scenario changes when the farmer and or the wholesaler decides to sell the grain to NCPB. The NCPB keeps the maize in its stores and releases it in times of scarcity to alleviate high prices. The wholesaler also supplies the informal grain markets.

¹² Data collection was conducted during the peak of the dry season when the production of milk in the arid lands is very low.

¹³ High Commodity Prices – Who gets the Money? A Case Study on the Impact of High Food and Factor Prices on Kenyan Farmers, Survey for Heinrich-Boell-Foundation Berlin, Germany, Mar 2009

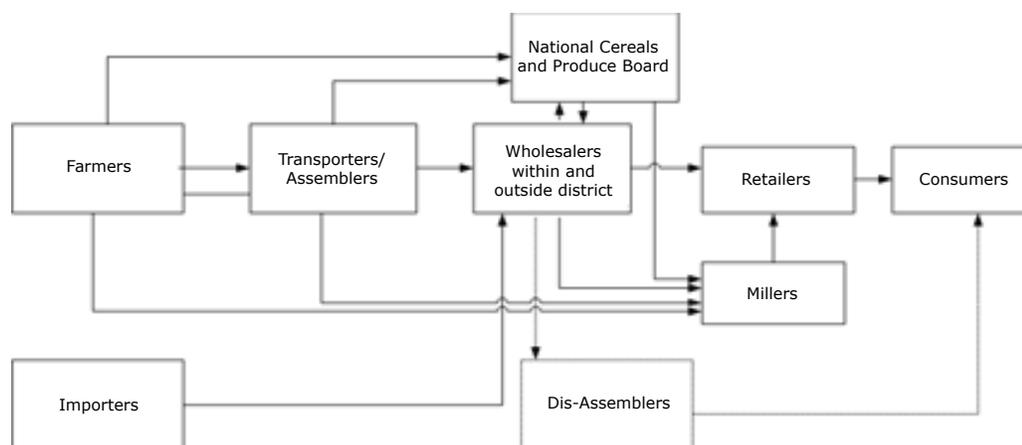


Figure 31: Typical maize supply chain

The beans supply chain is similar to the maize supply chain, with the exclusion of the millers and with the NCPB playing a much more limited role.

The fruits and vegetable supply chain is shorter than both the maize and beans chains; it bypasses the NCPB, the millers and disassemblers.

The supply chain of processed commodities (maize meal, wheat flour, rice, sugar, vegetable oil etc.) starts from the company factories. These factories are mainly located in Nairobi, with some also in market hub. From the company factories, these commodities are handed over to company-appointed distributors / dealers who distribute to the wholesalers, and eventually the commodities reach the customers through the retailers.

Overall the trade of cereals, beans, processed commodities and fruits and vegetables flow into the arid lands following the supply corridors described above; the hub markets and Nairobi are the main suppliers to the largest main markets in the arid lands – mostly the district headquarters – which subsequently supply other main markets along the corridors and also the remote markets.

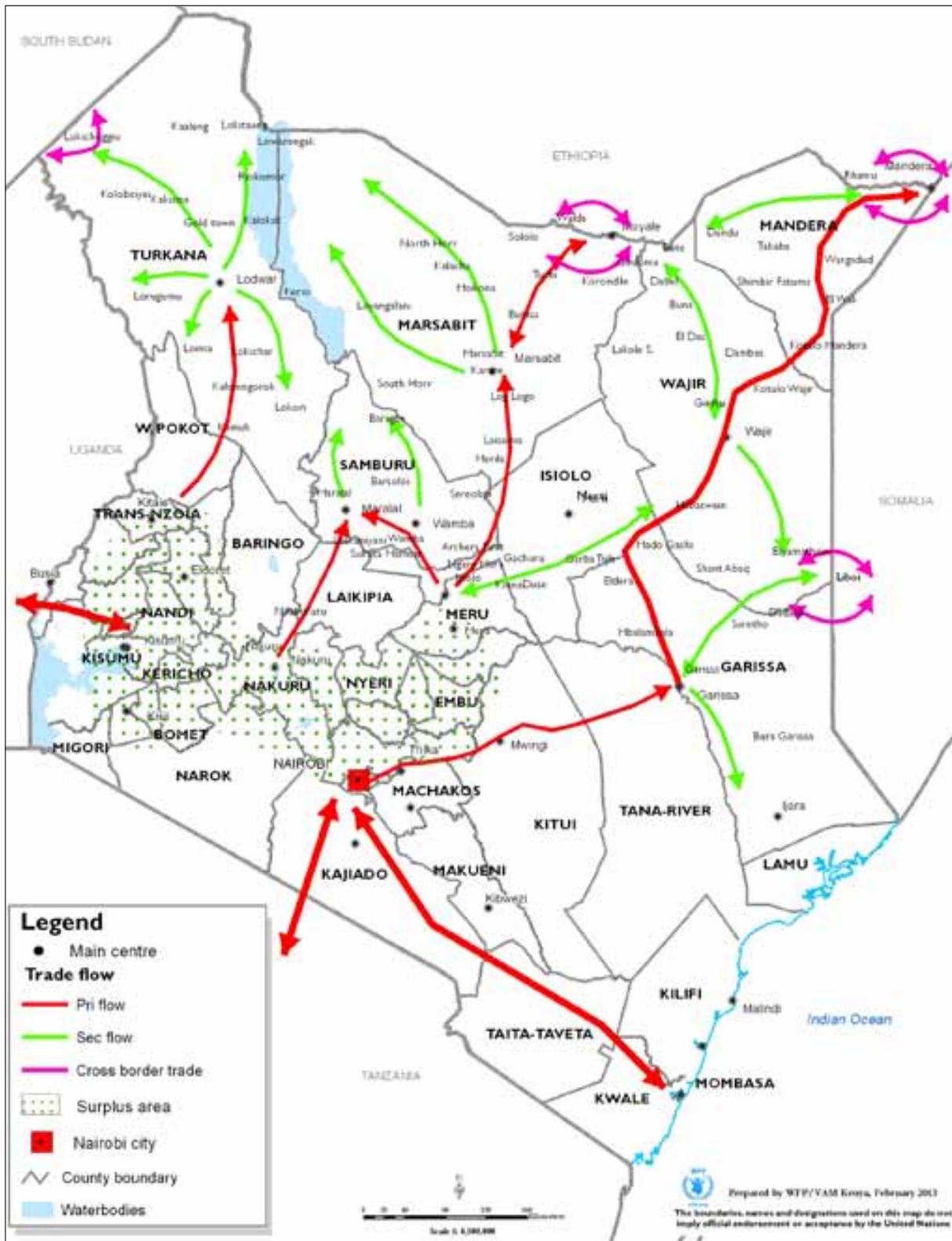
It is worth noting that mobile money systems are increasingly playing a role in the supply chains (see also section 8). This new method of payment is facilitating transactions along the supply chains, which is possibly contributing to strengthening linkages between remote markets and distant supply markets, and could also be impacting the role of wholesaling.

7.4.5 Main supply sources per corridor and market chain

The map below illustrates the trade flows of imported food commodities, their relative position vis-à-vis the producing region in Kenya and the main cross-border trade points.

In the western corridor the main suppliers of maize, wheat, rice, beans and sugar for both the main and the remote markets are Lodwar, within the arid lands, and Kitale in the highlands. To a lesser extent, Kakuma is also an important supplier of sugar for the remote markets. The main source of potatoes and tomatoes is Kitale, both for the main and the remote markets. The arid lands are the main producing areas of goat and goat meat. Therefore, the sources of goat and goat meat are indistinct from the main and remote markets within the arid lands.

Food trade Flow in Kenya - 2012



Map 6: Food trade flow in Kenya (2012) (WFP Kenya – VAM unit)

In the north-central corridor, the main sources of maize for the main markets are Isiolo, Marsabit and Moyale within the arid lands, Nyahururu in the highlands and, to a lesser extent, Ethiopia for locations in Moyale district. Maralal and Marsabit are the most important suppliers of maize for the remote markets within the arid lands, with Nyahururu and Ethiopia also playing an important role. Wheat is mostly sourced from Isiolo, Moyale and Meru for the main markets and from Isiolo and Moyale for the remote ones. Rice, beans and sugar are sourced from Isiolo, Moyale, Marsabit, Nyahururu and Nairobi in the main markets; and from Moyale, Marsabit, Isiolo, Maralal, Nyahururu and Ethiopia in the remote markets. Potatoes and tomatoes are sourced both from the main and remote markets of Isiolo, Meru (and locations in its vicinity), Nyahururu and Ethiopia. The goat meat sources are much more dispersed and include a combination of main and remote markets.

As for the northeastern corridor, the main sources of maize both for main and remote markets are Moyale, Wajir, Mandera, Garissa, Thika and Ethiopia. The lower reliance on Kenya's hub markets, compared with the other corridors, and the frequently sourcing from Moyale and Ethiopia reflects the importance of the cross-border trade in the northeastern corridor. Garissa is ostensibly the most important source of wheat and rice in the area, followed by Nairobi and Mombasa. Wajir and Moyale are also important sources for the remote markets. To a lesser extent, Somalia and Ethiopia are also supply sources of rice and wheat. Beans are sourced equally in Garissa, Mombasa, Nairobi and Thika for the main markets, while the most important supplier for the remote markets is clearly Moyale, followed by Garissa. Sugar is supplied from Garissa followed by Somalia, Mado Gashi, Nairobi and Mombasa in the main markets, and from Garissa, Somalia, Wajir and Moyale in the remote markets. This again reflects the importance of cross-border trade in the area. Potatoes and tomatoes are sourced in Garissa, Isiolo, Mandera, Thika and Meru in the main markets, and in Wajir, Isiolo, Garissa and Moyale in the remote markets. The supply of goat meat follows the same pattern

described for the other two corridors; the sources are equally distributed between various main and remote markets in the area.

Approximately half of the traders interviewed mentioned that they have an alternate source of supply. The retailers in remote markets off the transport corridor indicated a lower capacity in this regard, with an average of 39 percent of them answering positively.

As also shown in map above, Kenya's main food producing areas are concentrated around the western and central regions.

Likewise, most of the Kenyan maize production comes from the western and Mount Kenya¹⁴ regions. Large-scale producers are concentrated in the western region, mostly in Trans-Nzoia, Kakamega, Bungoma and Uasin-Gishu. Other medium- and small-scale producers also important in the supply chain - are located around the Mount Kenya region, mainly in Nyeri, Meru, Embu and Muranga.

Rice production in Kenya is limited, and mostly confined to two irrigation schemes: Mwea in the central region and Ahero in the western region.

Local bean production is also concentrated in the western and Mount Kenya regions, mostly overlapping with the maize producing areas.

Fruits and vegetables transported to the arid lands are mostly produced in the central and western regions. Production is spread over several districts; some of the leading producers are Nyandarua (leading potato producer, Limuru (kales and cabbages) and Kirinyanga (tomatoes).

Processed commodities traded in the arid lands are mostly manufactured in Kenya, the majority of them in Nairobi. Maize flour, wheat flour and vegetable oil are also manufactured in the hub markets: Thika, Nakuru, Kitale, Nyahururu. Salt is mostly produced in the coastal district of Malindi.

¹⁴ The central region includes the districts Kirinyanga, Muranga, Nyandarua and Nyeri. Mount Kenya region includes the central plus Meru and Embu.

7.4.6 Cross-border trade in the arid lands

Cross-border trade is an important determinant of food availability in the arid lands. Moyale is the main entry point for items from Ethiopia, Mandera and Liboi for items from Somalia and Mombasa for items from other countries. Cross-border trade with South Sudan was mainly reported in Lokichoggio, which is the biggest market closest to the border. However, information obtained during the field work indicated that while some trading activities exist, they are not at a large scale and are one-sided; mainly with processed food commodities crossing from Kenya to South Sudan. According to reports, a substantial number of Sudanese traders purchasing from Kenya were using an alternative route through Uganda, mainly due to poor roads and, to a smaller extent, fears of insecurity.

Trade from Somalia has decreased in recent years, due to Kenyan government restrictions. However, there is strong evidence that large amounts of goods continue to be traded through unofficial border points, both from Somalia and Ethiopia.

Key informants in Mandera reported that informal cross-border trade with Somalia contributes to more than 90 percent of the processed food commodities traded in Mandera, limiting the commodity trade through Nairobi. The most important commodities imported from Somalia are wheat flour, rice, pasta, sugar, vegetable oil, powder milk, tea, canned fish and salt. Commodities are brought into Kenya via four-wheel drive vehicles, camels and donkeys. Often the commodities are repackaged to conceal their origin before crossing into Kenya.

Livestock trade with Somalia includes cattle, sheep, goats, camels and donkeys. Cattle, sheep and goats are the main animals imported into Kenya. Similarly, a large proportion of the cross-border trade in Moyale from Ethiopia is informal, with commodities very often arriving across uncontrolled border points via donkeys. While the wholesalers in Moyale are usually Kenyans, many retailers, especially open air ones, are Ethiopians. Imported commodities include maize, beans, rice, wheat, fruits and vegetables, fresh and processed milk, oil and sugar. Some are sold locally in Moyale, and the rest is transported to other markets in Kenya.

In a normal year, cows are also imported from Ethiopia, though the direction of trade varies depending on the rains on each side of the border, and on the security situation. The cattle and small livestock market is in Moyale-Kenya, while the main camel market is in Moyale-Ethiopia, though both serve the border districts in both countries, being important border markets.

The sources and destinations of food commodities described in previous sections partially confirm the preliminary assumptions about the respective roles of the transport corridors, the hub markets, the district headquarters and other main markets in the arid lands. **Food flows into the arid lands through the main transport corridors. The hub markets and Nairobi are the main suppliers to the largest main markets in the arid lands, which subsequently supply other main markets along the corridors and also the remote markets. However, the district headquarters dominate the redistribution of food commodities in the arid lands.**

7.4.7 Supply-side actors and typology of traders

The supply actors typically involved in the arid lands food trade are the following:

- Producers and importers: These actors produce food locally or import it from outside Kenya (see above cross border trade).
- Collectors/assemblers/middleman/distributors: They import or buy from producers and distribute to the wholesalers.
- Wholesalers: Wholesalers determine the efficiency of the supply chains. They purchase food from importers and distributors for sale to retailers. Some wholesalers also operate as retailers. Due to their extensive vertical networks, their role is fundamental in the transport of food from surplus regions to deficit regions.

Wholesalers are usually located in major towns. **The role of wholesaling in remote locations is mostly confined to the trade of cereals, beans and processed commodities, and is often controlled by wholesalers from outside the districts who sometimes also act as transporters. This influence on the food supply**



Vegetables open air retailer in Kula Mawe – remote market in Isiolo – (left) and butchery in Dadaab town –main market in Garissa- right. Photos: WFP/Diego Fernandez

in remote locations can undermine local traders' response capacity, and increase the risk of collusion, hoarding and price increases.

Generally wholesalers located in larger towns, i.e. district headquarters, are more specialised than those in smaller locations. As for the food commodities under study, wholesalers in district headquarters usually specialise based on the three imported supply chains: 1) cereals and beans; 2) processed foods and; 3) fruits and vegetables. In other smaller locations, wholesalers tend to deal with cereals, beans and processed food, without specialising. The lack of fruit and vegetable wholesalers is due to risks associated with their perishability.

- **Retailers:** Operating in open air stands, shops or kiosks, they buy in bulk from wholesalers, and resell in smaller quantities to customers.

7.4.8 Typology of shops

The tables below provide information on the most common types of commercial outlets per type of trader and market (percentages out of the sample interviewed). Contrary to intuition, open-air trading is more frequent in the main markets than in remote ones, which is likely due to higher business opportunities associated with the population densities of these locations. In all cases, the most frequent structure is a permanent shop, mentioned by 40-60 percent of interviewed retailers and 50-90 percent of wholesalers. The availability of permanent shops, in particular at retail-trade level, is an advantage when targeting and selecting potential traders through which cash and vouchers can be redeemed.

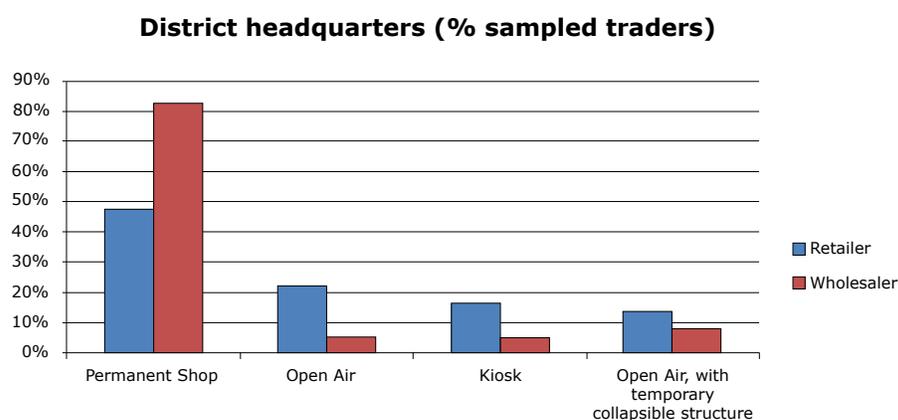


Figure 32: Types of shops, district headquarters

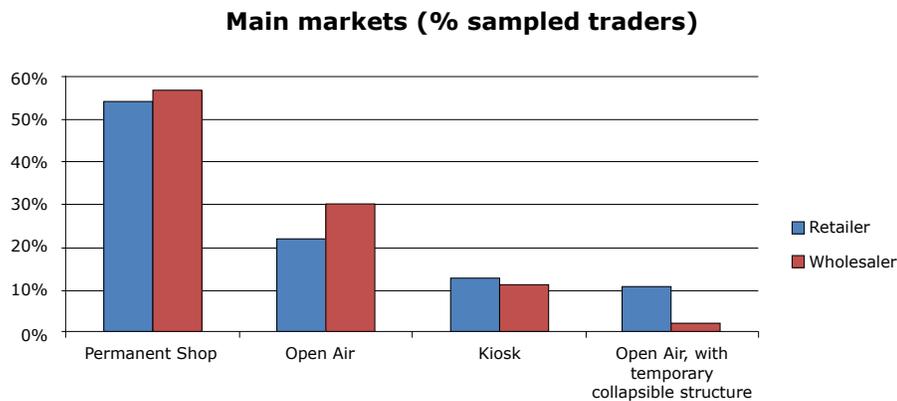


Figure 33: Types of shops, main markets

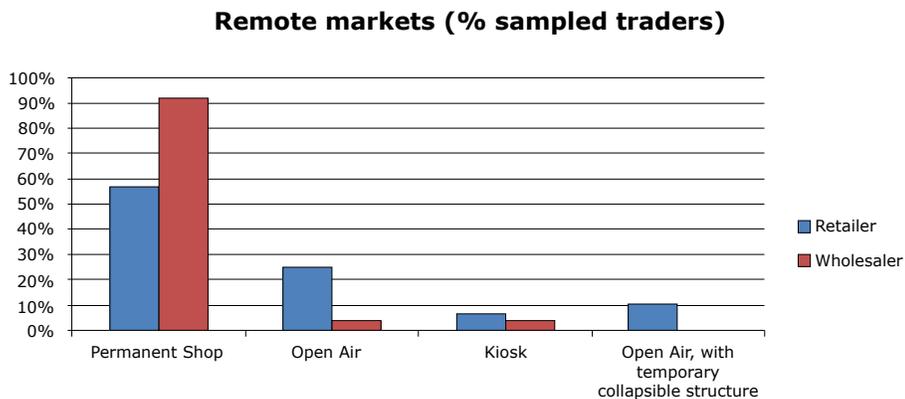


Figure 34: Types of shops, remote markets

7.5 Market conduct

The present subsection describes the role of important actors as well as the influence that external factors have on trade in the arid lands.

7.5.1 Competition between market actors

There are no major restrictions to the entrance of new traders in the market. Key informants reported that the only requirement is to obtain a license, which can be processed in less than a week, and pay annual fees to the county council. The only difficulty traders may encounter in setting up a new business is the allocation of land by the community or the county councils in larger towns.

The availability of retail outlets is closely linked to the population density and demand levels. The average number of retailers in district headquarters is 250. Retailers average around 150 in the main markets, and 30 in remote markets. As for the number of wholesalers, the average in the district headquarters is 25, with an average of 10 in the main markets and 1-3 in remote ones, depending on whether they are located off or on the main supply corridors. Some of these wholesalers, especially in remote markets relatively close to producing areas, are mobile and serve different locations. The average number of both retailers and wholesalers is higher in the markets on the main transport corridors than off the corridors. The number of retailers and wholesalers varies

from season to season depending on seasonal production cycles of the different commodities, and on accessibility during the rains. These variations are more accentuated in the remote markets than in the main ones.

The following table provides information about the ratio between retailers and wholesalers per type of market. The ratios are based on the number of traders sampled and interviewed, and should be considered as estimates of the competition levels in the different types of markets, not as absolute estimates of the proportions of retailers and wholesalers. Furthermore, it should be taken into account that due to the wholesalers' specialisation described above, there are more wholesalers per retailer in large district headquarters than in remote markets. However, these wholesalers tend to deal with slightly fewer commodities, thereby reducing effective competition within the respective supply chains.

Type of market	Relative Location	Retailers per wholesaler
District HQ	On main corridor	3.2
	Off main corridor	3.4
Main Market	On main corridor	7
	Off main corridor	6.6
Remote Market	On main corridor	7.4
	Off main corridor	9.4

Table 5: Ratio between retailers and wholesalers

The competition levels decrease with the remoteness of the market, which weakens the supply network and traders' response capacity, and increases retailers' vulnerability to supply shocks. Results indicate there is a clear correlation between size and remoteness of the markets and the number of retailers per wholesaler, which is consistent with the observations in the field and the difficulties the team faced in finding wholesalers to interview in the remote villages.

The arid lands are highly dependent on food sourced mainly from outside of the region, and trade is dominated by non-local wholesalers. As a result the benefits of trade on the local economy are likely limited. A case study conducted in Turkana¹⁵ showed the rates of return are slightly higher on average for wholesalers (18.5 percent) than for retailers (15.5 percent), and tend to double in the case of mixed wholesale-retail trade. In terms of commodities, the highest margins are linked to sugar. However, when considered in relative terms, such margins are reduced by the high cost of procuring the commodity. Maize meal emerges as the most profitable commodity.

7.5.2 Wholesale price setting

Traders in the arid lands are by and large price takers, i.e., they are not influential enough, nor have the negotiating power to influence the price of the traded food commodities. They are consequently vulnerable to price shocks, with a higher likelihood of passing food price increases and transaction costs onto consumers.

The graph below shows the different ways in which wholesale prices are established. While prices differ among district headquarters, wholesale price negotiating patterns outside these locations are similar across all categories of markets and relative positions on the transport corridors.

Twice the number of traders stated that prices are determined by the wholesaler in non-district headquarters than those who mentioned that price is determined through negotiations. There is a narrower divergence in the district headquarters, as is shown in the graph. Although the majority of traders in the district headquarters are also price takers, their negotiating power appeared to be higher.

¹⁵ Market analysis to assist selection between response options in conditions of food insecurity, Alessandro De Matteis, 2010

How is the wholesale price determined (% responses)

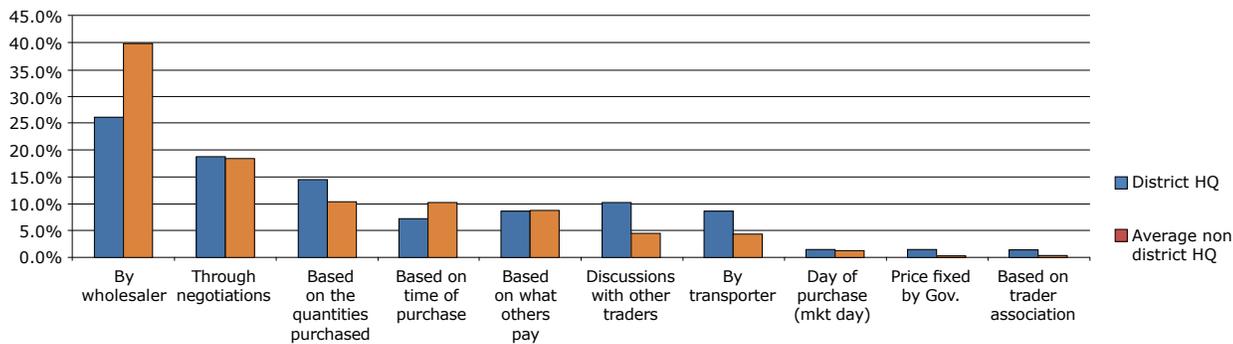


Figure 35: How wholesale prices are determined

7.5.3 Impact of National Cereals and Produce Board (NCPB) policies on prices

The NCPB remains a major player in the market for medium- and large-scale farmers in the producing areas around the Rift Valley, where it sets prices and provides some degree of stabilisation. Smallholders have little interaction with NCPB, with only an estimated 2 percent selling cereals to the board.

Government interventions in maize markets through NCPB tend to keep prices high and have little impact on price stability. According to a World Bank report,¹⁶ NCPB's maize market interventions are generally anti-poor in the sense that high prices paid to large-scale farmers negatively impact consumers especially poor urban households, and the majority of poor rural households, who are net buyers of maize.

NCPB's impact on food prices in the arid lands is, however, limited. As reported by key informants during the field data collection, NCPB's role in the arid lands is limited to overseeing the strategic grain reserves used mostly for relief purposes and, to a lesser extent, to subsidise grain sales.

7.5.4 Impact of WFP food distributions on maize trade and prices

Abundant references in the literature¹⁷ indicate that relief food influences traders' supply systems, affecting prices and traders' margins. Furthermore, case studies conducted in certain areas close to locations with large WFP interventions have shown abnormal price fluctuations that are likely linked to the presence of relief food in the market.

While an in-depth study of this subject is out of the scope of this report, a brief statistical description of food insecurity in the arid lands and WFP interventions aims to provide some intuitive implications of relief food on the markets.

An understanding of the amount of food insecurity amongst the population is important because it affects a community's ability to absorb and support food-insecure people (i.e. the higher the proportion, the less kinship support can be assumed). It is also important in targeting potential beneficiaries of food assistance. Coupled with the degree of functioning markets in the area, it can also help assess different assistant modalities.

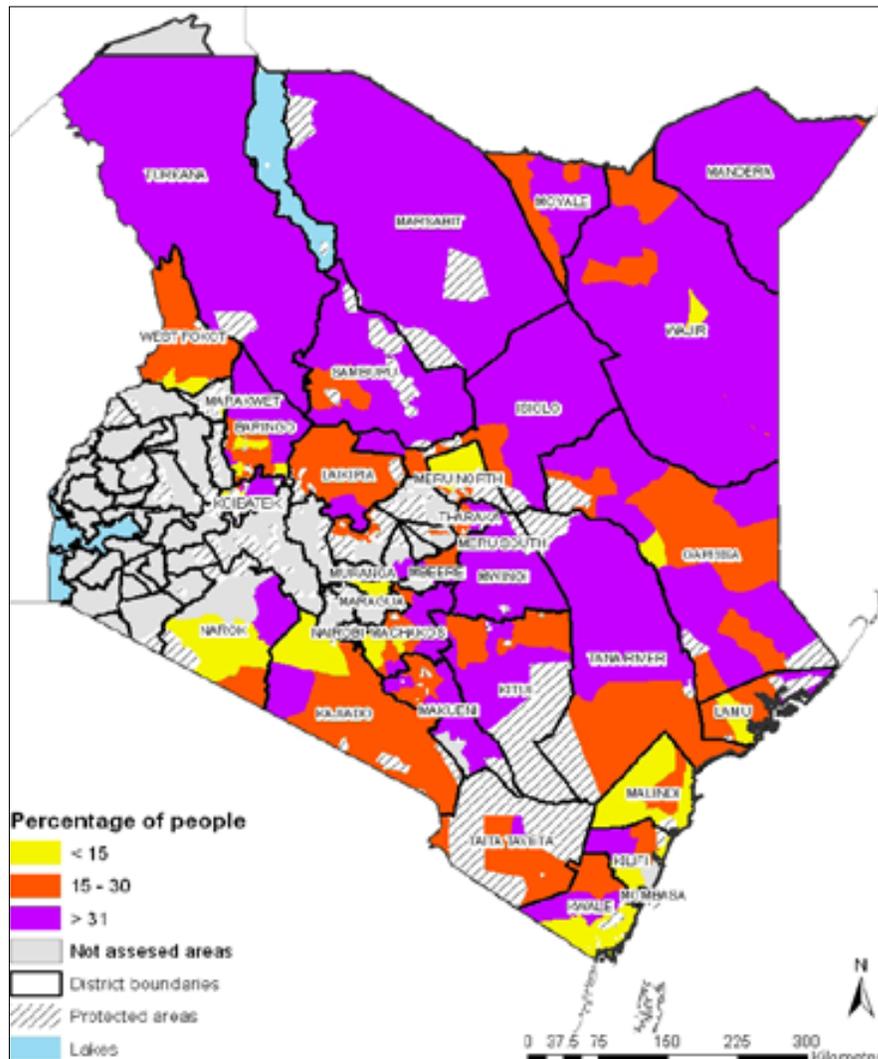
¹⁶ The drought and food crisis in the Horn of Africa: impacts and proposed policy responses for Kenya, World Bank, 2011

¹⁷ Market Functioning in Turkana District, Kenya, Alessandro De Matteis, OXFAM, May 2006 / Emergency Market Mapping and Analysis (EMMA), Kenya 2011 Drought Response Wajir County, Mercy Corps, Aug 2011 / Using Food Aid to Stimulate Markets in Pastoral Areas, Market Assessment, into the EC Food Facility Programme in Northern Kenya, Alessandro De Matteis, Save the Children, Mar 2012 / Kenya food steering committee group (KFSSG), Market study: Wajir market, 2009 / Moyale Cross-border Market Profile Report, Fewsnet 2011 / Markets and poverty in northern Kenya, towards a financial graduation model, FSD Kenya 2012

The maps below were generated using information from short- and long-rains assessments led by the Government of Kenya between 2007 - 2011. Map 7 shows the average percentage of people needing food assistance, while Map 8 shows the potential percentage of people estimated at risk of slipping

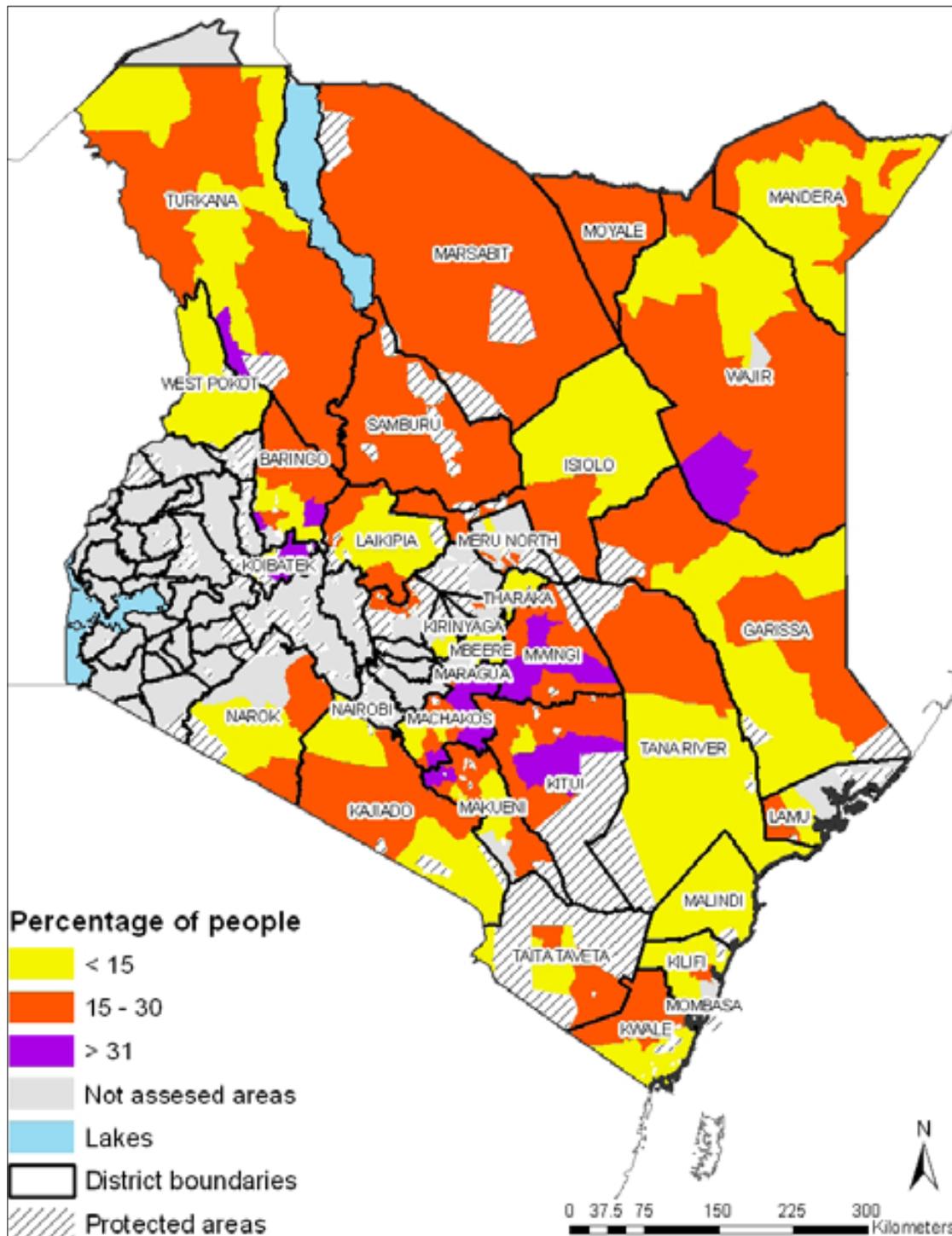
into food insecurity during a major crisis. With the former averaging more than 31 percent in the arid lands, and the latter ranging between 15-30 percent, data clearly illustrate the higher degree of vulnerability in Kenya's arid lands, compared with the rest of the country.

**Average percentage of people in need of food assistance
- from LRA's and SRA's (2007-2011)**



Map 7: Average number of people in need of food assistance (2007-2011)

**Potential percentage of people at risk to food insecurity in the event
- from LRA's and SRA's (2007-2011)**

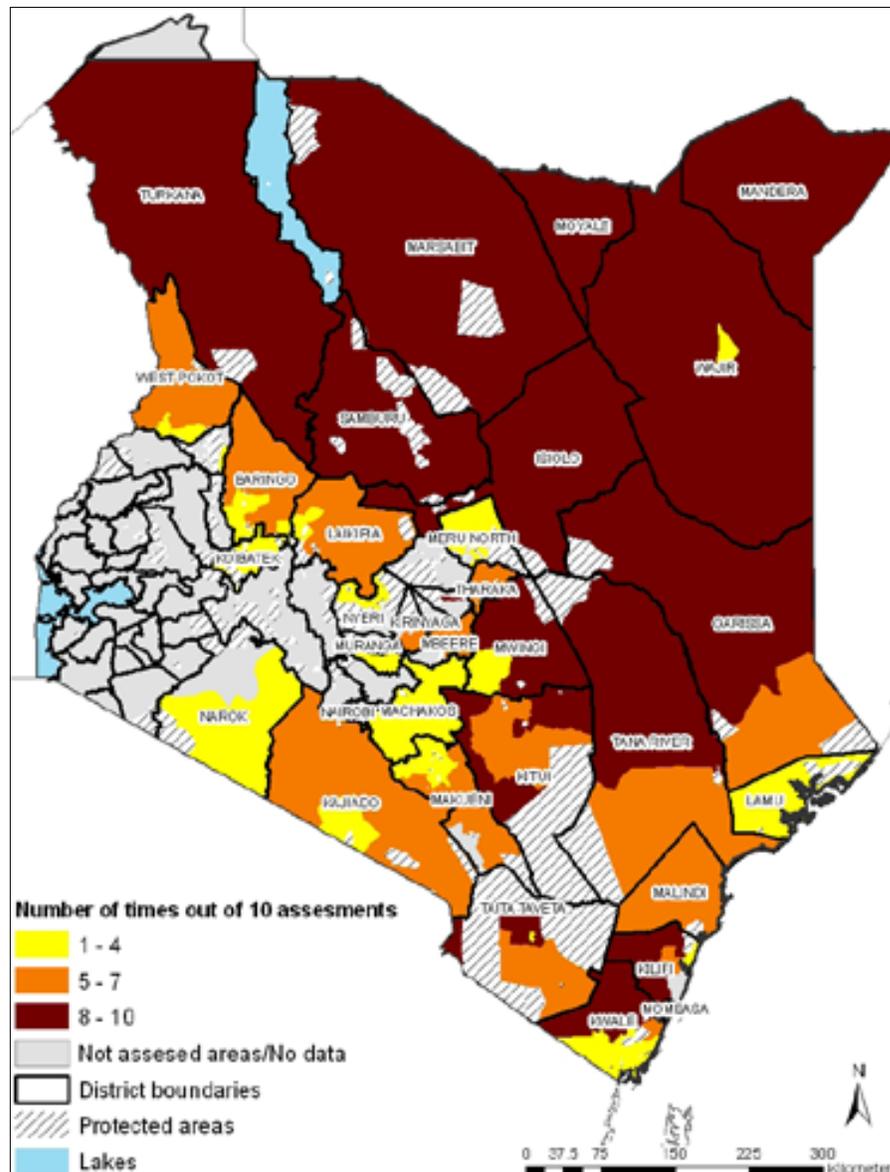


Map 8: Percentage of population at risk of becoming food insecure in case of crisis

There are areas of Kenya which are chronically food insecure,¹⁸ thus highly vulnerable, whereas other areas experience temporal food insecurity as a result of shocks, or at times when conditions deteriorate. The map to the left illustrates the frequency in which the rains assessments conducted between 2007 - 2011 found people in need of food

assistance. Although this does not indicate the depth of food insecurity, it contributes to understanding where food insecurity is recurrent. It also provides an understanding of how often people may need to resort to coping strategies, with the low level of community resilience often affected. More importantly, it underscores the higher vulnerability levels in the northern region.

Number of times people in need of food assistance were found in 10 assessments in the last 5 years



Map 9: Frequency of required food assistance

18 Long and short rains assessments, Kenya Food Security Steering Group, various years.

Based on the 2009 Kenyan census, the graph below illustrates the percentages of WFP beneficiaries compared with the total population in the eight

districts of the arid lands, and the tonnage of cereals distributed per month throughout the subsequent phases of WFP projects.¹⁹

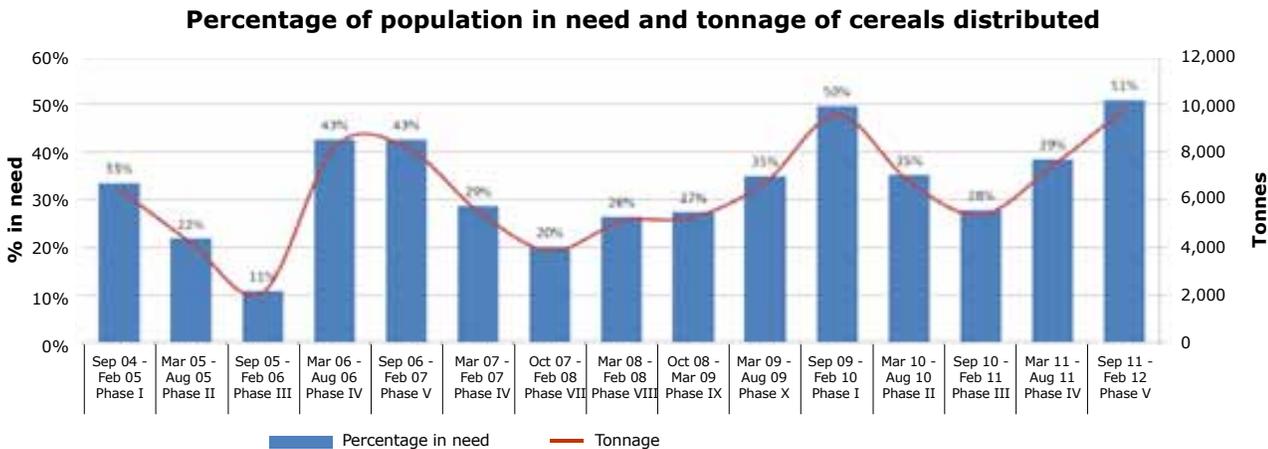


Figure 36: Percentage of population requiring food assistance, and tonnage cereals distributed

WFP interventions cover a substantial proportion of the population in the arid lands, though the majority of people depend more on markets than food assistance. Depending on the year, WFP interventions have covered between 11 to 51 percent of the population in the arid lands. From 2008 - 2012, WFP assistance covered one-third of the population, on average.

The graphs below²⁰ show the evolution (2007 - 2010) of maize prices in a selection of remote and

district headquarters markets in relation to WFP maize distributions in the respective districts.

According to these trends, there is an indication of an inverse relationship between maize distributions and maize price trends in remote locations (e.g. Wargadud and Loiyangalani). This is shown by several features: 1) sudden increases in tonnage distributed coincide with price dips; 2) soon after those declines, prices show an upward trend until the next increase in distributions, and; 3) maize prices are more volatile after the increases.

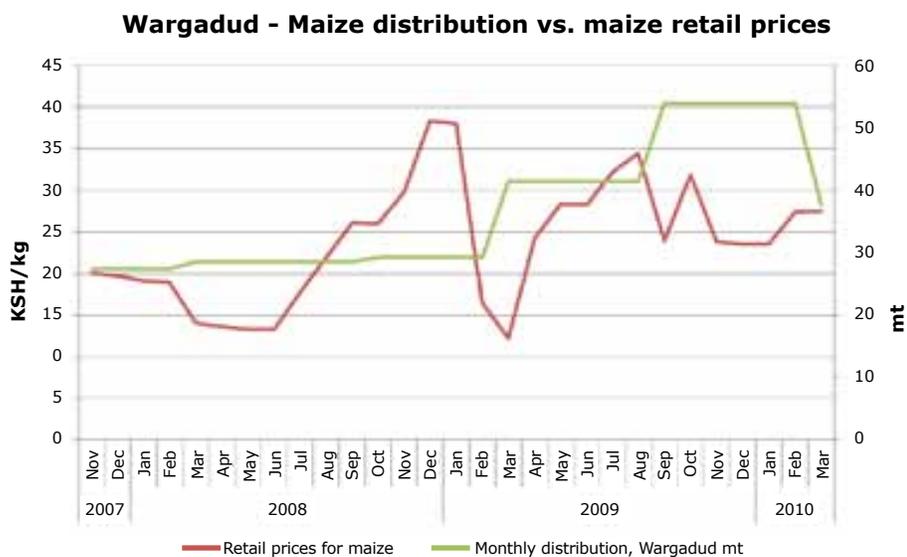


Figure 37: Maize distribution vs. maize retail price, Wargadud

¹⁹ The phases on the graph refer to the different WFP projects implementation periods (EMOP 10374/10745 from September 2004 to August 2009, and PRRO 10666 from September 2009 to February 2012)

²⁰ Source for all four graphs: NDMA and WFP

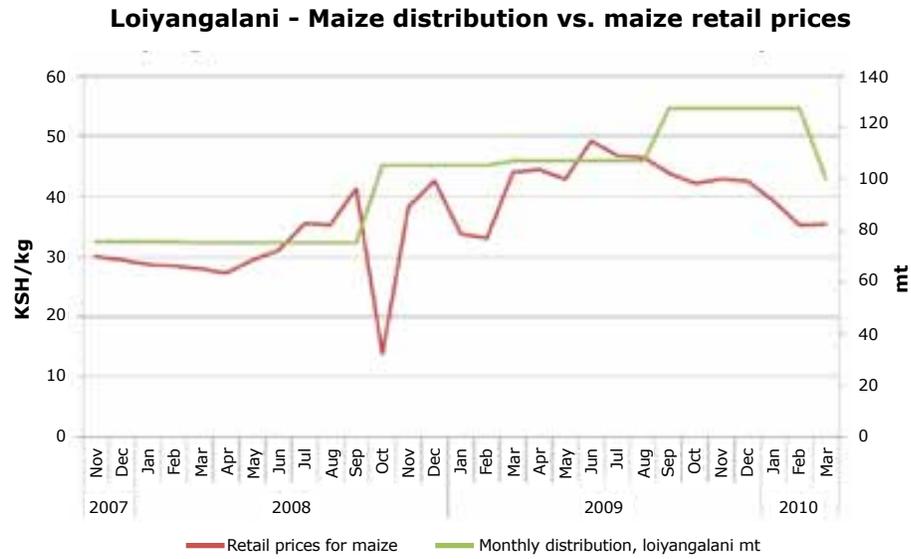


Figure 38: Maize distribution vs. maize retail price, Loiyangalani

However, the relationship between maize distributions and maize prices is less clear in district headquarters (e.g. Marsabit and Isiolo). This is likely due to the higher reliance of households in district

headquarters on markets, the greater proportion of private trade in district headquarters and the higher dependence of district headquarters' maize prices on production cycles in the grain basket.

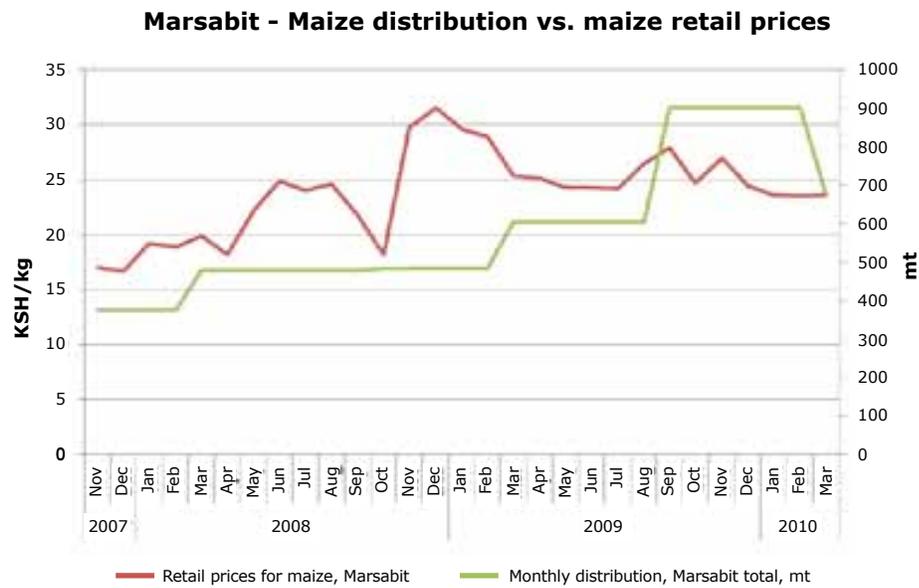


Figure 39: Maize distribution vs. maize retail prices, Marsabit

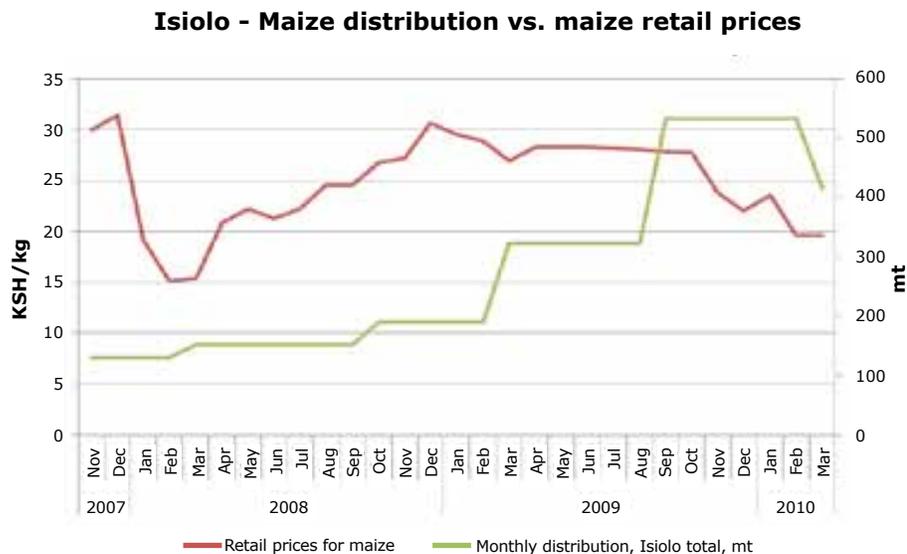


Figure 40: Maize distribution vs. maize retail prices, Isiolo

In view of the above, one cannot rule out the fact that local market price of maize is likely influenced by the amount and duration of relief food interventions in the arid lands, especially in remote locations. As shown later, food aid is in fact reported by traders as affecting their business, although it is not mentioned as one of the most important factors.

7.6 Market performance

This section assesses how markets perform in the arid lands through the analysis of food availability in local markets, seasonal price trends, price volatility, market price integration and other proxy indicators of market integration.

7.6.1 Most commonly traded commodities

The basket of commodities traded in northern Kenya is limited, reflecting food demands and consumption patterns. The most traded commodities are the staples (maize, rice, wheat and beans) and, to a much lesser extent, durable vegetables such as potatoes, tomatoes, cabbages and onions that can withstand the rough and long transport conditions and lack of refrigeration. Fruits are rarely consumed in the arid lands, especially outside major towns. Pasta is another highly consumed food, especially by the Kenyan Somali communities in the northeast.

Meat consumption and trade are influenced by a number of factors associated with the characteristics of the prevailing pastoralist livelihood system. For pastoralist communities, herds are, among other things, a financial asset, an insurance system and a sign of social status. Wealth in northern Kenya is defined by the number of animals owned by a family. Cattle and camels play important social functions as dowry, diya (blood money in inter-clan feuds), and in reinforcing ties of reciprocity and social safety nets through the exchange of animals. Herds are also an insurance against disaster, for which pastoralists traditionally stock up in good years in preparation for bad ones.

This explains why animals are very often sold only when needed (e.g. to pay for school fees or medical care), or as a coping mechanism during drought years. These aspects, coupled with consumption levels from the households' own production, influence the role of wholesaling in the market, with a high proportion of direct sales from herdsmen to butchers. Poorer households, who rely on food from markets, make purchases by exchanging small livestock. Sheep and goats, unlike larger livestock, have a clear commercial exchange value and thus have important market functions. Outward migrations, especially during drought periods, also negatively impact livestock trading activities.

Table 6 below presents the ten commodities most commonly traded in the region as a whole, and per transport corridor. The enumerators were directed to find traders dealing with each specific market chain, but in the shops they inquired about all the available commodities. Hence, the ranking is an estimate of the commodities most frequently found in the outlets, and a proxy indicator of the top

traded foods. The ranking is based on the frequency of responses for each commodity. Sugar is clearly the most commonly found commodity. Maize, rice, wheat and beans appear to be the most important staple foods across the region. Potatoes, tomatoes, onions and cabbages are the most traded tubers and vegetables, and goat the most common meat.

Average arid lands		NW corridor		NC corridor		NE corridor	
Commodity	% of traders dealing with commodity	Commodity	% of traders dealing with commodity	Commodity	% of traders dealing with commodity	Commodity	% of traders dealing with commodity
Sugar	40%	Sugar	49%	Sugar	35%	Sugar	56%
Beans	27%	Maize	35%	Rice	25%	Maize flour	34%
Rice	24%	Beans	28%	Beans	23%	Rice	33%
Maize flour	21%	Maize flour	22%	Maize flour	20%	Potatoes	32%
Maize	20%	Wheat flour	17%	Maize	20%	Wheat flour	30%
Potatoes	16%	Rice	15%	Potatoes	15%	Tomatoes	27%
Wheat flour	15%	Posho	15%	Tomatoes	14%	Beans	25%
Tomatoes	12%	Goat meat	10%	Posho	13%	Pasta	19%
Posho	10%	Potatoes	9%	Cabbage	10%	Maize	17%
Goat meat	10%	Tomatoes	9%	Wheat flour	9%	Onions	16%

Table 6: Most commonly traded food commodities

Table 7 below illustrates the spot retail prices per kilo of the most commonly traded commodities per type of market during the data collection period. The collected data indicates that food commodity prices increase with the remoteness and size of markets, with the exception of the locally produced commodities. The prices of meat and posho (locally produced or manufactured) tend to be lower at source. Meanwhile, there is a clear correlation between remoteness and price for other commodities; food is more expensive

in remote markets than in the main ones, and more expensive in the latter than in the district headquarters. Likewise, with the exception of the district headquarters,²¹ prices are also higher off the main transport corridors than along these routes. This is consistent with the structure of the supply chains, and suggests that cost-efficiency analysis of cash-based interventions should account for cost implications of market locations (remoteness and on/off the corridors) and market size (district headquarters, main markets or others).

Commodity	District HQ		Main Market		Remote Market	
	On corridor	Off corridor (Maralal)	On corridor	Off corridor	On corridor	Off corridor
Sugar	116	112	119	123	127	139
Beans	74	69	80	94	87	99
Rice	88	78	85	90	90	96
Maize flour	72	73	70	74	78	85
Maize	51	38	53	62	54	68
Potatoes	63	27	69	74	82	101
Wheat flour	76	67	78	83	88	94
Tomatoes	65	60	77	83	88	94
Posho	68	45	58	54	65	69
Goat meat	395	315	353	316	355	321

Table 7: Average retail price of top traded commodities, by market type²²

7.6.2 Seasonal fluctuations in quantities and prices

Food availability in local markets is generally influenced by the seasonal production cycles and undermined by transport conditions. About 70 percent of the traders interviewed mentioned they experience seasonal fluctuations in the quantities available to them. The frequency of traders' responses also indicates that fluctuations in quantities are more pronounced in remote markets than in the main ones, reflecting the impact of transport conditions. The effects of

seasonality on the availability of commodities are more pronounced for commodities produced in the arid land (meat and milk) and those that are rapidly perishable (fruits and vegetables) than cereals (maize and beans) and processed foods, which are mostly sourced outside the arid lands. Road conditions influence food availability in local markets, especially during the rainy season, when roads become impassable. To a much lesser extent, festive seasons such as Ramadan or Christmas were also reported as determinants mostly of availability and prices for meat and processed foods, due to increased demand during those periods.

²¹ Maralal is the only surveyed district headquarter off the main transport corridors and, with the exception of Isiolo town, it is closer to the producing areas than the other district headquarters under study.

²² Prices per kilogram in KSH, collected at the peak of the dry season in 2012

The graphs below show the reported periods when food availability in local markets is low and prices are high.²³

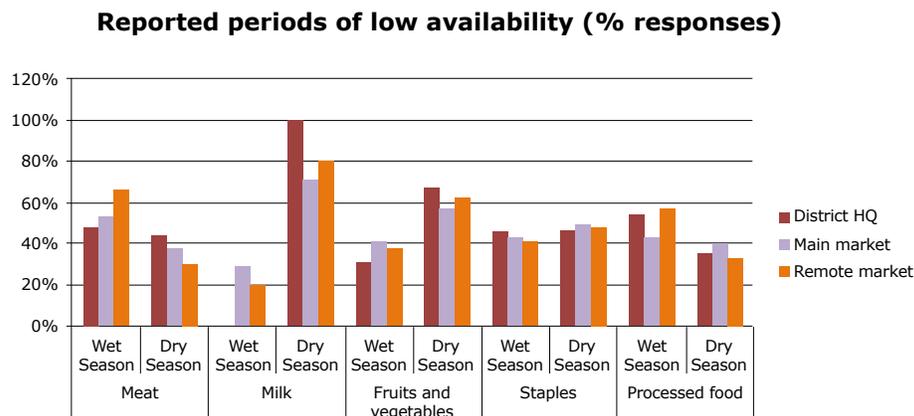


Figure 41: Reported periods of low availability

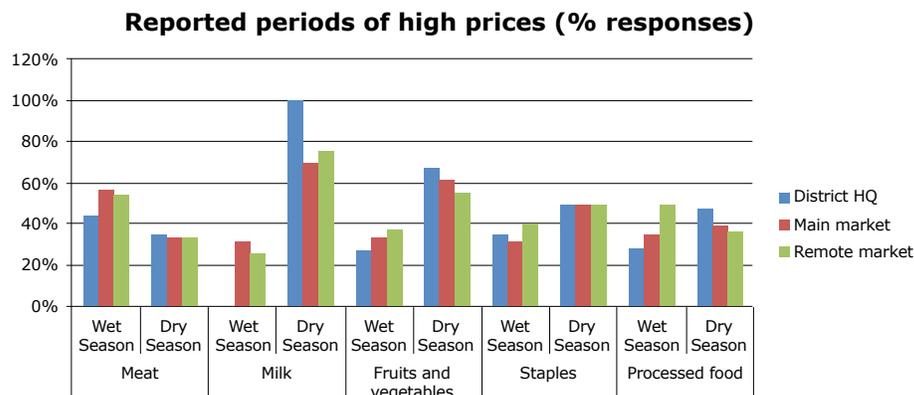


Figure 42: Reported periods of high prices

Availability of meat is higher during the dry season, since herdsmen keep their animals for breeding during the rainy season (April to May and October to November). In times of severe droughts, herdsmen are forced to sell their livestock at throwaway prices to prevent losses. Price trends usually mirror these production cycles patterns. Milk is also subject to seasonal fluctuations but follows the exact opposite availability trend, being higher during the rainy seasons due to the availability of pasture during the goats kidding period. Extraordinary long seasonal migrations due to droughts can alter the availability patterns and cause supply shortages of both meat and milk. These strong seasonal factors also influence the number of traders dealing with these two commodities over the year.

At the source of production, most of the crops are grown during the rainy season. Horticultural crops (including fruits and vegetables) are usually available all season in irrigated fields. Many of these crops grow quickly and farmers easily carry out planting whenever rains are available. The volumes available in the market are determined by the seasonal production cycles, rain performance in the producing areas and the road conditions during the rainy season. Key informants in Dadaab estimated that the supply of fruits and vegetables can decrease from daily to weekly due to the road conditions during the rains. These occasional reductions hamper the supply of perishable products to a greater extent than that of more durable ones such as potatoes or cabbages.

²³ Traders were questioned about periods of low availability and high prices. This helps to provide an estimate of seasonal variations without inquiring about the actual prices and hence resorting to excessively long recall periods. Results should be read in connection with the existing demand and in a normal year.

Due to the different growing periods, the availability of vegetables is higher during the rainy seasons. By contrast, volumes of fruits tend to increase during the dry season, though fruits are rarely consumed outside of the major towns. Prices of fruits and vegetables are mainly determined by the harvest performance, production cycles and, by the transport costs, especially during the rainy season. The number of traders decreases during the peaks of the rainy seasons due to transport constraints.

The peaks in the availability of fish on the local market occur immediately after the rains once the production is transported from the point of harvest. Fish is produced on the shores of Lake Turkana and is mostly consumed in its dry variety. Fish are caught during the rainy seasons and dried on the shores before being transported.

Since processed food is produced at a constant level, availability and price fluctuations are mainly caused by transport conditions varying between the dry and rainy seasons.

The maize seasonal calendar below²⁴ shows the main harvest periods in Kenya. Beans also have two production seasons, though a significant number of farmers grow the crop once a year because of the adverse climatic conditions. Maize availability in local markets increases with the long rains harvest between October and February in the grain basket of western Kenya. Maize availability decreases progressively between March and September, coinciding with the long rains season.

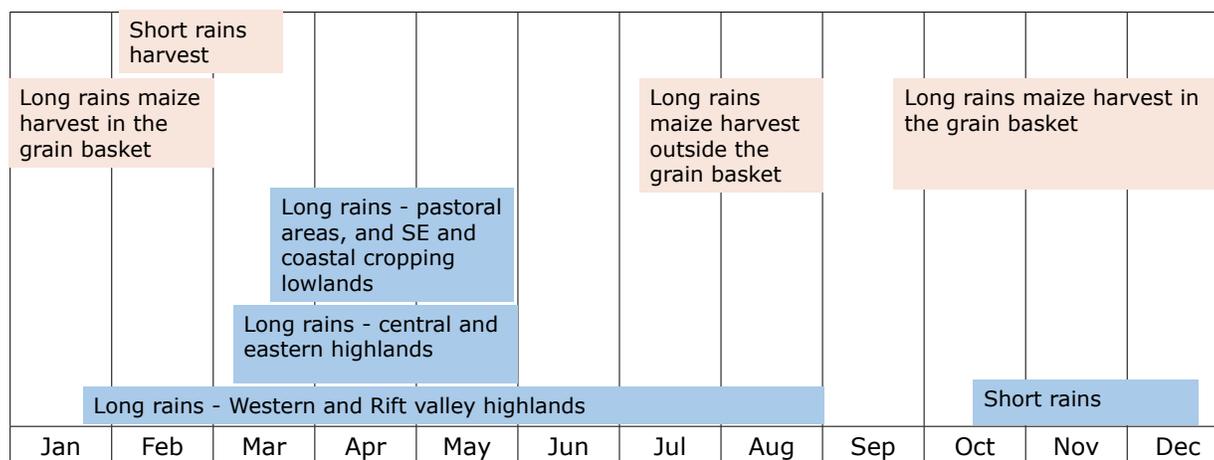


Figure 43: Maize agricultural calendar in Kenya

7.6.3 Traders' perception of food availability in local markets

Continuous availability of food year round in the different categories of local markets provides information on trade continuity among actors along the supply chain, and among markets across areas. However, volumes traded on markets will vary according to seasons (including production cycles), traders' supply capacity, consumers' effective demand, the degree of market integration, transaction costs, etc.

In response to the question on the number of food commodities available in local markets throughout the year, it appears there are 29 percent fewer

commodities – mostly fruits and vegetables and some processed foods- available year round in the remote markets off the main supply routes than the average maximum number recorded in the district headquarters.

No major differences are observed between markets along the main transport corridors. In the larger markets, i.e. hub and district headquarters, shops usually offer a lower variety of products than in the remote ones. This is because traders in hub and district headquarter markets are more specialised than in remote ones. The smaller the market, the higher the number and diversity of commodities sold per trader.

²⁴ Source: WFP Kenya, VAM Unit

These results indicate that the markets off the main transport routes within the arid lands are more weakly integrated with their respective supply sources than the markets along the main highways.

In summary, availability of food commodities in local markets is highly seasonal and heavily dependent on transport conditions. As a result, it can be a challenge to choose a food basket from local markets that affordably meets both household consumption frequency and diet diversity.

7.6.4 Maize price seasonality, volatility and integration

The analysis of price patterns is based on monthly price series of maize from 2007 to 2010 in 14 markets, as described in the table below. The price data originates from the Arid Lands Resource Management Project (ALRMP) and WFP.

Type of market	NE corridor	NC corridor	NW corridor
Hub market (HUB)	-*	-	Kitale
District headquarter (HQ)	Garissa, Wajir	Isiolo, Marsabit	Lodwar
Main market on main corridor (MON)	-	-	-
Main market off main corridor (MOF)	Shantabak	-	-
Remote Market on main corridor (RON)	Wargadu	Sereolipi	-
Remote Market off main corridor (ROF)	Banissa	Loiyangalani, Maikona	Kalemungorok, Kerio

Table 8: Markets selected for price pattern analysis

**No market found with consistent data for the period under investigation.*

The limited time and geographical coverage is due to significant gaps in the price-time series available after 2010. The price gaps identified between 2007 and 2010 were filled with the mean of the surrounding prices and through linear interpolation. The analysis focuses only on maize due to lack of consistent price-time series for other commodities. Nonetheless, maize is by far the most important staple food in study areas. To correct for inflation, real maize price series were calculated by dividing nominal prices by the Consumer Price Index (CPI).

Market integration analysis is carried out through a combination of price integration analysis and analysis of proxy indicators of market integration from the trader survey. Market integration is defined as the existence of efficient and timely trade flows between two geographically separate markets. A necessary but insufficient condition for that to occur

is that commodity price signals are transmitted between markets. Market price transmission is generated by the rational economic behaviour of traders who, in situations of competitive and integrated markets, exploit commercial opportunities by buying food commodities in markets where prices are low to sell them when and where they can make a profit.

In this section, the results of the price integration analysis using maize prices should be carefully interpreted given the limited time, geographical and commodity coverage. The results of the maize price integration analysis cannot be generalised to all commodities given differences in supply chains. The findings of the maize price integration can be applied to the beans market due to the similarities in their supply chains and seasonal production cycles and also, though to a lesser extent, to the processed food chain, given the similar supply mechanisms. However, the meat, milk, vegetables and fruits supply chains are different and could therefore yield different results.

Price integration is not sufficient to conclude whether or not markets are integrated. The existence of price transmission between markets does not necessarily mean that trade flows between them. A necessary and sufficient condition for market integration is that food effectively moves between markets in response to imbalances in supply and demand. The maize price integration analysis will therefore be complemented by the analysis of proxy indicators of market integration.

Maize price seasonality

In the arid lands, maize price is influenced by the production cycles in the producing areas, along with other factors such as transport and road conditions. Overall, maize prices tend to decrease between November and May, during the long rains maize harvest and post-harvest in western Kenya's grain basket, and to increase between June and September, before the main maize harvest. Seasonal patterns of maize prices are presented by market type and by corridor in the graphs below. There are some minor differences in the seasonal

patterns by corridor and by type of markets. In the northeastern (NE) corridor, district headquarters (HQ) prices are high in September to November, and low in January to May. In the remote markets on the northeastern corridor, maize prices are high in January to February, and low in May. In the north-central (NC) corridor, low maize prices are recorded in the district headquarters between January and March.

It is worth noting that the volatile seasonal patterns in the markets off the corridors are partly due to seasonal non-production factors such as road conditions and transport availability. In the main markets off the northeastern corridor, maize prices are high in July. Maize prices are high in the remote markets off the north-central corridor between January and May. Maize price spikes are observed in the remote markets off the northwestern corridor in July. The high seasonal fluctuations in the markets off the corridors are due to the influence of seasonal non-production factors such as road conditions and transport availability.

Seasonal index - maize retail prices, northeastern corridor

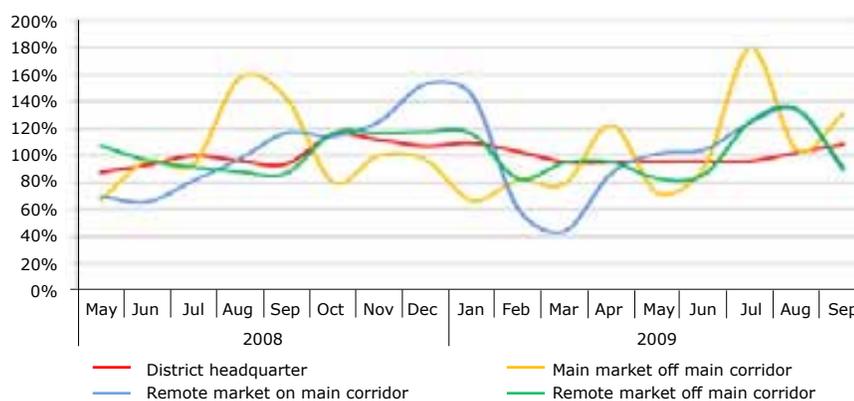


Figure 44: Seasonal index – maize retail prices north eastern corridor

Seasonal index - maize retail prices, north central corridor

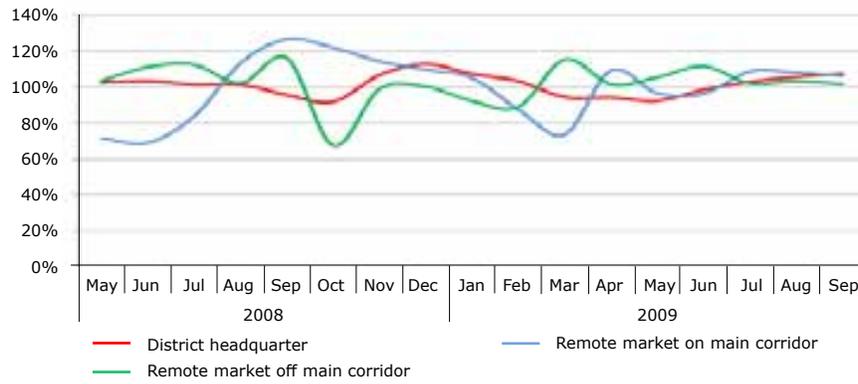


Figure 45: Seasonal index - maize retail prices north central corridor

Seasonal index - maize retail prices, northwestern corridor

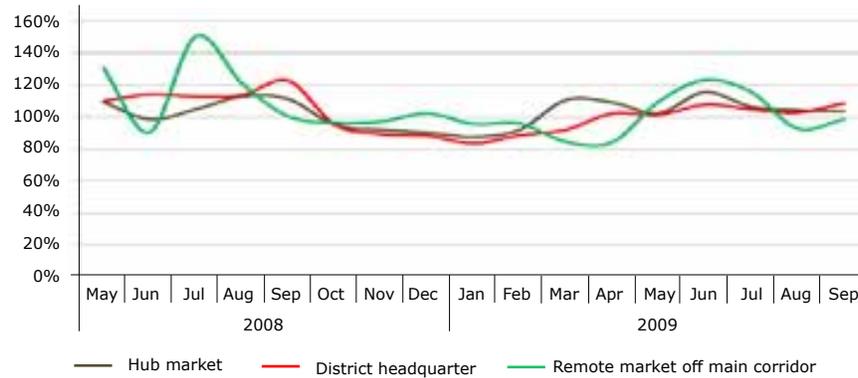


Figure 46: Seasonal index - maize retail prices north western corridor

Seasonal index - maize retail prices, Arid lands and Nairobi

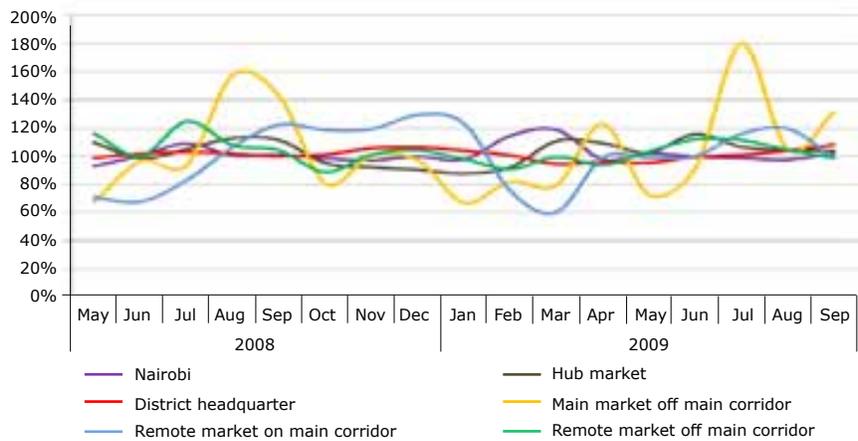


Figure 47: Seasonal index - maize retail prices Arid Lands and Nairobi

Maize price volatility

Overall, maize price volatility is lower in market hubs and district headquarters in all corridors, as opposed to other markets on and off the corridors.²⁵ An exceptionally high volatility is found on the main market (Shantabak) off the northeastern corridor, mostly driven by the effect of a pronounced seasonal pattern with abnormal spikes. District headquarter markets Garissa and Wajir on the northeastern corridor, Isiolo and Marsabit on the north-central corridor and Lodwar on the northwestern corridor show lower maize price volatility compared to remote markets on the corridors. The table below illustrates the price coefficient of variation per category of market during the study period (2007 - 2010). Although the time coverage does not include more recent data and all markets, the findings provide evidence of higher volatility of maize prices on markets off the corridors and remote markets compared to the ones on the corridors.

Corridor	Type of market	Coefficient of Variation
Nairobi	Nairobi	0.16
NE	District HQ (Garissa, Wajir)	0.13
	Main market off main corridor (Shantabak)	0.50
	Remote market on main corridor (Wargadu)	0.31
	Remote market off main corridor (Banissa)	0.22
NC	District HQ (Isiolo, Marsabit)	0.14
	Remote market on main corridor (Sereolipi)	0.21
	Remote market off main corridor (Loiyangalani, Maikona)	0.15
NW	Hub (Kitale)	0.14
	District HQ (Lodwar)	0.19
	Remote market off main corridor (Kalemungorok, Kerio)	0.22

Table 9: Price volatility - coefficient of variation per markets (2007 - 2010)

²⁵ Maize price volatility is analyzed through the coefficients of variation, which is the ratio of the standard deviation to the mean.

²⁶ The maize farm-market price spread in Kenya and Uganda, Takashi Yamano and Ayumi Arai, National Graduate Institute for Policy Studies, December 2010

²⁷ Kenya short rains assessment report, Kenya Food Security Steering Group, 2006

In summary maize price is seasonal, with lows observed generally between November and May in all corridors. Remote markets and markets off the corridors tend to show an unstable seasonal pattern and higher maize price volatility due to seasonal non-production factors such as road conditions and transport availability. High price volatility is a source of risk for poor and vulnerable households' purchasing power as well as for the transfer value attached to a food basket if the objective of a market based intervention is to improve household food access. Improving food access of vulnerable households with maize-dominated consumption in remote markets off the corridors through a market-based intervention can be challenged by the high maize price volatility in those areas, in the absence of mitigation measures.

Maize price integration

Evidence of impediments to trade in the arid lands exists in the literature. It is argued that markets in general are weakly integrated in the arid lands due to poor infrastructure and low population densities (see also Map 3 above), which lead to sparsely located domestic markets.²⁶ A 2006 study led by the government indicates that above normal maize harvest in western Kenya's grain basket does not lead to improved food security for vulnerable households in the arid lands in the north, despite the high dependence of the northern regions on food imports to meet basic consumption needs.²⁷ Among other causes, the prevailing livelihood systems in the arid lands and the food consumption and trade patterns are cited as major contributing factors.

This subsection assesses the extent to which maize prices are transmitted between markets in the arid lands,

notwithstanding price data limitations. Following the necessary tests, the results of the correlation analysis are summarised in the table below.²⁸

Overall, the maize price integration analysis suggests that hub markets are integrated with the district headquarter markets, and the latter are to some extent integrated with some remote markets on the corridors. For instance, Kitale (hub market) is integrated with Lodwar (district headquarter market) on the northwestern corridor. On the northeastern corridor, district headquarter markets (Garissa and Wajir) are integrated with Wargadud remote market. On the north-central corridor, district headquarter markets (Isiolo, Marsabit) are integrated with Sereolipi, a remote market on the corridor.

There is also an indication that price signals are to some extent transmitted from district headquarters to remote markets on the main corridors. This reflects the fact that maize moves from the producing areas (Hub) mostly to the district headquarters (HQ) and from there onwards to the main (MON) and remote markets (RON) on the corridors.

In general, maize prices in hub markets and district headquarters on the main corridors are weakly integrated with the main markets and the remote markets off the corridors. This is illustrated in the table below by the lack of statistical significance of the short-run price transmission coefficients (Beta) and the long-run speed of adjustment of prices (Lambda) between those markets.

Corridor	Markets		Beta		Lambda		Causality
	i	j	Coeff.	Std. Err.	Coeff.	Std. Err.	
North East (NE)	Garissa, Wajir (HQ)	Wargadud (RON)	0.74**	0.12	1.15**	0.34	⇒
	Garissa, Wajir (HQ)	Banissa (ROF)	-0.11	0.11	0.18	0.56	
	Garissa, Wajir (HQ)	Banissa (ROF)	-0.10	0.13	-0.32	0.32	
	Wargadu (RON)	Garissa, Wajir (HQ)	1.35**	0.31	0.08	0.08	
	Wargadu (RON)	Shantabak (MOF)	0.15	0.16	-0.14	0.42	
	Wargadu (RON)	Banissa (ROF)	0.14	0.19	0.24	0.24	⇒
	Shantabak (MOF)	Wargadu (RON)	-1.00	1.33	-0.21	0.54	
	Shantabak (MOF)	Garissa, Wajir (HQ)	0.06	2.49	-0.11	0.16	
	Banissa (ROF)	Shantabak (MOF)	0.52	0.30	-1.85	1.34	
	Banissa (ROF)	Wargadu (RON)	-0.52	0.95	-0.40	1.04	
Banissa (ROF)	Garissa, Wajir (HQ)	0.03	1.44	-0.20	0.31		

²⁸ Unit roots tests undertaken on maize price levels suggest that prices are non-stationary. Therefore the price integration analysis was carried out on price differentials, using a vector error correction model (VECM). The VECM provides information on the statistical significance of the magnitude of the short-run transmission of price changes and the long-run speed of adjustment of prices on one market to price changes on another market. Granger causality tests were also carried out to explore the direction of maize price signals.

Corridor	Markets		Beta		Lambda		Causality
	i	j	Coeff.	Std. Err.	Coeff.	Std. Err.	
North Centre (NC)	Isiolo, Marsabit (HQ)	Sereolipi (RON)	0.72**	0.08	1.41**	0.36	↔
	Isiolo, Marsabit (HQ)	Loiyangalani, Maikona (ROF)	-0.15	0.11	0.82*	0.32	
	Sereolipi (RON)	Isiolo, Marsabit (HQ)	1.39**	0.21	0.01	0.17	↔
	Sereolipi (RON)	Loiyangalani, Maikona (ROF)	0.21	0.18	-0.59	0.23	
	Loiyangalani, Maikona (ROF)	Isiolo, Marsabit (HQ)	0.20	0.38	-0.01	0.09	
North West (NW)	Kitale (Hub)	Lodwar (HQ)	0.49**	0.13	0.45*	0.22	⇒
	Kitale (Hub)	Kalemungorok, Kerio (ROF)	0.21	0.12	0.37	0.52	
	Lodwar (HQ)	Kitale (Hub)	2.04**	0.45	0.15	0.10	
	Lodwar (HQ)	Kalemungorok, Kerio (ROF)	-0.43	0.25	-0.18	0.26	
	Kalemungorok, Kerio (ROF)	Lodwar (HQ)	-0.07	0.41	-0.05	0.09	
	Kalemungorok, Kerio (ROF)	Kitale (Hub)	1.14	0.69	0.08	0.07	

Table 10: Maize price integration in the arid lands

These results are consistent with the findings of studies on the most common supply structures in the arid lands. A study comparing maize price trends in a set of 55 markets in four districts in the arid lands (Wajir, Turkana, Mandera, Marsabit and Moyale)²⁹, concluded that most of the areas considered are marginally connected to the main trading centres, and that the degree of market connection within the districts or with the neighbouring districts was weak. In contrast, markets in the high potential mixed farming livelihood zone are better integrated within the zone and with key urban centres, largely due to a fairly sophisticated trade infrastructure. Distances from markets are relatively low, and there are a considerable number of participants across the marketing chain, thus minimising transaction costs. Subsequently, food-price fluctuations are fairly low during normal years.³⁰

In summary, the results of the maize price integration analysis and similar studies of maize market integration in the arid lands suggest that the markets along the main corridors are better integrated with each other than with other markets off the corridors. In general, hub and district headquarters markets on the main corridors are the ones that transmit price signals to other markets on the corridors. In order to mitigate price and supply risks associated with weak market integration, beneficiaries of cash-based interventions should be targeted in the vicinity of large markets along the main transport corridors, notwithstanding issues related to the operational feasibility of such interventions.

²⁹ Using food aid to stimulate markets in pastoral areas, market assessment, into the EC Food Facility Programme in northern Kenya, Alessandro De Matteis, Save the Children, Mar 2012

³⁰ The impact of rising food prices on disparate livelihood groups in Kenya, The Kenya Food Security Steering Group (KFSSG), July 2008

7.6.5 Comparative analysis of proxy market integration indicators

Besides the maize price integration analysis, other proxy indicators can help to understand the extent to which different categories of markets are integrated with each other. In addition to food availability trends in local markets explored above, this subsection will focus on understanding food commodity resupply times and transport conditions.

Resupply schedules

The most common factors cited by traders as influencing the resupply time are price and availability of commodities at origin (hub or district headquarters), distance, time and transaction costs from the source to the destination markets. These criteria are consistent across all categories of markets, though distance is a slightly more important factor in the remote markets than in the main ones.

As reported by the majority of traders, except those in remote markets off the main transport corridors, the resupply period is about 2-3 days on

average. The resupply time in the remote markets off the main corridors can extend up to 4 days. This is due to the lower availability and frequency of transport at remote locations. This is consistent with the frequency of resupply in the main and remote markets. The number of traders with long resupply schedules (once or twice per month) is higher in the remote markets, while the number of traders who place orders from once a week to daily is higher in main markets.

Modes of transport

Transport capacity in the arid lands is in general poor, though the situation is changing progressively with the development of road infrastructure. Based on the number of answers provided by the traders, matatus (micro-and minibuses), buses and other public transportation vehicles are the most commonly used, followed by 7 - 12-ton trucks. The use of trucks is more common along the main transport corridors than off the corridors. By contrast, the most common vehicles used to transport food in hub markets are 7-ton trucks, followed by 28- and 12-ton trucks. The graph below shows the different means of transportation used by market type.

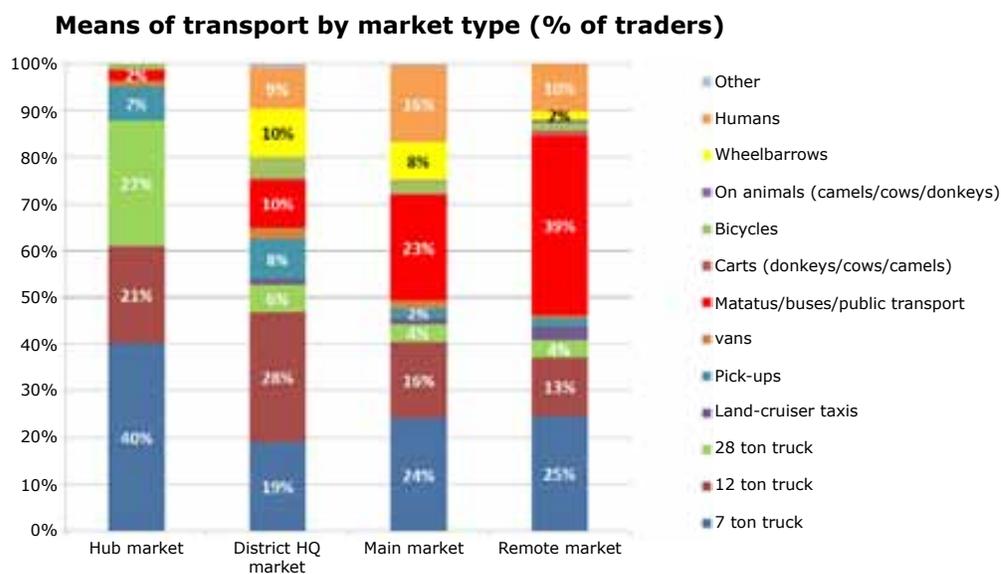


Figure 48: Means of transport by market type

In summary, traders' resupply times and schedules increase with the remoteness of markets off the main transport corridors. This is partly due to the

difficult transport conditions in these locations where transport availability is less frequent, and the most common transport means can only handle

small quantities of commodities at high transaction costs. As a result, remote markets and markets off the main transport corridors are more prone to lower availability of food commodities (in terms of quantity) and higher price volatility as shown in the price volatility analysis section.

Summary

The preceding sections have illustrated the high dependence of the arid lands on food imports to meet consumption needs, and the higher food insecurity and vulnerability levels in the northern region as compared to the producing areas of Kenya. In such conditions of chronic food deficit, the degree of market integration is critical to assess the availability of food in the markets, and hence the feasibility of cash-based interventions.

The analysis of the various supply chains, price trends, proxy market integration indicators and, especially, the existing literature indicates that most markets in the arid lands are weakly integrated both amongst themselves and with Kenya's main supply markets. The district headquarters and a few other large supply markets positioned on the transport corridors are the only markets in the arid lands that show signs of adequate integration with the producing areas. By contrast, markets in the high potential mixed farming livelihood zone are better integrated within the zone and with key urban centers, largely due to a fairly sophisticated trade infrastructure.

A major underlying reason that explains this generally weak market integration is the weak economic development in the arid lands. The extent of market development follows population density and infrastructure development in Kenya. Low population densities and purchasing power, coupled with extremely poor infrastructure and high transaction costs, are systematically hindering market functioning and private sector development in the arid lands. Recent revival of public investment, particularly in roads in the arid lands, is seen as an opportunity to alleviate bottlenecks to market development in the medium and long term.

7.7 Response capacity of traders in the arid lands

This part of the report provides an understanding of traders' capacity to meet the increases in demand that are expected to be generated by potential cash interventions without disproportionate increases in prices. The assumption is that price increases due to cash interventions will not only affect the beneficiary caseload, but the entire vulnerable population living within market catchment areas overlapping with the targeted geographic areas. Such a risk is generally overstated in the literature by the fact that once prices are on the rise it is usually difficult to bring them back under control, to predict the future value of cash transfers and household purchasing power. In a context of general inflation, consumers tend to accumulate goods, which increases demand, and traders tend to hoard, which decreases supply. Both behaviours tend to have further inflationary consequences.

Research indicates however, that a moderate increase in prices is a determinant of traders' willingness, and therefore plays an important role in increasing food supply³¹. But for vulnerable food consumers and deficit farmers, the increase in basic food prices implies they must reduce consumption of food and other goods, and often switch to less preferred but less expensive foods. For pastoral groups, an increase in food prices also impacts household income. The deterioration of the livestock-grain terms of trade renders such groups even more vulnerable to food price rises.

7.7.1 Constraints to food trade

By far, the most important constraints to trade in the arid lands have to do with road conditions and transport capacity. Other frequently mentioned constraints are lack of cash and access to credit, lack of storage, poor market infrastructure, lack of market information (including prices and trade regulations), price volatility, insecurity and lack or irregular supply.

³¹ Market analysis to assist selection between response options in conditions of food insecurity, Alessandro De Matteis, 2010

The graph below shows the types of road linking the different locations with the next main markets, and it is indicative of the difficulties associated

to transporting commodities in the arid lands, especially to locations off the transport corridors and to remote markets.

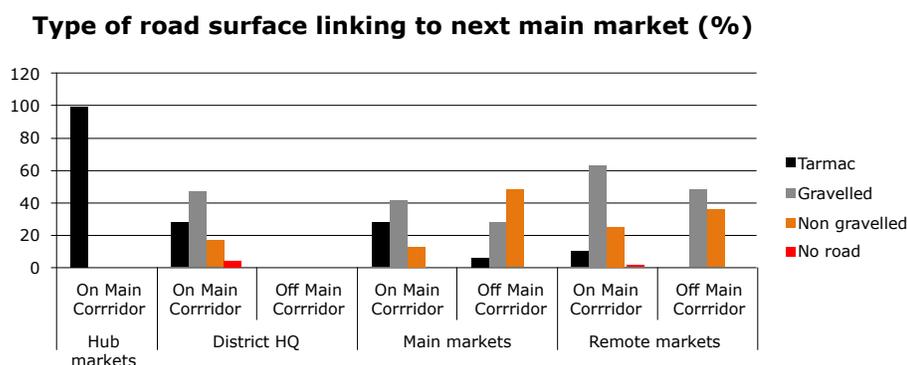


Figure 49: Type of road surface to next main market

(Source: key informant questionnaires)

Transport time grows exponentially during the rainy season, when some roads become impassable. The differences are higher in the main markets than in the remote ones, due to the respective distances to the supply markets. District headquarters and large main markets supplies from distant markets outside the arid lands, while remote markets supplies from district headquarters and other large markets within their territory. These divergences directly impact transport costs during the rainy season and price volatility in the arid lands.

The importance of transport in the supply chains and the availability of food cannot be overstated.

By far, the key factor to market development in the arid lands is the quality of the available transportation infrastructure. Transport on unpaved roads multiplies the time required to move the commodities and increases the need for vehicle repairs. During the rainy seasons, impassable roads cause major disruptions along the distribution channels, creating long delays and increasing traders' exposure to bandit attacks, thereby increasing business costs. All these factors cause prices of staple foods in the arid lands to be high compared to the rest of the country, and reduce traders' capacity to scale up supply, especially in remote markets.



Assessment team and security escort travelling during the dry season from Isiolo to Marsabit –district headquarters on the main north central corridor – (left) and from Marsabit to Maikona –remote market off the transport corridor- (right). Photos: WFP/ Diego Fernandez

Traders interviewed for this study said the main constraints to transporting commodities are, in order of importance: high transport costs, impassability during the rainy season, poor road infrastructure, and security and distance from wholesalers or supply markets. Similarly, when the key informants were asked about constraints to transporting commodities to their regions, three main concerns were raised: state of the transportation infrastructure (hence transport costs), insecurity, and seasonality (which links to transport infrastructure, as rains lead to closed roads).

Improving the transportation infrastructure has actually helped market development, as indicated in the example below of an excerpt of a response given by the market chairman in Isiolo.

“The roads to Meru, Thika and Nairobi are tarmac roads and they are therefore mostly good throughout the year, with no major constraints. From Isiolo to Meru, it takes 30 minutes one way, which means traders can go in the morning and come back the same day. The tarmac road between Isiolo and Meru was completed last year, 2011, and there has been a clear improvement of commodities available in the market ever since. It has also increased the number of traders in the market. The problem now has become space in the market, as it’s not enough. They are now expanding the market area and especially the ‘formal’ part.” - **James Gitongo, Market Chairman (of the main market in Isiolo town)**

Only wholesalers and large retailers generally have the capacity to organise transport independently. Smaller retailers often resort to aggregating their orders and sharing truck transport or, more frequently, arranging public transport such as buses or matatus.

The 2009 international conference to design priority actions for market development for African farmers held in Nairobi³² concluded that a major reason many smallholder farmers do not seek to produce or sell excess harvests, even with high food prices, is that it can be very expensive to bring crops from their fields to regional or national markets. The conference also concluded that there is a need for investments that reduce transaction costs both for smallholder producers and the various market intermediaries that provide critical linkages between farmers and consumers. A major transaction cost is tied to the high price and logistical difficulties involved in transporting often perishable harvests from remote farms to markets along poorly developed transportation networks. Analysis has made clear for some time that reducing such costs requires upgrading transportation systems, as well as power infrastructure. The most effective interventions to improve market development are in improving access in general, and road infrastructure in particular.

Price-remoteness analysis

Retail prices collected from 1,651 interviews with retailers and wholesalers were used to examine the relationship between the selling price and the time taken from purchase markets to sales markets.

In general, it takes on average about 38 hours, 35 hours and 38 hours, respectively, to get commodities from the source market to sales markets in the northwestern, north-central and northeastern corridors. The table below shows the average – all imported food commodities combined - percentage price increases for every hour of transport from the hub markets to the district headquarters, and from the district headquarters to the main and remote markets on and off the corridors. On average, prices increase by about 1.3 percent per additional transport hour from the hub market to the district headquarters. Similarly, prices increase by about 1.8 percent for transportation between the districts headquarters and the remote markets off the corridor.

³² Towards priority actions for market development for African farmers, ILRI, proceedings of an international conference, May 2009

Price change per transport hour from source market to sale market					
Corridor	Source market	Sale market		Transport time (hr)	Price change (%/hr)
		Type of market	Location		
NE	Hub	District HQ	On Main Corridor	36.38	1.75
NC			On Main Corridor	27.60	1.20
NW			On Main Corridor	44.39	0.96
NE	District HQ	Main Market	Off Main Corridor	34.05	1.19
			On Main Corridor	30.67	1.48
		Remote Market	Off Main Corridor	35.46	1.37
			On Main Corridor	39.88	1.46
NC	District HQ	Main Market	Off Main Corridor	31.85	1.42
			On Main Corridor	25.88	1.86
		Remote Market	Off Main Corridor	40.32	1.24
			On Main Corridor	33.44	1.97
NW	District HQ	Main Market	Off Main Corridor	29.65	2.73
			On Main Corridor	24.00	1.44
		Remote Market	Off Main Corridor	43.64	2.24
			On Main Corridor	25.38	2.39

*Table 11: Price change per transport hour from source market to sale market
(Source: traders' questionnaire)*

Similar trends are observed when data is broken down per market chain, as shown in the table below. The average price increases from the source markets to the district headquarters are 1.5 percent for cereals and beans, 1.4 percent for fruits and vegetables, and 1.2 percent for processed

food. The average increases when transporting food commodities from the district headquarters to the remote markets off the corridor are 1.9 percent for cereals and beans, 1.5 percent for fruits and vegetables, and 1.4 percent for processed commodities.

Price change per transport hour from source market to sale market per market chain					
Market chain	Source market	Sale market		Transport time (hr)	Price change (%/hr)
		Type of market	Location		
Staples (cereals, beans)	Hub	District HQ	On Main Corridor	47.68	1.46
	District HQ	Main Market	Off Main Corridor	34.79	1.39
			On Main Corridor	35.79	1.40
		Remote Market	Off Main Corridor	33.12	1.86
			On Main Corridor	41.20	1.34
	Processed Commodities	Hub	District HQ	On Main Corridor	38.18
District HQ		Main Market	Off Main Corridor	34.15	1.53
			On Main Corridor	27.37	1.94
		Remote Market	Off Main Corridor	43.24	1.41
			On Main Corridor	35.79	2.47
Fruits and vegetables		Hub	District HQ	On Main Corridor	51.81
	District HQ	Main Market	Off Main Corridor	26.90	2.64
			On Main Corridor	40.40	1.04
		Remote Market	Off Main Corridor	33.31	1.49
			On Main Corridor	37.72	1.45

Table 12: Price change per transport hour per market chain
(Source: trader questionnaire)

A similar study regarding the constraints posed by the lack of infrastructure³³ examined the relationship between the farm-market price spread and driving time from each sample household to the nearest maize market where monthly maize price data was available. Results indicated that the farm-market price spread of maize in Kenya increases by 2 percent for each additional driving hour away from the maize market.

Another case study conducted in Turkana³⁴ also concluded that prices tend to increase along the trade flow as the distance from sources of supply increases. The average rate of price increases between source markets out of the district (Turkana) and Lokichoggio (as the furthest major market in Turkana) is in the range of 40-50 percent, with peaks of up to 80 percent for some commodities such as beans. The average rates increase slightly when considering some final markets such as Lokitaung, where the highest prices were recorded.

7.7.2 Analysis of traders' capacity to respond to increases in demand

This section includes the findings on traders' perception of their own response capacity, and the results of alternative proxy indicators that influence this response capacity.

A way of assessing traders' capacity to respond to increased demand is by directly questioning them about their ability to increase supplies under the existing cost structure and value chain. However, their answers may be biased by a number of factors, such as their perception of potential business opportunities, or their fear that the information could be used by fiscal authorities or competitors. Some researchers have also expressed concerns that traders' confidence in accessing additional commodities may lead to an overestimation of supply expandability.³⁵

³³ The maize farm-market price spread in Kenya and Uganda, Takashi Yamano and Ayumi Arai, National Graduate Institute for Policy Studies, December 2010

³⁴ Market analysis to assist selection between response options in conditions of food insecurity, Alessandro De Matteis, 2010

³⁵ Using food aid to stimulate markets in pastoral areas, market assessment, into the EC Food Facility Programme in Northern Kenya, Alessandro De Matteis, Save the Children, Mar 2012

Traders were asked whether they could meet an increase in demand under the existing cost structure and value chain. The chart below shows the results per type of trader, type of market and relative position on the transport corridor. In general, 79 percent of traders said they could, and 21 percent they could not be able to increase their supplies. The perceptions are quite consistent across the different market chains, though traders

dealing with fruits and vegetables appeared to be slightly less optimistic than those dealing with staple or processed foods. Wholesalers seem to be somewhat more confident across all categories of markets. The size and relative position of markets on the transport corridors do not seem to influence traders' perceptions, with only minor variations in the percentages.

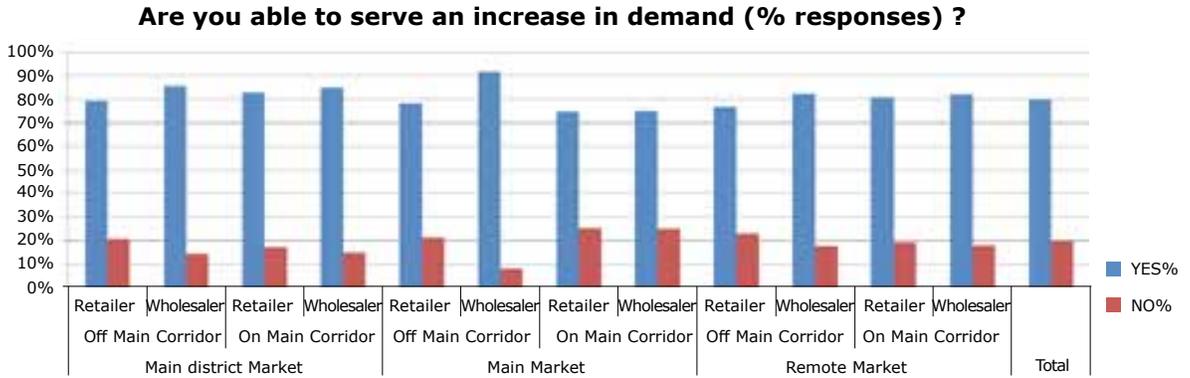


Figure 50: Perceived response capacity
(Source: trader questionnaire)

Furthermore, the traders were also asked about how much increase in demand they could absorb using their current supply chain mechanisms. The figure below shows the reported proportions of additional demand traders could meet.

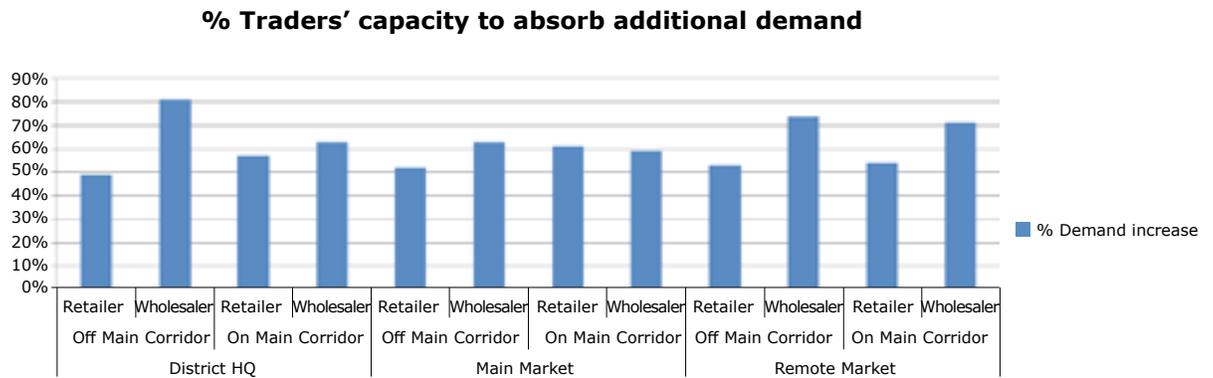


Figure 51: Perceived capacity to absorb increased demand
(Source: trader questionnaire)

On average, wholesalers across all categories of markets indicated they could meet demand increases of around 68 percent, while the retailers' average capacity was 54 percent. This reflects the wholesalers' better established networks. The average reported capacity of wholesalers and retailers in the hub markets is 93 and 83 percent, respectively.

By comparison, a similar study conducted in Kenya's central region³⁶ showed that around 65 percent of wholesalers and 50 percent of retailers believed they could serve a 100 percent demand increase.

The table below shows the number of days the traders require in order to increase their supplies if demand increases by 25 and 50 percent. In general wholesalers' responses indicate they need less time than retailers. On average wholesalers need 4 to 6 days to increase their supplies by 25

to 50 percent respectively, while retailers need 5 to 7 days, respectively. Looking at retailers' capacity in the main and remote markets vis-à-vis their relative position on or off the transport corridors, the graph also probes the intuitive correlation between remoteness and time required to resupply. This correlation does not appear to occur when looking at wholesalers' restocking time on and off the corridors, as the number of days required on the corridors is higher than off the corridors. This is likely linked to the fact that most wholesalers on the corridors resort to distant supply markets in the producing areas, while the wholesalers off the corridors source from district headquarters and other large supply markets within the arid lands. The lower number of days required by wholesalers in the district headquarters off the transport corridor (Maralal), compared to the other district headquarters on the corridor, is explained by their proximity to the producing areas.

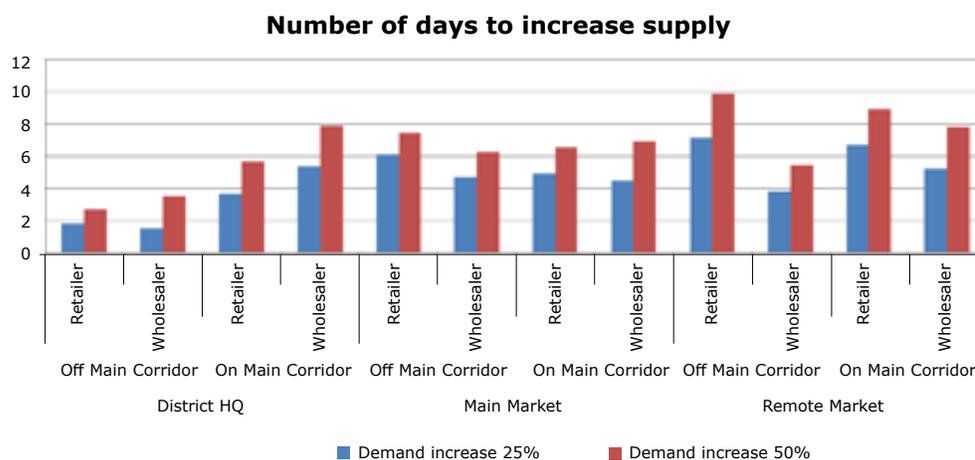


Figure 52: Number of days required to increase supply (Trader questionnaire)

Traders also reported on the constraints they face when increasing supplies to the market. As shown in the figure below, these constraints are, in order of importance: high transport costs, lack of good roads and access to credit, lack of storage, insecurity, inadequate or irregular supplies and

relief food distributions. There are no significant differences between wholesalers and retailers with regard to the perceived difficulties in serving an increase in demand. High transport costs and lack of good roads appeared to be a greater concern in remote markets than in larger markets and those positioned along the transport corridors.

³⁶ Unconditional cash transfer baseline survey – Kenya, WFP Kenya – VAM unit, 2012

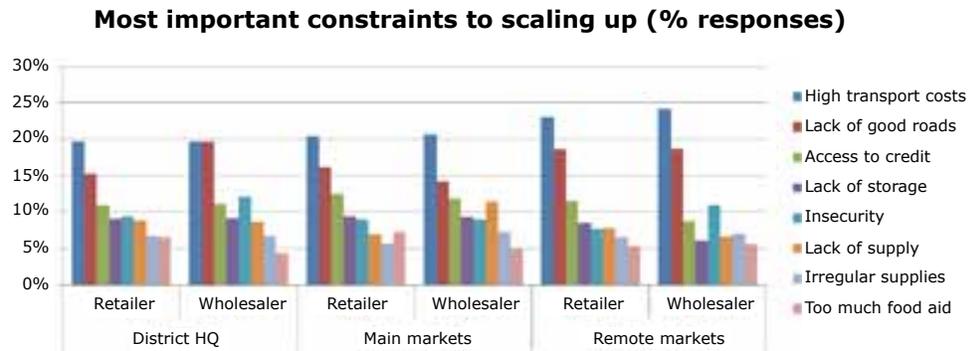


Figure 53: Constraints to scaling up supply
(Source: trader questionnaire)

A case study in Turkana³⁷ found that the poor infrastructure throughout the district was a major disincentive for traders to scale up, while price was cited as the second priority in traders' decisions to invest. Poor security conditions and the poor access to credit were cited as the third and fourth factors, respectively. The same study highlighted the yawning gap in terms of capacity between traders based in Turkana and in the neighbouring areas in Kenya. The turnover, as well as the amount of food sold on a monthly average by a large trader in Turkana is lower than for a small, non-Turkana trader.

When traders were asked about possible inflationary effects of a sustained increase in demand generated by a cash injection, 49 percent expected no effect

on prices, 28 percent believed prices would increase in the long run, and 18 percent expected prices to increase in the short run.

The average perception about prices in the arid lands is less optimistic than in the hub markets, where 68 percent of the traders expected there would be no effect on prices, 19 percent believed prices would increase in the long run and only 4 percent expected prices to increase in the short run. The number of respondents expecting no effect on prices is relatively higher in the main markets close to Kenya's producing areas, than in the remote markets off the transport corridors. This seems to confirm the correlation between remoteness and perceptions about price reactions, to increases in demand.

Traders' perceptions of impact on prices of a sustained increase in demand (% responses)

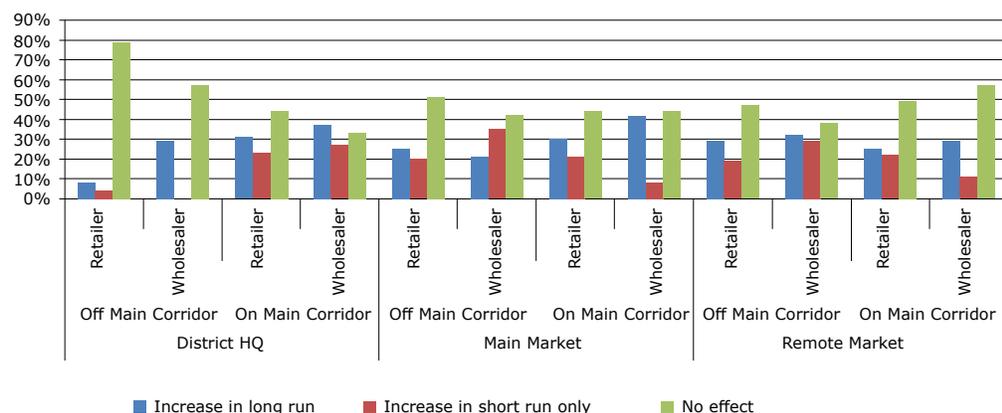


Figure 54: Perceived price impact of sustained increase in demand
(Source: trader questionnaire)

³⁷ Market Functioning in Turkana District, Kenya, Alessandro De Matteis, OXFAM, May 2006

Taking into account the sensitive nature of the question formulated to the traders, the significant share of wholesalers (10 to 40 percent) anticipating that retail prices will increase in the short and long run across all categories of markets -- suggests that sustained increases in demand are likely to lead to some price increases.

7.7.3 Analysis of proxy indicators of traders' response capacity

The following section includes a basic comparison of a set of variables that serve as proxy indicators for traders' response capacity, comparing hub, district headquarters, main and remote markets. These proxy indicators include:

- Monthly turnover;
- Access to credit;
- Facilitation of credit;
- Storage capacity; and
- Access to market information

Monthly turnover

The average monthly turnover can serve as a comparative indicator of market capacity as a

whole, provided that the ratio between the number of traders and the population size, along with consumers' purchasing power remains constant across all categories of markets. In the absence of such information, it can be used as an indicator of specific traders' capacity if comparisons are made within the same location or within markets with very similar characteristics, especially among retailers where the competition levels are higher (see above analysis of ratios retailers/wholesalers).

The graph below shows the ranges of the average monthly turnover of retailers per type of market. Nearly half of the responses, 46 percent, are concentrated around the range of 10,000-75,000 KSh, across all categories of markets, with the highest concentration between 10,000-25,000 KSh. The responses in the lower range (i.e. less than 10,000 KSh) are associated with petty traders and open air retailers. As expected, the proportion of responses in the range from less than 10,000 to 25,000 KSh is higher in the remote markets than in the main ones, while this trend reverses in the higher ranges.

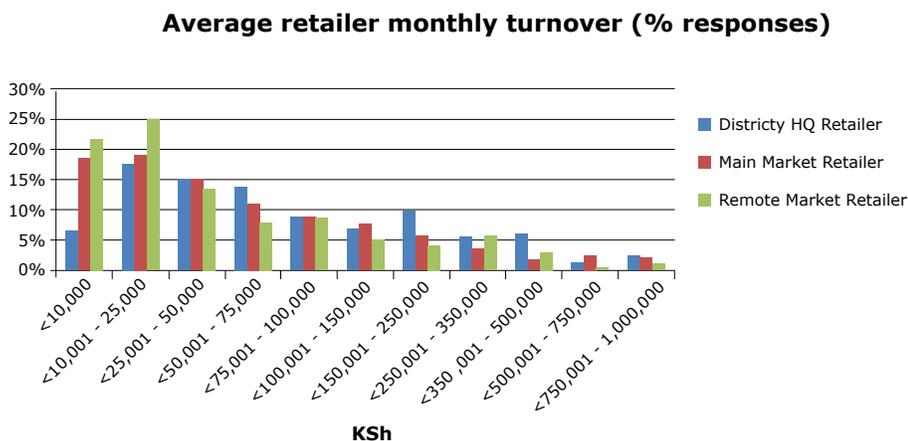


Figure 55: Average retailer monthly turnover
(Source: trader questionnaire)

The following chart shows the same information for wholesalers. The higher number of responses is concentrated between 350,000-750,000 KSh, but with a clear decreasing trend from district headquarters to remote markets, reflecting the

decreasing population densities and demand levels. This is consistent with the patterns in the lower ranges. The number of responses declaring low turnovers is lower in the district headquarters than in the main and remote markets.

Average wholesaler monthly turnover (% responses)

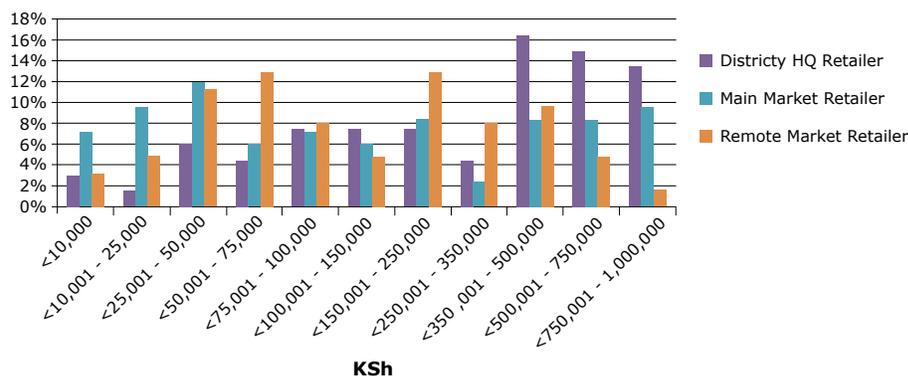


Figure 56: Average wholesaler monthly turnover
(Source: trader questionnaire)

Access to credit

Traders were asked about the means they use to finance their purchases. It is worth highlighting that only 17 percent of those interviewed resort to some form of credit. Around 94 percent mentioned they finance their purchases with cash generated from previous sales, and 8 percent from advances by suppliers. Breaking down the use of credit per type of market finds that 23 percent of traders in the district headquarters resort to credit, compared to 16 percent in the main markets and 12 percent in the remote markets. On average, there are no

significant differences in the answers provided by retailers and wholesalers with regard to use of credit. When considering only the main and remote markets, the use of credit is slightly more frequent in markets on the transport corridors than off the corridors.

Informal credit³⁸ is more common than formal in all the markets visited in the arid lands. The graphs below show the different sources of credit per type of market.

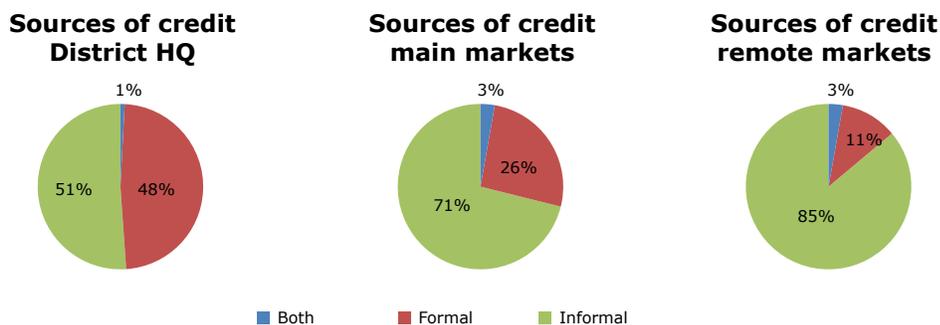


Figure 57: Sources of credit by market type
(Source: trader questionnaire)

³⁸ Credit provided by individuals (as opposed to formal institutions such as banks or governments), usually with less traditional forms of collateral and higher interest rates than formal credit.

The most common formal sources of credit mentioned by traders are banks (70 percent of the responses), Saccos³⁹ (21 percent), and traders' associations (18 percent). As for informal sources of credit, the most common are credit from suppliers (42 percent), family members and friends within the region (20 percent) and outside the region (18 percent), and other traders (17 percent).

Out of those traders that have access to credit to finance their businesses, 53 percent buy less than a quarter of their stock on credit, 28 percent between a quarter and a half, and 19 percent between half and the total stock. As for the terms of credit, traders resort to and combine several options: 59 percent of those interviewed said they reimburse the entire amount of credit at once, 22 percent by paying back a share of their profits, 20 percent through a straightforward, monthly percentage, and 12 percent as a percentage of their turnover.

These findings confirm field observations and reports from key informants. Limited access to credit can undermine traders' capacity to efficiently respond to sudden increases in demand. Access to credit in the arid lands is very limited and largely confined to informal sources. This is common to all markets, including the district headquarters, though in these large locations formal credit is relatively more common.

Facilitation of credit

About 84 percent of the traders interviewed extend credit to their customers. This type of credit is more common in remote markets than in the main ones, likely reflecting the poorer purchasing power of the population in remote locations. In nearly 90 percent of the cases, repayments are made when the client has access to funds, and in almost all the other cases repayment is done in-kind. Nearly 75 percent of credit requests take place during the dry seasons⁴⁰, indicating the increased food dependency on the market of the vulnerable population, particularly during the second dry season, which coincides with the lean season (June–September).

³⁹ Savings and credit cooperative societies.

⁴⁰ There are two dry seasons in the arid lands: December to March and June to September. The peak of the lean season usually takes place in August – September.

Storage capacity

On average, around 50 percent of traders in the arid lands stated they can store supplies for more than a month, 27 percent for a month, 16 percent for 2 weeks and 3 percent for a 1 week. Overall, no significant differences between wholesalers and retailers' storage capacities were reported. The average storage capacity in the main markets appears to be slightly higher than in the remote ones, reflecting the higher population densities and demand. Within the main and remote market categories, storage capacity in the markets on the transport corridor is also higher than in those off the corridor.

Access to market information

Overall, 83 percent of the traders mentioned they have access to some form of market information. Though the number of traders is relatively high, key informants reported that in many instances, quality and timeliness do not favour business decision making in the arid lands. For example, delayed or inaccurate information on prices at source results in inefficient business planning, which can erode profit margins.

Access is higher in the district headquarters, but there are no significant differences between main and remote markets. Wholesalers' access to information appeared to be higher than the retailers' across all categories of markets.

The graph below shows the most common types of market information traders have access to per type of market. In general 93 percent of traders have access to information on prices; around 40 percent on quality, volumes available in the source markets and transport costs; and less than 10 percent on competition and storage. While the access to price information is consistent across all categories of markets, access to the other types of information is higher in the main markets than in the remote ones, especially when it comes to quality and volumes.

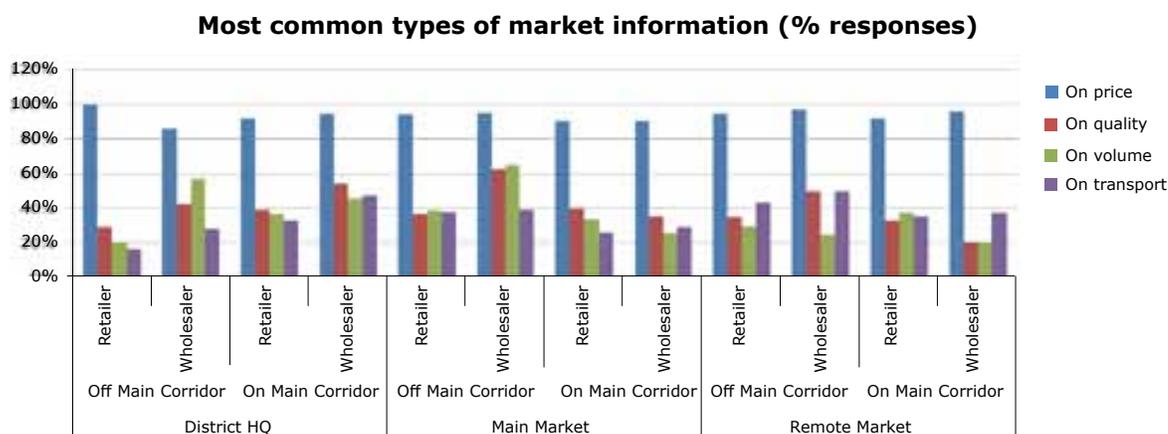


Figure 58: Most common types of market information
(Source: trader questionnaire)

Suppliers are most important source of information (73 percent of the respondents), followed by traders associations (16 percent), the radio (11 percent), and newspapers and government sources (3 to 4 percent of the responses).

Summary

The analysis of both proxy indicators and traders' own perceptions reveals that traders' capacity to serve continued increases in demand in the arid lands is limited, compared to traders in the producing areas. The size and relative position of markets on the transport corridors do not seem to influence traders' perceptions, though the analysis of proxy indicators shows that traders in district headquarters are slightly better off in terms of response capacity than those in other market categories. Wholesalers' capacity is slightly higher than that of retailers across all categories of markets, reflecting the wholesalers' better established networks.

It is worth highlighting that according to traders' responses, the most important difficulties they face in trying to increase supply to the market are high transport costs and lack of good roads. These are also the main factors undermining market integration with the producing areas, illustrating once again the importance of market and trade development in the arid lands.

With regard to traders' perceptions on the possible inflationary effects of a sustained increase in demand, the significant share of wholesalers (10-40 percent) anticipate short- and long-term retail price increases across all categories of markets.

7.8 Cost efficiency of transfer modalities

This section aims to compare the cost-efficiency of different transfer modalities, i.e., in-kind vs. voucher or cash transfers, for different locations in the arid lands. A cost-efficiency analysis measures outputs against inputs in monetary terms, and facilitates comparison of alternative transfer modalities in order to use available resources as efficiently as possible. It ought to be complemented with an effectiveness analysis.

For the in-kind modality, the procurement value and logistic costs⁴¹ to transport the commodity to the respective market are considered, while for cash or vouchers, the local market price at the time of the survey is used. The monthly household food basket for comparison includes maize and pulses for a larger group of markets⁴², and additional rations of oil and salt at three specific markets.⁴³ The ratio of the market value vs. the in-kind costs are specified as commodity specific alpha values which, if below the value 1, mean that a C&V modality by commodity would be more cost-efficient than in-kind transfers.

⁴¹ The logistics costs are composed of transport, storage and handling, quality control and salaries for logistics staff.

⁴² These markets include: Isiolo town, Habaswein, Lodwar, Marsabit, Wajir, Eldas, Kalokol, Loyingalani, Garissa, Kakuma, Lokichoggio, Moyale, Sololo

⁴³ Habaswein, Isiolo, Lodwar

The following limitations apply to the presented cost-efficiency analysis; they are also among the reasons for not illustrating a cost effectiveness analysis:

1. Time series of all commodity prices and even spot market prices for the entire WFP food basket are not available for the respective markets. Thus seasonality effects and comparison of the entire food baskets are not possible.
2. Spot prices, for different commodities were collected based on per-kilo units, if the retailers had the particular commodity as one of the most important commodities demanded. This resulted in some cases a wide distribution of prices and non-convertible units and there is a risk that these might not reflect the average market price of the respective commodity.
3. Costs that would occur in distributing vouchers or cash (ODOC/delivery costs) are not yet established. Hence a full cost comparison, including the calculation of the omega value⁴⁴, is impossible, which is also the reason for not calculating a stand-alone nutrient value score (NVS⁴⁵). It is therefore recommended to integrate
4. Markets with outlying 'other direct operational costs' (ODOC) are excluded from the analysis.
5. The in-kind commodity price in the analysis is taken from actual local procurement data around the date of the survey. It may not reflect WFP procurement prices when bigger quantities, from different origins and at different times, are procured. This applies particularly to pulses, with a total procurement volume in Kenya of around 110 MT in 2012. Similarly, maize prices are based on Eldoret prices in August, which were lower at other times of the year. However the fundamental conclusions do not seem to be affected.
6. All of the analysis below solely looks at the efficiency component, not at the feasibility component, and therefore has to be validated with the financial sector assessment of this report, or the above discussion on response capacity of the markets.

Monthly household food basket	
Commodity	kg/month
Maize	7.5
Beans	1.5
Oil	0.46
Salt	0.1

Table 13: Monthly household food basket

3. Costs that would occur in distributing vouchers or cash (ODOC/delivery costs) are not yet established. Hence a full cost comparison, including the calculation of the omega value⁴⁴, is impossible, which is also the reason for not calculating a stand-alone nutrient value score (NVS⁴⁵). It is therefore recommended to integrate

additional cost estimates when available, and then conduct a more comprehensive as well as an updated cost-effectiveness analysis.

The graph below illustrates the commodity-specific alpha values for maize and pulses. Among the markets in the analysis, only in Wajir and Eldas does maize distributed in-kind seem to be more cost-efficient than a local market-based transfer. For all other markets, cash or vouchers seem favourable. For pulses alone, only Lodwar, Marsabit, Kalokol and Sololo seem to offer a cost environment that is favourable to cash-transfers.

Cost-efficiency in-kind vs. C&V transfer value for maize and pulses (alpha value)

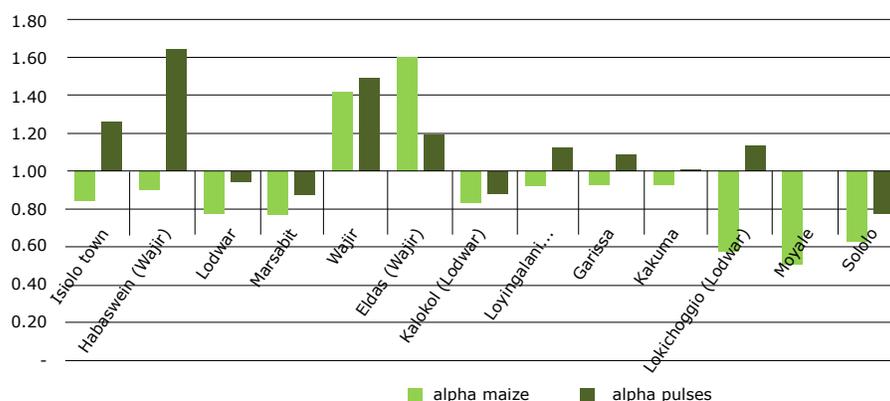


Figure 59: Cost-efficiency, in-kind vs. C&V transfer value

(Source: Own calculations from Trader Survey and WFP data)

⁴⁴ The WFP omega value is the ratio between Nutrient score divided by the full cost for the in-kind delivery basket and the nutrient score divided by the full cost of the cash/voucher basket. If the value is >1, in-kind delivery is potentially considered nutritionally more cost-effective.

⁴⁵ The NVS is of the food basket includes macro- and micronutrients and is calculated as the sum of proportional requirements of these nutrients that are met by the food basket.

This picture, however, changes when the costs are combined, according to quantities of the household food basket for maize and pulses (see Figure 59 above). The first graph below illustrates that without accounting for any delivery costs to the beneficiary, a cash/voucher transfer seems more efficient in all these markets, except for Habaswein, Wajir, and Eldas. It also illustrates significant differences in the transfer value between markets, e.g. approximately from US\$3.90 per month in Moyale to more than US\$9 in Eldas. The graph to the below represents

the additional inclusion of other distribution costs⁴⁶ per monthly food basket, while leaving the cash option constant. Hence the difference in values between the two transfer modalities would hint to the potential cash-distribution costs per household food basket within which cash/vouchers still remain favourable, except for Wajir and Eldas. In monetary terms and, for example in Garissa, these ODOC costs would lead to a break-even point between the modalities, when they are negotiated to a level of US\$86 per MT, or 13 percent of the transfer value.

Food Basket Costs Maize and Pulses, in US\$ (without delivery costs)

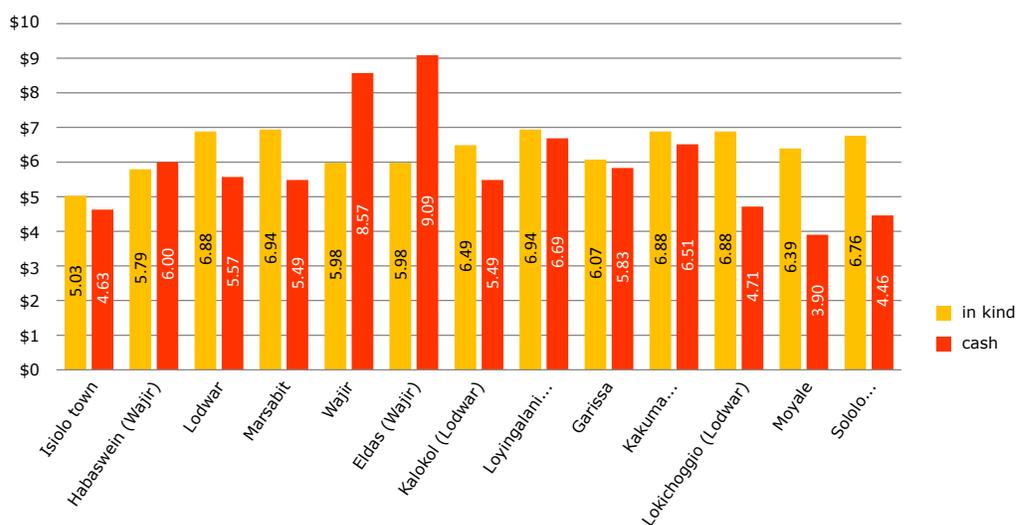


Figure 60: Food basket costs (maize and pulses) without delivery costs*

* Source: own calculations, Trader survey and WFP data

Food Basket Costs Maize and Pulses, in US\$ (with delivery costs for in-kind)

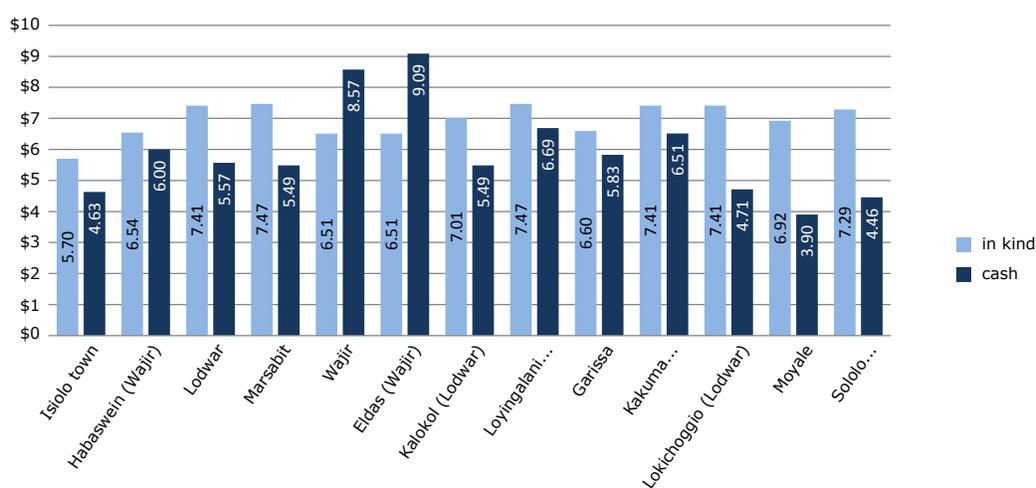


Figure 61: Food basket costs (maize and pulses) with delivery costs for in-kind

Looking at three markets in more detail (Isiolo, Lodwar, Habaswein), and adding further commodities to the basket, the analysis leads to different implications. By procuring in bulk, WFP can leverage its purchasing power significantly for vegetable oil and, in the first two markets, for salt as well. This, therefore results in commodity specific alpha values, notably above the value 1 (see Figure 62). This means that if WFP distributed vegetable oil solely, the in-kind transfer would be more cost-efficient in all three markets, while for salt the same applies to Isiolo and Habaswein.

When the food basket includes maize, pulses, salt and vegetable oil, there is no change in the cost-efficiency comparison in the case of salt (see Figure 64). However, the addition of vegetable oil would suggest that a cash-based option becomes

less efficient than in-kind in Isiolo, and increases the monetary disadvantages of cash transfers in Habaswein (see Figure 65). In Lodwar, the potential cost savings by a cash operation would be reduced. Although the full cost-comparison, including other direct operational costs, remains important and might change the presented results, the implication is still that the food basket's composition clearly matters when high-value commodities in which WFP has a comparative advantage in procuring are included. In other words pulses, maize and salt, given their low quantity or monetary equivalent, can be more easily replaced by a cash transfer than vegetable oil. Considerations of externalities and nutritional value (delivery of fortified oil vs. potentially non-fortified oil) should also be taken into account when fully evaluating the different modalities.

Cost-efficiency in-kind vs. C&V transfer value for vegetable oil and salt (alpha value)

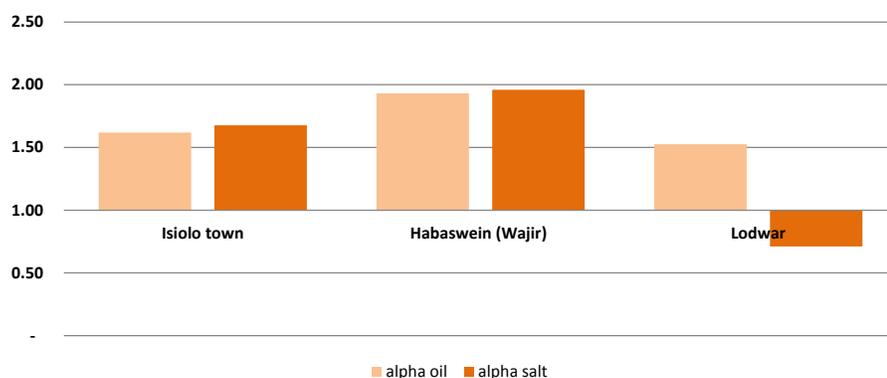


Figure 62: Cost efficiency in-kind vs. C&V (vegetable oil and salt)

Costs of food baskets (maize, beans) in US\$ - in-kind vs. cash/voucher

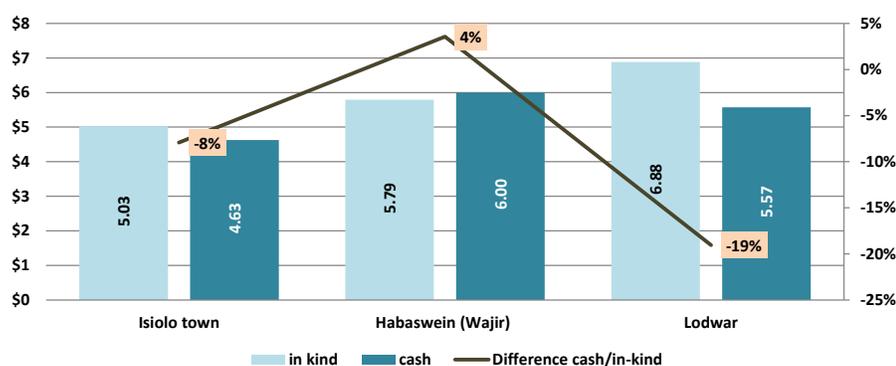


Figure 63: Cost of food baskets (maize and beans) in-kind vs. C&V

Costs of full food baskets (maize, beans, salt) in US\$ - in-kind vs. cash/voucher

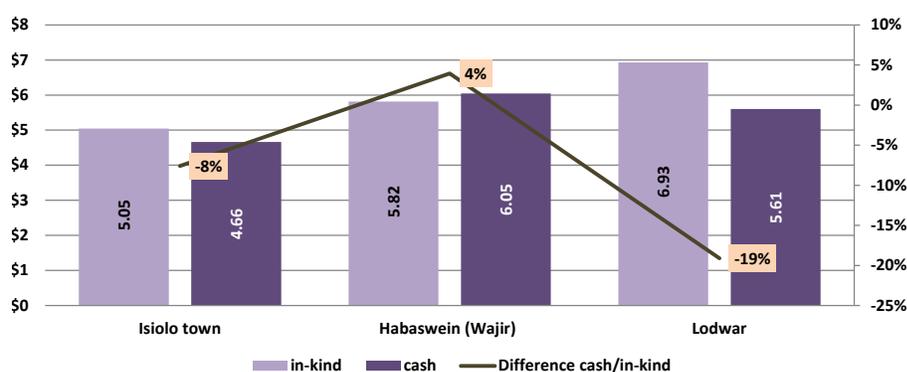


Figure 64: Cost of food basket (maize, beans, salt) in kind vs. C&V

Costs of full food baskets (maize, beans, oil, salt) in US\$ - in-kind vs. cash/voucher

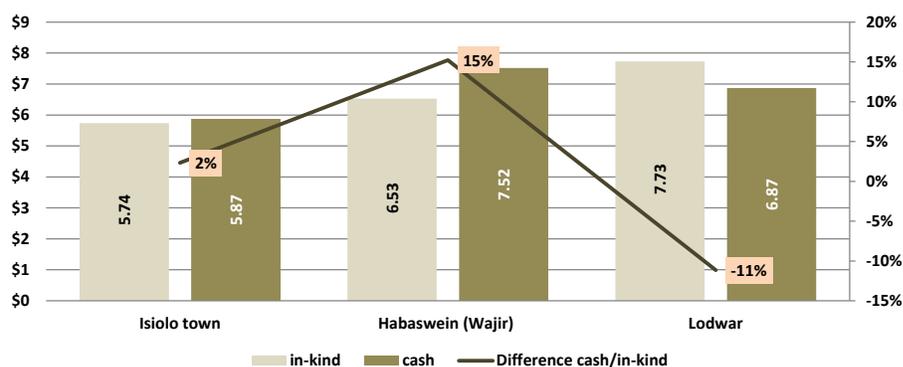


Figure 65: Cost of full food basket (maize, beans, oil and salt), in-kind vs. C&V

7.9 Concluding remarks and recommendations

The purpose of this chapter was to provide a comparative gauge of the feasibility and risks associated with implementing cash interventions in various types of markets in the arid lands of Kenya. The findings are summarised below, followed by recommendations.

7.9.1 Summary of the findings

Market structure

- The basket of commodities traded in northern Kenya is limited, reflecting food demand and consumption patterns. The most traded commodities are the staples (maize, rice, wheat and beans) and, to a much lesser extent,
- The northern region is highly dependent on food imports to meet its basic consumption needs. With the exception of livestock, which is locally produced, most food commodities are largely brought in from the main supply markets in

durable vegetables such as potatoes, tomatoes, cabbages and onions, which can withstand the rough and long transport conditions and lack of refrigeration. Fruits are rarely consumed in the arid lands, especially outside major towns. Pasta is also a highly consumed food, especially by the Kenyan Somali communities in the northeast. Meat consumption and trade is relatively low in the arid lands, compared to traditional staples such as maize, wheat, rice or beans. This is due to a number of factors associated with the characteristics of the livelihood system.

Kenya's central region or imported from Ethiopia and Somalia. Trade between the arid and non-arid lands is, however, undermined by high transaction costs, due mainly to inadequate transportation and telecommunications systems, and lack of marketing infrastructure.

- Trade in cereals and beans, processed commodities and fruits and vegetables flows into the arid lands following three main supply corridors: Kitale-Lokichoggio, Meru/Nakuru-Moyale and Thika-Mandera. Although in some instances remote markets resort to distant large supply markets either within the arid lands or even in the highlands, in most of the cases the trade of imported commodities originates from hub markets in the central region or in Nairobi, which supply the largest main markets in the arid lands – mostly the district headquarters. In general, district headquarters supply other main markets along the corridors and the remote markets. Only half of the traders interviewed mentioned they have an alternate supply source.
- With the exception of the district headquarters and other large supply markets, the role of wholesaling in the arid lands is limited, especially in remote locations where trade is often controlled by traders who originate from outside the districts. Wholesale is mostly confined to the trade in cereals, beans and processed commodities. Results show that competition levels decrease with the remoteness of the market, which increases retailers' exposure to supply shocks and undermines traders' scaling-up capacities.
- The heavy dependence of local traders on external supply sources and the limited role of wholesaling can potentially undermine the multiplier effect of increased demand from injecting cash into the local economy. With the exception of the livestock trade, which constitutes a small percentage of the overall food trade and consumption, only a small fraction of the price structure (around 15 percent) would be captured by local retailers and the few wholesalers. The rest would be shared between transporters, and suppliers of other areas, including from the country's production areas.

- The analysis of the spot prices collected during the field data collection indicates that, with the exception of the locally produced commodities (e.g. meat) which tend to be cheaper at source in the remote markets, food prices increase with distance (from the source? or from the main transport corridors?). That is, food is more expensive in remote markets than in the main ones, and more expensive in the latter than in the district headquarters. Likewise, prices are also higher off the main transport corridors than along these routes. This implies that cost-efficiency analyses of cash-based interventions should take the differences between markets into account (remote versus main versus district headquarter markets, and on- versus off-the-corridor markets).

Local food availability and market integration

- The arid lands are chronically food deficit and households living there are highly dependent on food imports to meet their consumption needs. Food insecurity is higher in the arid lands compared to the producing areas of Kenya. In such conditions, market integration is critical to ensure continuous and consistent availability of food in sufficient amounts and at reasonable prices.
- The analysis of the supply chains, price trends, constraints to trade, proxy market integration indicators and the review of existing literature all point to the fact that most of the markets in the arid lands are generally weakly integrated both amongst themselves and with Kenya's main supply markets. The district headquarters and a few other markets positioned on the main transport corridors in the arid lands show some signs of adequate integration with the producing areas, but even these have to bear the price implications of high transaction and transport costs. By contrast, markets in the high potential mixed farming livelihood zone are well integrated within the zone and with key urban centres, largely due to a fairly sophisticated trade infrastructure.

- A major underlying reason that explains weak market integration is the weak economic development in the arid lands. Market development and functioning is hindered by low population densities and purchasing power, coupled with extremely poor infrastructure and high transaction costs. Recent revival of public investment in roads in particular in the arid lands is seen as an opportunity to alleviate bottlenecks to market development in the medium and long terms.
 - The majority of traders experience seasonal fluctuations in food quantities (70 percent) as well as prices (95 percent). Fluctuations in quantities are higher in the remote markets than in the main ones, reflecting their lower degree of integration with other markets. In general, both availability and prices are influenced mostly by the seasonal production cycles and by the transport conditions, especially during the rainy season, when roads become impassable. To a certain extent, the festive seasons of Ramadan and Christmas, and the school calendars also influence prices in the arid lands. While seasonality affects all food commodities, the most severe fluctuations take place in the supplies of meat, dairy, fruits and vegetables. Overall, fruits, vegetables and processed foods are generally less available year round in the remote markets off the main corridors than in the district headquarters.
 - Transport capacity in the arid lands is in general very poor. Matatus, buses and other types of public transportation are the most commonly used means, followed by 7- and 12-ton trucks. The use of trucks is more common on the main transport corridors than off them. By contrast, the most common vehicles to transport food to the hub markets are 7-ton trucks, followed by 28- and 12-ton trucks. Commonly, only wholesalers and large retailers have the capacity to organise transportation independently. Smaller retailers often aggregate their orders and share truck transport or, more frequently, use public transport.
- arid lands could be overstated when compared with other proxy indicators of traders' response capacity. While most of the traders said they would be able to increase the flow of supplies under the existing cost structure and value chain, 21 percent said they would not be able to respond to demand increases. Out of those traders who mentioned they could absorb additional demand, the wholesalers indicated they could meet demand increases of around 68 percent, while the retailers' average capacity was 54 percent. This reflects the wholesalers' better-established networks. The average reported capacity of wholesalers and retailers in the hub markets was 93 percent and 83 percent, respectively.
- There are indications that potential price increases triggered by increases in demand cannot be ruled out. When asked about the possible inflationary effects of demand increases, 49 percent of traders in the arid lands said there would be no effect on prices, 28 percent indicated that prices would increase in the long run, and 18 percent stated they would increase in the short run. Traders in the arid lands were less optimistic than in the hub markets, where 68 percent of traders said there would be no effect on prices, 19 percent that prices would increase in the long run and 4 percent that prices would increase in the short run. The number of responses indicating no effect on prices was relatively higher in the main markets close to Kenya's production areas than in the remote markets off the transport corridors. This indicates that the likelihood of price increases in response to demand increases is higher in remote markets.
 - Traders' response capacity is often challenged by several constraints such as road conditions and transport capacity. Other frequently mentioned constraints are lack of cash and access to credit, poor market infrastructure, lack of market information, price volatility, lack of storage, insecurity, and lack of or irregular supply. Transportation's importance when it comes to supply chains and food availability cannot be overstated. The key factor to market development in the arid lands is the quality of the available transportation infrastructure. Unpaved roads multiplies transportation time for commodities and increases the need to

Traders' capacity to meet increases in demand

- Traders' own perception of their capacity to serve continued increases in demand in the

repair vehicles. During the rainy seasons, roads are often impassable, causing disruptions along the distribution channels. This causes delays in supplies and exposes traders to attacks by bandits, thereby increasing the cost of doing business. Notably, the resupply time in the remote markets off the transport corridors is around 44 percent higher than the average for the main and remote markets on the main transport routes. Besides road conditions, low availability and frequency of transport is reported another factor limiting supplies to the remote markets.

- The availability of formal financial services in the arid lands is limited. The main bank branches are only present in the district headquarters and a few large main markets along the three transport corridors. The limited presence of financial services can undermine payment transactions by traders. However, the fast growing payment mechanisms through mobile phone (?) technology is seen as a way to mitigate this constraint.
- Limited access to formal credit in the arid lands undermines traders' capacity to increase supply. About 94 percent of the traders interviewed said they financed their purchases through their sales. Only 17 percent used credit and 8 percent financed their purchases through advances from suppliers. The use of credit (formal and informal) is more common in the district headquarters than in the main and remote markets. With the exception of the district headquarters, informal credit is more common than formal in all the markets visited in the arid lands.
- Notwithstanding quality-related issues, storage is not a major constraint to trade in the arid lands. On average, around 50 percent of traders said they could store supplies for more than a month, 27 percent for a month, 16 percent for 2 weeks and 3 percent for a 1 week. The average storage capacity in the main markets is slightly higher than in the remote ones. Within the main and remote market categories, the storage capacity on the transport corridor is also higher than off the corridor.
- While market information is generally accessible, its quality and timeliness could affect business decisions. The majority of traders (83 percent)

said they had access to some form of market information. Though the number of traders is relatively high, key informants reported that in many instances, quality and timeliness do not favour business decision making in the arid lands. Access is higher in the district headquarters, but there are no significant differences between main and remote markets. Wholesalers' access to information appeared to be higher than the retailers' across all categories of markets. Out of those who have access to market information, 93 percent of the traders have access to information on prices, around 40 percent on quality, volumes and transport, and less than 10 percent on competition and storage. Access to information on commodity quality and volumes is higher in the main markets than in the remote ones.

7.9.2 Recommendations

- In view of planning for cash-based interventions and from a market perspective, it is recommended to target locations with higher market response potential, i.e. the district headquarters and large markets of similar size and characteristics. A non-exhaustive list of such large non-district headquarters markets could include locations like Habaswein and Eldas in Wajir, Elwak in Mandera, Sololo in Moyale, Laisamis in Marsabit, Lokichar in Turkana, Mado Gashi in Garissa, Archers Post in Isiolo or Wamba in Samburu.
- Expansion of cash-based interventions to other areas should be gradual. Decision to expand to other locations should follow the development of road infrastructure, especially in relation to supply sources. In this context, close monitoring of market trends and infrastructure development is fundamental.
- Market catchment areas are generally larger than areas targeted by cash-based interventions. Therefore, monitoring the impacts of cash-based interventions on markets and non-beneficiaries should expand to market catchments to account for potential impacts on vulnerable people living in the wider catchment areas.
- Improving price monitoring in the arid lands is particularly needed to enhance accuracy and reliability of price data for cash- or voucher-

transfer value monitoring and adjustment. This should cover selected district headquarters, main and remote markets - some of which are already being monitored by WFP and the National Drought Management Authority (NDMA).

- From a cost-efficiency perspective, consideration should be given to replacing some of the commodities in the in-kind food basket with a cash and voucher equivalent, while maintaining in-kind provision of others. Of the present WFP food basket, cereals (maize) and pulses (beans) are more easily replaceable than vegetable oil.
- Considerations should be given to seasonal programming, since not all food commodities are available in sufficient amounts in the arid lands throughout the year. Food assistance programmes are generally implemented during the lean season⁴⁷, when availability of food diminishes and prices increase. This can undermine the cost-efficiency of the intervention if cash is the selected modality. This is further complicated by production cycle differences of the different foods consumed in the arid lands. For instance, fresh food is not sufficiently available when cereals and processed food are available.
- Seasonal considerations for cash-based interventions should also consider a combination of factors, including the food security situation, the seasonal food production cycles, the specific livelihood systems, the main periods during which labour and income are mostly generated, and the relative cost-efficiency / effectiveness of the interventions vis-a-vis relief food distribution. When possible, it is recommended to plan conditional activities that actually support the improvement of market infrastructure and functioning: strengthening market information systems, investing in market-place infrastructure, ensuring security for mobile markets, improving access to credit, etc.

⁴⁷ There are two dry seasons in the arid lands: December to March and June to September. The peak of the lean season usually takes place in August – September.

8. Financial services in the arid lands

Where market aspects as well as livelihood and gender issues lead to the assessment that cash and voucher transfers are feasible in principle, it is crucial for WFP and its partners to understand which options exist, in terms of suitable payment systems and delivery mechanisms in the arid lands. This section of the study is organised into the following sections:

1. **Methodology:** This section describes the different tools and mechanisms used to collect data for this study.
2. **Payment system overview:** This is an overview of the different payment systems currently being operated for social payments in Kenya, and the advantages and disadvantages of each mechanism.
3. **Macro issues in developing payment systems:** Discussions with senior respondents from the banking sector showed there were a number of strategic issues which needed to be considered in the the design of any social payments intervention.
4. **Supply of financial services:** This section shows the evolving supply of financial services in the arid lands, based on field observations.
5. **Demand for financial services:** This section summarises the findings from focus group discussions on the existing use and considerations of the population in the arid lands with respect to savings, credit and money transfer.
6. **Trends in the use of financial services:** This section addresses the observed dynamism with respect to increasing supply and demand for financial services in the arid lands.
7. **Encouraging the use of financial services:** This section presents a number of important factors promoting and constraining the use of financial services in the arid lands.

After each of the subsections 2-7, key observations, implications and recommendations are summarised.

8.1 Methodology

The survey of financial services used four different methodologies:

- Key informants within the banking sector were interviewed to obtain their perspectives on banking technology and trends. These key informant interviews included respondents from commercial banks and the Central Bank of Kenya;
- Existing literature on the sector was reviewed;
- Quantitative data available in the FinAccess 2006 and FinAccess 2009 databases on the arid lands were reviewed; and
- The field study in the arid lands employed several kinds of qualitative tools described below.

The principal tool for qualitative field work consisted of focus group discussions (FGD), supported by a clear guide. In addition, participatory rapid appraisal (PRA) tools were employed.

The selection of participants was guided by a purposive sampling technique aimed to ensure that the selected samples would most productively answer the research questions. The fieldstudy also included the involvement of non-beneficiaries in PRA exercises. Such participants were required to have practical knowledge of financial services in their areas. Participants in these exercises included traders and civil servants such as teachers, nurses or community workers.

Finally, individual in-depth interviews (IDI) were conducted with existing and potential financial agents, as well as with stakeholders from the financial sector in the locations visited.

The table below shows the tools used and the objective each tool sought to achieve.

Tool	Participants	Purpose
FGD Guide	Beneficiaries: 230 Non-WFP beneficiaries: 33	To assess how residents in the Arid areas use money, financial services and their preferences, assess the products and services available from financial service providers, understand residents' perceptions of factors that would constrain them from using financial services; and assess their use of different financial mechanisms.
IDI Guide	Traders: 10	To determine the extent to which suitable agents exist in the areas under research and are interested to become banking agents or agents for mobile payments.
Seasonality Analysis (PRA Tool)	Beneficiaries: 28 Non-beneficiaries: 24	To obtain information on seasonal flows of income and expenditure, and the demand for credit and savings services.
Relative Preference Ranking (PRA Tool)	Beneficiaries: 35 Non-Beneficiaries: 19	This tool enables one to see how clients and potential clients perceive the financial service providers and components of the financial services they provide. It also helps challenge pre-conceived notions about poor people's attitudes towards financial service providers, what matters to them, and why they have those preferences.
Financial Sector Trend Analysis (PRA Tool)	Non-Beneficiaries: 17	This tool is useful in determining which financial services have been used over time and thus understanding the changes in the use/availability of a variety of financial services over time, and why participants used them
Cash Mobility Mapping (PRA Tool)	Non-Beneficiaries: 29	To get an understanding of where the communities go to acquire or spend cash (markets, waged labour, co-operatives, informal financial organisations etc.). The mobility mapping exercise also gives insights into income generating ventures that the residents are involved in.

Table 14: Overview of tools, objectives and participants for financial services survey

The profile of respondents of the field survey is illustrated below:

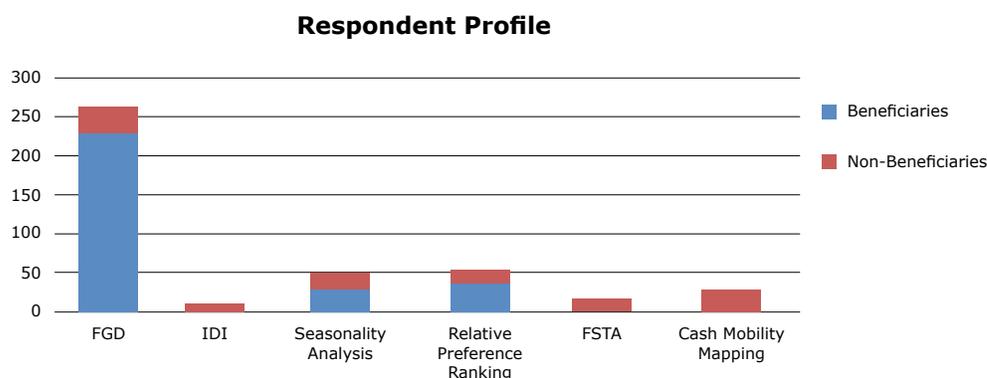


Figure 66: Profile of respondents of financial services survey

The selection of sites for the field survey interviews was oriented at the overall sampling of markets to be covered. This ensured linkages with the teams focusing on markets and livelihood and gender, and allowed the triangulation of findings between the study components. Annex 1 shows the study sites where the above-described interviews were carried out.

A number of aspects led to certain research limitations, which should be mentioned:

- **Mobilisation:** In some areas visited, focus groups had – for various reasons – not been mobilised beforehand. Where this was the case, it resulted in loss of time and led to fewer FGDs, or a mix of participants who did not really fit the ideal profiles.
- **Long Distances:** The team carrying out the field survey on financial services had to cover all livelihood zones of the entire study area. For this reason, a considerable amount of time was spent on the road.
- **Poor Infrastructure:** Travelling on often deteriorating roads was often time consuming. On many roads, it would take approximately 5 hours to travel a distance of 100 km.

Despite these limitations, the research produced useful information on ASAL Kenya's financial landscape.

8.2 Payment system overview

8.2.1 Overall development

Payment systems in Kenya operate through two main platforms: mobile phone-based payments supported by agencies, and bank accounts, supported through bank branches and bank agencies. Customers of commercial banks in many cases can also make mobile phone-based payments through linkages created by their commercial bank with one or more of the mobile network operators.

Over the last five years the growth of M-PESA, combined with the launch of agency banking for banks, as well as for regulated deposit-taking microfinance institutions, has revolutionised

payments in Kenya. Today more than 18 million Kenyan access mobile payment services through M-PESA (mainly) or one of the other providers. There are more than 45,000 mobile payment agents countrywide, and more than 12,000 bank agents. The payment system continues to develop. From May 2012, deposit-taking microfinance programmes were created to conduct agency transactions through their marketing offices as well as third party agents, which allows them to transact deposits and withdrawals through many more outlets, once approved by the Central Bank of Kenya.

The payment revolution has been slow to penetrate the arid lands. But as of 2012, there is increasing evidence to suggest the payments revolution is beginning to influence the arid lands in a more significant manner. Field trips by observers for the Hunger Safety Net Programme (HSNP) have noted a significant increase in signal coverage by Safaricom during that year, to the point that most market centres now have connectivity with at least one mobile network (usually Safaricom). With growing connectivity, mobile phone ownership and the number of mobile money agents have increased significantly.

Banking systems also have evolved rapidly, following the introduction in the north of Equity Bank over the last five years, and in particular through the establishment of banking agencies. Most market centres visited by the research team had banking agents from Kenya Commercial Bank, from Equity Bank, or both. There is a high likelihood the banking system in the arid lands will develop further, spurred on by three factors, in particular: (1) the establishment of new administrative units at county level with all counties having a county budget; (2) the growing understanding of value chains operating in arid lands; and (3) infrastructure developments associated with improving communications to South Sudan and Ethiopia, and not least in relation to mineral extraction and power generation.

The combination of signal coverage and the evolution of supportive banking infrastructure increases the potential for using payment systems to support cash transfers in the arid lands.

8.2.2 Payment systems used by Kenya's Cash Transfer Programmes

Cash-transfer programmes in Kenya are evolving rapidly; since 2005, the coverage of these programmes has increased tenfold. The Government of Kenya is one of the main operators of such programmes. The large government-channelled programmes include:

- The Orphans and Vulnerable Children Programme
- The Urban Food Subsidy Programme
- The Older People's Cash Transfer Programme
- The Persons with Severe Disability Programme
- The Hunger Safety Net Programme

The first four programmes will be addressed jointly as Government-to-person (G2P) Payments. These programmes are operated through Posta, Equity Bank and M-PESA. The fifth programme, the Hunger Safety Net Programme, has piloted agency banking payments with Equity Bank, and is in the process of rolling out payment solutions on a larger scale.

In addition to the five programmes mentioned above, WFP also has developed cash programmes (cash-for-assets and unconditional cash transfers) which operate through Cooperative Bank, Equity Bank, Safaricom (M-Pesa) and Orange Money. The table below provides an overview of which programme uses which technical solution.

The following subsections describe in more detail the mechanisms used by PCK, HSNP/Equity and WFP:

Government-to-person (G2P) Payments through PCK

Currently, the first four government programmes are funded from different sources and work through four different administration mechanisms. However, they all use the Postal Corporation of Kenya (PCK) for making payments.

The Orphaned and Vulnerable Children (CT-OVC) is a programme in which the Government of Kenya, UNICEF, the UK Department for International Development and the World Bank provide funds to orphaned and vulnerable children through their caregivers.⁴⁸ The cash stipend is used to provide for their basic needs. In partnership with the PCK, donors and the government have been able to ensure that this money reaches beneficiaries throughout the country in an effective and transparent way.

Through the CT-OVC programme, more than 110,000 transfers are disbursed every two months at the PCK outlet. This constitutes an important source for the PCK outlet and creates the potential to offer complementary financial products to the beneficiaries of these G2P payments. The PCK has a wide network, especially in rural areas. The figure below describes the model employed by the PCK.

Programme	G2P				HSNP	WFP	
	CT-OVC	OPCT	PwSD	UFSP		CFA	UCT
Pay points	Equity Bank, PCK	PCK	PCK	M-PESA	Equity Bank	Equity Bank Cooperative Bank	Safaricom & Orange

Table 15: Cash transfer programmes and pay points

48 <http://postfi.files.wordpress.com/2009/10/upu-case-study-1-kenya-public-version.pdf>

Postal Corporation of Kenya

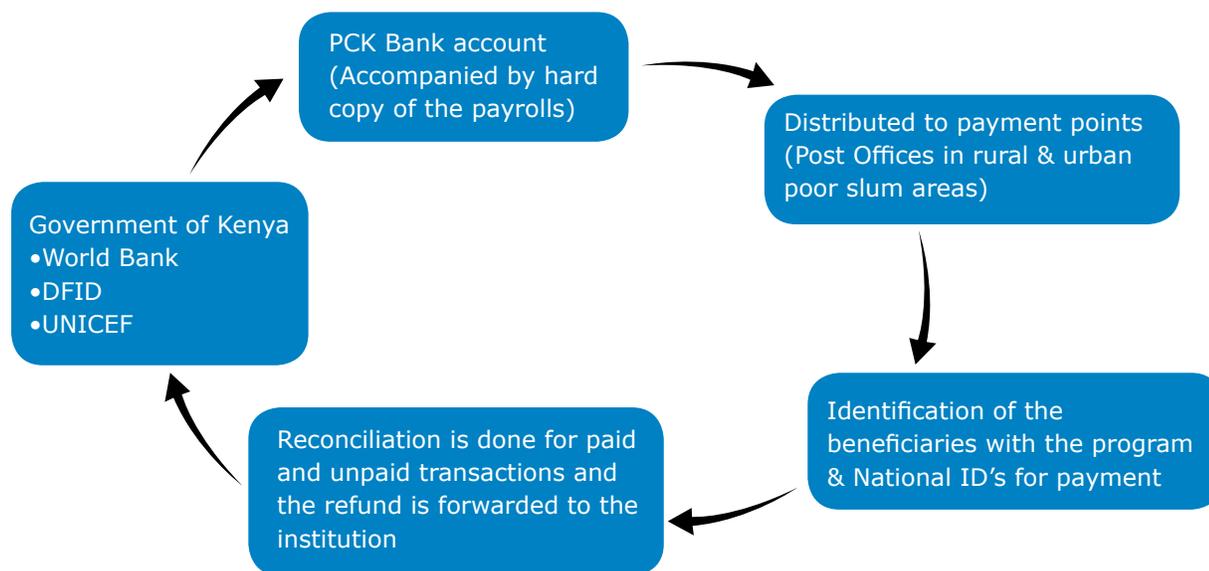


Figure 67: The model for payments through PCK

The PCK has also been able to use its merchant model to facilitate payment to beneficiaries in the Urban Food Subsidy Programme, the Older Persons Cash Transfer Programme and The Persons with Severe Disability Programme, to ensure they have

access to a source of income. These programmes are funded entirely by the government. By May 2012, the government and its partners supported 195,302 households with cash-transfer programs in 69 districts, as shown below.

Government of Kenya Cash Transfer Programs			
Programme	Number of Households	Funding	From
CT-OVC	134,566	GOK, Unicef, DFID, World Bank	2004
OP-CT	36,036	GOK	2007
CT-PWD	14,700	GOK	2010
UFSP-CT	10,000	GOK	2012
HSNP	69,000	GOK, DFID...	

Table 16: Government of Kenya cashTable

(Source: Ministry for Gender, Children and Social Development Kenya)

The Original HSNP Payments Pilot Test

The original HSNP payments pilot test was operated through Equity Bank. The donor project provided support to the bank to develop appropriate systems for operating agency payments in remote locations. This included infrastructure, agent communications, vehicles, and the payment of a range of different fees. One of the lasting achievements of the HSNP payments pilot test is that it helped to leverage Equity Bank into opening branches in the north of Kenya. Based on its commitment to operate in the area, Equity carefully studied local opportunities. The bank found there were significant sources of liquidity in the region, which hitherto had been untapped by the banking sector. In particular, livestock traders traditionally had not kept their funds in the banking system. By building relationships with livestock traders, Equity was able to increase liquidity in their branches, thus reducing the need to bring in cash.

The HSNP/Equity bank offline model is illustrated below.

Initially funds are received by Equity Bank. Each payment cycle is uploaded onto agent POS devices, and agents ensure they have sufficient cash for anticipated payments to be made. At a pre-assigned time and meeting place, pre-registered beneficiaries present their smart card to agents, and verify their

identity with their fingerprint. At this stage, the POS device updates the smart card for the HSNP payment. Typically at this time, beneficiaries chose to withdraw the funds on their card. When the clients withdraw cash, their smart card accounts are debited, and the agent's account on the POS device is credited. The agent now has a low cash balance, but a high electronic funds balance. To restore the electronic balance on the POS device to cash, the agent takes the POS device to a location with signal coverage so the transactions can be uploaded. At this stage, the agent's bank account is credited with the disbursements made, and fees due are paid. Beneficiary accounts are updated to record the field-based transactions.

World Food Programme

WFP has two programmes using electronic money in Kenya, namely cash-for-assets and unconditional cash transfers. The former links beneficiaries directly to fully functioning bank accounts and the latter uses mobile money services.

WFP Cash-for-assets

WFP runs a cash-for-assets programme in seven semi-arid districts, reaching more than 485,000 beneficiaries (approximately 80,000 households): Tharaka, Mwingi, Kitui, Kilifi, Kwale, Taita Taveta, and Malindi. Beneficiaries are expected to work on

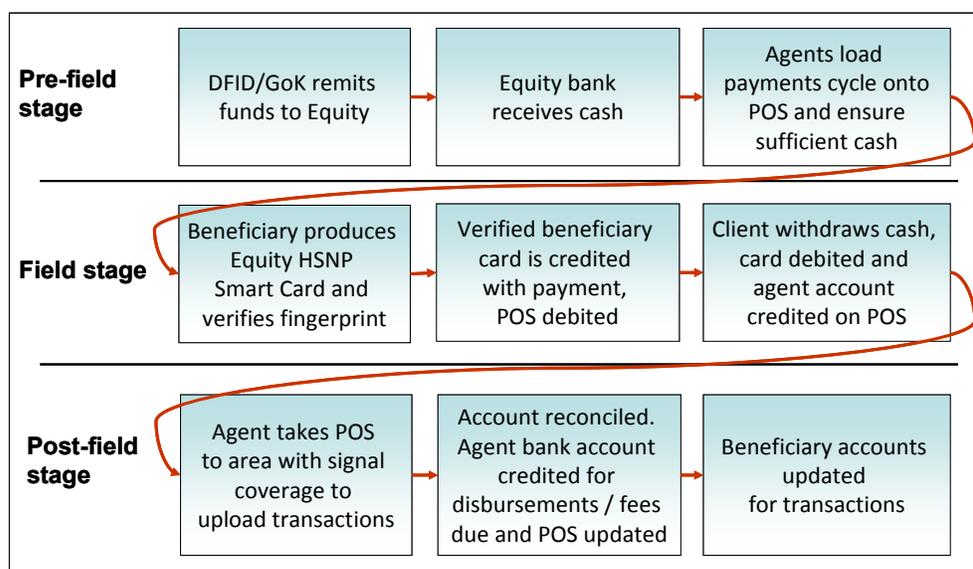


Figure 68: HSNP off-line transaction model

community assets to obtain their payments. The areas targeted are those with functional markets, because it is expected that once the beneficiaries receive cash they will use it to buy food. The amount due is based on an agreed per-household ration and then converted in the market at the prevailing

average prices. The beneficiaries open accounts with either Equity Bank or Cooperative Bank and are issued an ATM card. They can access their money by visiting the bank branch, ATM or respective bank agents where transactions are performed in real time. The table below summarises the process:

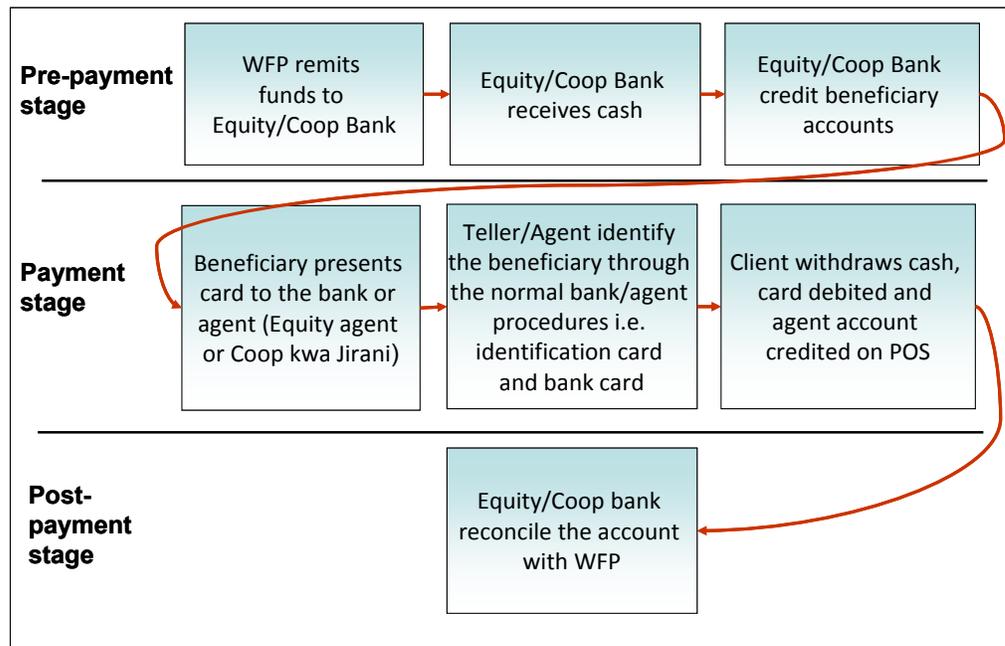


Figure 69: WFP cash-for-assets programme

WFP Un-conditional cash transfer pilot

In addition to the cash-for-assets project, WFP operates an unconditional cash transfer pilot project through which 16,500 beneficiaries (2,700 households) in arid areas receive monthly payments equivalent to the retail cost of WFP's food basket. Under this system Safaricom or Orange provide beneficiaries with SIM-cards and M-Pesa or Orange Money accounts, and the beneficiaries collect their funds at M-Pesa or Orange agents. For households without access to a mobile phone, WFP provides basic handsets that can be shared amongst a group of beneficiaries (approximately 1 phone for every 5 households).

8.2.3 Payment Systems and the arid lands

Payment systems offer the potential for clients to access payment services at multiple points countrywide. This section explores bank branches and agencies, as well as two mobile payment solutions, M-PESA operated by Safaricom, and Tangaza, which can operate using any mobile number.

Bank Branches

Bank branches are crucial in providing and managing liquidity in northern Kenya. However, there are few of them, mostly those of Kenya Commercial Bank

(KCB) and Equity Bank. The table below provides an overview of bank branches currently found in the arid lands.

	KCB	Equity	Other
Dadaab	-	1	
Garisa	1	1	First Community, Gulf Orient, Postbank, National Bank
Mandera	1	1	
Wajir	1	1	First Community Bank
Marsabit	1	1	
Lodwar	1	1	Family Bank
Moyale	1	1	
Maralal	1	1	

Table 17: Overview of bank branches in the arid lands

Bank branches play a particularly important role in the local economy; they store cash, and they provide liquidity to their customers, their agents, and to M-PESA agents. Bank branches provide a range of formal financial services including payroll or payment services to traders, NGOs and government agencies. As such they are often key in facilitating transactions which will occur at a later point, either through bank agents or M-PESA agents. Furthermore banks provide loan products tailored to the local community.

Bank Agencies

Wherever there is a bank branch, there is the potential to support bank agents. Typically this is achieved by having the bank at the centre of a radius in which agents operate, a so-called hub and spoke pattern. While a number of financial institutions have agencies in the north, most agencies belong to KCB and Equity.

KCB manages around 4,000 bank agents from its network of branches. To do so, it has some 160 agency supervisors based in its branch network, with each supervisor managing 20 or more agents. Agency supervisors are managed at regional level by a three-person team across five regions.

Regions are supported by a team of six at head office. Selected agents are known and respected in the local community. Agency set-up costs include a Point of Sale (POS) device, supplied on lease at around KSh 15,000 (about 190 US\$), and the costs of painting the agent's premises.

Connectivity poses a major constraint for bank agencies. In principle, this is provided by the mobile network. However, the quality of the signal is a key concern. Meetings with Family Bank confirmed that most banks require at least GPRS signals to operate real time data traffic, but GSM – the lowest level of signal – can only support voice and SMS.

Offline agents

Both Equity Bank and KCB propose the use of offline agents in more remote parts of Kenya. In this case, expected payments can be loaded onto the offline POS device by the bank. The agent conducts transactions offline. Customers can make withdrawals against these payments using their chip-based cards. Experiences with offline agents have mostly been positive, though there are a number of challenges:

- i. **Offloading balances:** It is necessary to regularly bring the offline POS machines online to download their data. This can be done through the agent moving the POS machine to an area with signal coverage, or through the bank visiting the agent in a van equipped with VSAT connectivity. Once the POS terminal is connected, completed transactions can be downloaded and newly authorised transactions can be uploaded. In the case of cash transfer programmes, this would imply that the offline POS terminal needs to be connected online at least once per payment cycle.
- ii. **Reconciling balances:** With offline POS devices there can be a reconciliation process to perform. In an earlier study of the HSNP pilot test, two out of three Equity Bank offline agents said they had had reconciliation issues. Reconciliation issues can arise when transactions are performed twice, or when amounts are transferred to the wrong account.
- iii. **Biometric mismatches:** Typically with offline systems, customer identification is ensured through biometric information held on the chip

embedded within a smart card. If the original registration of the biometric information was faulty, then there will be a biometric mismatch and the customer will be unable to withdraw. To control this problem, a number of solutions are available, e.g. the registration of a larger number of finger print impressions, or a process which can be used to recapture biometric information, if required.

One challenge when using an offline agent is that customers cannot connect to a live version of their accounts, as accounts are only updated once the offline POS is uploaded. Most customers with limited access to their cash will withdraw the entire cash amount transferred, as they cannot access online services easily.

Bank agents are currently used primarily for cash deposits and withdrawals. However, there is significant potential for the optimisation of agency banking in a number of ways:

- Expanding the range of POS-based transactions. KCB indicated that they are planning a major upgrade, which will enable different types of transactions to take place through an agent-based POS device, including: (a) account-to-account transfers; (b) account-to-phone transfers; and (c) phone-to-account transfers.
- Developing products and services to ride on POS devices. This could include, for example, payroll services and automatic loans, i.e. loans secured against past performance or future entitlement.
- Developing products to operate on Smart Phones (as opposed to POS devices). This could include applications targeted toward assisting local traders to manage their supplies, or to manage loans with their customers.

For a transfer mechanism through agents to work, there must be an “agent business case”, i.e. there must be sufficient business and profit for an agent to justify his costs and risks. These mainly arise with the transport of cash; the more remote the location where an agent operates, the higher his costs and the lower his transaction revenue can be expected to be. Profits are mostly earned from the direct transaction revenue or are generated indirectly; for example, in case where agents are

shopkeepers (which is often the case), and their turnover increases as the bank agency draws customers to the shop. Some agents have tried to pass the cost of obtaining cash to their clients, by charging additional ‘informal’ fees. While this is a logical consequence of the above-mentioned costs of liquidity, Equity Bank has removed some agents for overcharging their customers.

Without clear incentives for doing business, agents will discontinue operations (as was experienced by Equity Bank), with the result being lost investments and a foreseen payment mechanism becoming unavailable. Additional compensation for remote agents may therefore be needed to secure the agent business case.

8.2.4 M-PESA: ubiquitous and trusted

Safaricom’s M-PESA money transfer product works through any mobile phone handset using a SIM toolkit, a software loaded onto the SIM card. M-PESA provides simple menus which guide the user to input the nature and amount of the transaction, and the telephone number is being used to transact with. A PIN number is entered, and a confirmation of the transaction is generated.

M-PESA is by far the most ubiquitous provider of payment services in Kenya, including in the arid lands. It operates wherever there is a mobile signal. Until recently, there was very poor signal coverage in northern Kenya, and a recent mission to review aspects of the HSNP noted particularly poor coverage in Turkana. However, signal coverage appears to be rapidly improving, particularly in North Eastern Province. The field research team noted that:

- While Safaricom’s signal is available in almost all the research areas, at least at trading centres, there is limited coverage in areas immediately beyond these centres.
- Uptake of mobile phones amongst the WFP target group was relatively rapid once the mobile signal became available to a moderate level. Around 50 percent of focus group participants had mobile phones.
- M-PESA and Safaricom were widely trusted by FGD participants.

- Time-series analysis suggested that the population makes rapidly increasing use of both M-PESA and Equity Bank agents and, to a lesser degree, of KCB agents.

These findings have profound implications for the provision of payments services in rural communities, as they imply that – at least for literate beneficiaries possessing a mobile phone – M-PESA becomes a viable option for providing cash transfer services.

8.2.5 Tangaza

Tangaza is the second largest mobile payments provider in Kenya after M-PESA, but it is still quite small, with some 170,000 registered customers and a reported 800 agents. It has very few agencies in the north, so it would need to expand considerably if it were to process humanitarian cash transfers.

Despite the serious limitations in network and agents in the arid lands, Tangaza is mentioned here in some detail because its technical solution is different from other service providers. It offers ways for users to access their mobile payments account even without a PIN, or without conventional identification. Tangaza users can be clients of any mobile network, and whilst they need to be registered and have a network phone number, they do not actually need to possess a phone to access services.

Tangaza agents are equipped with a Personal Digital Assistant (PDA) which has a built-in camera. The PDA is connected to a biometric reader, number pad and printer. When users are registered on the system, the agent captures biometrics, national identity card, photographs and a PIN number. When a transaction is made, an agent can access all forms of identification. Multiple finger prints are captured upon registration. The national identity card number is cross-checked against the national database.

When a client conducts a transaction, the normal practice is for both PIN and biometric data to be used to authenticate a transaction. However, when a PIN transaction fails due to the system's security level, an agent can handle a PIN replacement

transaction easily using the customer's photograph and biometric details.

In addition to the SMS receipts generated by the transaction – and unlike transactions on the mobile networks – a physical receipt is printed which the customer can keep. Tangaza is in the process of issuing ATM cards which can be linked to the customer's Tangaza account. This will then enable customers to access services through ATM networks connected to Tangaza, for a fee.

Tangaza has also thought very carefully about integrating their solution into their own business. Using Tangaza, the agent can order from suppliers who can register their own stocklist on Tangaza through an easily accessible, downloadable menu. This solution has different levels of sophistication for retailers, distributors and wholesalers and includes Internet access, and options for tracking the transactions of individual sales agents.

8.2.6 Advantages and Disadvantages of Different Mechanisms⁴⁹

It is not easy to choose the most appropriate payment mechanism for the arid lands. Fortunately, however, the Cash Learning Partnership (CaLP) has gathered experiences from piloting electronic systems in different parts of the globe. CaLP was formed to gather the lessons learned from the Tsunami emergency response in 2005. It is today composed by Oxfam GB, the British Red Cross, Save the Children, the Norwegian Refugee Council and Action Against Hunger / ACF International. In November 2011, CaLP carried out a study called "New Technologies in Cash Transfer Programmes and Humanitarian Assistance".⁵⁰ The study includes a comparison of experience with prepaid cards (P), smart cards (S), mobile money (M) and electronic vouchers (V). While there is no numeric interpretation in this table, and limited data in the study itself, the table provides an overview of areas where there is some evidence (x) and other areas where there is substantial evidence (X) of the different themes and benefits:

⁴⁹ This section is expanded and adapted from a similar section in MicroSave's HSNP study.

⁵⁰ http://www.cashlearning.org/downloads/resources/calp/CaLP_New_Technologies.pdf

Theme	Benefits experienced (x = some evidence, X = substantial evidence)	P	S	M	V
Accountability	■ Unique PIN protection increases the likelihood cash reaches the intended person	X	X	X	X
	■ Increased visibility of use of the grant and control of what recipients buy	X	X	X	X
	■ Secure systems / reduced handling of cash reduce leakage	X	X	X	X
Security	■ Considered to reduce the exposure of staff and recipients to possible robbery	X	X	X	X
	■ Particular vulnerable groups such as women are able to keep cash securely	x	X	x	
Partnership	■ Private sector service providers reduce workload and risk of staff moving money	X	X	X	X
	■ Service provider have gone the extra mile in providing the service required	X	X	X	X
	■ Good publicity for the service provider	X	X	X	
Accessibility	■ E-payments were generally understood by recipients	X	X	x	x
	■ Reduced opportunity costs, store purchase reduces liquidity issue	X	X	X	x
	■ KYC requirements more relaxed than bank accounts		X	x	X
Cost	■ Technology reduces the variable distribution costs on recurrent transfers	X	X	x	X
	■ Possible to deliver e-payments without significant investment in hardware	X		x	X
Operations/ Efficiency	■ Branchless banking agent model enables penetration to areas without banks	x	X	X	X
	■ Offline functionality	X	X	X	
	■ Generally the technology performed well		X		

Table 18: Benefits of different transfer systems

Theme	Benefits experienced (x = some evidence, X = substantial evidence)	P	S	M	V
Accountability	■ People shared their PIN meaning there is a risk of fraud or coercion	X	x	X	X
	■ Increased control of expenditure reduces flexibility and choice for recipients	X	x	X	X
	■ There remains some evidence of leakage at point of cash out	x		x	
	■ Some difficulties in reconciliation			x	
Security	■ Most people 'cash out' so still have risk of carrying cash	X	X	X	
	■ Desire for cash out means programmes still have to move physical cash	X	X	X	
Accessibility	■ Literacy prevents a barrier to full adoption	x	X	X	X
	■ Lack of agents and agent liquidity can delay cash out	x	X	X	X
	■ KYC requirements remain a barrier to some poor households	x	X	X	X
Cost	■ Initial set up costs can be significant	x	X	X	X
Operations Efficiency	■ Poor connectivity can cause transaction delays and problems with reconciliation	x	X	x	x
	■ Technical glitches occur in any new system and biometrics can be error prone	X	x	X	x
	■ Delays due to the time required for identifying systems and negotiating contracts	X	x	X	X
	■ Significant investments in training required		x	x	

Table 19: Issues encountered with different transfer systems

8.2.7 Assessment of Different Payment Approaches

The Strategic Assessment of Payment Services Report⁵¹ examined each provider against a Payments Scorecard, using twelve specific criteria. Five criteria focused on meeting recipient requirements, reliability, communications, dignity, and financial inclusion. Four criteria focused on meeting funders' or administrators' requirements, security of funds transfer, and security of authentication and cost. Three focused on national requirements, including scalability, flexibility and national coverage.

The composite scores are shown in the table below.⁵²

Provider	Score
Posta / PCK	49%
Equity HSNP	69%
Equity CT-OVC	72%
Equity WFP	83%
M-PESA	69%

Table 20: Scores of payment systems

The major differences between WFP's Cash for Assets programme compared to the HSNP or CT-OVC programme, are that WFP's programme provides a magnetic stripe card, and a fully functional Equity Bank account, and the participant can access services through any Equity Agent, branch or ATM. This accounts for higher scores for some indicators like financial inclusion, scalability and flexibility.

51 Pulver, Caroline, 2013: Strategic Assessment of Payment Services for the Kenya National Safety Net Programme – For Results, World Bank

52 For details on the scoring and definition of criteria, reference is made to the report.

Observations, Implications and Recommendations

Observation	Implication (s)	Recommendation
Security of cash – clients will share their PIN numbers with agents and family.	PIN sharing can mean that funds are not released to the right individual	Examine the practical implications of PIN sharing to determine appropriate actions to be taken. Consider use of multiple forms of identification.
Literacy – Literacy will be a constraint to full adoption	Illiterate clients may find it difficult to adopt certain solutions.	Where possible, and viable for agents, enable clients to operate through one of several payment mechanisms.
Agent availability – availability of agents will be a constraint to full adoption	Clients may not receive service where they need it, this could be a problem particularly in more remote areas.	Consider use of offline solution to make the cash transfers. Give some incentive to agents who can the pay beneficiaries on mobile basis in very remote locations.
Offline solutions – will increase delays and lead to reconciliation issues	Beneficiaries' dissatisfaction with the system may reduce their confidence in using technology based mechanisms. Delay will increase beneficiaries' vulnerability.	Scheduled payments might help in managing liquidity for the agents. Challenge then will be the security of the money.
KYC requirements – can be a barrier in some households	The implications of KYC need to be understood and planned around.	Ensure the solution adopted by WFP plans around the specific requirements of KYC.

Table 21: Observations, implications and recommendations on payment systems

8.3 Macro Issues in Developing Payment Systems

8.3.1 The National Social Protection Policy

The Strategic Assessment of Payment Services for Kenya's National Social Protection Policy notes that the National Social Protection policy aims to create a framework around which the "five main cash transfer programmes will be increasingly coordinated and harmonised". There are three main objectives of this harmonisation;

- More robust systems for targeting, beneficiary registration, payments and monitoring
- Harmonise the programmes to improve the sector's coherence
- Expand coverage of the five programmes in

a coordinated manner that will progressively realise the right to safety net support.

Collectively, these actions are likely to lead to a series of strategic decisions which will define the social payment space in Kenya.

The study further outlines payment system legislation and guidelines which are in the process of being enacted. Guidelines include the Retail Transfers Guideline 2010, issued under the Central Bank Act, which creates a new regulatory category of Payment Service Provider. These guidelines require that payment services are handled by authorised payment service providers and that payments are effected in real-time. This implies that transactions should be provided in an online environment. The guidelines also require that systems should be interoperable with other payment systems in the country and internationally.

The Guideline on Agent Banking allows banks to appoint agents to carry out limited banking business, however, all transactions should be in real-time. This has implications for the provision of service through remote agents, as remote agents will need to be connected through satellite-based systems, or an offline solution will be needed for using stored value cards.⁵³

The study concludes: The NSNP and the individual CT programmes will need to plan to comply with the changing regulatory environment. Specifically this entails:

1. All recipients of payments should hold a national ID
2. Payment transactions must be made in real-time
3. Payment systems through which payments are made should be interoperable
4. Non-bank providers will need to be prepared for licensing as Payment Service Providers by the Central Bank.”

Discussions with financial institutions and industry stakeholders indicated that although there is a wide range of design issues at the level of individual payment system users, there are some industry-level concerns which specifically need to be designed around. These issues are the use of PIN-based solutions, the cost of liquidity and the impact of Know-Your-Customer regulations. Each of these issues will be addressed in more detail in the following subsections.

8.3.2 Use of PIN-Based Solutions – PIN Replacement

PIN-based solutions have a number of operational challenges which revolve around the consequences of clients losing PIN numbers and the time to replace PIN numbers or cards. When a client loses a PIN number, he or she loses access to the payment solution.

Choice of PIN number: The present study, the CaLP study as well as WFP’s experience indicates that clients either chose very simple, insecure PIN

numbers, either based on a repeated digit, or a birthday. Education is required to encourage clients to change PIN numbers so they are more secure. A system tested by WFP in one location was to print a series of numbers on the face of the card which clients could use to create a PIN.

Consequence of losing a PIN: The consequence of losing a PIN number varies considerably by the financial service provider. With M-PESA, it was reported that PIN numbers could be obtained relatively easily through calling customer service. For EMV-compliant financial institutions, it was noted that due to security concerns, when a PIN number needed to be replaced, the card had to be reissued (Equity). KCB has security procedures in place with the card printers in which a lost PIN can be replaced by producing a new PIN mailer. However, the challenge will be how easily the PIN number can be transferred to the customer.

PIN loss is not regarded as a significant issue by the banking sector, amongst ‘typical’ bank clients, and amongst those who use the PIN number frequently. However, the frequency of lost PINs increases significantly for M-PESA and at least anecdotally amongst those who are illiterate, and/or use their PIN number infrequently.

This implies that where PIN-based solutions are to be used, the risk of PIN loss needs to be actively managed. WFP is aware of this from its other cash transfer programmes, and in some programmes it takes over the role of arranging PIN replacement for its clients.

8.3.3 The Cost of Liquidity

According to commercial banks, liquidity (i.e. having cash reserves in place) is one of the main constraints to operating financial services in the arid lands. To understand the importance of liquidity, and its impact on cash transfer programmes, it is necessary to understand how bank agencies or mobile payment agencies work, and further to appreciate the interaction between commercial banks and these agencies.

⁵³ For an explanation of how this might work see footnote 20 in the Strategic Assessment Study.

Bank and mobile payment agents essentially operate a 'float' system. An M-PESA agent, for example, pays money – say, KSh 100,000 – into his M-PESA agency account. He now has no cash, but he has KSh 100,000 of electronic money. When a customer comes to deposit a cash amount of KSh 10,000, the agent exchanges KSh 10,000 of electronic money, so he now has KSh 90,000 of electronic money and KSh 10,000 of cash. The agent can continue to operate until he runs out of electronic money. Similarly, when customers come to withdraw cash, the agent's cash balance goes down and his electronic money balance goes up.

Cash transfer programmes typically involve paying out cash to beneficiaries, which means that agents have to either generate large amounts of cash within their businesses to fund this cash flow, or they need to ensure that they provide of significant volumes of cash prior to large-scale disbursements being made.

Different locations have very different cash flows. Often cash circulates around market days (as is the case in Garissa), on which cash is reported to be more readily available. In other locations, liquidity dips in the middle of the month.

Discussions with KCB indicate there has been a gradual reduction in the number of cash-in-transit movements. Cash deficits are seen in Moyale, Marsabit, Lockichoggio (approximately 6 cash trips are required to each location per year), and in Turkana (requiring about 3 trips per year). Each cash movement costs approximately Ksh.250,000, as cash is usually flown in. By contrast, some areas such as the northeast are actually cash-rich. Garissa, for example, has a surplus liquidity of around KSh 1 billion.

These figures suggest that while the costs of maintaining cash reserves in commercial centres in the north of Kenya are significant, they are not prohibitively high. The case may, however, be different for areas beyond commercial centres. It is important to note that KCB sees the cash mismatch decreasing over time, with NGOs, construction projects and devolution bringing cash to the counties. Local economies are expected to become more sustainable.

8.3.4 The Impact of Know-Your-Customer Regulations

Worldwide, financial legislation operates to safeguard the security of the financial system, and to prevent and/or trace undesirable or criminal transactions. Collectively this legislation is known as Know Your Customer (KYC), Anti Money Laundering (AML) and Combating the Financing of Terrorism (CFT). The legislation which has the most potential impact for cash-transfer programming is that concerning KYC.

Central to KYC regulations is a statutory obligation for financial institutions to know their customers. This means, in practice, to verify the identity and address of all of their customers. In Kenya, the National Identity Card is usually used to satisfy customer identity and a utility bill to confirm residence.

The Strategic Assessment of Payment Services noted that "up to 20 percent of programme beneficiaries covered by WFP did not hold a national ID, 20 percent of HSNP did not hold an ID and 10 percent of beneficiaries in the Urban Food Subsidy Programme did not hold an ID." Field research under the present study suggests that it is even more common for residents in the arid lands not to have a national ID.

The Strategic Assessment of Payment Services suggests that, as a short term imperative, a strategy is needed to help beneficiaries acquire national IDs. It suggests the five government programmes develop a coordinated strategy for engaging with the National Registration Bureau. This is laudable, and WFP should be part of an effort to register Kenyan citizens.

In the short term, however, alternative approaches may needed to satisfy the legislative requirement. According to Stephen Mwaura, of the Central Bank of Kenya:

"KYC is a challenge, but it is one which can be worked around. KYC does not have to revolve around the National Identity Card, this is just one form of identification. Customers for the WFP programme are known individuals approved by WFP, and situated in a location known to WFP, they receive

regular payments. Therefore, if this knowledge can be converted into a form of identification acceptable to the different banks etc., then the KYC issue need not be a major challenge”.

In determining its actions, WFP will need to consider that a significantly greater percentage of its beneficiaries in the ASAL region are likely to be either non-Kenyan citizens, especially in the Northeastern livelihood zone, or Kenyans without National Identification Cards. It is further likely that many WFP beneficiaries are also recipients of assistance from other social transfer programmes. This implies that as a strategy, WFP will need to liaise with the Government of Kenya to determine its approach. For Kenyans without national ID cards, WFP may have to issue temporary identification documents acceptable to the Central Bank of Kenya, while helping these beneficiaries acquiring a National Identity Card. For non-Kenyan citizens, it is probable that WFP would need to issue appropriate identification documents.

8.3.5 The Importance of Creating a Payments Eco System in the arid lands

Security is a long term issue in the north of Kenya, and while this may change over time, particularly with the discovery of oil in Turkana and construction of roads to Ethiopia and South Sudan, it is unlikely to change rapidly. This means that cash is limited in the north, and moving cash is expensive.

“The issue should not be to move more cash to the north, but rather to move as much value electronically as possible. If people need to make transactions, then the task is to facilitate as many electronic transactions as possible, and to keep these transactions electronic.” **Stephen Mwaurea, Head of Payments, Central Bank of Kenya**

These thoughts are echoed in a recent study⁵⁴ which examined in detail the cash flows in a rural community in Eastern Province. The study noted that there are two ways to move toward “cash-lite”: through increasing recirculation of cash, and by increasing the prevalence of e-payments.

Increase local recirculation of cash (reduce the cost of moving large amounts of cash over space)	Increase prevalence of e-payments to decrease use of cash in total
<ul style="list-style-type: none"> ■ Agencies bring cash in for cash transfer programmes from banks, with transport appropriate for the geography and local circumstances. ■ Agencies also need to bring cash to support remittance payments which are being paid through M-PESA. 	<ul style="list-style-type: none"> ■ Significant expansion in bank agencies and M-PESA ■ Increase use for making trade payments to reduce challenges of insecurity and infrastructure ■ Increased use of e-payments to pay school fees and payment of support to children in school ■ Transfer of e-value from bank accounts to M-PESA ■ Payment of advances for food from agent/merchants

Table 22: Options for moving towards ‘cash-lite’

For WFP, this would mean that if the goal is to provide food security and not just to provide cash, then it should seek as many options as possible for clients to pay for their food electronically. Considerations should include the traders who sell to WFP beneficiaries, as they too would, to the extent possible, have to be able to make their purchases electronically. If the merchants are receiving large amounts of electronic value on M-PESA, then they may be encouraged to make payments for their stock using M-PESA, rather than using cash through the banking system.

If merchants are M-PESA agents, and cash reserves are low, then in principle the agent could, instead of paying out cash, pass over goods of equivalent value to the cash withdrawn. However, to avoid agents taking undue advantage of their position and, for example, increasing their prices, it must be ensured that beneficiaries can insist on receiving cash, if they so prefer.

⁵⁴ Financial Sector Deepening (2012): “Time for Cash to Cash Out?” – Scoping Kenya’s Path to a Cash-Lite Society.

An important potential hindrance for moving toward an e-payment environment in the north is transaction size. In the arid lands, a large number of individuals make small daily food or airtime purchases, depending on their cash flow. In situations like this, 'cash is king', and a transition toward an e-payment environment is more difficult. This is confirmed by the observation (see above) that many beneficiaries cash out the full amount of an electronic transfer immediately, rather than making transfers from their e-account.

According to the above-mentioned cash-lite study, market day traders can be important agents of direct cash leakage from an area, if they carry received cash with them, rather than deposit it locally. In the north, traders do not move around as much as in other areas, and are usually based in a single location, due to poor infrastructure, poor security and the vast amount of time required for transport. They receive supplies via a number of different ways, including buses and lorries moving between communities, and – for certain commodities – via trucks which follow regular supply routes. For example, some traders in Wajir are supplied from Isiolo. That is because a truck driver has a supply route which passes through Isiolo, Modogashi, Habasweni and then to Wajir, a journey which may take several days.

Enhancing an e-payment environment in the north would thus require that traders can pay for goods through the routes described above with transfers not involving cash payments. This aspect is examined more closely in the following point.

8.3.6 Encouraging Business Use of Mobile Payment Systems

A recent study by FSD-Kenya⁵⁵ questioned why businesses did not use M-PESA more frequently. The study identified a range of constraints:

- **Competing payment options:** This is particularly the case for established institutions that already have bank accounts, with cheques, Electronic Funds Transfer (EFT) and Real Time Gross Settlement (RTGS) transactions.
- **Paper trail and authorisation procedures on payments:** Established businesses require a paper trail on transactions for approval

purposes, and do not generally have a unique business phone on which mobile payment transactions can be performed.

- **P2P Payments:** Most businesses do not have a business account number. Therefore when they accept payments, they often do so through employee phone numbers. Once received, these payments need to be cashed by the employee and processed with the business proceeds.
- **Length of time for PayBill payments to reflect:** It can take up to four days for PayBill payments to reflect on business bank statements. Moreover, it is often a challenge to reconcile received payments using the PayBill function.
- **Trust issues:** Business owners find it more difficult to trust the M-PESA system, due to either to SMS fraud or attempts by customers to reverse accepted transactions by calling M-PESA customer services.

Despite these constraints, the study notes a number of opportunities:

- There is greater use of M-PESA amongst less formal businesses.
- There is increasing uptake of customer payments through PayBill.
- There is active use of payment systems to handle distributor payments, so that distributors receive payments on delivery, without receiving cash. There is also a practice by traders in the research area of using M-PESA to store cash on M-PESA whilst they move from place to place, cashing out only when they reach their intended destination, where they make their purchases.

Finally, interoperability is important for the development of an e-payment environment which can work in the north. As long as all payment methods and channels remain separate and incompatible, such an environment can only develop slowly and will always remain far behind its potential. Interoperability has several aspects. It could encompass businesses which can operate for multiple service providers, e.g. a business which is registered as an agent both for a bank, and a mobile payments provider. Interoperability can also mean a payments provider which can operate on multiple networks (such as Tangaza), or

⁵⁵ To be provided by MicroSave

a payments provider which can link into many bank accounts (such as mobicash).

In much of Kenya, interoperability appears to be discouraged on an informal basis. For example, bank agents can be agents of multiple financial institutions. However, financial institutions have taken to painting the agents' buildings in their colours, associating them with their bank through highly visible branding. M-PESA agents are regularly inspected and reported on by M-PESA's Top Image.

However, there were clear reports from the field team that varying degrees of interoperability are being practiced, with agents, for example, doubling as banking agents for Equity or KCB and/or M-PESA.

8.3.7 Conclusions from Literature Review and Stakeholder Interviews

- Various channels exist that can be used as delivery mechanisms for cash (and to some extent vouchers). Each has its advantages and disadvantages, depending on the exact purpose and location of the transfer recipient.
- The situation is dynamic, as network coverage and mobile phone ownership are expanding rapidly in the arid lands.
- The less the cash is handled, the lower are the risks of leakage and transaction costs, in particular liquidity costs.
- The above findings are altogether encouraging with respect to the probability of an e-payment environment developing in the north. Such an environment increases the feasibility of providing cash-transfers to WFP beneficiaries, by significantly reducing transaction costs and the problem of low cash presence in the arid lands. In turn, an e-payment environment could also benefit considerably from WFP cash-transfers being made through e-payments, by adding scale as well as new users to the system. Thus electronic WFP cash- (or voucher-) transfers could strengthen this environment as an important, indirect benefit which – at least in the medium-term – is one of the preconditions of economic development in the arid lands.

8.4 The Supply Side – The Financial Service Environment in the ASAL Region

To determine the availability of suitable agents in the arid lands, existing and potential banking and mobile payment agents were interviewed to assess their suitability (in terms of range of services provided, use by the population, etc.) and their interest in being channels for distributing cash to WFP beneficiaries.

The map below shows the distribution of financial services in the arid lands. It is only indicative, as it reflects information based on the review team's observations, supplemented by secondary sources.⁵⁶ The figure shows the concentration of financial services in major population centres, which are separated by vast distances. In addition, concentrations of services exist near the borders of Ethiopia and Somalia, and particularly in Garissa and Marsabit.

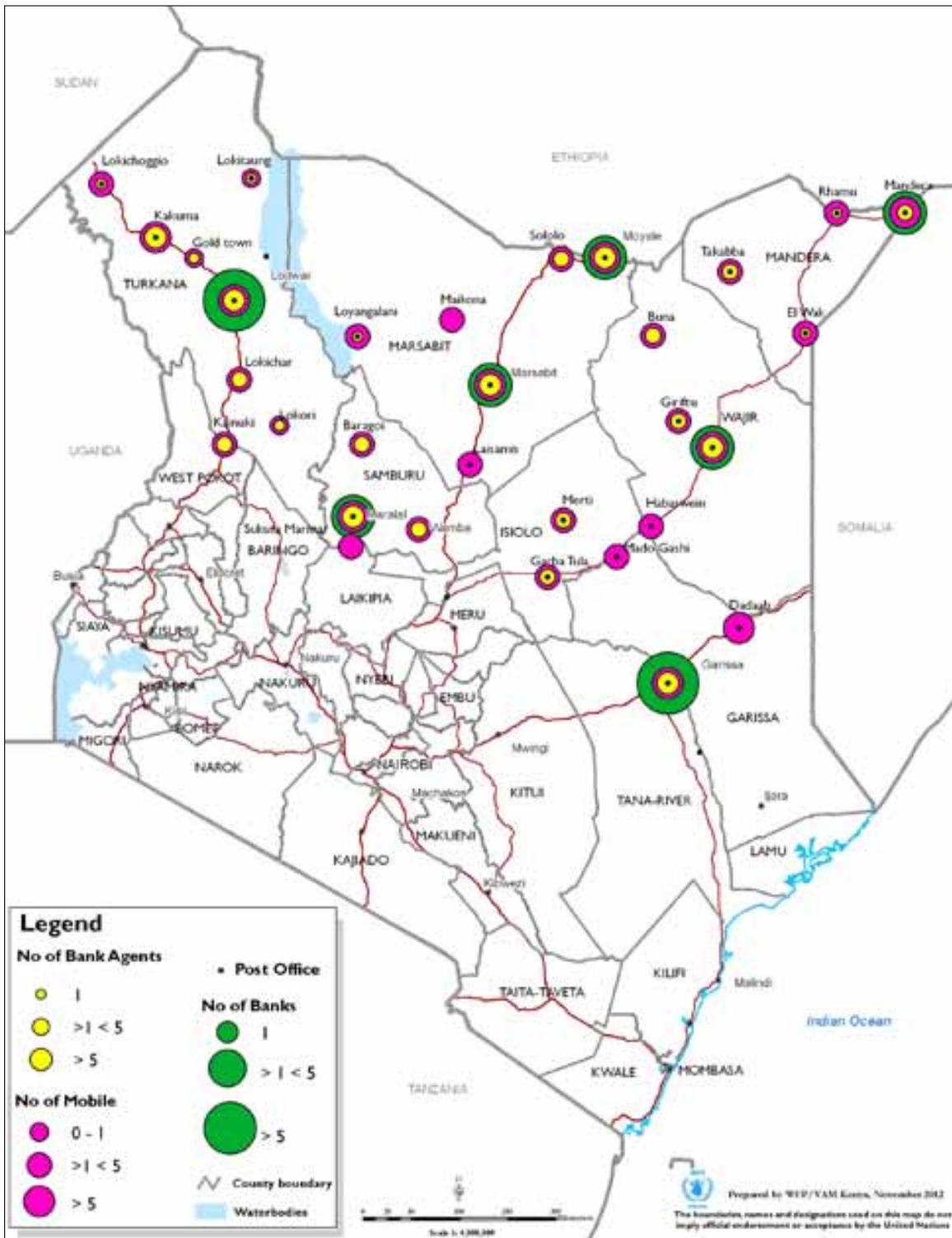
Traders get into the agency business with the intention of earning a profit. In the arid lands, shopkeepers in remote shopping centres also provide savings, and sometimes credit services. The traders are trusted by members of the community and many are willing to partner with NGOs to provide services to the community. Most of the agents interviewed easily achieved transaction volumes of between KSh 100,000 - 200,000 per day, especially on busy days (market days, end of month or school opening days). The traders are willing to make necessary arrangements to meet conditions stipulated by financial or money transfer providers.

“Capacities can be built according to need....float limits can be upgraded as long as there is an arrangement (with the NGO)”. An M-PESA agent

In Garbatula, a businessman who is also an Equity Bank agent indicated that employees such as teachers and doctors at the local hospital carry out transactions at the agency mainly due to the distance to the nearest bank. Parents are also able

⁵⁶ Detailed up-to-date information on KCB agencies is not available on the KCB website, however, the broad distribution of agents is indicated in the map below.

WFP KENYA - Financial Service Providers in Arid Areas - 2012



Map 10: Financial service provides in the arid lands

to deposit school fees. The NGO influence in the region has also led to the increased use of the agents by the population. Organisations such as the Kenya Red Cross Society (KRCS) have used the Equity Bank agent in Garbatula as a withdrawal point for beneficiaries coming from the remote Garfasa and Malka-daka areas. The agency uses both POS and mobile devices for carrying out transactions.

In Marsabit, a business woman with a retail shop has partnered with Community Initiative Facilitation and Assistance (CIFA) to provide food items from her shop to targeted beneficiaries holding CIFA food vouchers. She is also an agent of Kenya Commercial Bank (KCB).



Figure 70: A Co-op Kwa Jirani and Equity Agent in Garbatula



Figure 71: A KCB Mtaani agent in Marsabit

The following table summarises the main issues, their implications as well as recommendations with respect to the retail environment in arid lands region.

Observation	Implication (s)	Recommendation
<p>Availability – In most of the locations visited there are more M-PESA agents than other mobile operator agents. The bank agents in the areas are the Equity Agent, KCB Mtaani Agent and Co-op Kwa Jirani Agent. Equity Bank, in terms of agents, has a bigger presence in the arid lands than KCB and Co-op Bank.</p>	<p>Most people are likely to find it easier to use M-PESA and Equity Agents as a result of their availability. There is a higher level of awareness and usage of the services offered at these agencies.</p>	<p>In areas with connectivity, WFP could make direct payments to beneficiary M-PESA accounts to be withdrawn at an M-PESA agent; or send cash to beneficiary bank accounts to be withdrawn (i) from the bank branch; (ii) from the bank agent or (iii) from M-PESA agent where the account is mobile enabled.</p>
<p>Connectivity - In terms of mobile phone connectivity, Safaricom is the main provider in the region. Other mobile operators (Airtel, Yu and Orange) are only in major towns. In a few remote locations (e.g. Turbi, Walda, or Dabel) Orange is the only operator.</p>	<p>Cash transfer agents are concentrated in areas with connectivity. (See Map 10:). In areas with poor or no connectivity, residents would need to travel long distances to access cash transfer services.</p>	<p>In areas without connectivity, WFP could explore the use of offline transactions where agents are engaged by financial institutions to pay a pre-determined amount to beneficiaries.</p>
<p>Float - Many agents lack capacity to hold large amounts of cash, and find it difficult to replenish their floats (electronic values) as banks are located far from their trading centres.</p>	<p>Agents may delay or even fail to provide services as needed.</p>	<ul style="list-style-type: none"> ■ Agents' capacity may need to be enhanced in order to meet the demand for their services. ■ WFP could transfer electronic vouchers instead of cash. ■ Beneficiaries and traders can be encouraged to use electronic payment for goods.
<p>Technology - Many agents use mobile phones or POS devices to transact. In areas with no coverage/signal, offline systems can be used for cash transfer.</p>	<p>There are options available for both offline and online transactions</p>	<p>Different locations would require different solutions.</p>
<p>Business Support - Some of the bank agents are located far away from bank branches which makes it difficult for support to reach them.</p>	<p>Insufficient technical support in terms of customer case management, training, or float management for agents in remote locations may lead to service delays.</p>	<p>Adequate technical support and training to agents must be put in place, and customer case management must be mapped well before the program commences by channels selected.</p>

Observation	Implication (s)	Recommendation
Business Case - Bank agents have fewer transactions than M-PESA and in most cases agents are used to facilitate cash transfers to beneficiaries.	Cash transfers may not entail higher transaction volumes for bank or M-PESA agents as beneficiaries are likely to withdraw benefits in lump sums. For bank agents in remote areas, there may not be a sufficient business case.	Bank agents in remote locations will need additional incentives as they operate in harsher business environments than their counterparts in major towns.

Table 23: Issues, implications and recommendations on retail environment

8.5 Demand for Financial Services in the Arid Lands

The evolving demand for financial services in the arid lands was examined using several principle tools.

Firstly, quantitative data was obtained from the Central Bank's FinAccess datasets. The FinAccess survey is conducted every three years⁵⁷ on the basis of a standardised questionnaire, which is administered to over 5,000 randomised participants across Kenya's different geographies. Whilst the questionnaire is evolving over time with the evolution of the financial sector, the common core enables comparisons to be made over time. The quantitative dataset was restricted to the 2006 and 2009 datasets, as the data for the 2012 survey was being collected toward the end of 2012. The 2006 and 2009 FSD FinAccess datasets show the level of financial access in the country which includes, among other areas, savings, credit, money transfer and mobile phone ownership. The section below highlights the status of financial services in the arid lands, according to the FinAccess. It covers the districts of Isiolo, Samburu, Marsabit, Moyale, Wajir, Mandera, Garissa, Turkana and Tana River.

Secondly, focus group discussions were carried out throughout the study area. The qualitative research was carefully designed using a combination of overlapping focus group discussions, individual interviews and participatory rapid appraisal tools to provide a representative and realistic picture of the financial landscape in the arid lands.

8.5.1 Use of Savings, Credit and Money Transfer

The arid lands region has seen the emergence of a number of formal financial institutions over the past five years. However, many of the respondents and communities in general still do not use them. As shown in the figure below, apart from Equity Bank and M-PESA, many people still prefer using informal financial service mechanisms such as shopkeepers, merry-go-rounds and livestock. The reasons for their preference of informal methods include ease of access and, in the case of livestock, the opportunity to obtain decent returns.

Equity Bank, KCB and M-PESA have achieved greater penetration in ASAL areas which has led to increased use of financial services in the area. The figure below shows the financial service providers used in the locations visited.

⁵⁷ The FinAccess 2012 Survey was conducted at the end of 2012. At the time of writing this report the dataset is not available.

Financial Services Providers Available

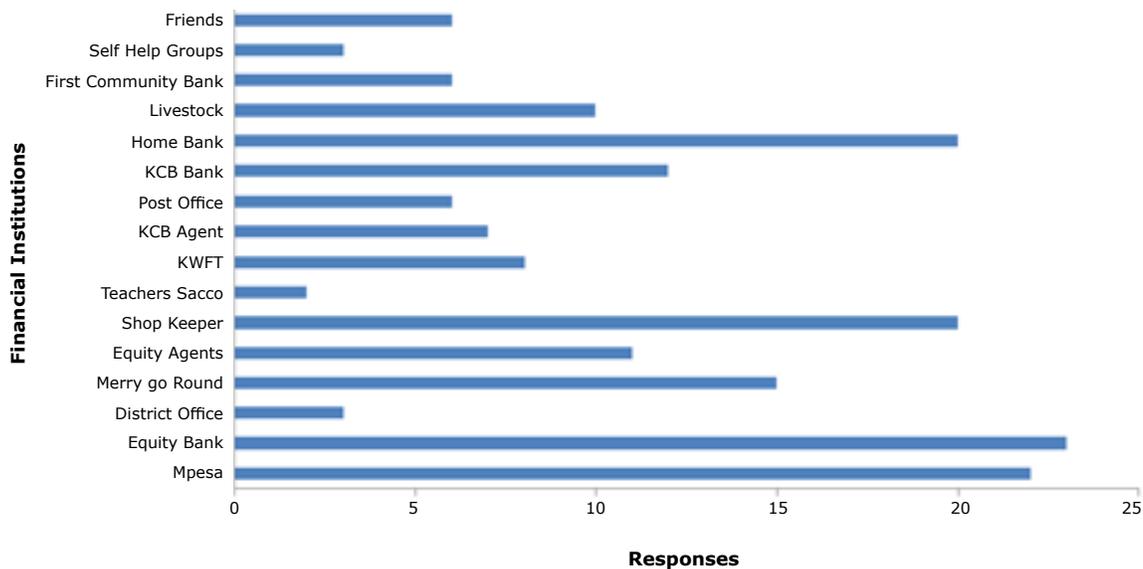


Figure 72: Financial services used by focus groups in the arid lands

It should be noted that “home bank” is a euphemism for hiding or locking cash inside the homestead. The service provided this way is safekeeping.

Availability and access are among the main reasons for using a given service provider; in most areas people do not have other choices, and have to make do with what is available. The figure below shows some of the (formal as well as informal) financial providers mostly used in the area.

Mostly Used Financial Services Providers

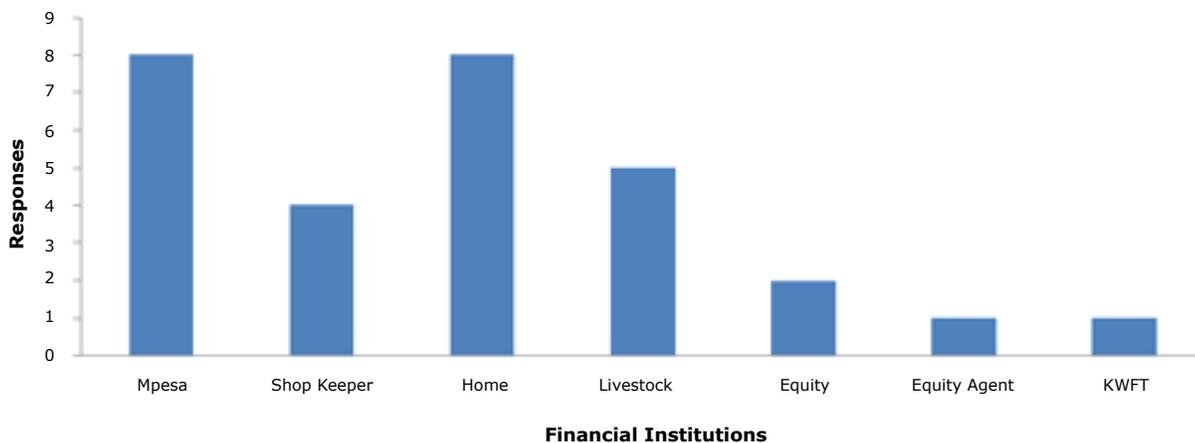


Figure 73: Frequency of financial service providers used

Each of these financial service providers is preferred for different reasons, as summarised by the table below.

Financial Service Provider	Attributes
M-PESA	<ul style="list-style-type: none"> • Availability • Convenience • Secure • Fast • Easy to use.
Shopkeeper	<ul style="list-style-type: none"> • Availability • No collateral required for loans • Flexible as need arises
Home	<ul style="list-style-type: none"> • Ease of access • Money is little-no need to bank • Have no fees and charges
Livestock	<ul style="list-style-type: none"> • Great returns • Lifestyle
Equity Bank	<ul style="list-style-type: none"> • No opening balance/Lower charges • HSNP payment • Security of money • Marketing • Does not discriminate

Table 24: Desirable / expected attributes of different financial service providers

The available financial service providers, both formal and informal, each offer a range of different services or products. These include the following:

Savings: From the FinAccess survey, savings in formal institutions have remained minimal in the region over the study's three-year period. The use of Savings and Credit Cooperatives (SACCOs) has decreased slightly over the three years, while the use of Rotating Savings and Credit Associations

(ROSCAs) has remained between 5-7 percent. The majority of people indicated that they use informal financial mechanisms (a secret place, group of friends or family) as shown in the table below. This may be due to a lack of adequate SACCOs and MFI services for savings in the arid lands. In addition, informal mechanisms do have desirable attributes such as accessibility, flexibility and affordability that lead to their frequent use. In the north, the use of formal financial services is directly proportional to the availability of these services.

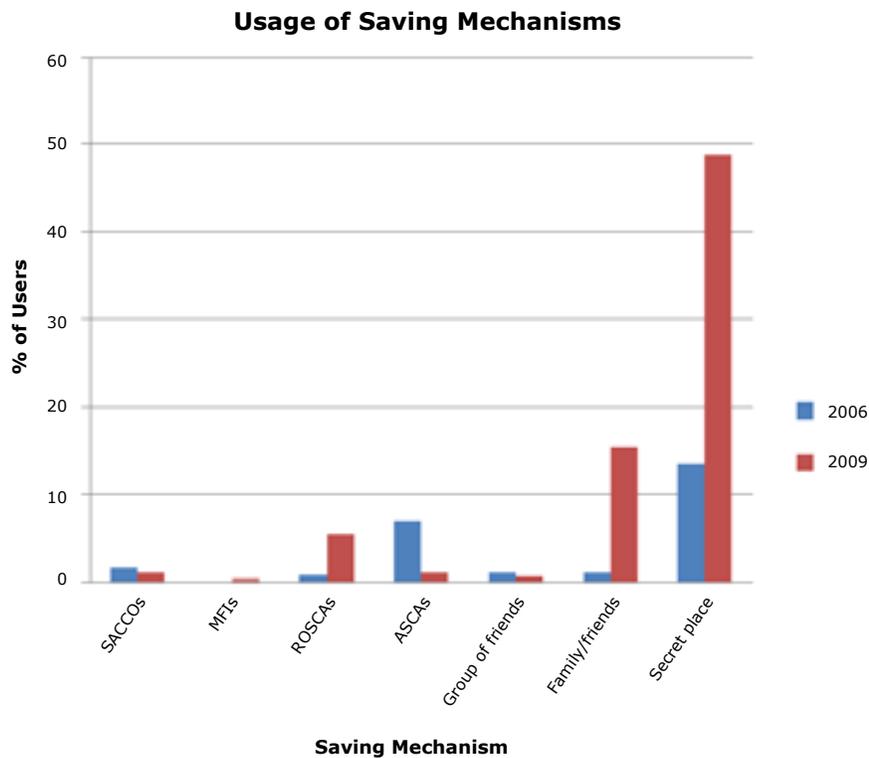


Figure 74: Use of different saving mechanisms

From the field research conducted, different people are saving in different forms in the area. Although some people, in particular traders, have opened bank accounts, the majority of the beneficiaries and communities at large mainly save informally, i.e. in form of livestock or by keeping the money in their houses (see above: “home banking”). It is also very common for people to carry their money with them wherever they go. According to both male and female focus groups, women are considered as better keepers of money in the household, especially for critical expenses like school fees. However, the aspect of saving generally seems to be of limited relevance for the majority of beneficiaries, who lack money even to meet their basic needs and do not have a surplus to save.

Credit: While beneficiaries usually lack the requisite collateral to secure a loan from a formal financial institution, many traders can access credit from banks and micro-finance institutions (MFI). Beneficiaries and communities in general access credit from the shopkeepers in form of food, and can receive money from relatives, friends and local

leaders. The informal credit is entirely based on trust and personal acquaintance, and the incentive in repaying any debt is extremely high, as this record determines a person’s access to future credit. Beneficiaries of cash transfers reportedly can access food advances from traders. However in Lokorio (Turkana District), traders reported such beneficiaries tend to over-borrow from different traders in excess of the cash benefit they will receive. So while cash transfers increase social capital and credit worthiness, they can also lead to indebtedness.

Payments: Most of the people pay school fees into a formal account in the nearest bank branch. In isolated areas they use a bank agent. Many of the beneficiaries report that they only enter a bank to pay school fees, which indicates that such payments can initiate the use of financial services.

Account Opening: Account opening services are mainly done at the banking branch, during promotions organised in remote centres and, in isolated cases, with the banking agents.

8.5.2 Use and preferences of Money Transfer Services

According to the FinAccess 2006 survey, most of the people interviewed had at the time never received any form of money transfer. Only 11 percent of respondents had ever received any form of money transfer, as shown in Figure 75 below. However, this total does not indicate which form of transfer was used, and may include informal mechanisms, for instance the *Hawala*, buses or use of friends and relatives.



Figure 75: Money transfers, 2006

By 2009, the total of internal and external money transfers received had increased to 60 percent (see Table 25). This increase could be a result of increased penetration of M-PESA in the region.

	Business internal	Received internal	Received external	Sent internal	Sent external
	%	%	%	%	%
Yes	6.3	55.9	4.1	11.7	0.2
No	93.7	44.1	95.9	88.3	99.8
Total	100	100	100	100	100

Table 25: Money transfers, 2009

In contrast to personal use in 2009, only 6.3 percent of interviewed traders used money transfer services for business transactions. Low levels of M-PESA use by traders may be partly attributed to local use of *hawala* systems,⁵⁸ but also to challenges that businesses have in using M-PESA, as noted in the FSD-Kenya study "FSD Insights Issue 4 - "Why doesn't every Kenyan business have a mobile money account?". This study noted that businesses failed to use M-PESA for multiple reasons, including lack of paper trail, fears of fraud, and systems which are not geared to using M-PESA.

People are increasingly embracing formal money transfers, especially for personal use. Thus, the use of M-PESA for WFP cash transfers should be easy to adopt for many beneficiaries with access to mobile phones and M-PESA agents.

A number of factors are decisive in considering whether or not to use available money transfer services. These include the risk, the cost, the speed and the convenience of the potential money transfer. Each of these factors will be addressed in the subsequent subsections.

Risks of Money Transfer

Different methods of transferring money have different perceived or actual risks. Entrusting money to a friend or a relative as a transfer channel was in both the 2006 and the 2009 survey rated as both the most and the least risky. However, the share of those who perceived this method as the most risky decreased over this period from 43 to

⁵⁸ This is a method of transferring money, primarily in Islamic societies, without any actual cash transfer. It is based on trust and often leaves no written record

20 percent, while the share of those who felt it was the least risky increased from 27 to 38 percent, as shown in the table below. This means that despite the increased availability of other, formal methods of transferring money, the trust in the informal (friend/family) channel has increased. The respondents answering the questions on risk were mutually exclusive.

The *hawala* system, another informal method of money transfer, also was considered low risk. Trust remains a key consideration when respondents determine the risk of a transfer channel.

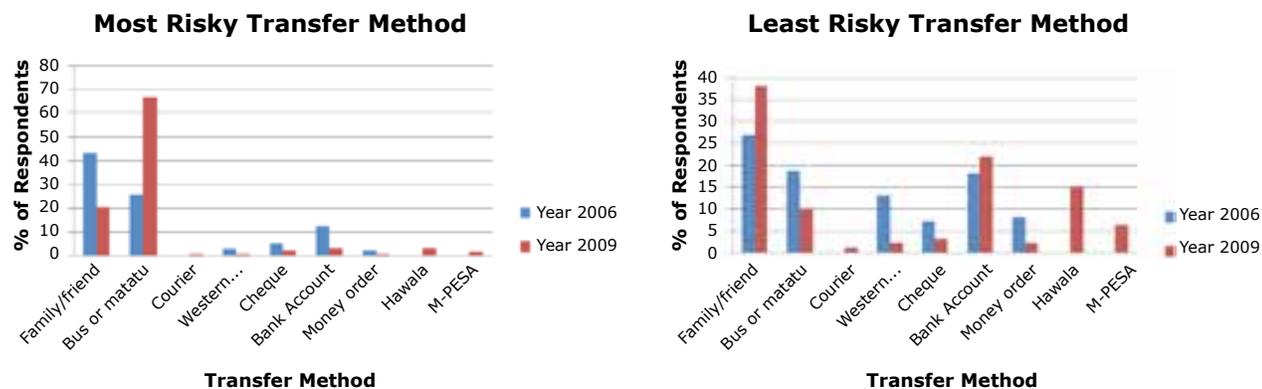


Figure 76: Perceived risks of different money transfer methods, 2006 and 2009

While these data indicate an increased use of informal money transfer methods, it must be noted that the availability of formal channels has rapidly increased since the second survey. It will be interesting to see how these ratings develop in the 2012 survey, which analysis is presently underway.

Cost of Money Transfer

With respect to the cost of money transfers, the family/friend method was considered the least

expensive method of sending or receiving money by 43 and 61 percent of respondents in 2006 and 2009, respectively. A deposit directly into the recipient's account was considered expensive by 14.6 percent of respondents in 2006, and by 20.7 percent in 2009. This may be due to the cost of travel to the nearest bank to do such transfers. Travel cost has a direct impact on the cost of money transfers. The channel used to transfer money should therefore consider the distances beneficiaries would need to travel to receive the cash.

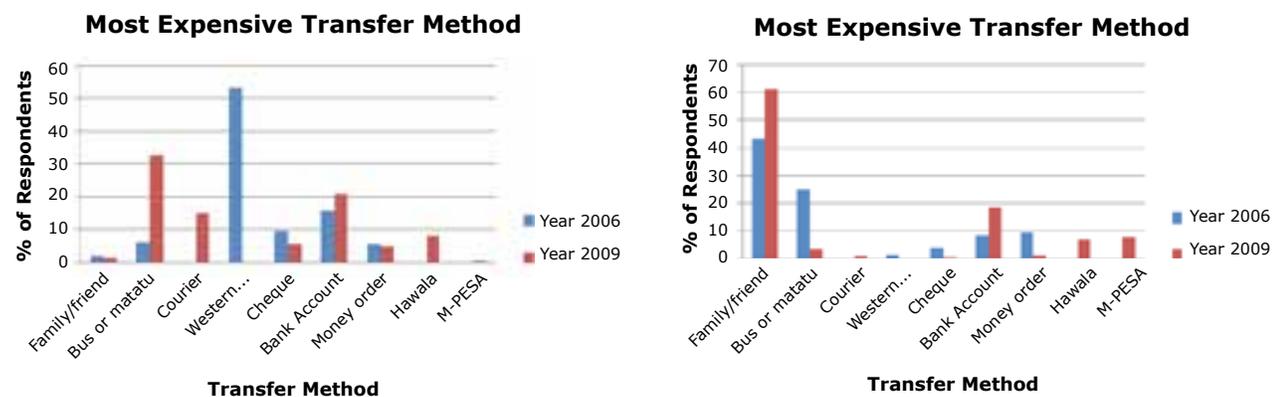


Figure 77: Cost of different transfer methods, 2006 and 2009

Speed of Money Transfer

Formal money transfer methods were considered the fastest by 36 percent of respondents in 2006, and 38 percent in 2009. Friends and family were considered the slowest method of all, by 27 percent of respondents in 2006, and 62 percent in 2009. In 2009, the use of buses was considered fastest by

about 40 percent, and slowest by 17 percent. Some of the respondents may have compared buses to formal transfer methods (then buses are slow), while others without access to formal services, compared them? to using friends or relatives. Formal services are faster and would therefore be more effective and efficient in reaching the intended beneficiaries.

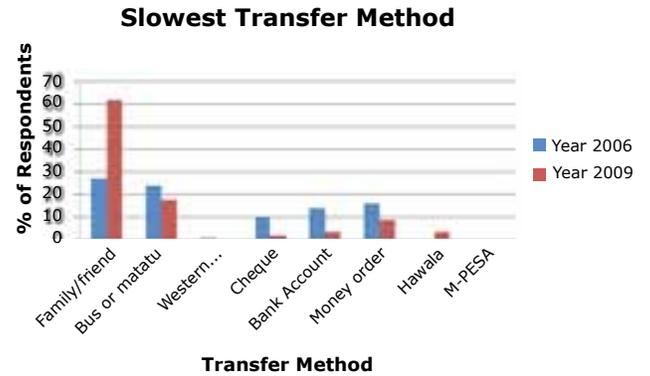
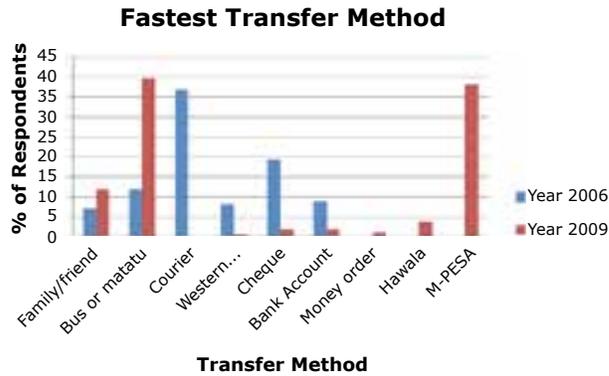


Figure 78: Speed of Money Transfer, 2006 and 2009 (source: FinAccess)

Convenience

Family was considered the most convenient vehicle to transfer money in both studies, with the share of respondents even increasing by 10 percent between 2006 and 2009. This confirms that this method is still highly popular and widely used, despite the increasing availability of formal transfer methods like M-PESA. However, the latter method only started picking up rapidly after the second survey.

For formal transfer methods to become increasingly used, they need to be reliable and easy to use. These attributes have resulted in the tremendous growth and use of M-PESA in recent years.

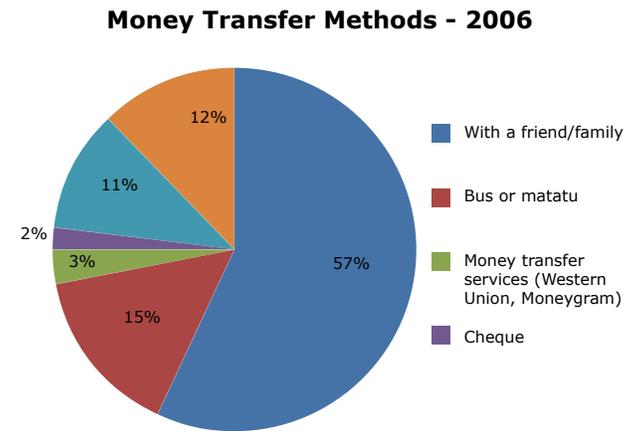


Figure 79: Convenience of transfer, 2006

Money Transfer Methods - 2009

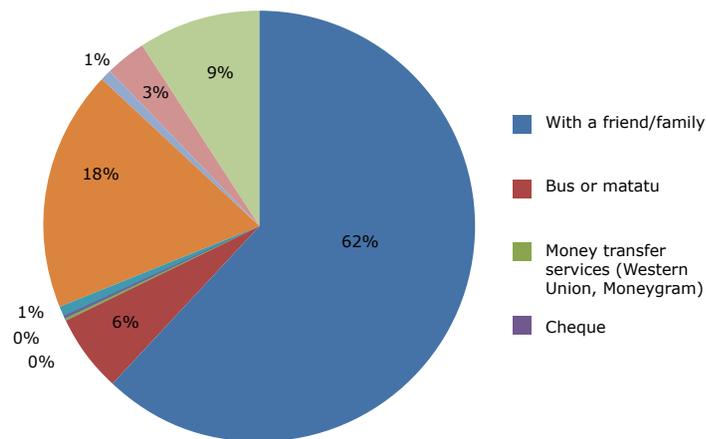


Figure 80: Convenience of transfer, 2009

The following table summarises the key findings on financial services providers and their use in the arid lands.

Observation(s)	Implication	Recommendation
Usage: Formal and informal financial service providers are used in ASAL region. Informal methods are dominant and include the “home bank”, merry go rounds, livestock and shopkeepers. However, usage of formal services can expand if encouraged through social payments.	Various options for the provision of formal financial services exist in ASAL region although access still remains a major challenge especially in remote locations	WFP should select the use of formal approaches over informal methods, such as physical cash packets; offline methods such as vouchers could be used in remote communities.
Credit: Unlike beneficiaries who receive food, beneficiaries of cash transfers have been able to access food and money on credit from the traders.	Cash transfers increase social capital amongst beneficiaries. However, this may lead to over-indebtedness since the beneficiaries’ request credit from multiple traders.	Beneficiaries need to be educated on the prudent use of credit so as to avoid over-indebtedness.

Table 26: Implications and recommendations on the use of present financial services

8.5.3 Mobile Phone Ownership

The use of formal financial systems by the population in the ASAL Region is still at a low level. The majority of people have not yet interacted with any formal financial institution. Focus group participants desire basic financial services close by, enabling them to save and withdraw money. It is therefore critical that these regions first access and experience the use of financial service in their basic form. That said, with the expansion of mobile network operators, especially Safaricom, the use of mobile phones and the mobile banking platform is rapidly increasing. This is likely to unlock the use of financial services in the area and overcome the challenge of access.

The FinAccess survey suggests that mobile phone ownership has increased by 80 percent between 2006 and 2009, bringing the share of those who own a mobile phone from 10.3 percent to 18.4 percent of all respondents. Increased signal coverage in the arid lands is a key reason for this uptick. The 18.4 percent of mobile phone owners in the 2009 survey said they used their mobile phones as shown in the figure below:

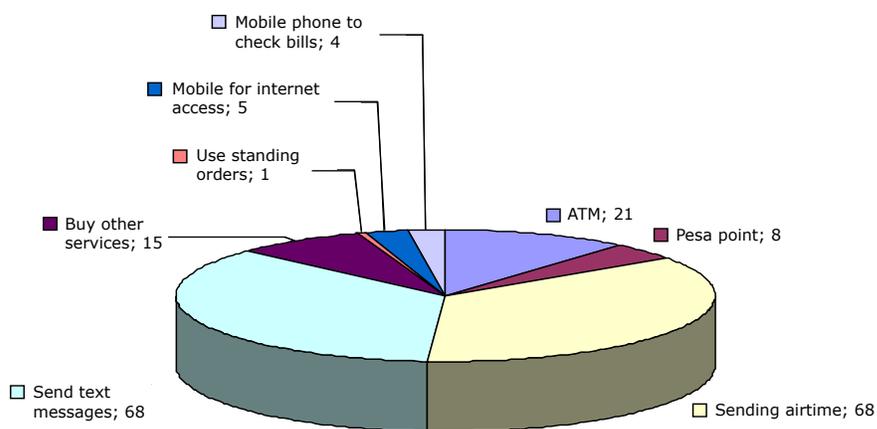


Figure 81: Uses of mobile phones

Findings from the qualitative survey show that phone ownership grew considerably, with more than half of the respondents having phones in 2012. Among beneficiaries, however, this share is slightly lower. Beneficiaries from Turkana own fewer phones as those in Isiolo, Marsabit, Wajir and Garrisa.

Mobile Phone Ownership

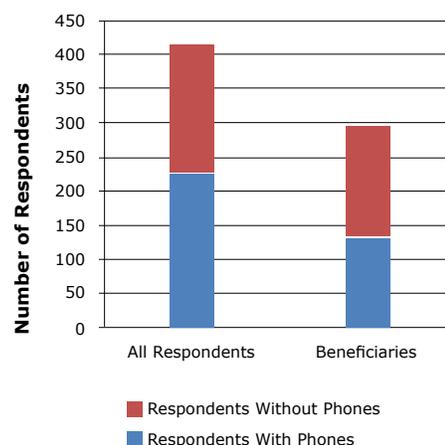


Figure 82: Mobile phone ownership

The observed high level of phone ownership does not, however, mean that mobile phone connectivity has been achieved throughout the north. Many remote areas still have no form of connectivity. A cash transfer solution thus needs to be provided through a model that avoids excluding many beneficiaries or forcing them to travel long distances to access these services.

8.5.4 Cash Mobility

A cash mobility mapping exercise was conducted with traders to get an understanding of where the communities go to acquire or spend cash (markets, waged labour, co-operatives, informal financial organisations, etc.). This exercise led to discussions of which financial service institutions traders trust or value, and why. The mobility mapping exercise also offered insights into the income-generating ventures that residents are involved in. In areas where financial institutions are rare or nonexistent, the exercise also identifies opportunities for products or services.

The results of the exercise are summarised in the table below.

Place	Money movement	Size/importance of the route	Opportunities for financial institutions
Kalokol	<ul style="list-style-type: none"> • Money goes out when the traders purchase goods from Kitale and Lodwar. • Money comes in from the sale of fish to Kitale Kisumu, Busia and Nairobi. 	<ul style="list-style-type: none"> • Major trading centre where fish from Lake Turkana is sold 	<ul style="list-style-type: none"> • Credit for fish brokers • Money transfer services for both brokers and fish mongers
Marsabit town	<ul style="list-style-type: none"> • Traders buy goods from Meru • Money is airlifted to/from Nairobi by the banks • Neighboring centers buy goods from Marsabit • Schools and medical facilities are found in the town 	<ul style="list-style-type: none"> • The area is unable to meet its food needs and thus has to rely on Meru for supplies • The road from Isiolo to Marsabit is poor and banks have to rely on air transport to manage their cash flow. 	<ul style="list-style-type: none"> • There are opportunities for money transfer services through M-PESA and bank agents • Savings accounts for traders that could lead to better credit appraisal and electronic payment for goods.
Kaleng	<ul style="list-style-type: none"> • Traders buy goods from Lodwar • Sell their livestock in Kakuma, Lodwar, Lokichogio • HSNP beneficiaries receive money through agents • School fees are deposited in Lodwar banks • Employed residents travel to Lodwar to withdraw salaries 	<ul style="list-style-type: none"> • Kaleng-Lodwar is an important route as Kaleng receives food supplies or even salaries (for civil servants) from Lodwar. • Money transfer is a big challenge as the area lacks connectivity. 	<ul style="list-style-type: none"> • With the challenge in connectivity, current opportunities for financial institutions include offline systems like the HSNP payment solution.
Lokori	<ul style="list-style-type: none"> • Money goes out to Kitale to buy food items and to Lodwar for school and hospital fees. • Purchase orders are placed by phone and paid through M-PESA. The goods are delivered using buses that make daily trips to Kitale. • Sell livestock to Baragoi 	<ul style="list-style-type: none"> • The Lodwar-Kitale route is critical for Lokori as food supplies are distributed through the route. 	<ul style="list-style-type: none"> • Opportunities available for money transfer services through M-PESA or bank agents • Potential for savings accounts for traders that in turn could lead to better credit appraisal and electronic payment for goods.

Table 27: Mobility of cash in the arid lands

8.5.5 Mobility of Residents

As described in detail in the section on livelihoods and gender above, residents of the arid lands engage in a multitude of small-scale economic activities to meet some of their basic needs, including casual labour, shop keeping, collecting firewood and charcoal burning. Livestock is an

important resource and livelihood asset in the region and most families keep camels, cattle, sheep, goats and donkeys. With 24 million hectares of land suitable for livestock production, the arid lands are home to 80 percent of Kenya's livestock, a resource valued at Ksh 173.4 billion.⁵⁹ The table below shows Kenya's livestock populations in 2009.⁶⁰

	Kenya Total	ASAL total	Arid	Semi-arid	Highlands
Cattle	17,467,774 100%	12,155,974 70%	6,281,354 36%	5,874,620 34%	5,311,800 30%
Sheep	17,129,606 100%	14,954,925 87%	10,246,527 60%	4,708,398 27%	2,174,681 13%
Goats	27,740,153 100%	25,250,865 91%	18,230,633 66%	7,020,232 25%	2,489,288 9%
Camels	2,971,111 100%	2,968,670 100%	2,924,742 98%	43,928 1%	2,441 0%
Donkeys	1,832,519 100%	1,616,522 88%	1,126,103 61%	490,419 27%	215,997 12%

Table 28: Kenya Livestock Population

The pastoralists in ASAL Kenya move their livestock periodically to follow the seasonal supply of water and pasture. This movement, however, is essentially made by a small section of the population; the majority remains sedentary. Livestock from several families in the community are generally herded together by a few of their members.

Accordingly, the movement of residents in the areas visited was found to be limited. Apart from

the dry seasons or periods of prolonged drought, animals taken to pasture are usually brought back home in the evening. As illustrated below, most people are settled and rely on some form of economic activity as well as relief food to sustain them while the livestock is away. Most respondents indicated about 75-100 percent of the population is sedentary, while a few areas have between 50-75 percent of sedentary population.

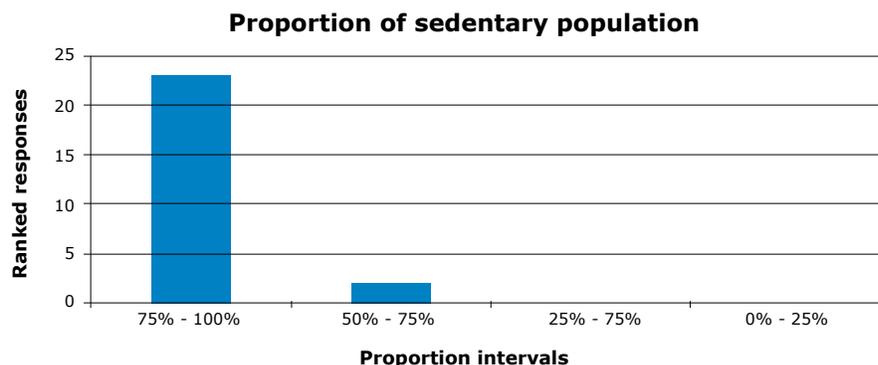


Figure 83: Proportion of sedentary population in the arid lands

⁵⁹ International Livestock Research Institute (ILRI), <http://www.ilri.org/ilrinews/index.php/archives/category/pastoralism>

⁶⁰ Kenya National Bureau of Statistics (KNBS), Kenya Population and Housing Census, 2009 Animal Production Division

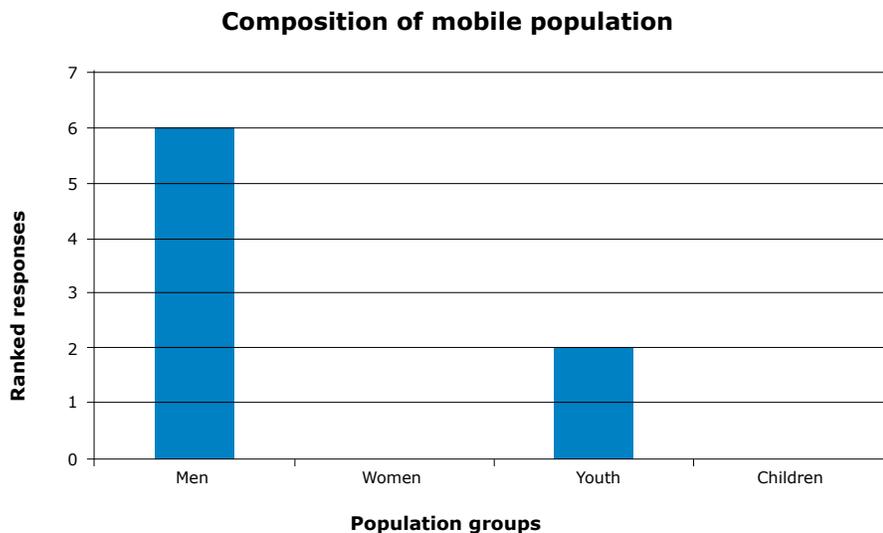


Figure 84: Composition of the mobile population in the arid lands

The share of the population that is mobile in search of pasture for livestock is quite low and is comprised of mostly males and youth. It can be observed that a majority of women are usually left at home to take care of the household, while the few remaining men and youth herd the livestock.

Based on these findings it can be concluded that financial services for most of the population in the arid lands should be permanent and concentrated in the trading centres and settlements.

8.5.6 Nature and Seasonality of Financial Transactions Performed

Population

Information on seasonal flows of income and expenditure as well as the demand for credit and saving services was obtained through seasonality exercises with beneficiaries and non-beneficiaries in the locations. With a few exceptions, the main expenditures were similar in all the areas visited, with food, clothing, school fees and medical expenses described as the top expenses for the majority of people.

Food is the biggest expense for the area's residents, as mentioned earlier in this report, because – contrary to other areas in the country – most of the region does not produce sufficient food to feed

its population and has to rely on food purchases from outside the region. Most households spend between KSh 5,000-20,000 per month on food, although most of the expenditure takes place daily and in small quantities.



Figure 85: Carrying out a seasonality analysis

School fees for secondary education are another major expense for arid lands residents (primary education is free), costing a household about KSh 15,000 per term, per child. Adding to the pressure of paying tuition, households must also find transport money for school-going children, which is another serious cost in the area. Most school fees are paid on a quarterly basis, mainly through a bank, but

sometimes children just take cash to the school. Some people send money through M-PESA to teachers, who then pass it on to the receiver. Poor households finance this cost by borrowing from friends or relatives – and some receive bursaries from CDF.

Other major expenditure items include medical bills, clothing and livestock. In some areas like Wajir, people spend money on a Madrasa (a religious school for the study of Islam). The figure below illustrates the seasonality of beneficiaries' income, expenses, savings and credit needs.

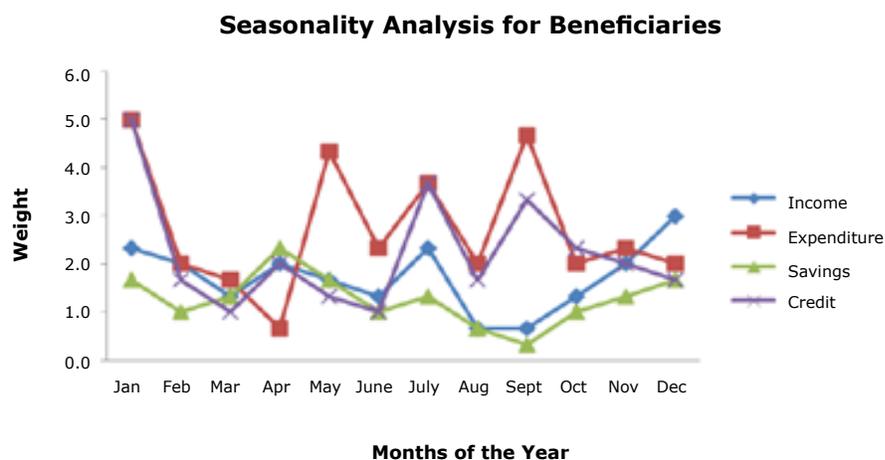


Figure 86: Seasonality analysis for beneficiaries

Income: Most income, as mentioned in the gender and livelihood section, is generated by collecting firewood, making charcoal, selling livestock, small-scale farming (in isolated areas), as well as collecting building materials such as twigs, ballast and thatch. During the months preceding religious festivities such as Christmas and Ramadan, people work harder so they can afford the expenses related to those celebrations.

Expenses: Income is used to meet basic household expenditures such as milk, sugar, cereals and other groceries. Seasonal expenditures include school fees and the purchase of uniforms, medical expenses and books. School-based expenses are incurred in January, May and September, when new school terms begin. Ramadan expenses include buying food not ordinarily purchased (meat and fruits). At the end of Ramadan, major expenses also include purchasing clothes for the family and other home improvements. These are usually bought on credit to be paid over time.

Savings: Most beneficiaries hide their savings in a secret place at home, or purchase livestock with their extra income that can be sold later to meet large expenditures. In Garbatula, for instance, money kept at home is for consumption only and not for large expenses. Savings patterns go hand in hand with income and expenditure patterns. Most savings are accumulated in the month of April, when the market price for livestock is high, especially in places like Karare in Marsabit. Expenses during this month are also lower in most locations, as school-related expenditures are not due at this time.

Credit: Most people borrow for school-based expenses, especially at the beginning of January and in September. School-related expenses for the second term (May) are covered by high income and savings accumulated in April. During the month of Ramadan, people also borrow to meet expenses incurred during the celebrations. Credit is obtained in the form of cash or goods from shopkeepers or well-off friends or relatives in the community. It is also obtained in-kind (as livestock), to be returned in-kind within a repayment period agreed on by both parties.

Traders

The traders interviewed from a financial service angle in this exercise operate retail shops or are involved in the livestock trade. They have a fairly

regular income throughout the year, as compared to the beneficiaries. The figure below describes the seasonality analysis of traders in Buna (Wajir).



Figure 87: Seasonality analysis for traders

Income: The income of traders is derived from businesses (shops), livestock, farming crops such as maize, sorghum and beans, or casual labour (collecting ballast, fetching water and making building blocks). The income for shopkeepers is good in the month preceding Ramadan (when people cater for the festivities) and in September (dry season), when livestock herders are usually in the area to water their animals and restock their food supplies.

Expenses: Traders have the same expenditure pattern as everyone else. Main expenses include food and school-related costs (fees, uniforms, transportation, pocket money). School-related expenses are high in January, May and September. Expenses for food and clothing are particularly high in the month before Ramadan.

Savings: Savings are kept in form of livestock, bank accounts, bank agents, M-PESA accounts and in the house. Savings are only possible after school-related expenses are paid. Savings are, however, made in the months preceding those that will need major expenses. Traders also buy livestock in March and September, when prices are lower, as these are the driest seasons.

Credit: Many people borrow for school-related expenses and for food during the Ramadan celebrations. During the dry seasons of March and September, many people also borrow food from shopkeepers who, in turn – when required – often refer to credits from wholesalers.

For business people, seasonal income increases have some correlation to the expenses incurred by residents, especially during the religious celebrations. Traders usually save for school fees in the months of April, August and December. By contrast to meet school expenses in January, May and September.

It can be concluded that opportunities exist for financial institutions to develop products that will help people save money for seasonal expenses. This can be done by opening channels like bank agents, as residents' income is small and they will not be willing to travel to major towns where bank branches are located. Livestock traders would need credit in March to purchase livestock. Retail traders would need credit in to stock their business, because of the high sales during the month of Ramadan.

Observation(s)	Implication (s)	Recommendation
Phone Ownership: Phone ownership is dramatically and rapidly expanding wherever there is access to a signal. Ownership is increasing even in relatively low income groups.	Delivering financial services in ASAL regions, especially through mobile financial services is becoming more feasible over time.	M-PESA is a viable option for payments where the signal is available. Payment could also be made through bank accounts that are integrated with mobile payment platforms.
Mobility of Residents: Mobility of residents is decreasing – with significant portions of family units in permanent residence.	The business case for agents should improve as population centres grow, and populations settle.	Demographics play an important part in the viability of delivery channels. It is therefore important that WFP maintains its awareness of demographic trends, and reviews its delivery solutions from time to time.
Seasonality: Significant seasonality patterns of income, expenditure, savings, and credit exist.	Liquidity challenges with the agents during the high and low seasons in the year.	Encouraging the development of the payments system eco system is important to manage seasonal fluctuations in cash flow.
Cash Mobility: Cash is already mobile and has mobility has increased through the adoption of M-PESA and agency banking.	Most people are more likely to use existing mechanisms because of trust issues.	Leverage on the existing cash mobility mechanism because they are easy to use and adapt.

Table 29: Observations, implications and recommendations concerning phone ownership, seasonality and mobility

8.6 Trends in the Use of Formal Financial Services

The availability and use of formal financial services in the arid lands has changed over the last decade. While different locations have different experiences, the use of formal financial services in the north has mainly revolved around formal providers such as Equity Bank, KCB and M-PESA.

According to the FinAccess Survey, the use of bank services in the arid regions is below 10 percent for

both survey periods (2006 and 2009). This might be due to obstacles to access such as distance and perceptions that banks are only for the rich. By contrast, informal credit from traders is frequently used in the region. This may be due to their greater availability, as well as minimal conditions they require for access. A strong relationship exists between traders and the population which goes beyond the provision of goods and services. Traders also provide financial services (informal) and therefore would be an appropriate channel as bank agents.

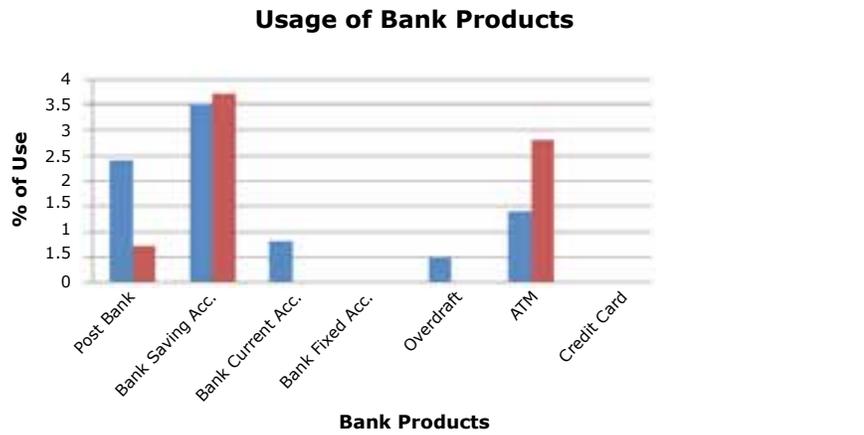


Figure 88: Use of Bank Products 2006 and 2009

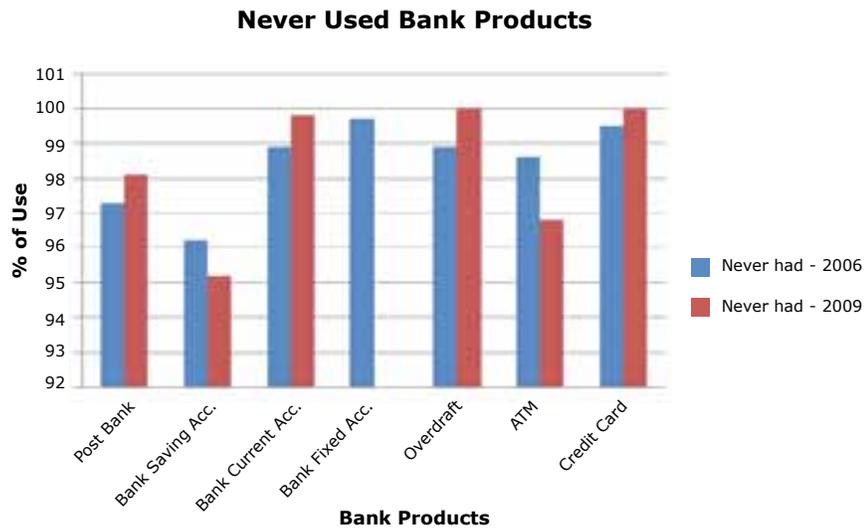


Figure 89: Unused Bank Products 2006 and 2009

In the qualitative research, the financial sector trend analysis (FSTA) tool was also used to rate the use of various financial services/providers over time. The weight and subsequent justifications for each provider gives a general pointer to the level of use of that particular provider over time.

Kenya Commercial Bank: KCB is one of the longest serving banks in the study area. Ten years ago, KCB was the major bank in the region with people having little or no alternative financial institutions. Residents considered KCB to be a costly bank, as it was seen to be making numerous deductions, through fees and charges, on customers' savings. Other new entrants in the last five years have been Equity Bank, SACCOs (in Maralal) and MFIs, who are perceived to have fairer requirements such as low opening balances and ledger fees, as well as group loans. Generally, the use of KCB services has steadily increased with the improvement of their

services, including lower opening balances and ledger fees, and the introduction of Western Union money transfers.

Equity Bank: Equity Bank came to the region about five years ago. The services included a variety of features for instance, zero opening balance requirements or ledger fees, which were highly attractive for many people. In addition, Equity Bank marketed its products very well. Over the last few years Equity Bank began an agency channel which has also experienced great penetration even in the remote areas. However, with the increased penetration, many respondents said that they only use a bank agent in areas where there is no bank branch located. This indicates that some information gaps still exist with respect to the agency bank model. Currently the bank has lost some customers in Moyale to the First Community Bank, which offers Sharia-compliant products for Muslims.

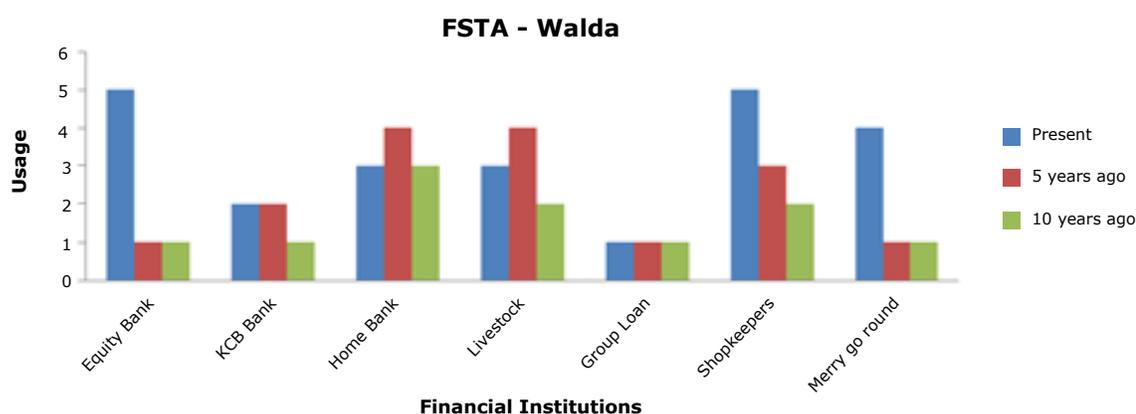


Figure 90: Financial Sector Trend Analysis in Walda

Kenya Women's Finance Trust: KWFT is a deposit-taking micro-finance institution that focuses exclusively on women. While it is present in all the major towns in the arid lands, it has a sizeable presence in the region compared to other MFI. KWFT has been operating in the region for about five years. According to respondents in Maralal, KWFT's uptake of loans has decreased recently because of very strict requirements for loan repayments, which has discouraged many women from joining the programme.

Livestock: Keeping livestock is the most common form of long-term saving in the area. According to respondents, income from livestock was not very high ten years ago, because the market was not very good and grazing land was not very well managed. Currently the market is very good for livestock, which is even exported through a government initiative. Today, grazing land is well managed through zoning.

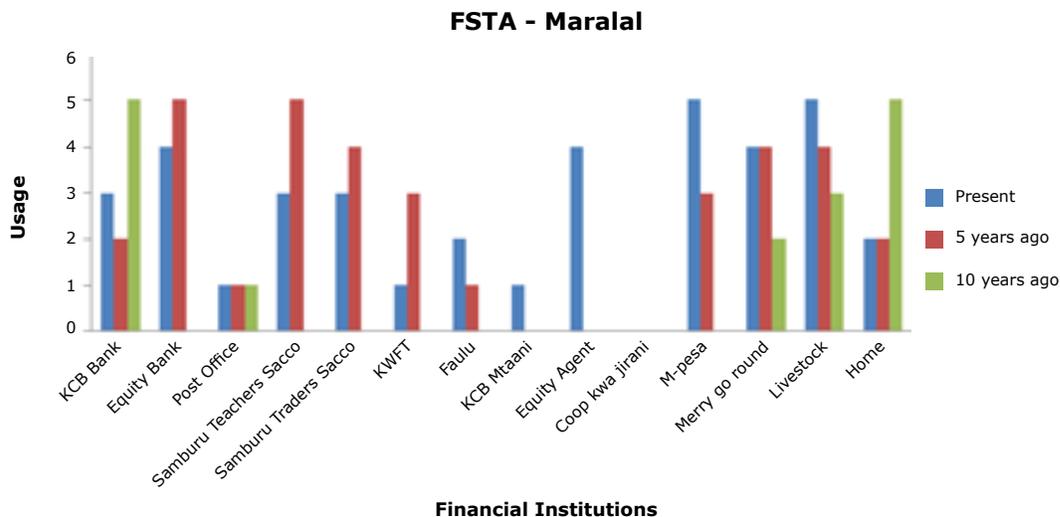


Figure 91: Finance Sector Trend Analysis in Maralal

Merry Go Round: Few people used this form of saving ten years ago because of a lack of information about it. Many simply considered merry-go-round schemes as a way for women to pass their time.

Over the last five years, however, men have joined the schemes and even started new ones. Currently these schemes are taken seriously by both men and women, and considered as a development initiative.

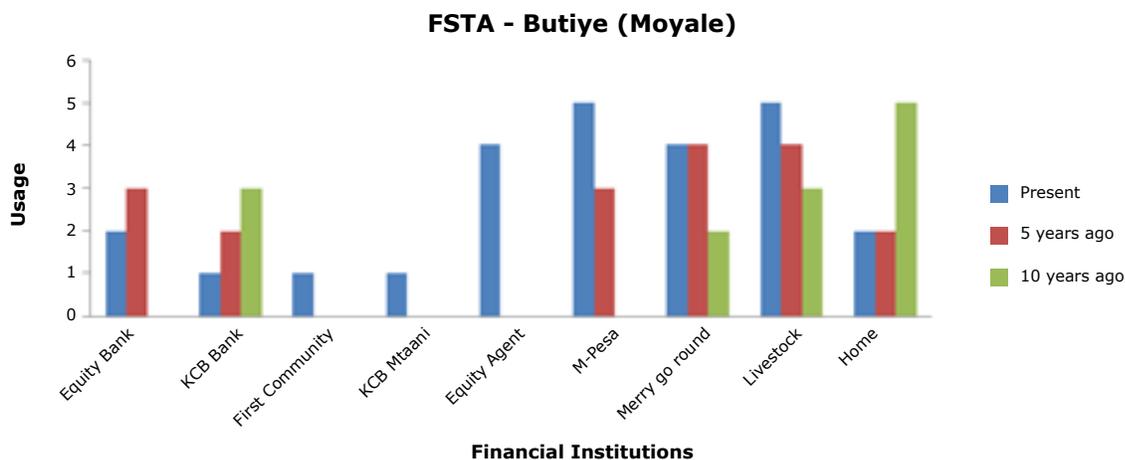


Figure 92: Finance Sector Trend Analysis in Butiye (Moyale)

Use of M-PESA: Since its inception about five years ago, the use of M-PESA has risen steadily because of its convenience and number of agents. According to some of the respondents interviewed during the qualitative research, M-PESA is both efficient (because it is used everywhere without complications) and sufficient, because it meets the needs of all people. In addition, it is preferred because it is used by all customers of the network operator (Safaricom), unlike other money transfer agents that are particular to specific banks. Residents even with low literacy levels use M-PESA, as the agents usually help in conducting transactions. While the respondents indicated a high use of M-PESA five years ago, secondary information indicates there was in fact very little use of M-PESA then. This misrepresentation is probably a result of the rapid uptake and success of M-PESA in the last five years.

The research also showed that M-PESA is used mainly by traders buying goods in major market hubs such as Kitale and Meru. Many people also regularly receive money through M-PESA from their children.

The 2006 FinAccess survey did not include questions with respect to M-PESA. However, the 2009 survey included questions that asked respondents about a change in their use (sending, receiving, frequency, amounts). Usage can thus be seen from the 2009 dataset, but it is difficult to quantify relative increases. According to this survey, the use of M-PESA has increased in recent years in terms of use, frequency and volume of transactions.

In 2009, only about 9 percent of respondents had used M-PESA (this would be quite different in 2012!). Of the 48 (out of 537) respondents who had used M-PESA, 43 had received and 38 had sent money. Fifteen percent used the system at least once a week, 30 percent at least once a month, and 56 percent once in a while. Of those who had received money, 37.2 and 34.9 percent reported that frequency and amounts, respectively had increased. For money sent, the share of those who reported increased frequency and amounts was 42.1 and 44.7 percent, respectively.

	Sent money through M-Pesa				Received money through M-Pesa			
	Frequency		Amount		Frequency		Amount	
	F	%	F	%	F	%	F	%
Total	38	100	38	100	43	100	43	100
Increased	16	42,1	17	44,7	16	37,2	15	34,9
Remained the same	19	50,0	19	50,0	25	58,1	25	58,1
Decreased	3	7,9	2	5,3	2	4,7	3	7,0

Table 30: Trend in usage of M-PESA

Uses of M-PESA

A considerable number of people are using M-PESA to buy air time, save money, or keep money safe while travelling. Since the 2009 survey this could have changed considerably because M-PESA is

currently being used as a form of payment, for example by traders using M-PESA to purchase goods to overcome infrastructure problems. Consequently, M-PESA is a viable option for money transfer especially in the remote areas, as long as network coverage is available.

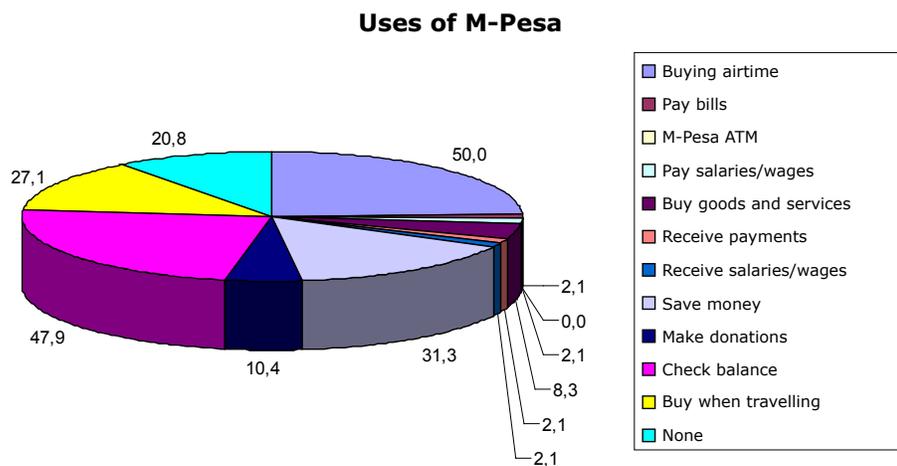


Figure 93: Uses of M-PESA, 2009

Observation	Implication	Recommendation
<p>Formal Usage: The formal providers mostly used are Equity Bank, Equity Agent and M-PESA because of their higher penetration as compared to other providers. The Equity Agent and M-PESA are mostly used for cash transfer/ remittances as well as payment of expenses or purchases for instance school fees or goods for traders.</p>	<p>Since the knowledge and use of Equity and M-PESA is higher in this region compared to other providers, it is might be easier to channel cash transfer to beneficiaries through them.</p> <p>The available cash transfer and payment mechanisms can help in introducing presently unbanked people to formal financial services.</p>	<p>Consider using M-PESA or Equity Agents for cash transfers, and also other banks/agents for comparison purposes.</p> <p>Cash transfers could also be made using formal methods to increase the access of financial institutions to residents of the arid lands.</p>
<p>Informal usage: The informal methods are used mainly because of their easy access (shopkeepers and home banks) and high long term return in the case of livestock.</p>	<p>The ease of access and long term returns on savings are major factors that people consider when looking for a financial service in the arid lands.</p>	<p>The mechanisms selected for cash transfer will need to be affordable, accessible and easy to use.</p>

Table 31: Observations, implications and recommendations concerning financial service usage

8.7 Encouraging Use of Financial Services

One of the motivations for this study was the realisation that social payments had the potential to encourage financial sector development in the arid lands. However, for this to happen, it is necessary to understand the factors contributing to, and constraining the use of financial services in the region. From the discussions, analysis and observations in this study, they are as follows:

8.7.1 Factors Contributing to the Increased Use of Financial Services

Potential users of formal financial services in the arid lands still face many challenges that hinder their use. In the last five years however, the region has experienced a relative increase in the penetration and use of formal financial services. The following factors have contributed positively to their uptake in the arid lands.

Network Connectivity: Since financial transactions are real-time in nature, network connectivity is a critical precondition for the supply / offer of financial services. Over the years, connectivity in the region has continued to increase, which has enabled the significant increase of money transfer services such as M-PESA and other banking agents such as the Equity Bank agent or KCB Mtaani.

Infrastructure development: The arid lands have also seen some infrastructure development. In particular, better roads and rural electrification have improved mobility, and there are good prospects that this trend will continue. The Isiolo-Moyale road, for example, is currently under construction, and areas such as Habaswein are in the process of being connected to electricity.

Growth in Trade: Generally speaking, the volume of trade has increased due to government and NGO efforts and presence. The increased possibility of traders to send money to purchase goods through M-PESA has improved their ability to deal with transport challenges – another benefit from the increased money transfer services in the area.

Financial Education: Equity Bank has provided some financial education with positive results. Several focus groups mentioned that the training helped them understand and appreciate the services offered by banks. Financial education, *ceteris paribus*, appears to increase the use of financial services.

NGO Intervention: The prevalence of drought in the arid lands has seen the intervention of government and several NGOs with non-traditional assistance. Social security cash transfer programmes like the HSNP, cash for work, cash for assets programmes and emergency/relief cash transfers exist in the region. In many cases these programmes have been implemented in partnership with financial institutions like Equity Bank or KCB. In areas with no network coverage, Equity agents used an offline solution to pay the beneficiaries. This has increased the presence of bank agents at markets or trade centres, primarily to disburse cash transfer programmes, but also to perform functions like deposits, withdrawals and payments.

8.7.2 Factors Constraining Uptake of Financial Services in ASAL Region

Despite the relative increase in the use of financial services in the north, the region's population still faces major constraints in accessing and using formal financial services. Agents also face challenges in running their business. These challenges include:

Float Management/ Liquidity: A major challenge faced by both bank and mobile payment agents is the lack of sufficient float or liquidity to handle transactions. Some agents are required to travel long distances to deposit cash into their bank to restore their electronic float to enable more transactions. Other agents lack sufficient finance to maintain an electronic float sufficient to manage the value of transactions which may occur at their agency, especially when there are large welfare disbursements to be made.

"An agent in South Horr may find it difficult to maintain float because it takes time to travel and it is risky carrying money to Maralal, where his bank account is." A trader in Maralal

Residents are also often inconvenienced by the agents' lack of float, and at times are asked to return later when the agent – hopefully – has obtained sufficient cash for the intended transaction. In Buna (Wajir), respondents claimed that salaried people prefer to go to the bank in Wajir town because the M-PESA agent in Buna does not have enough float. People in Sololo either use a shopkeeper to transfer money from his M-PESA account to an intended recipient at an additional fee, or they send relatives to Moyale to withdraw money from M-PESA on their behalf.

Security: While efforts are made to ensure there is optimum security at agencies, agents still face some threats of robbery. Many of their premises are not insured against such threats and, if they are robbed, traders normally have to bear the loss. Security is even more an issue during transport. M-PESA agents are also targeted by people claiming to be Safaricom officers who defraud the agents of their M-PESA balances.

Periodic Demand: Agents' high expectations about the volumes of transactions have also been reduced by the low and sometimes periodic demand for services, as well as new competition when more players enter the agency business. An M-PESA agent noted that "business is not predictable, some customers want large amounts at a go". In remote locations, demand for services coincides with payouts made to beneficiaries by NGO programmes. The surge in demand by many customers all seeking to cash out their full entitlement – often all at the same time – can pose a serious liquidity challenge for unprepared agents.

Lack of identification cards: In the arid lands, some residents lack the official identification required for transactions, and hence are not eligible to use formal banking services. Traders who also distribute food from their shops use the laminated identification cards (vouchers) provided by NGOs, together with the register, to ascertain the identity of beneficiaries.

Low literacy levels: Due to their inability to read the menus on the phones, some users share PINs with agents. In such cases, agents are compelled to assist them in making transactions. However, this

compromises the privacy and security of the users' money. On the other hand, a KCB Mtaani agent in Marsabit who has been in operation for more than six months protested that customers still prefer carrying out their transactions in the crowded banking hall rather than at her agency. According to her, illiteracy is the main challenge as "...illiterate people take longer to trust a bank agent."

Low literacy levels also impede many residents from using formal financial services. They have a perception that these services are only for the educated. Most illiterate people feel they are the poorest in the community and hence formal financial services are out of their reach. They therefore prefer informal financial services such as using shopkeepers for both saving and credit.

Network Downtime: Although the area is witnessing increasing signal coverage by the major network operator Safaricom, the areas covered are just within a short radius from the centres with a transmission mast, while the remaining interior locations remain without signal. All the agents interviewed mentioned intermittent network downtime as a challenge when running their agency. Mobile banking systems in the remotest areas of the region mostly rely on Safaricom's platform, where available. There is also some (very low) coverage by other providers (Airtel, Yu and Orange).

Distance/Access: Long distances and poor access as a result of poor road infrastructure, low population density and dispersed settlements are the most important constraints for using formal financial services in the arid lands. Where people have to physically travel to reach a financial service institution (or to reach an area with network coverage), they have to cover long distances, spend large amounts of time and, not least, cover high transport costs. All this makes formal financial services costly and inconvenient. For instance, residents of Turbi, a centre on the Isiolo-Moyale road, either have to travel 148 km to Marsabit or 100 km to Moyale to access formal financial services. The travel to Marsabit costs KSh 1,000. As a consequence, residents prefer using informal methods such as keeping money at home or investing it in assets such as livestock.

Poverty: The majority of people in the arid lands are affected by extreme poverty, as the region suffers from periodic droughts and offers limited income generating opportunities (for more details, see the section on livelihoods and gender). In recent years, most of WFP's beneficiaries have lost their livestock, their major source of livelihood. Not only does this limit the demand for saving schemes, but it also reduces the affordability of and readiness to pay for financial services. Many residents who have some knowledge on banking feel that the fees charged by formal financial institutions are too high and that their services thus are expensive and out of reach.

"I get very little money so let me just keep it in my pocket as it won't attract any charges" - **A Kakuma resident explaining how bank charges discourage her from keeping money in a formal financial institution.**

Lack of money also remains a major reason why people do not bank, according to the FinAccess study (see Figure 94 below). The share of respondents giving this reason for not banking has, however, dropped by 20 percentage points between 2006 and 2009

Information: Very little information is available on the financial services offered in the region by formal service providers. The majority of people are not aware about the different types of products and services offered, and their respective benefits. They therefore feel that in order to increase their use of such services, they need to be better informed about them. Increased awareness about Equity Bank and M-PESA services has had a positive impact in their uptake, as described above.

Collateral: With widespread poverty, many people – and especially WFP beneficiaries – lack assets or any other form of collateral which is a prerequisite for accessing credit in banks and microfinance institutions. Some respondents reported that only those who benefit from cash transfers can access any credit at the end of the month from shopkeepers.

Trust: Residents of locations with bank agents (e.g. KCB Mtaani or Equity Agents) feel that agents are as not as good as the brick-and-mortar banking halls when it comes to the security of their money. The safety of money transactions using the M-PESA agency is considered higher, according to the residents, than that of money transactions at the bank agencies.

These findings of the qualitative field survey are further supported by the FinAccess surveys conducted in 2006 and 2009. As indicated in the figure below, the majority of the people still feel they don't have adequate money to keep in the bank. This is closely followed by having no regular income or not being able to afford bank services. Low literacy increased as a reason from 5 percent in 2006 to 22 percent in 2009. The (long) distance to a bank also increased as a reason, from 7.3 percent in 2006 to 23.3 percent in 2009. The latter finding is interesting, considering that the number of banks remained unchanged or even increased during the same period. The intended cash transfer program will therefore increase regular income, which could further increase the use of formal financial services.

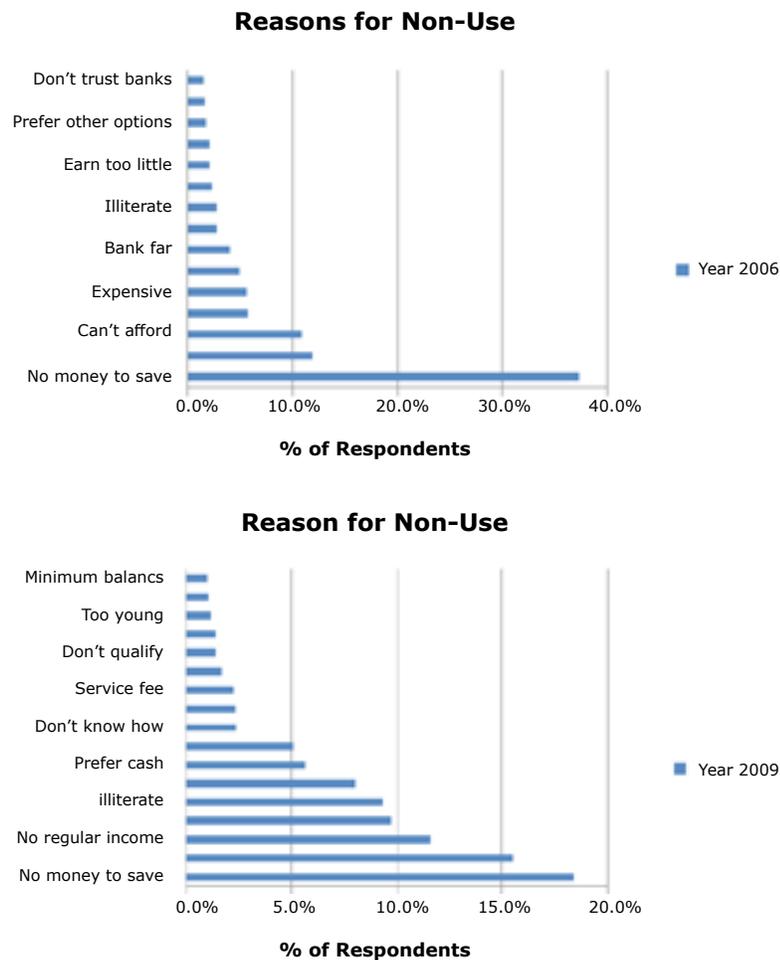


Figure 94: Reasons for being unbanked, 2006 and 2009

Observation	Implication	Recommendation
Information / education: There is still limited awareness of the services and how they can be relevant for low income users.	Education of actual and potential clients is important, and should be built into delivery mechanisms.	Use of multiple mechanisms for information dissemination should be considered. Partner institutions, agents, posters etc.
Accessibility: Accessibility of financial services is increasing but is still a significant issue for customers.	Building access to sustainable services needs to be carefully considered especially where there are limited sources of liquidity in an area.	Interoperability of agents, especially in more remote locations is likely to be important, suggesting it could be a bank agent with a relationship with M-PESA
Trust: People are still learning to trust the new mechanisms	Building trust in the mechanisms is likely to be important in encouraging the use of payment mechanisms.	Different mechanisms to build trust need to be adopted, these include training of clients, monitoring of agents, and fast resolution of customer issues.

Table 32: Observations, implications and recommendations on encouraging usage of financial services

8.8 Summary of main findings and conclusions

Connectivity

Main findings:

- Connectivity is rapidly expanding in and around trading centres as Safaricom (in particular) installs new infrastructure. Towers are often powered by wind turbines. This is facilitating the expansion of M-PESA and bank agencies
- Rapid increase in the use of mobile telephones among our target group; approximately 50 percent of focus group beneficiaries had a mobile phone.

Conclusions:

- Availability and use of M-PESA is rapidly expanding. The picture is dynamic, with access rapidly improving.

Banking Infrastructure

Main findings:

- Bank infrastructure expanded significantly in the past five years with the opening of Equity Bank branches. This trend is likely to continue with the devolution of county budgets, infrastructure improvements, and the extension of cash transfer programmes.

Conclusions:

- Banking infrastructure is likely to improve over time in major centres, with other banks opening branches.

Agency Infrastructure

Main findings:

- Given the increasing connectivity bank agencies, particularly those from Equity Bank and Kenya Commercial Bank, are opening.

Conclusions:

- Practical short-term options for bank partners are Equity Bank and Kenya Commercial Bank. However, the situation is dynamic, and should be further reviewed over time. The distribution of agents – whether bank or M-PESA – differs, and needs to be considered when making

choices. However, the WFP programme in itself has the potential to encourage the development of new agency channels.

Agent Operating Challenges

Main findings:

- Significant operating challenges still exist for agents. These include security, liquidity management, periodic demand for services, and network downtime.

Conclusions:

- Any transition to cash-based interventions must take into account such operating challenges by providing sufficient lead time and ensuring that agents receive support and back-up.

Development of a Payment Eco System

Main findings:

- It is important to keep cash circulating within the arid lands communities, to reduce costs (costs of liquidity, security, etc).

Conclusions:

- It is important to promote electronic payments at individual level, and more significantly at the level of the traders.

Use of Informal Services Predominant

Main findings:

- Individual use of financial services is still predominantly informal. This includes in-kind savings, particularly of livestock. Also the use of merry-go-rounds and credit with traders. The use of M-PESA and Equity, in particular, is gradually increasing.

Conclusions:

- Recipients may benefit from some basic financial education and familiarisation with financial institutions so that they can make the best choices for their financial service delivery.

Seasonality of Expenditure

Main findings:

- There is significant seasonality of expenditure.

Conclusions:

- This implies that there are seasonal needs for credit to meet expenditure peaks typically driven by school fees, medical expenses and festivals. This is also likely to create significant liquidity peaks for agents.

Reasons for non-use of banks**Main findings:**

- Many reasons are given in the FinAccess survey 2009, but the leading ones are that there is no money to save and no regular income. Illiteracy is another major reason.

Conclusions:

- Encouraging the use of financial services includes educating actual and potential clients, building accessible financial systems and trust in these systems.

Client Challenges**Main findings:**

- The greatest difficulties mentioned are vast distances, availability of transport, low literacy level, lack of exposure to and familiarity with financial services.

Conclusions:

- Distance is a relative concept in the arid lands. In areas with good roads, distances of even 40 km can be managed by recipients. In areas with poor infrastructure, distances of 15 km are more reasonable.

- Low levels of literacy will impact the nature of support usually required from agents, and this may have implications for programme management.

Know Your Customer**Main findings:**

- There is a general move toward the use of national identity cards; however, the level of adoption/acquisition of national ID cards is low in some communities, and alternatives are required for non-Kenyan citizens.

Conclusions:

- There is a need to decide whether to support the initiative to encourage participants to obtain a national identity card. Those who are not eligible – by virtue of being non-Kenyans – may need a different form of acceptable identity.

Online / Offline**Main findings:**

- Signal coverage reaches only around the major trading centres. New payment guidelines require the use of online transactions.

Conclusions:

- Payment system options in remote communities are more limited. Possibilities include voucher programmes, satellite access for agents, and existing food distribution programmes.

9. Recommendations

Based on the findings of the three study components, one joint set of recommendations has been formulated.

1. When considering cash-based interventions, priority should be given to areas and markets where market risks are low and most manageable (in particular those with low price volatility, stronger market integration, better road connectivity, higher supply capacity) and where financial services are available. This is the case in district headquarters and a number of selected markets on the transport corridors.
2. When considering replacing in-kind food provisions with cash or voucher transfers, the possibility of replacing some of the commodities foreseen in the food basket, while maintaining in-kind provision of others based on the cost-efficiency analysis should be considered. Of the present WFP food basket, cereals (maize) and pulses (beans) appear to be more easily replaceable than vegetable oil, for example.
3. When considering market-based interventions, the transfer value needs to be adjusted to normal seasonal price fluctuations, taking into account cost-efficiency. This is particularly important during the lean season (July – September).
4. Cash or voucher transfers should be considered only for beneficiaries living within a range of not more than 30km to the market, which corresponds to the 0-30 km that people report presently covering to reach markets.
5. For a potential transfer of cash and vouchers, electronic rather than physical solutions are preferable, as this will reduce transaction costs, including the cost of liquidity, along with the time beneficiaries have to spend for collecting the cash/vouchers, and security risks.
6. Decisions on transfer mechanisms should build on assessments and lessons learned with respect to existing and piloted mechanisms, along with regular reviews of the dynamic development going on in the arid lands. Important aspects to consider include the experience with different transfer programmes, the rapid development of technical solutions and network coverage in the arid lands. The requirement for good information and training, and the ability to swiftly resolve operational problems are other considerations.
7. It is important to ensure reliable and timely monitoring and reporting on any development with respect to the identified risks of a transition to cash and vouchers. Issues to target in particular include the development of prices on local markets, bottlenecks with respect to food availability, and potential conflicts at household level and within communities.
8. A transition to cash transfers in particular should be preceded and accompanied by intensive communication with communities and households, including both men and women, as well as traders. Where possible and appropriate for the focus group in question, established structures such as *wazee baraza* could be used for such communication.

Not least, the study also proposes four recommendations to advocate for the Government of Kenya to:

- Continue and accelerate the improvement of road infrastructure as the all-decisive factor for further strengthening markets and economic development in the arid lands.
- Strengthen systematic and regular price data collection with significant geographical coverage.
- Further encourage increased signal coverage.
- Take the lead in sharing of strategic information and increasingly linking the different safety nets existing and under development.

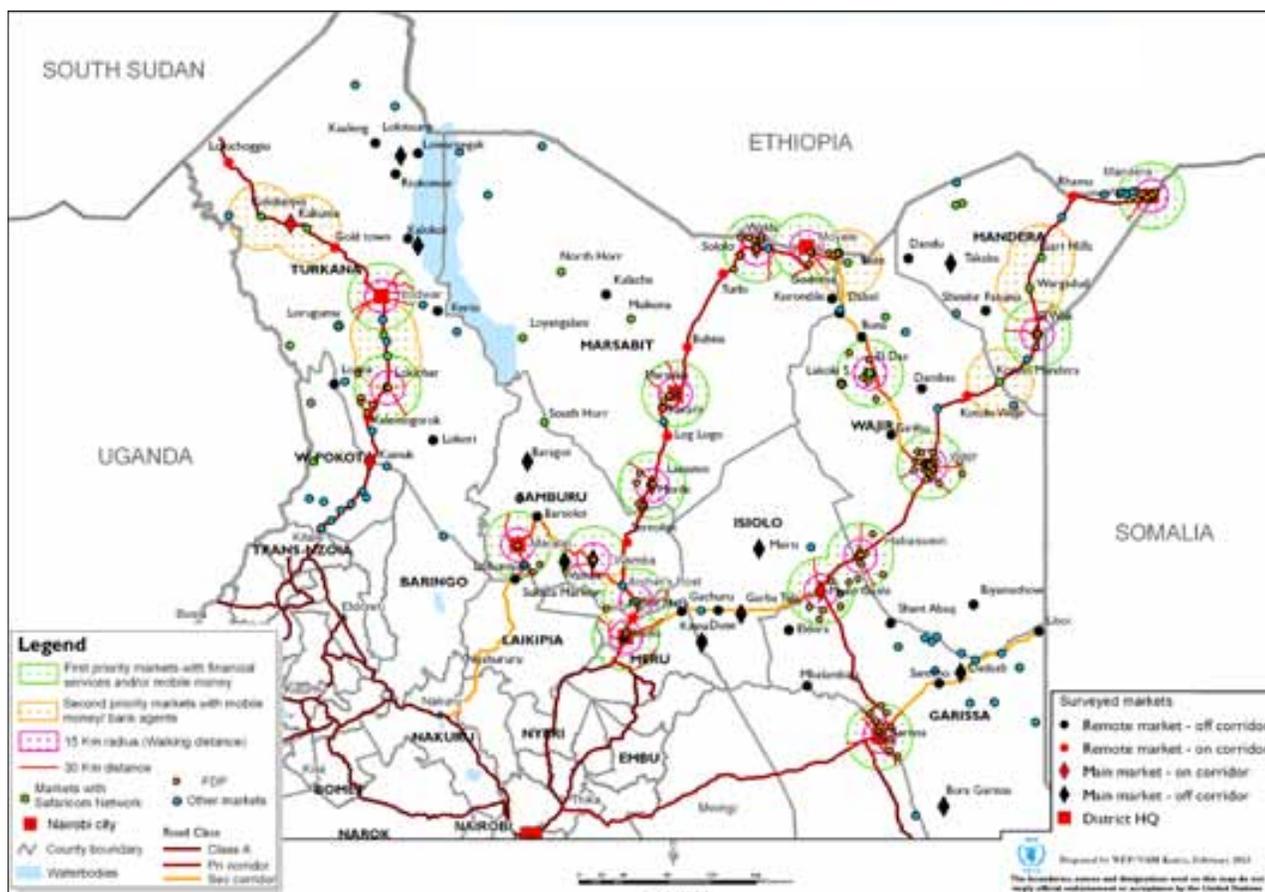
The map below illustrates the areas and markets which fulfil the minimum conditions for a transition to cash or voucher transfers based on the criteria established (markets on the main transport corridors, availability of financial services, and connectivity). Among these, those with green circles

would be the first priority areas for a transition to cash or voucher transfers, and those with yellow circles would be the second priority.

The shaded circles around these markets indicated the 30 km radius mentioned in recommendation 4 above. Final distribution points of WFP food provisions are indicated by yellow circles. Based

on the Long Rains assessment in August 2012, some 885,000 people required food assistance in Arid Lands. The approximate number of these beneficiaries who could – provided additional operational prerequisites were in place – transition to cash or voucher transfers amounts to about 150,000-200,000.

Catchment Areas for Potential Cash Interventions



Map 11: Catchment areas for potential cash or voucher interventions in the arid lands

10. Presentation and discussion of the study results

The findings, conclusions and recommendations of the study were presented at a participatory workshop in Nairobi on February 27, 2013. Participants were stakeholders from a wide range of institutions, including government, bilateral and multilateral donors, non-governmental organisations, private sector (banks) and United Nations organisations.

Presentations focussed on the most important findings and conclusions of each of the three study components, and on clarifying any potential issues. On this basis, one set of recommendations derived from the three sets of conclusions was presented, including a map that overlays the main transport corridors, the location of markets, the presence of banking institutions and agents, and the present mobile telephone and Internet network coverage. This overlay forms the basis for identifying areas within which, according to the criteria established by the study, risks of replacing food provisions with market-based approaches seem to be lowest and most manageable.

Participants agreed that the identified landscape is highly dynamic, and that the factors influencing the choice of areas where a replacement of food transfers by cash or voucher transfers is most feasible need to be regularly reviewed. In addition, there was wide agreement that the close, ideally real-time monitoring of local market prices should form part of risk management strategy that has to accompany this transition.

The ensuing plenary discussion focused mainly on two areas:

- How the enabling environment for a continuous strengthening of markets and local economic development in the arid lands can be supported.
- The way forward in the short, medium and long term.

10.1 Enabling the environment for strengthened markets

The increased use of market-based modalities of food assistance in the arid lands is expected to have a positive effect on the development of markets and the local economy in the areas concerned. However, this effect will remain limited because almost all the food that will be bought with transferred cash will be imported into the arid lands by wholesalers outside the local economic area. So most of the cash transferred locally will rather quickly be transferred to actors outside these areas, namely wholesalers and transporters.

For this reason, additional activities are required by actors other than WFP to further strengthen local markets. Such strengthening will then contribute to the dynamic development of markets in the arid lands, and will in time allow further expansion of market-based interventions into areas where markets today are not yet sufficiently integrated and where risks are currently still prohibitive of price inflation and insufficient capacity of traders to adjust their supply to increasing demand.

These additional activities recommended above include, in particular, the following:

10.1.1 Investing in increased and improved road infrastructure

The weak road infrastructure in the arid lands, even on the main corridors, has been identified as the all-decisive factor limiting greater integration of local markets. It increases transaction costs significantly, resulting in price increases for commodities of between 1.3 and 1.8 percent for each additional hour of transport required. Reducing the required

time to transport goods between markets – including during the rainy season – would thus significantly reduce consumer prices, which would be a particularly important benefit for the large numbers of poor in the arid lands who depend on markets. Not least, reduced end prices would also make market-based food assistance more competitive and cost-efficient.

Improved road infrastructure would also reduce the resupply time for traders in arid lands markets, thus tackling one of the factors that might limit their capacity to scale up their supplies. Furthermore, improved roads may help increase the number of transporters operating in the arid lands, thus increasing competition, which would further contribute to reducing end prices. Similarly, better roads would also allow the use of bigger trucks, or more mobile traders, which would reduce unit transport costs.

To some degree, investing in road improvements in the arid lands is already foreseen in national development plans, for example, with respect to allowing the exploitation of oil deposits in Turkana, better linking south Sudan to Kenya, and improving the transport links with Ethiopia. These investments (or “these plans”) will not only pump money into county budgets but also will devolve decision-making to the local level on how these budgets will be used. Counties will thus be able to use both their increased financial strength and their enhanced power and influence to directly finance road improvements and to advocate for further state investments in this area.

10.1.2 Providing energy and market infrastructure

Experience shows that electrification plays a tremendous role in market development. Counties and cities can thus contribute to strengthening their markets by directly financing electrification projects or by encouraging and accommodating private sector investments in this area.

In addition, cities and counties should consider strengthening market infrastructure – for example, by providing adequate stalls or offering secure storage (for a fee) to reduce traders’ costs due to wastage or theft.

10.1.3 Encouraging greater signal coverage

The study has shown how better mobile phone and online signal coverage has spurred an explosive development in the supply and use of financial services. These investments are typically and appropriately made by private companies. However, local authorities can encourage private-sector investments by offering to supply facilitating conditions such as providing security for physical installations, etc.

10.1.4 Encouraging an enhanced network of banks

The increased presence of formal banks in the arid lands is another factor that will contribute to strengthening local markets, as more traders will have access to formal credit, allowing them to increase their supply. Furthermore, increased competition among banks can contribute to reducing charges, and thus make the use of their services more attractive. Counties can help strengthen the available bank network by using their budgets strategically. An enhanced network of banks would also allow a further expansion of market-based food assistance into areas where this option is presently not feasible or advisable.

10.1.5 Security

Insecurity is among the factors constraining economic development in the arid lands. Improving security along transport corridors can thus be an important measure to promote development. There are various ways that counties can increase security, such as establishing patrols, accompanying truck convoys, and encouraging mobile wholesalers or entire mobile markets.

10.2 The way forward

With respect to the way forward, a number of specific actions must be taken to ensure that – based on the study – progress is made toward operational decisions and an actual transition toward and increased use of market-based interventions in the proposed areas, where found actually suitable. In addition, the Government of Kenya, development partners and WFP need to engage in an increased harmonisation of different

safety net programmes into one framework using a single registry, harmonised entry and exit criteria as well as mechanisms for transfers, seasonal adjustment of transfer values, etc.

Another important aspect discussed concerns the requirement of national identity cards for cash transfers. On one hand, all partners agreed that the provision of these cards to those eligible needs to be supported. On the other hand, it will be necessary to identify additional ways to fulfil

national “know-your-customer” requirements to enable such transfers until all eligible beneficiaries have acquired national identity cards. Ways must also be found to enable transfers to beneficiaries who are not Kenyan citizens and thus not eligible to receive such identification.

The table below provides an overview of short-, medium- and long-term action to be taken by the various partners involved.

Actors	Short-term (coming 6 months)	Medium-term (6 – 24 months)	Long-term (2 years +)
WFP	<ul style="list-style-type: none"> ■ Begin implementation of market based activities in selected markets (district headquarters and large supply markets well positioned along the transport corridors in line with potential beneficiary, financial and mobile network locations) ■ Monitor impact of implementation and infrastructure developments that currently undermine the market functioning in other locations. ■ Determine food basket elements to be replaced by cash or voucher; ■ Based on the recommended seasonal considerations, decide on the most appropriate assistance modality for those selected locations (cash vs. vouchers, conditional vs. unconditional and proportions of food and cash if applicable) ■ Clarify operational requirements of various modalities, weigh their respective concrete advantages and disadvantages and on that basis take operational decisions and produce a map for cash and for other “blended” approaches, e.g. vouchers; ■ Partner with Government to secure an adequate monitoring of in particular price developments; ■ Develop a risk management strategy; ■ Engage in a single registry of beneficiaries. 	<ul style="list-style-type: none"> ■ Undertake communication with communities, traders and households, with particular attention to targeted communication with women and men aiming at maximising the share of transfers that is actually used on food, and at avoiding conflicts at household and community level; ■ Engage in incorporating all WFP beneficiaries (also of in-kind food beneficiaries) into a single beneficiary registry. ■ Clarify how non-Kenyan nationals can access support (without being eligible to receive a national ID) ■ Roll-out cash or voucher transfers in selected markets; ■ Continuously support and strengthen monitoring system accompanying cash and voucher transfers; ■ Undertake full cost-effectiveness analysis (including cost-efficiency) of various intervention options (in-kind, cash, vouchers) to feed into subsequent operational decisions; ■ Develop a transition / hand-over strategy to move chronic caseload from WFP to NSNP; ■ Engage with government and partners to hand-over chronic beneficiaries to NSNP; ■ Regularly review the factors determining the choice of modalities with a view to expand the area in which market based interventions are undertaken as becomes feasible. 	<ul style="list-style-type: none"> ■ Harmonise the various safety nets and ensure that eligible households are covered by the right programme, avoiding unintended double-coverage.

Actors	Short-term (coming 6 months)	Medium-term (6 – 24 months)	Long-term (2 years +)
Safety Net Partners	<ul style="list-style-type: none"> ■ Include WFP in partnership towards NSNP safety net and a single beneficiary registry 	<ul style="list-style-type: none"> ■ Engage in NSNP poverty ranking ■ Identify which registered beneficiaries do not yet have a national ID ■ Support the application for issuance of national IDs to eligible beneficiaries 	
Government - central	<ul style="list-style-type: none"> ■ Take the lead in the development of a single registry ■ In partnership with WFP and partners, define the entry and exit criteria into social transfer schemes 	<ul style="list-style-type: none"> ■ Promote the provision of national IDs to eligible population ■ Engage in strengthening the enabling environment for market development, including investments in (in particular road) infrastructure, or encouraging the use of banks and electronic transfers by traders (including through e.g. a reduction of taxes. 	<ul style="list-style-type: none"> ■ Engage in harmonised NSNP ■ Engage in a transition plan for an increasing government takeover of responsibility for the resourcing and management of the NSNP
Government - county	<ul style="list-style-type: none"> ■ Engage in the establishment of single registry 	<ul style="list-style-type: none"> ■ Engage in the establishment of single registry ■ Support the application for and provision of national IDs to eligible population ■ Engage in strengthening the enabling environment for market development including investments in road and market infrastructure (including energy), encouragement of expansion of banking networks and competition among them, expansion of on-line signal coverage, increased security, e.g. accompanying mobile markets and encouraging financial agents to join these, further increasing the potential catchment areas for cash interventions. 	<ul style="list-style-type: none"> ■ Continue the on-going efforts to develop road infrastructure in the arid lands, and expand the motorable road network off the main corridors to support market development in those areas.

Actors	Short-term (coming 6 months)	Medium-term (6 – 24 months)	Long-term (2 years +)
Private sector	<ul style="list-style-type: none"> ■ Banks in the arid lands to find ways of extending credit or the possibility of overdraft to traders as a way of supporting market development and strengthen traders' capacity to increase supply in areas where cash interventions are taking place. 	<ul style="list-style-type: none"> ■ Banks in the arid lands to find ways of extending credit or the possibility of overdraft to traders as a way of supporting market development and strengthen traders' capacity to increase supply in areas where cash interventions are taking place. 	<ul style="list-style-type: none"> ■ Banks in the arid lands to find ways of extending credit or the possibility of overdraft to traders as a way of supporting market development and strengthen traders' capacity to increase supply in areas where cash interventions are taking place.

Table 33: Overview of short- medium- and longer-term follow-up action

Each of team 1-5 carried out interviews with traders and key informants - and specialised team members implemented focus group discussions for the livelihood and gender component

Day	Date	Place	Itinerary Team 1 - Turkana Anand and Ken-neth	Itinerary Team 2 - Samburu Isiolo Sara and John	Itinerary Team 3 - Marsabit Moyale Diego and Rajab	Itinerary Team 4 - Wajir Mandera Julius and Sirat/ Ali	Itinerary Team 5 - Garissa Isiolo Barbara and Anna	Itinerary Team 6 - Financial markets George and Joyce
5	31 August	Work at Kaaleng remote Market (14 interviews) and Lomoru remote market (14 interviews) and travel to overnight at Kakuma	Work at Maralal main Market (21 interviews) and Barsaloi remote market (14 interviews) and overnight at Maralal	Travel to Work at Maikona remote Market (14 interviews) and Kalacha remote market (14 interviews) and overnight at Kalacha/North Horr	Work at Rhamu remote Market (14 interviews) and Wargadud remote market (14 interviews) and overnight at Elwak	Work at Sericho remote Market and El-Dera remote market (14 interviews) and travel to overnight at Habaswein	Travel to Maralal	
6	1 September	Work at Kalobevei remote Market (14 interviews) and Lokichoggio remote market (14 interviews) and travel to overnight at Lokichoggio	Work at Maralal main Market (21 interviews) and Sukuta Marmar remote market (14 interviews) and overnight at Maralal/Wamba	Work at North Horr main Market (Entire team - 42 interviews) and overnight at North Horr	Work at Elwak main Market (21 interviews) and Kotulo-Mandera remote market (14 interviews) and overnight at Elwak	Work at Habaswein main Market - IN WAJIR COUNTY (Entire team - 42 interviews) and overnight at Habaswein/ Daadab	Work at Marala (remote) and Wamba (main), overnight at Wamba	
7	2 September	Work at Oropi remote market (14 interviews) and travel to overnight at Kakuma	Work at Wamba remote market (Entire team - 42 interviews) and overnight at Isiolo	Travel to work at Loiyangalani remote Market (Entire team - 14 interviews) and overnight at Loiyangalani	Work at Elwak main Market (21 interviews) and Shimbir-Fatuma remote market (14 interviews) and overnight at Takaba	Work at Biyamathow remote Market - IN WAJIR COUNTY (14 interviews) and overnight at Daadab	Travel to Marsabit	
8	3 September	Work at Kakuma main Market (Entire team - 42 interviews) and overnight at Kakuma	Work at Wamba main Market (Entire team - 42 interviews) and overnight at Isiolo	Rest at Loiyangalani	Work at Takaba main Market (Entire team - 42 interviews) and overnight at Takaba/Banissa	Rest at Daadab	Work at Marsabit (main) and Karare (remote), overnight at Marsabit	

Each of team 1-5 carried out interviews with traders and key informants - and specialised team members implemented focus group discussions for the livelihood and gender component

Day	Date	Place	Itinerary Team 1 - Turkana Anand and Ken-neth	Itinerary Team 2 - Samburu Isiolo Sara and John	Itinerary Team 3 - Marsabit Moyale Diego and Rajab	Itinerary Team 4 - Wajir Mandera Julius and Sirat/ Ali	Itinerary Team 5 - Garissa Isiolo Barbara and Anna	Itinerary Team 6 - Financial markets George and Joyce
9	4 September	Work at Gold town remote Market (14 interviews) and overnight at Lodwar	Rest at Isiolo	Travel to Marsabit	Work at Banissa remote Market (14 interviews) and Dandu remote market (14 interviews) and overnight at Takaba.	Work at Daadab main Market (Entire team - 42 interviews) and overnight at Garissa	Travel to Turbi, work at Turbi (remote), overnight at Turbi	
10	5 September	Rest at Lodwar	Work at Sereolipi remote Market (14 interviews) and Archer's post remote market (14 interviews) and overnight at Laisamis	Travel to and work at Bubisa remote Market (14 interviews) and Turbi remote market (14 interviews) and overnight at Turbi/Isiolo	Travel to Wajir	Work at Bura-Garissa main Market (Entire team - 42 interviews) and overnight at Bura/Garissa	Travel to Walda, work at Walda (hub) and Sololo (main, overnight at Moyale	
11	6 September	Work at Kalokol remote Market (14 interviews) and travel overnight at Lodwar	Work at Laisamis main Market - IN MARSABIT COUNTY - (Entire team - 42 interviews) and overnight at Laisamis	Work at Sololo main Market (21 interviews) and Walda remote market (14 interviews) and overnight at Sololo	Rest in Wajir	Travel to Isiolo	Work at Moyale and Dabel (remote), overnight at Moyale	
12	7 September	Work at Loima main Market (Entire team - 42 interviews) and overnight at Lorgum	Work at Merillir main Market - IN MARSABIT COUNTY - (Entire team - 42 interviews) and overnight at Isiolo	Work at Sololo main Market (21 interviews) and Dabel remote Market (14 interviews) and overnight at Moyale	Work at wakir main market (Entire team - 42 interviews) and overnight at Madera/Griftu	Travel to work at Mertim main Market (Entire team - 42 interviews) and overnight at Mertio	Rest in Moyale	

Each of team 1-5 carried out interviews with traders and key informants - and specialised team members implemented focus group discussions for the livelihood and gender component

Day	Date	Place	Itenerary Team 1 - Turkana Anand and Ken-neth	Itenerary Team 2 - Samburu Isiolo Sara and John	Itenerary Team 3 - Marsabit Moyale Diego and Rajab	Itenerary Team 4 - Wajir Mandera Julius and Sirat/ Ali	Itenerary Team 5 - Garissa Isiolo Barbara and Anna	Itenerary Team 6 - Financial markets George and Joyce
13	8 September	Work at Lorgun remote Market (14 interviews) and travel to overnight at Lodward	Work at Gachuru remote Market (14 interviews) and Kula mawe remote market (14 interview) and travel to overnight Garbatulla	Work in Moyiale main Market (21 interviews) and at Bute remote market (14 interviews and overnight at Moyale.	Work at Eldaa main Market (21 interviews) and Griffu remote Market (14 interviews) and overnight at Eldas	Travel to Isiolo	Work at Buna (remote) overnight at Griffu	
14	9 September	Travel to and work at Lokichar main market (Entire team - 42 interviews) and overnight at Lokichar	Work at Garbatulla main Market (Entigre team - 42 interviews) and overnight at Garbatulla	Reats at Moyale	Work at Eldas main Market (21 interviews) and Buna remote Market (14 interviews) and overnight at Eldas.	Work at Isiolo main Market (Entire team - 42 interviews) overnight at Isiolo	Work at Griffu (main), overnight at Griffu	
15	10 September	Work at Kalemgorok remote Market (14 interviews) and Lokori remote Market (14 interviews) and overnight at Lokichar	Work at Kinna main Market (Entire team - 42 interviews) and overnights at Isiolo	Travel to Marsabit	Travel to Wajir	Work at Garemara remote market (14 interviews) and overnight at Meru	Travel to Wajir, Work at Wajir (main) overnight in Wajir	
16	11 September	Work at Kainuk main Market (Entire team - 42 interviews) and overnight at Lokichar	Travel to Nakuru	Travel to Marsabit	Travel to Garissa	Work at Meru main Market (Entire team - 42 interviews) and overnight at Nakuru	Travel to Garissa, overnight in Garissa	
17	12 September	Travel to Kitale	Work at Nakuru main Market (Entire team - 42 interviews) and overnight at Nakuru	Travel to Isiolo	Travel to Thika	Travel to Nairobi	Work at Garissa (main), overnight at Garissa	

Each of team 1-5 carried out interviews with traders and key informants - and specialised team members implemented focus group discussions for the livelihood and gender component

Day	Date	Place	Itinerary Team 1 - Turkana Anand and Ken-neth	Itinerary Team 2 - Samburu Isiolo Sara and John	Itinerary Team 3 - Marsabit Moyale Diego and Rajab	Itinerary Team 4 - Wajir Mandera Julius and Sirat/Ali	Itinerary Team 5 - Garissa Isiolo Barbara and Anna	Itinerary Team 6 - Financial markets George and Joyce
18	13 September	Work at Kitale Hub Market (Entire team -45 interviews) and overnight at Kitale	Travel to Nairobi	Travel to Nairobi	Work at the Thika Hub Market (Entire team - 45 interviews) and travel to Nairobi		Travel to Nairobi	
19	14 September						Rest in Nairobi	
20	15 September						Rest in Nairobi	
21	16 September						Fly to Lodwar, overnight at Lodwar	
22	17 September						Travel to Lokoro, work at Lokoro (main) and Lokichar (remote), overnight at Lodwar	
23	18 September						Work at Gold Town (remote) and Kakuma (remote), overnight at Kakuma	
24	19 September						Work at Kakuma (remote), oversight at Lokitaung	
25	20 September						Work at Lokitaung (main) and Kaaleng (remote), overnight at Lokitaung	

Each of team 1-5 carried out interviews with traders and key informants - and specialised team members implemented focus group discussions for the livelihood and gender component

Day	Date	Place	Itenerary Team 1 - Turkana Anand and Kenneth	Itenerary Team 2 - Samburu Isiolo Sara and John	Itenerary Team 3 - Marsabit Moyale Diego and Rajab	Itenerary Team 4 - Wajir Mandera Julius and Sirat/ Ali	Itenerary Team 5 - Garissa Isiolo Barbara and Anna	Itenerary Team 6 - Financial markets George and Joyce
26	21 September							
27	22 September							Work at Kalokol (main) overnight at Lodwar Fly to Nairobi

Annex 2: List of Literature used

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- Markets and poverty in northern Kenya, towards a financial graduation model, FSD Kenya 2012
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Monitoring results of the Somalia Cash vouchers transfer programme: Phase 1. Catherine Longley, Sophia Dunn and Mike Brewin. Humanitarian Exchange Magazine, Issue 55 September, 2012.

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The drought and food crisis in the Horn of Africa: impacts and proposed policy responses for Kenya, World Bank, 2011

The impact of rising food prices on disparate livelihood groups in Kenya, The Kenya Food Security Steering Group (KFSSG), July 2008

The maize farm-market price spread in Kenya and Uganda, Takashi Yamano and Ayumi Arai, National Graduate Institute for Policy Studies, December 2010

The social impact of cash transfers: a study of the impact of cash transfers on social networks of Kenyan households participating in cash transfer programs Phyllis Ressler, Dr. Stuart Gillespi. RENEWAL/IFPRI, Regional Network on AIDS, Livelihoods and Food Security, International Food Policy Research Institute, January, 2008.

