



# MARKET DYNAMICS AND FINANCIAL SERVICES IN KENYA'S ARID LANDS

# THE IMPORTANCE OF MARKETS FOR PASTORALIST COMMUNITIES IN THE ARID LANDS

The Arid Lands, which are chiefly in the North of Kenya, cover around 50% of the country and are home to about 5.6 million people and approximately 60% of the national livestock herd. The people living in these areas have remained outside the mainstream economy of the country: subsistence is the way of life for most farmers who are agro-pastoralists and pastoralists.

The dominant production system of pastoralism has historically been less well understood and supported than other forms of land use. But many Governments, including Kenya, now recognise the contribution of pastoralism to food security, environmental stewardship and economic growth, and are seeking to protect and promote the mobility on which it depends.

Currently the Arid Lands have the lowest development indicators and the highest incidence of poverty in the country. Poverty rates are between 60% and 80%, and are highest amongst female-headed households.

Against almost every indicator of human development such as access to healthcare, education, energy, water, financial services and justice the region scores poorly compared with the national norm.

Across the Arid Lands as a whole, the over-riding challenge is to ensure food security in drought-prone environments.

Households in the Arid Lands are largely dependent on public or commercial inflows of food and obtain staple commodities for consumption either through food distributions or at the market. On average, households that are not reliant on food aid distributions or its 'food for assets' programme spend as much as 70% of their income on food. Among the most important commodities that traders procure and sell are sugar, beans, rice, maize flour, maize, potatoes, wheat flour, tomatoes, posho and goat meat. Given the dependency on markets for staples it is vital for the Government of Kenya, donors and relief agencies to have a clear idea of how these markets function.

## Aims and methodology of the survey

The objective of this survey is to better understand how markets function in the Arid Lands and what capacity they may have to respond to increased demand. It explores the feasibility of alternative transfer delivery mechanisms in the Arid Lands based on cash or vouchers. This will inform decision makers when programming food assistance and livelihood interventions including how these options impact on gender dynamics. The analysis focuses on the market systems with different supply side actors and their behaviour, the enabling environment and how markets perform with regards to food supplies, e.g. how are markets integrated and whether prices exhibit seasonal and volatile patterns.

Further to the food market component, the study analyses the infrastructure of financial service providers to facilitate delivering cash/voucher food assistance, e.g. via banks or mobile phones. It seeks to determine the readiness of the technology for these new delivery mechanism and whether beneficiaries have a sufficiently adequate level of financial literacy to receive assistance in this way.

The survey was carried out between 25 August and 14 September 2012. Both quantitative and qualitative data were collected. Some 1652 traders and 102 key informants were interviewed and 56 focus group discussions (FGDs) took place.

# MARKET CHARACTERISTICS VARY BY SIZE, SUPPLY FUNCTION AND PROXIMITY TO MAIN TRANSPORT CORRIDOR

Only livestock and milk are locally produced and traded – for the remaining commodities households in the Arid Lands are totally dependent on imports of staple foods from other areas of Kenya. Maize flows from the grain basket of western Kenya, while vegetables are mostly produced in the central and western regions and then supplied to the Arid Lands via three main transport corridors – North East, North Central and North West. Along and off these transport corridors there are four tiers of markets: hub (outside the Arid Lands), district headquarter, main and remote markets.

After the hubs, district headquarter markets are at the core of the food redistribution to other main and remote markets, which do not supply further to other markets. Proximity to the three main transport corridors often defines a market's general characteristics and its performance. There are relatively fewer wholesale traders in the Arid Lands, especially away from the district headquarters and transport corridors. With increasing distance from the hubs the degree of specialization of wholesalers reduces. The fact that retailers have fewer sources may impact on their quick stock replenishment or response to increased demands.

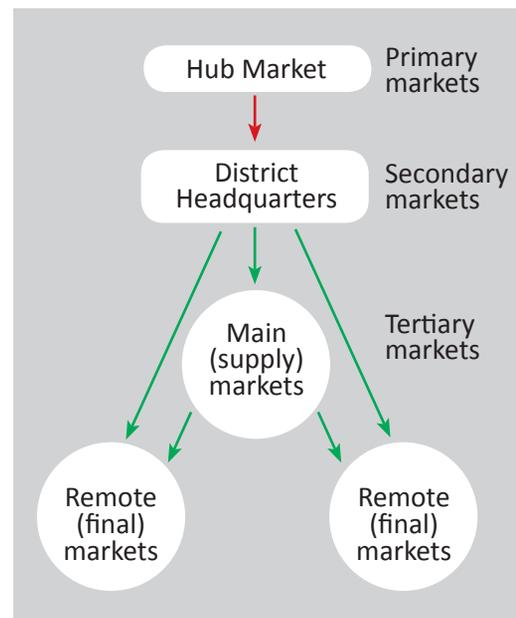
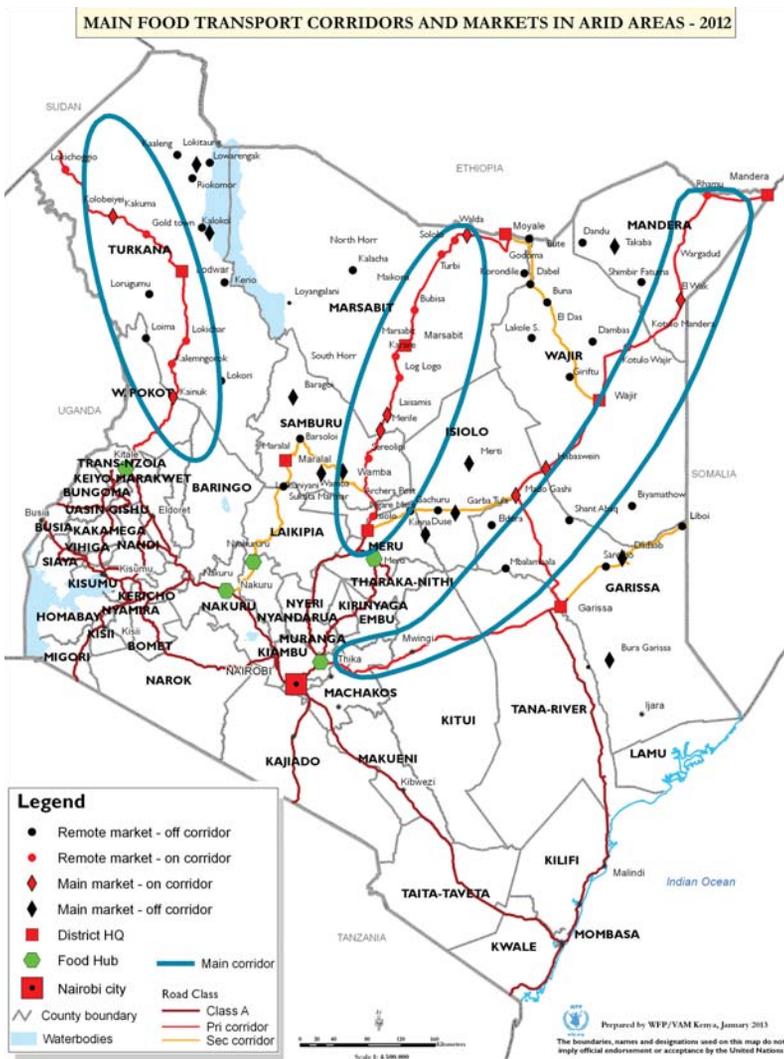


Figure 1: Market structure

## HOW SEASONALITY AFFECTS FOOD AVAILABILITY

Food availability in markets is highly seasonal - and is dependent on both the seasonal production cycles and climatic conditions in the food producing areas of the country and transport conditions.

About 70% of traders interviewed mentioned they experience seasonal fluctuations in the quantities available to them. These are more pronounced in remote markets than in the main ones, reflecting the impact of road conditions.

The effects of seasonality on the availability of commodities are more pronounced for commodities produced in the arid areas (meat and milk) and rapidly perishable commodities (fruits and vegetables) than for cereals (maize and beans) and processed foods (see figure 2).

Meat is more readily available 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 drought herdsmen are forced to sell their livestock at throwaway prices to prevent losses. Price trends usually mirror these production cycle patterns. Milk follows the exact opposite availability trend, being higher during the rainy seasons due to the availability of pasture – during the goats' kidding period. Extraordinarily long seasonal migrations because of droughts 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.

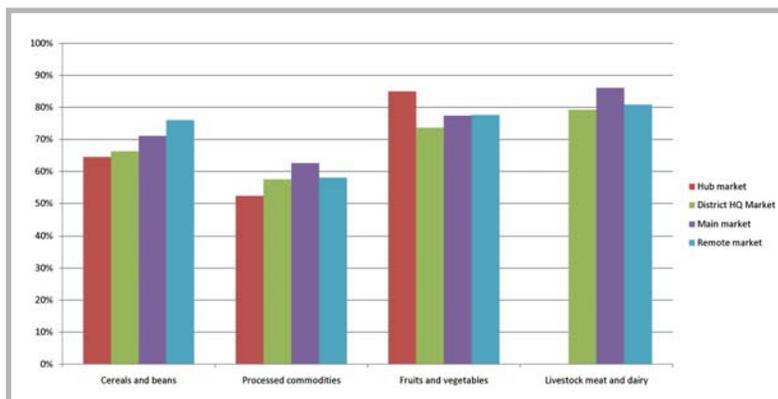


Figure 2: Seasonal fluctuations in quantity by supply chain

Maize is more available in local markets following the long rains harvest in the grain basket of western Kenya, which takes place between October and February, before decreasing progressively between March and September. Again the volumes of fruit and vegetables available in the market are determined by the seasonal production cycles, which in turn is highly rain dependent unless the land is irrigated.

In addition the road conditions have a major impact on market supply. While resupply time averages overall around two to three days, it takes up to four days to reach remote markets off the corridor during the dry season. In the rainy season routes may become impassable and hence supply time increases and availability reduces.

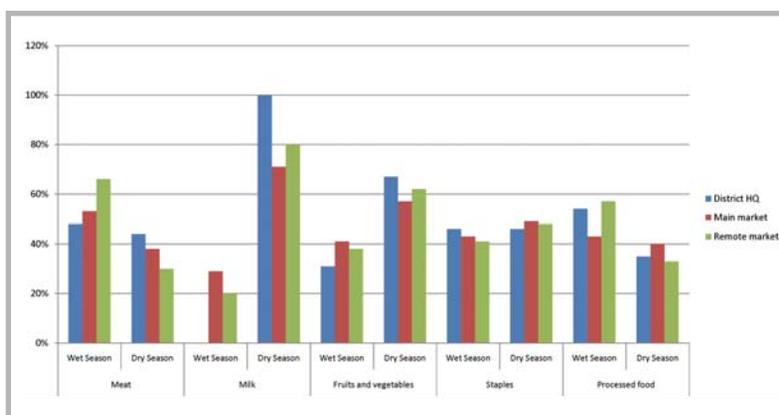
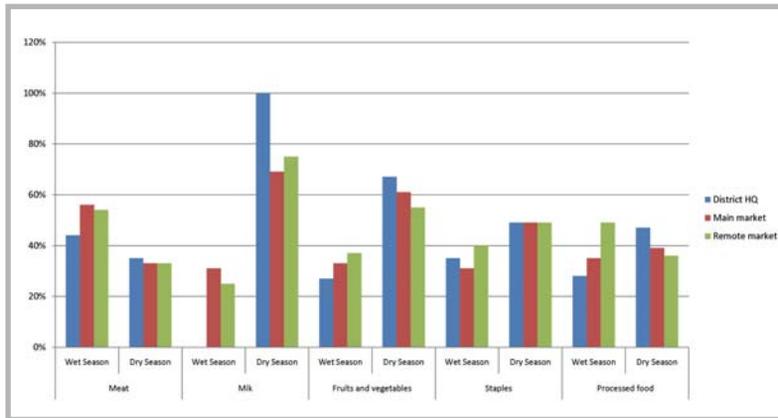


Figure 3: Reported periods of low food availability

# VOLATILITY OF MAIZE PRICES IS HIGHER IN REMOTE MARKETS AND OFF THE TRANSPORT CORRIDORS



**Figure 4:** Reported periods of high prices

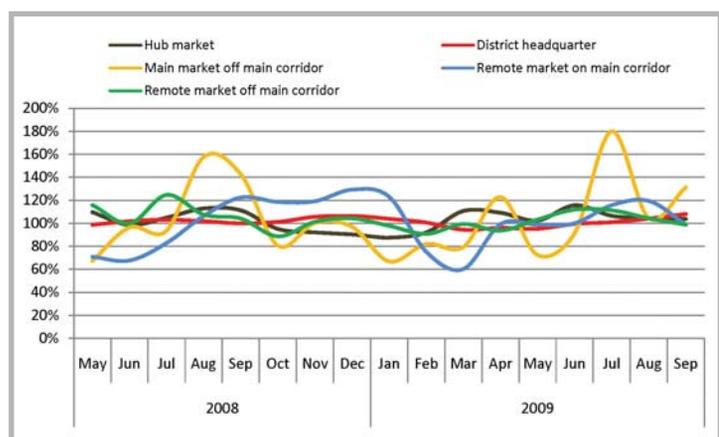
food insecurity since they have no financial buffer to protect them. They often have to resort to corrosive coping mechanisms, such as restricting the number of meals they eat a day, undermining their food security and nutrition status. This price volatility of maize, especially in the remote markets off the main corridors, needs to be taken into account when considering a market based food assistance intervention.

Price fluctuations of fruit, vegetables and staples are mainly determined by the harvest performance, production cycles and by transport costs, especially during the rainy seasons. Lower market prices are generally observed between November and May in all corridors.

Maize prices are more stable where markets are more integrated, i.e., between hub markets and district headquarters and between district markets and remote markets on the corridors. In general price signals are transmitted from hub and district headquarters to other markets on the main corridors. There is only weak price integration of maize prices between market hubs and district headquarters on the main corridors with markets off the corridors. Consequently, prices are also more volatile away from the main transport corridors as seasonal indices of maize prices clearly indicate.

High price volatility exposes poor and vulnerable households to greater

Apart from volatility, prices increase by about 1.3% for every additional hour of delivery time from the hub market to the district headquarters, and 1.8% for each hour between the district headquarters and the remote markets off the corridor. This is not only a reflection of road conditions but also of transport capacities and the limited capacity of traders in the Arid Lands to set their own prices. Ultimately these traders pass on price increases and transaction costs to consumers.



**Figure 5:** Seasonal index of maize prices

## WHAT IS PREVENTING TRADERS FROM INCREASING SUPPLIES?

High transport costs, lack of good roads, lack of access to credit, insecurity and lack of storage are the most important constraints for traders to increase supplies. The infrastructure constraint and its cost implication are significant and more pronounced for remote markets and off the corridor. Only the hub markets on the main corridors are fully connected by tarmac roads. All markets off the main corridors are re-stocked either on graveled or non graveled tracks.

The further one moves away from the main markets or off the main transport corridors the more traders rely on matatus, buses and other public transport. These vehicles carry relatively small quantities at much higher cost compared with the larger trucks used on the main hard surface transport routes. Hence road surfaces and conditions as well as transport type contribute to high transaction costs, curb traders' supply capacity and increase resupply time at remote markets.

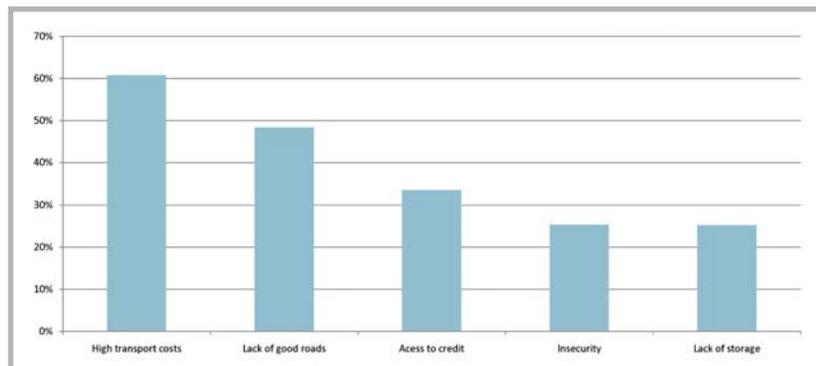


Figure 6: Constraints to upping supplies

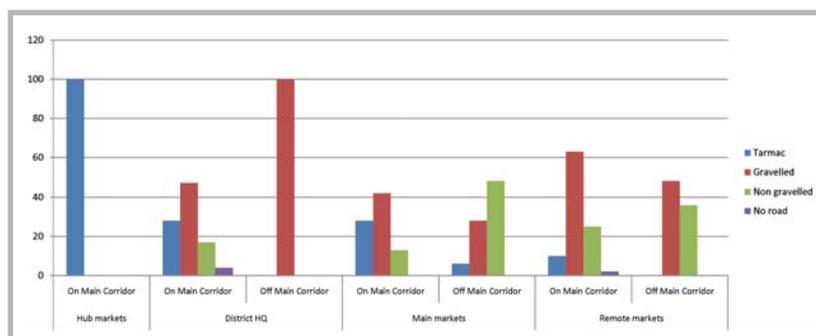


Figure 7: Type of road surface linking markets

Access to credit is generally low (15-20% of traders) and this could also hinder the capacity to increase supply. Most traders use cash generated from previous sales to finance their purchases. Access to formal credit shrinks with remoteness (from 20% of traders in district headquarters markets to 3% in remote markets), while the proportion of traders with no access to credit increases with remoteness (from about 60% in district headquarters markets to 70% in remote markets).

While half of all traders estimated that a surge in demand would have no effect on prices, a significant share of wholesalers (20-30%) expect that retail prices will increase in the short and the long run, regardless of the type of market. Given the crucial role of wholesalers in the supply chain, it may in fact indicate that demand increases could lead to price increases.





### Men vs women – who should receive cash transfers?

Men typically spend their time on casual labour, livestock rearing and charcoal burning and very little on household and family related needs. They dedicate considerable time to wazee baraza and leisure activities. As expected, household-related chores take up much of women's time with less spent on income generation. Women have no leisure time.

Women's priorities for spending potential cash assistance are focused on basic family needs, particularly on food, clothes, education and health, while men are likely to prioritise livestock purchase alongside the family needs. And men are more likely to invest in personal pleasures including alcohol, miraa, eating out, or luxury items. The probability that cash assistance is actually spent on food or other basic family needs is higher when the transfer is received and used by women.

Concerning the daily use of money, women are used to taking independent decisions. They are in charge

of purchasing household goods from markets, so they would be the natural recipients of cash for food and they have equal access to transfers through mobile phones (just under 50% of those interviewed – about half of whom were women – own mobile phones, and use them for communication and money transfers).

But there are many challenges. For instance, transfers involving formal bank accounts may limit access for women because they often don't have the required national ID.

While about half of the interviewed focus groups did not anticipate any negative effects of replacing in-kind food provisions with cash or vouchers, some groups feared increased domestic tensions (between men and women) and community tensions (jealousy from non-beneficiaries).

Cash transfers will lead to reduced sharing, which has both positive and negative aspects. Around half of participants feared exclusion from traditional safety nets (i.e., in-kind support from the community).



## FINANCIAL SERVICES INFRASTRUCTURE, TECHNOLOGY AND THE BENEFICIARIES – ARE THEY READY FOR THIS?

There are two main platforms that can be used for social payments in Kenya - mobile money transfers and bank accounts supported by bank agents. Over the last five years the payments landscape has altered dramatically. Now some 18 million Kenyans access mobile payments mainly through M-PESA, there are 45,000 mobile payment agents and 12,000 bank agents throughout the country.

It was only in 2012 that this payment revolution started to penetrate the Arid Lands. Signal coverage, and therefore data connectivity, increased significantly as did phone ownership.<sup>1</sup> The number of M-PESA and bank agents, particularly those of Equity Bank and Kenya Commercial Bank expanded rapidly.

The banking system in the arid areas will continue to develop. Additional banks are expected to open branches due to, i) the establishment of new county level administrative units in the region each with an independent budget, ii) the

extension of cash transfer programmes, iii) the growth in infrastructure associated with regional trade to Ethiopia and South Sudan, mineral extraction, or power generation. Moreover, WFP programme have the potential to encourage the development of new agency channels.

Cash is in short supply in the North of Kenya - it has to be brought in which is expensive and risky. So it makes sense to move as much value electronically as possible and to facilitate transactions electronically now that the opportunities are there – and growing. This implies the need to explore options for customers to purchase their supplies electronically and for traders to restock their stores through electronic transfers.

However, significant operating challenges still exist. For agents these include intermittent signal coverage and security and liquidity management. Liquidity management is difficult because of periodic, often seasonal demand for services.

<sup>1</sup>Around half of focus group participants had a mobile phone though it was slightly less for WFP programme beneficiaries.



The need for credit is seasonal as households' peak expenditures are typically driven by school fees and festivals, and intermittent medical expenses.

There remains a culture of predominantly informal use of financial services such as saving in kind through investing in livestock for men and the use of Merry Go Rounds<sup>2</sup> for women, and accessing credit from traders. The majority has not yet interacted with any formal financial institution.

Many reasons are given in the FinAccess survey 2009 for people not using banks, but the leading factors are that they have no money to save and/or lack regular income. Other difficulties mentioned include vast distances to access services, compounded by insufficient availability of transport, low literacy levels and lack of exposure to and familiarity with financial services. Distance is a relative concept in the Arid Lands: in areas with good roads, distances

of even 40km can be managed by recipients, but in areas of poor infrastructure people struggle to manage more than 15km. Focus group participants want essential financial services close by, so they can both save and withdraw money. The continued expansion of mobile network operators is likely to unlock further use of financial services in the area by facilitating local access.

A further constraint to financial service delivery is the increasing requirements for online transactions and 'know your customer' standards, that require users to have national identity cards. While there is a general move towards adopting national identity cards, the level of adoption/acquisition of cards is low in some communities, and alternatives are required for non Kenyan citizens. There is a need, therefore, to decide how to support the initiative to encourage participants to obtain a national identity card.

<sup>2</sup>Members of a group contribute a certain amount of money each month and take it in turns to receive the monthly collection on a rotational basis.

## RECOMMENDATIONS

**1** For 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. Cost-efficiency of cash-based interventions generally decreases with remoteness of the markets from the producing areas, so best to focus on district headquarters and large markets of similar size and characteristics well positioned along the main transport corridors.

**2** For replacement of in-kind food provisions with cash or voucher transfers, it is worth considering the possibility of replacing some of the commodities in the food basket, while maintaining in-kind provision of others based on the cost-efficiency analysis. Of the present WFP food basket, cereals (maize) and pulses (beans) appear to be more easily replaceable than vegetable oil, for example.

**3** For 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** Electronic transfers rather than physical payments are preferable both at individual level and more significantly at the level of the traders, as this will reduce transaction costs, including the cost of liquidity, the time beneficiaries have to spend for collection, and security risks.

**5** 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 in the Arid Lands. Important aspects to consider include the experience of 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 resolve operational problems swiftly.

**6** Reliable and timely monitoring and reporting will be key, in particular regarding prices in local markets; food availability and potential conflicts at household level and within communities.

**7** Any transition to cash transfers should be preceded and accompanied by intensive communication with communities and households, for men, women and traders. Where possible, established structures, such as wazee baraza for men, should be used for such communication.

**8** Recipients may benefit from some basic financial education and familiarisation with financial services so that they can make informed choices. Use of multiple mechanisms for dissemination of training should be considered - partner institutions, agents, posters.

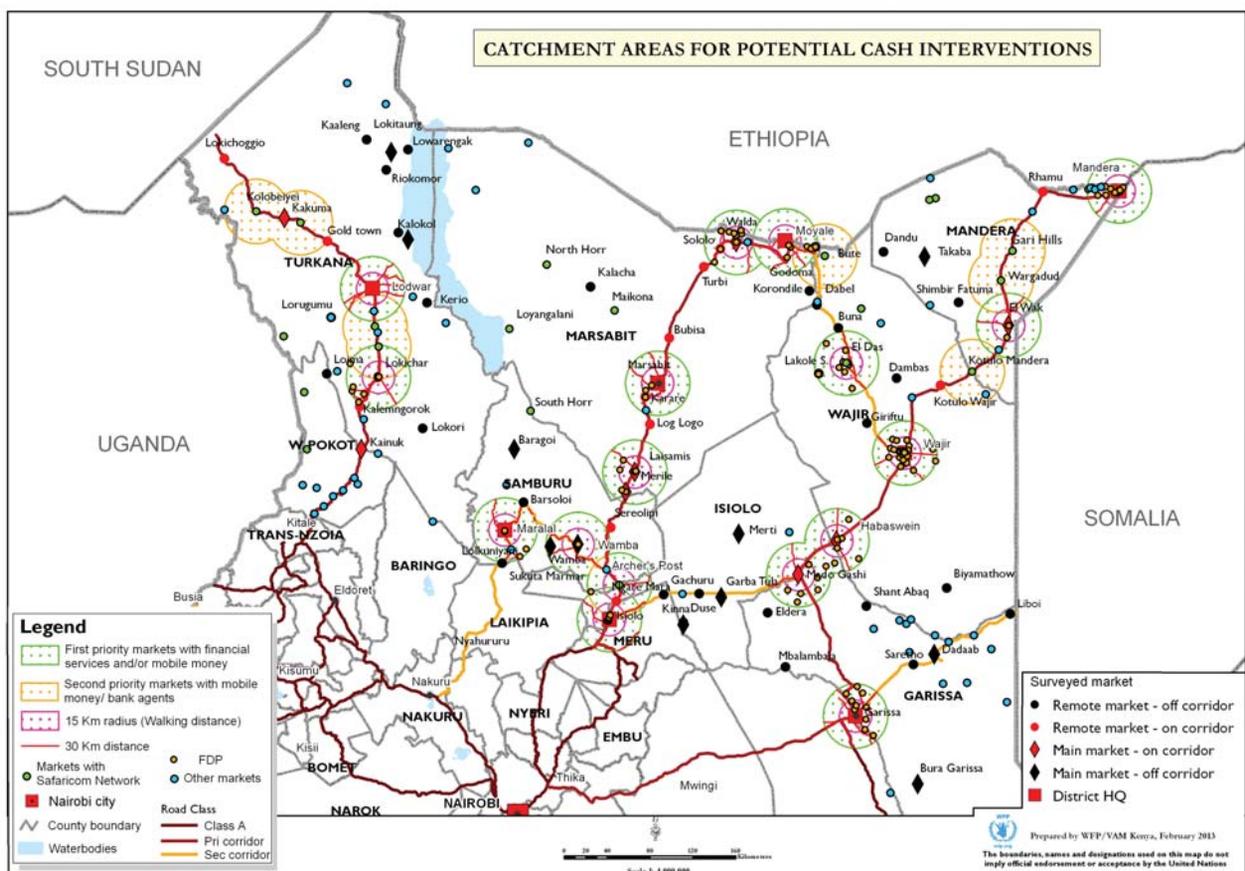
**9** Accessibility of financial services is increasing but is still a significant issue for customers in the Arid Lands. Building access to sustainable services is important, especially where there are limited sources of liquidity in an area. Agents need to be interoperable, especially in remote locations, suggesting a bank agent requires a relationship with M-PESA.

**10** 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. In areas without connectivity, WFP could explore the use of satellite connectivity, offline transactions or vouchers.

**11** Encouraging the use of financial services and different payment mechanisms includes building trust in these systems. Different ways to build trust need to be adopted, including training of clients, monitoring of agents and fast resolution of customer issues. monitoring of agents and fast resolution of customer issues.

**Advocate for the Government of Kenya to:**

- Continue and accelerate the improvement of road infrastructure as a critical key for further strengthening markets and for economic development in the Arid Lands.
- Strengthen systematic and regular price data collection with significant geographical coverage.
- Support expansion of mobile network coverage.
- Improve the coverage of ID cards.
- Take the lead in sharing strategic information and increasingly link the different existing and emerging safety net programmes.





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