



Indicator Development for the Surveillance of Urban Emergencies - IDSUE

YEAR FOUR ANNUAL REPORT

January to December 2014



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ANNUAL REPORT

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Credits

Jay Chaudhuri:	Project Coordinator/Technical Advisor jay.chaudhuri@concern.net
Barbara Kagima:	Geospatial/Data Analysis
Frank Odhiambo:	Information Officer
Phillip Okull:	Data Analysis

SECTION 1

OVERVIEW

Introduction

Increasing urbanization worldwide has immediate implications for the humanitarian sector. The intensity and widespread nature of an urbanizing world is powered by the economic opportunities and dynamism which cities present. In 1950 one-third of all people lived in cities. Currently, 54 percent of the world's population resides in urban areas, representing the highest share in history. ¹ By 2050, this could reach 75%.

In the developing world, one-third of the entire urban population lives in slums. ² Globally, an increasing percentage of the world's population is living in cities. In addition, an increasing number of people are living in the world's slums. The implications of these trends are relevant for a wide range of actors in both development and humanitarian settings. For the humanitarian community which has historically been concerned with life-saving interventions in rural areas, the re-orientation of priorities and frameworks to urban settings requires a new approach in terms of monitoring, programming and advocacy. From a monitoring perspective, rather than building on rural frameworks, a new contextualized approach for the detection of emerging crises and emergencies is needed. Concern Worldwide has been leading a long-term operational research initiative – Indicator Development for the Surveillance of Urban Emergencies (IDSUE) for the past four years to develop new approaches for responding to slow-onset crises in urban informal settlements.

Monitoring for a humanitarian emergency also has broader implications for the development and urban planning communities. Food security and nutritional status are basic requirements for economic productivity and human development. Urban slum-dwellers lack basic amenities and are highly vulnerable to wide array of shocks ranging from labor/market shocks, political violence/displacement, and disease outbreaks, which could move more households into severe poverty. 'Regular' shocks such as food prices risks, policy effects of Value-Added Tax (VAT) increases, chronic insecurity, fire/flooding all have direct impacts on vulnerable populations which often result in 'silent emergencies' which can result in large populations being in severe crisis. These crises often go undetected due to lack of evidence or standards which would allow for funds or programming to be activated for a response.

Urban contexts require a re-think of these international frameworks. Cash-based urban economies will require a different set of tools for monitoring and response as vulnerabilities are different from those of rural contexts. The number of urban poor in large cities, with heterogeneous socio-economic population groups, requires



Figure 1: Map of Nairobi.
Highlighted areas are IDSUE data collection sites.

a new understanding of relative thresholds and scale for response, especially when comparing to rural frameworks.

This annual report discusses key learnings, results, and policy recommendations which have emerged from the data collection activities of 2014. A brief section highlights Concern's emergency cash transfer response to an increase in food insecurity for one Nairobi informal settlement (Korogocho). The detection and response verified many of the underlying assumptions of slow-onset urban emergencies. The final section documents the road forward for the initiative and next steps.

¹ Global Health Observatory Data, World Health Organization http://www.who.int/gho/urban_health/situation_trends/urban_population_growth_text/en/
² Global Health Observatory Data, World Health Organization

Urbanization and Emergencies

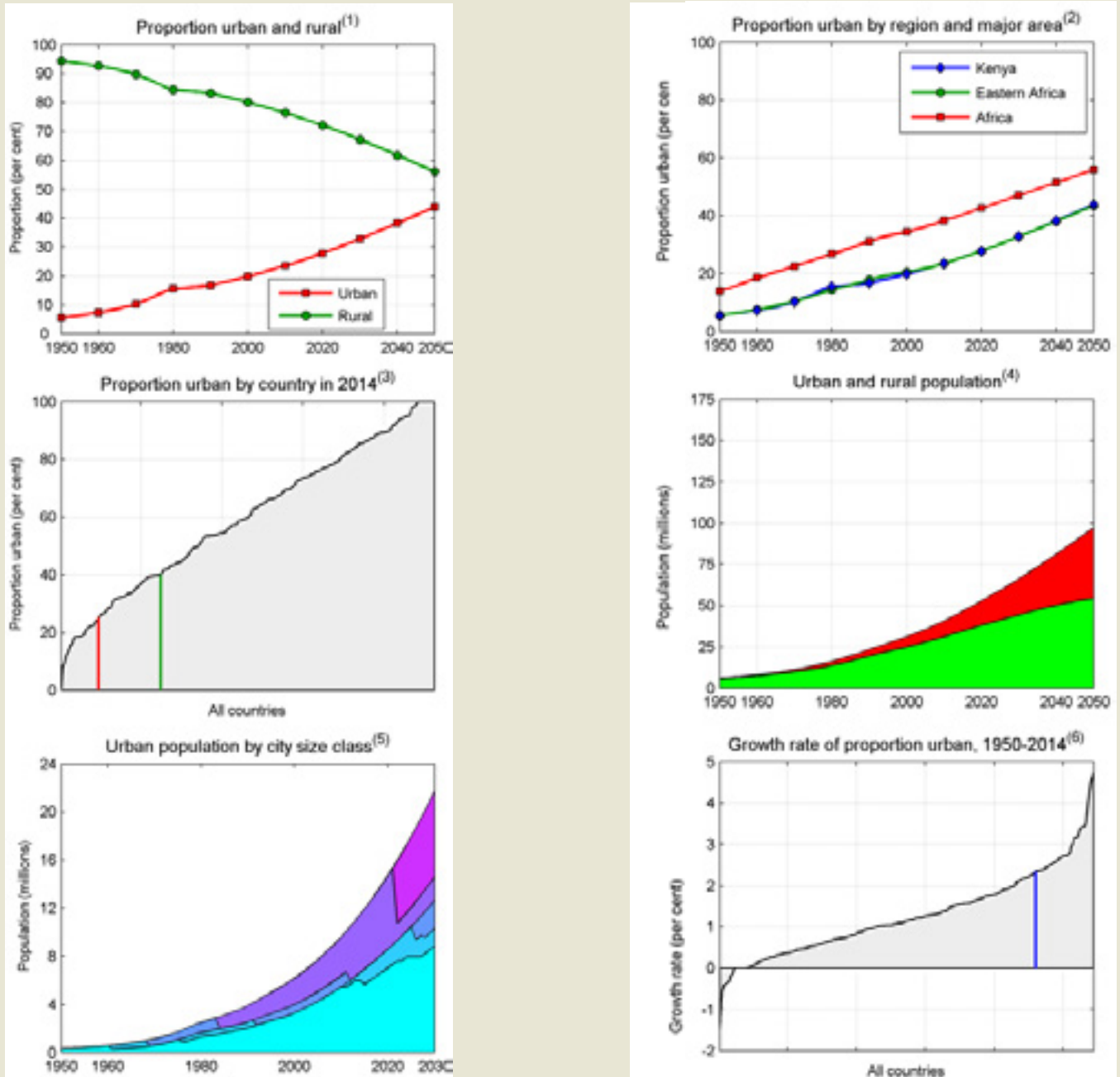
Kenya is a case study embodying the duality of the global urbanization trend. While the urban growth in Kenya is a result of booming investment and economic growth, this growth is also an example of how urbanization in developing countries exacerbates vulnerabilities and risks faced by the urban slum dwellers. Stylized facts illustrate the scale and rate of Kenyan urbanization (See Figure 2 for more).

About 32% of Kenya's population is urban. Nairobi, the capital and largest urban centre, has about 3.2 million people (25% of Kenya's urban population). 60% of Nairobi's population (5% of Kenya's total population) lives in slums, amounting to close to 2 million people.

The increasing urbanization translates into large numbers of people populating the slums of Nairobi, Kisumu and Mombasa.

The result of this unplanned growth where larger portions of the poor lack basic services and amenities means that more households face risks with high vulnerabilities – placing more people at risk of an emergency. It is this trend which underpins the need for a framework which can detect emerging crises within these urban informal settlements. Furthermore, poor urban households are amongst the most vulnerable in the entire country and any major development advances that are likely to happen at a national level cannot be achieved without major progress in the well-being of slum-dwellers. This means preventing vulnerable urban households from falling into more negative coping, severe hunger etc. is vital to the longer term development agenda of Kenya.

Figure 2: Growing Importance of Urbanization in Kenya



From: UN Department of Economic and Social Affairs, Population Division (2014), World Urbanization Prospects: The 2014 Revision. <http://esa.un.org/unpd/wup/Country-Profiles/Default.aspx>

BOX 1

Defining Urban in Kenya

Defining what is a city can vary depending on the country³. A mix of population density, population sizes, or socio-economic characteristics will determine this classification. In Kenya, there are three major cities – Nairobi, Kisumu and Mombasa. However there are other urban centres, as described below:

“Urban: Is an area with an increased density of human-created structures in comparison to the areas surrounding it and has a population of 2,000 and above.

In this definition urban areas include the following: cities, Town Councils and Urban Councils. The City of Nairobi, Mombasa, all Municipalities, District Headquarters, all towns and trading centres with a population of 2,000 persons or more are designated as urban areas.”⁴

“Rural: Is a large and isolated area of an open country (in reference to open fields and not forests, etc.), often with low population density.”⁵

SECTION 2

Problem Statement

When has chronic poverty turned to an acute crisis?

Background

The genesis of how to detect a slow-onset emergency in urban slums came out clearly in Kenya around 2010. Due to the post-election violence, global economic crisis, and rising food prices in Kenya, there was an understanding that there was deterioration in the informal settlements. However, much of this relied upon anecdotal evidence and there was no framework for detection or reliable baseline survey to serve as proof to any emerging crisis. Within Kenya, many pointed to the slums and said this was chronic poverty and was not a humanitarian issue, as the emergency threshold of 15% Global Acute Malnutrition (GAM) was not crossed for urban areas. This is despite the fact that there were more malnourished children in Nairobi than rural districts (Figure 3). Concern, Oxfam and Care did a scoping study to look into this issue in 2009/10.

⁶The report detailed qualitative evidence that negative coping was steadily rising and households were in severe stress and worse than usual. Another key finding suggested that existing humanitarian frameworks were inadequate for responses in Nairobi, and alternatives should be explored for urban areas. Oxfam and Concern both mobilized cash transfers as a response. ⁷Concern undertook a long-term initiative to properly develop a monitoring framework for slow-onset emergencies which accounted for urban specific vulnerabilities. A three-year grant was awarded by USAID - OFDA in 2012 to develop, test and operationalize a surveillance system.

How do existing humanitarian systems overlook urban areas?

The measurement of GAM is a well-established standard for monitoring for a slow-onset emergency. When 15% GAM is crossed emergency response funds, plans and programmes are activated. A series of interventions are put in place to not only save lives but also to prevent further deterioration. There are notable disagreements with this standard, not the least of which states malnutrition is a lagging indicator, and therefore when 15% is reached this might be past an optimal time frame for early interventions⁸.

Slow-onset emergencies are declared once a threshold of 15% GAM is reached⁹. Due to the presence of rich and poor households

in urban areas, averages mask the reality. Also, due to large populations in cities, it is difficult to reach 15%. The absolute number of malnourished children in urban areas is often higher than entire rural districts (Figure 3). Currently with 5.7% GAM in Nairobi slums, there is a higher number of malnourished children in Nairobi than at-risk districts where malnutrition surveys are regularly done. Due to larger populations, humanitarian organizations looking to find the greatest number of malnourished and at-risk children will find them in urban areas (see Figure 4).

Reaching 15% GAM can be a rare or frequent occurrence depending on a rural or urban context. This type of monitoring, overseen by the IPC, is traditionally done in rural areas of at-risk countries. For East and Central Africa the countries are: Burundi, Central African Republic, Democratic Republic of Congo, Djibouti, Kenya, Rwanda, Somalia, South Sudan, Sudan, Tanzania and Uganda. In all of these countries the IPC tracks GAM rates based on rural surveys. While the IPC's presence in each of these contexts serve as useful instruments, they overlook large urban populations present in Nairobi, Mogadishu, Dar es Salaam, etc. This approach overlooks large urban populations in major cities, where due to population size and prevalence of poor and vulnerable, large numbers of malnourished children are not accounted for¹⁰.

³ The definitions are outlined by national governments. For reference see: https://unstats.un.org/unsd/demographic/sconcerns/densurb/Defintion_of%20Urban.pdf

⁴ The 2009 Kenya Population and Housing Census (2010), Kenya National Bureau of Statistics

⁵ Ibid.

⁶ Concern Worldwide (2011) IDSUE 2011 Annual Report

⁷ MacAuslan, I & Schofield, L (2011) Evaluation of Kenya's Korogocho Emergency and Food Security Cash Transfer. Link <http://www.alnap.org/resource/9189>

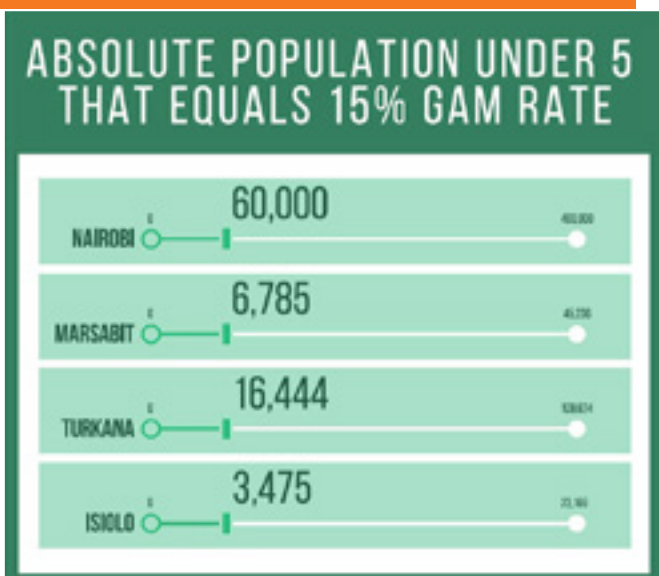
⁸ The literature on the advantages and disadvantages of this current approach is extensive. A document which summarizes the debate - Young, Jaspers, The meaning and Measurement of acute malnutrition in emergencies: A primer for decision makers. <http://www.odihpn.org/hpn-resources/network-papers/the-meaning-and-measurement-of-acute-malnutrition-in-emergencies-a-primer-for-decision-makers>

⁹ The methods to measure malnutrition can vary. Two common methods are weight-to-height and mid-upper-arm circumference (MUAC). IDSUE uses MUAC measurements for 6-59 month old children for all its surveys. Global Acute Malnutrition is the combination of acute and severe malnutrition rates.

¹⁰ In the last IPC update for 2012 (Technical Manual Version 2.0) it was stated that the IPC framework could be applied to urban contexts. However, a separate framework which analyzes urban data for urban contexts is yet to be developed.

If a major goal for humanitarian organizations is to find the largest number of people in crisis, most of these people are likely to be in urban areas. Also, since there is no routine data collection in the slums, it is difficult to have an understanding of how these rates fluctuate. National governments such as the Government of Kenya

Figure 3: Rural – Urban Malnutrition Comparisons



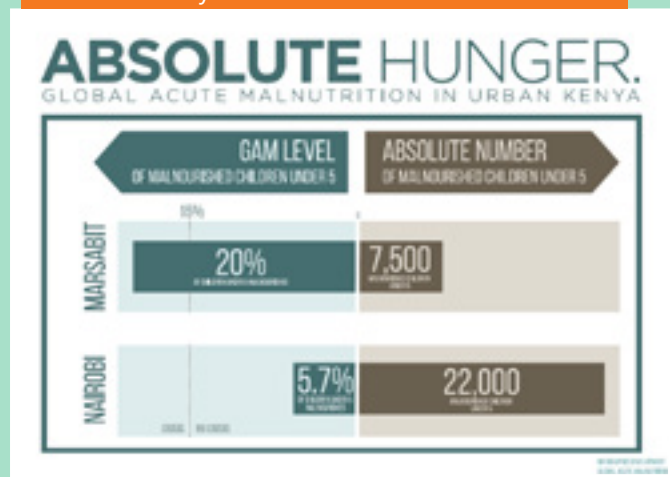
Source: Concern 2014 Nutrition Baseline. Marsabit, Turkana, and Isiolo are rural districts in Northern Kenya. They are part of an area known as Arid and Semi-Arid Land (ASAL) districts.

produce long-rain and short-rain assessment to assess potential risks such as drought, conduct malnutrition surveys, or livestock surveys to gauge a crisis. There are no analogous tools which can be used for urban contexts.

The idea that MUAC (Middle Upper Arm Circumference) malnutrition is a late indicator is somewhat agreed upon¹¹. If urban areas were to wait until 15% GAM rate was reached, the caseload would be too high and would overwhelm current systems put in place for response. If both Marsabit and Nairobi were at 15% GAM the number of affected, malnourished children, would differ greatly. (Figure 4).

Therefore, IDSUE seeks to develop an early-warning surveillance system for the informal settlements in Kenya. A major component is to also establish an early action framework. This will require a new set of metrics and thresholds which are tailored for urban economies and vulnerabilities. By detecting and intervening before a crisis fully evolves we can encourage more resilient households.

Figure 4: Absolute numbers of Malnourished in two Kenyan Counties.



What types of slow-onset emergencies are being discussed, and how are they monitored?

By definition slow-onset emergencies are emergencies which emerge over a protracted period of time. They differ from rapid-onset disasters where the emergency tends to be driven by a natural disaster or specific event/conflict. As slow-onset emergency evolve with uncertainty and without any set pattern, they require a quantitative monitoring framework which can track changes over time.

For Kenya, the risks faced by urban households can greatly vary. IDSUE tracks the outcomes from these risks. The most important outcomes are income, food security, and negative coping. Household incomes for the poorest seem to be insufficient for maintaining a basic standard of living, and are in constant fluctuation depending on economic factors and the labor market. Food security and hunger, based on our data, seem to be the largest threat. Increases in negative coping are also the other major concern. Negative coping can be realized from resorting to begging or prostitution, selling an asset, taking a second job, or withdrawing your child from school.

¹¹ The literature on this is large. See Young :Malnutrition as an Indicator : OPM



ABSOLUTE HUNGER

GLOBAL ACUTE MALNUTRITION IN URBAN KENYA



KENYA'S ARID AND SEMI-ARID REGIONS

Almost half of Kenya's topography consists of arid and semi-arid land (ASAL). Marsabit is included in these regions but Nairobi is not as it has a 'greener' climate.

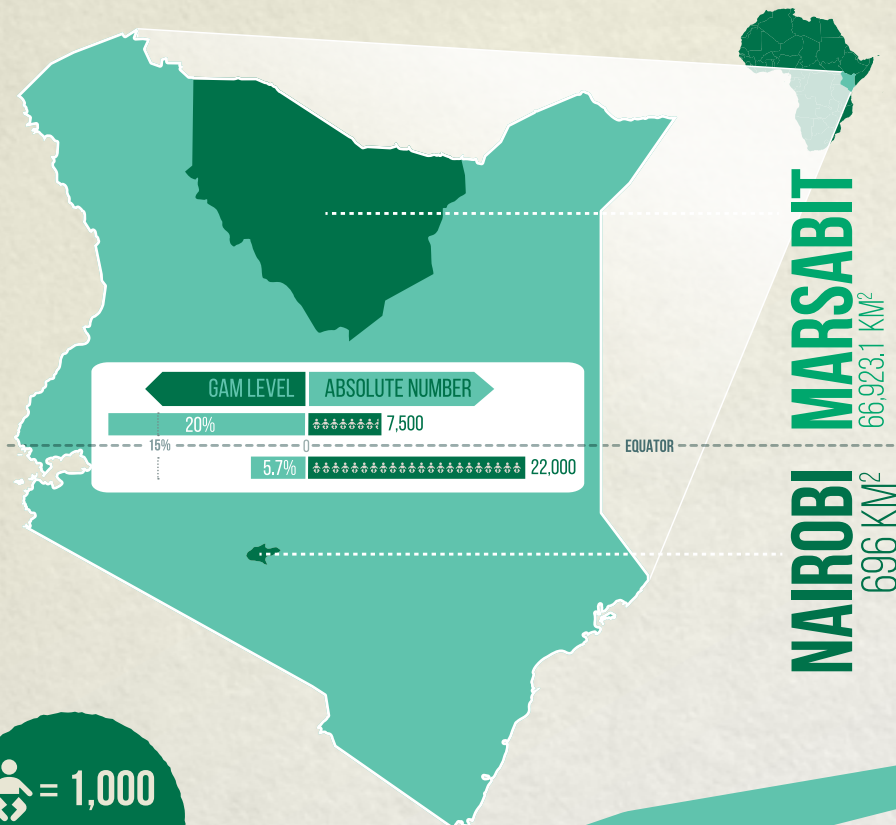
CRISIS? WHAT CRISIS?

The GAM rate in Nairobi slums is 5.7% which translates to about 22,000 cases of children under 5 years old with severe or moderate acute malnutrition (WFH). The accepted GAM rate to declare a nutrition humanitarian crisis is 15%, which would translate to about 60,000 children under 5 years old with moderate or severe acute malnutrition in Nairobi slums.

The current 5.7% rate represents a hidden nutrition crisis in Nairobi slums. Were we to reach 15% GAM rates in urban slums, the already poor health facility infrastructure would likely not sustain such a crisis. Which is why it is imperative that we act fast on slow onset, hidden crises such as these.

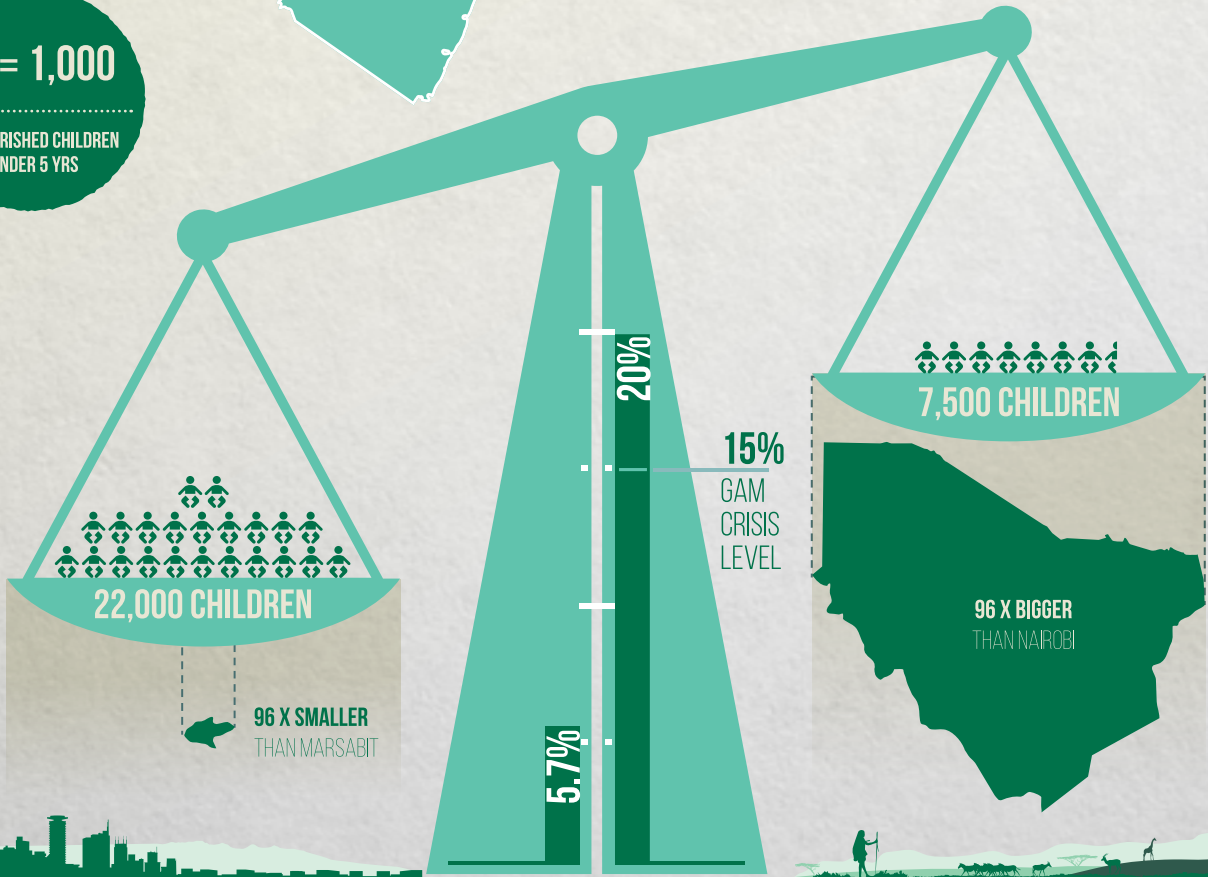
Also, remember, not all slums are created equal. If we split Nairobi slums into two socio-economic groups, better-off and worse-off, we find that malnutrition rates are even higher in the poorer slums (6.9%) compared to 4.4% in the 'better-off' slums.

NB: 15.8% of Nairobi county population is children under 5 years old, i.e. 386,000 thousand children (KNBS 2009).



1,000
MALNOURISHED CHILDREN UNDER 5 YRS

NAIROBI



MARSABIT

Figure 5: Kenya Rural-Urban Malnutrition Infographic



IDSUE enumerator conducting a household survey in Korogocho.

Another common negative coping tactic is to take on too much debt in the form of informal credit or a loan.

Rising food and commodity prices affect everyone, but disproportionately affect the poorest. Food insecurity rises and they lower food consumption and substitute meals with lower quality foods such as street foods.

The types of shocks slum-dwellers can face are widespread. There are 'everyday' shocks such as small-scale fires and floods as well as security risks. Fires and floods pose direct threats to assets and livelihoods. Perceived insecurity results in residents taking on 'avoidance strategies', which are tactics that lower risks from robbery, mugging, or rape. IDSUE identifies avoidance strategies as measures which are taken to manage increased insecurity. This may mean staying indoors, paying for an escort home, coming home from work earlier than usual. These tactics are likely to have a negative impact on the food security of the household, and are likely to constrain additional income activities which are curtailed due to insecurity. Suffering a security shock can mean loss of money, personal harm or depression. In addition, we have seen impacts from policy decisions such as the VAT on food prices resulting in higher food insecurity (lower food consumption) due to increased food prices. The size, scale, and frequency of the different risks, shocks, and disasters differ.

These factors will also determine level of impact on vulnerable populations. The types of risks which are explained in this document map out those threats on vulnerable slum-dwellers. We emphasize risks and threats which demonstrate a negative impact on a household to meet very basic food consumption.

In 2014, there were several risks and shocks to those living in poor informal settlements. Rising global food prices coupled with the effects from a VAT increase on food prices across Kenya were determined to have negative consequence on the food security situation in Nairobi. Food security trends are discussed in later sections.

SECTION 3

Issue Objectives

With a three-year operational research agenda the objectives focus on developing indicators, a methodology, and thresholds for action in urban informal settlements. The first and second years were to understand urban vulnerability and conduct focus group discussions which informed potential indicators. The third year focused on testing a methodology and beginning routine data collection.

A new set of strategic priorities are faced by both humanitarian and development actors. While both sectors are examining new programmatic realities around increasing urbanization, an evidence base on urban areas and slums is lacking. Common data sources which could serve as a baseline for potential responses or for strategic planning for urban interventions do not exist. Traditional data sources currently employed are either de facto baseline surveys, which are highly issue-specific/contextual (one-offs/not repeated) or are systematic with ample coverage but are untimely (traditional 'large datasets' such as national household surveys) and as a result become quickly outdated. In addition, the methodologies of these data sources do not adequately represent the urban poor (due to

no formal registrars or migrant population segments). It should also be noted that none of these datasets were designed to meet the challenge of monitoring slow-onset urban emergencies.

There is a need for a framework which provides routine data collection as well as looks at the multi-dimensional nature of vulnerability in slums.

The three objectives are based on addressing challenges within the existing humanitarian frameworks. First, develop a range of multi-dimensional early-warning indicators (more than just malnutrition rates), to incorporate a more complex understanding of urban emergencies. Second, develop solutions to challenges with respect to routine data collection in urban informal settlements with a new surveillance system. Third, a new set of thresholds for these indicators will allow for early-action for humanitarian and development organizations as well as local authorities; thereby enabling more resilient urban communities. Currently these are not in place for urban stakeholders.

3.1 Developing Indicators

What to measure? What are the key indicators for routine monitoring in urban areas for early-warning for government and humanitarian organizations? Rather than re-contextualizing indicators which have been tested or applied in rural settings, a new set of metrics can be developed in order to effectively track urban slow-onset crisis.

Over three years a range of indicators have been tested and refined. These indicators are discussed in this report in the Results section. Indicators which have been tested and determined to have relevancy are kept for future monitoring, indicators which have not been relevant have been discarded (see Indicators paper).

A large share of work focuses on cleaning, analyzing, and summarizing the extensive baseline data collected between Aug 2012 and Feb 2014 in an effort to advance knowledge on the key indicators for the long term surveillance for a slow-onset urban emergency. A review and general overhaul of the questionnaire was also undertaken (see attached indicator review) at the end of 2013. These indicators were then reviewed again to determine their appropriateness for monthly surveillance, in June 2014.

Table 1: IDSUE Key Indicators

Indicators	Type	Domain
Area Effect	Early	Demographics
# HH illness in last two weeks	Early	Health
Experienced shock in last 4 weeks	Early	Shocks/Security
Avoidance Behavior	Early	Shocks/Security
Credit	Early	Coping
HH Gender (female)	Early	Demographics
Dependency Ratio	Early	Demographics
Source of livelihood	Early	Demographics
Do you feel secure within the HH	Early	Shock/Security
Lowest Income Quintile (Q1 Income)	Early	Demographics
HFIAS	Outcome	Food Security
HHS	Outcome	Food Security
HH income	Outcome	Food Security
Withdrawal from school last 4 weeks	Outcome	Coping
MUAC	Outcome	Child Nutrition

BOX 2

Learning about cash-based urban economies

Urban economies are heavily cash based, reliant on monthly income with few assets. As a result, tracking negative coping and the ability for households to withstand shocks will also have a large financial component to it. The selection of indicators in IDSUE has relied on understanding the cash-based nature of urban livelihoods.

For example – In Korogocho, at times households spend more on food than their monthly household income. This automatically lowers the households ability to withstand shocks and increases their likelihood for future use of negative coping, such as credit use. Also, large percentages of the most vulnerable households come from the lowest income quintiles.

A 20 liter jerrican is approx. 5 schillings. However this on a per-litre basis much higher than rate charged by Nairobi water.

3.1.1 Testing various indicators

Over a three year period, numerous indicators were tested in the field. Many of these indicators were deemed to be inadequate in the contexts of urban informal settlements. For example, queue times for water were not significant as these times were often between 3-5 minutes. However the price for water is more significant as it is subject to change and imposes a financial (at times prohibitive cost) on households. ¹²As a result, many of the indicators developed for IDSUE have a financial component to measurement.

A listing and rationale behind the indicators which were field tested and subsequently dropped, can be found in another Concern Worldwide Working Paper "Testing and Revising Indicators for Slow-Onset Urban Emergencies (2015)"

3.2 Develop a surveillance methodology for urban informal settlements

Developing a new fit-for-purpose methodology Monitoring a slow-onset urban emergency poses a unique set of challenges. Rapid assessments are often de-facto and do not demonstrate the change over time. Large representative datasets such as the census or national household budget surveys are not timely enough to capture changes for the urban poor. In addition, informal settlements are often lacking enumeration or representation with central statistical offices due to their informal nature and political sensitivity. Current tools for monitoring for an emergency are grounded within rural contexts, and there is still a knowledge gap for understanding urban environments.

Table 2: Change in number of households

Korogocho	Feb-14	Jul-14	Sep-14	% Change	Count
Gitathuru	1206	1333	1300	8%	94
Grogan A	818	869	912	11%	94
Grogan B	712	614	609	-14%	-103
Highridge	2311	2579	2372	3%	61
Korogocho A	1268	1278	1141	-10%	-127
Korogocho B	898	823	1049	17%	151
Kisumu Ndogo	1399	1185	1495	7%	96
Nyayo	880	926	1058	20%	178
Total	9492	9607	9936	5%	444
Mukuru	Feb-14	Jul-14	Sep-14	% Change	Count
Bin	1069	1020	1084	1%	15
Feed the Children	967	1063	1074	11%	107
Gatope	888	792	825	-7%	-63
Kariobangi	1592	864	897	-44%	-695
Mombasa	1806	1736	1815	0%	9
Riara	4446	5629	5706	28%	1260
Rurii	3031	3127	3159	4%	128
Simbacolt	1738	1865	2001	15%	263

Therefore, due to a lack of appropriate urban-specific information and tools, there is a need to develop a new tool which is fit for monitoring slow-onset urban emergencies.

We identified three major areas which were addressed to develop this surveillance methodology – 1) due to constant population changes at the village level the re-enumeration of areas is needed 2) how to select the most vulnerable villages for an efficient routine monitoring framework and 3) use of smartphones and digital data gathering to enable fast turnaround time for data.

3.2.1 The enumeration issue

Villages see significant changes in the number of households and structures change within a few months (Table 2). Gathering representative samples is challenging due to the highly dynamic nature of informal settlement populations. Therefore, household counts needs to be established before choosing a sample size. This is the only way to ensure representative samples can be made. In Table 2, both positive and negative population changes can be seen. In Mukuru, for example, the increase in the number of households in Riara village was larger than the change in households for all of Mukuru. The same time period saw a massive decrease in Kariobangi households (due to local flooding), even the fluctuations at village level, require that a proper household listing needs to be done before each data collection activity.

In order to resolve issues with enumeration, a framework will need to be rigorous and produce representative samples, as well as account for population changes. Perhaps in informal settlements which do not see such rapid changes, repeated enumeration might not be needed. However in the case of Nairobi, large population swings at village level require it.

3.3 Using mobile phones for surveys

Technology enables a faster, routine system which would not be possible with a paper-based system. With smartphones to conduct data collection, turnaround time for analysis is reduced. Since 2012, IDSUE has utilized digital data gathering in its household surveys. The advantages are cleaner data, faster turnaround times, and accurate geo-tagging of households to facilitate spatial analysis. Cities have better network coverage, therefore when surveys are uploaded to the cloud server; progress of surveys can be tracked in real-time. Any issues with enumerators and quality of data can be addressed immediately.

3.4 Identifying vulnerable villages for routine monitoring

Not all informal settlements are similar. Not all areas within a particular informal settlement are the same either. The inequality across and within informal settlements translates into several important lessons.

In addition, a surveillance system for an emergency should focus on the most vulnerable and monitor areas where the humanitarian need is greatest. In urban areas where rich/middle-class and poor often live within close spaces, identifying areas for where the most vulnerable can be challenging from a methodology standpoint.

In order to design a system where high-frequency data can be collected efficiently, it was decided that the areas where a slow-onset emergency is likely to emerge first should be the focus of data collection. Due to high spatial inequalities, the most vulnerable areas were identified.

¹² A 20 liter jerrican is approx. 5 schillings. However this on a per-litre basis much higher than rate charged by Nairobi water.

Figure 6: Hotspot map of vulnerable areas in Korogocho, Nairobi. A composite indicator of income, food insecurity, and household hunger was used to map areas of vulnerability (in red) which represents a clustering of households with very low income, high food insecurity, and high rates of household hunger.

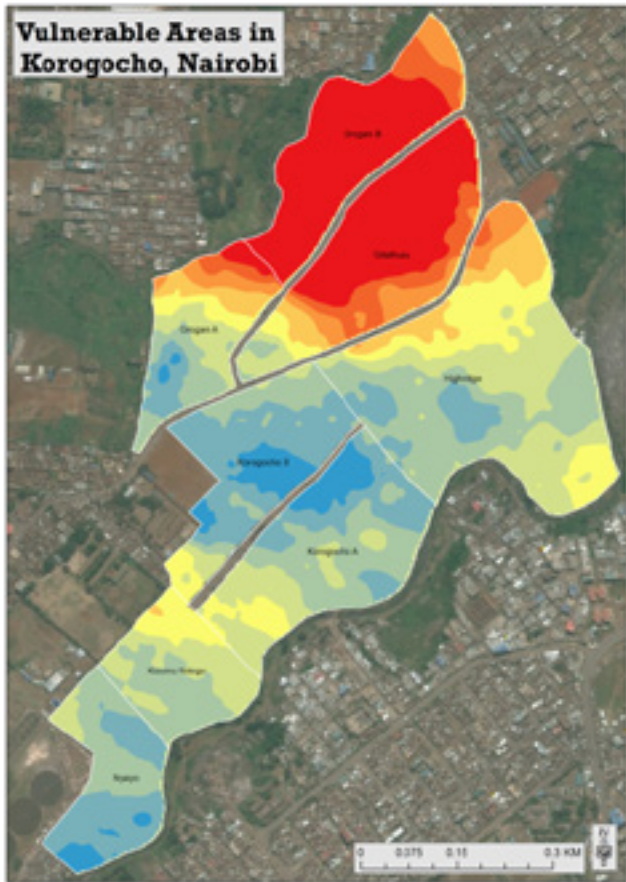


Figure 7: Income Distribution in three informal settlements.

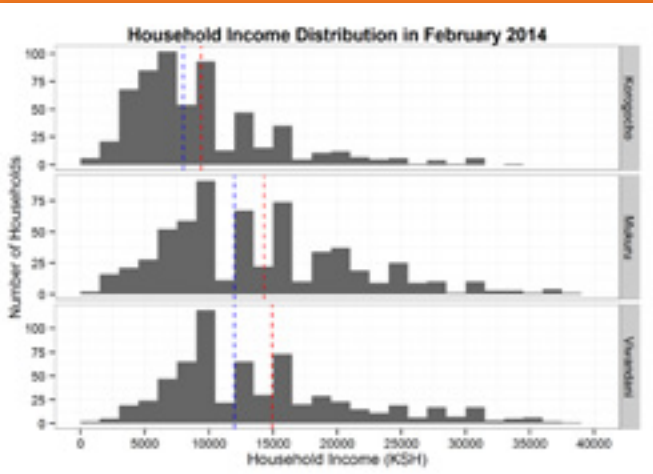
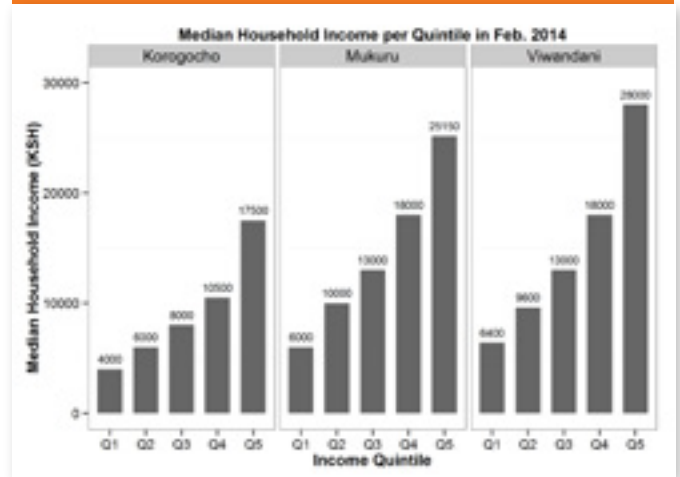


Figure 8: Income Quintiles for three informal settlements



The type of slum for monitoring is critical. A slum like Korogocho is overall poorer and also has larger number of poor households. This distribution tells us that the type of informal settlement (higher vulnerability, lower incomes, higher food insecurity) will greatly inform the type of data which is emerging.

Korogocho, with its higher level of vulnerability, is a more likely candidate for a slow-onset crisis than Mukuru. This is observed by Mukuru having higher general food security (HFIAS), lower severe hunger (HHS) and higher incomes (monthly household income). In our findings, the area effect citation to regression paper is of critical importance. Also, the inequality within an areas means that the most vulnerable villages (sub-unit of a slum) are significant. Poorer and more vulnerable households are clustered within the poorer villages.

During 2014 the project moved from a tool to assess household stresses, negative coping strategies and spatial inequalities (covered in a baseline survey for all of a slum) and coping to a more holistic surveillance system (which covers the most vulnerable villages within a slum).

- It is inefficient to monitor entire slums due to high levels of inequality within slums. One, income levels are vastly different by income quintile. Two, there is a strong spatial component to the inequality. Therefore only the most vulnerable slums will need to be monitored on a routine basis.
- The most vulnerable households will provide us the early-warning information. Since those households are clustered within the most vulnerable villages, this is where we will collect routine data.

Vulnerable Areas in Viwandani, Nairobi

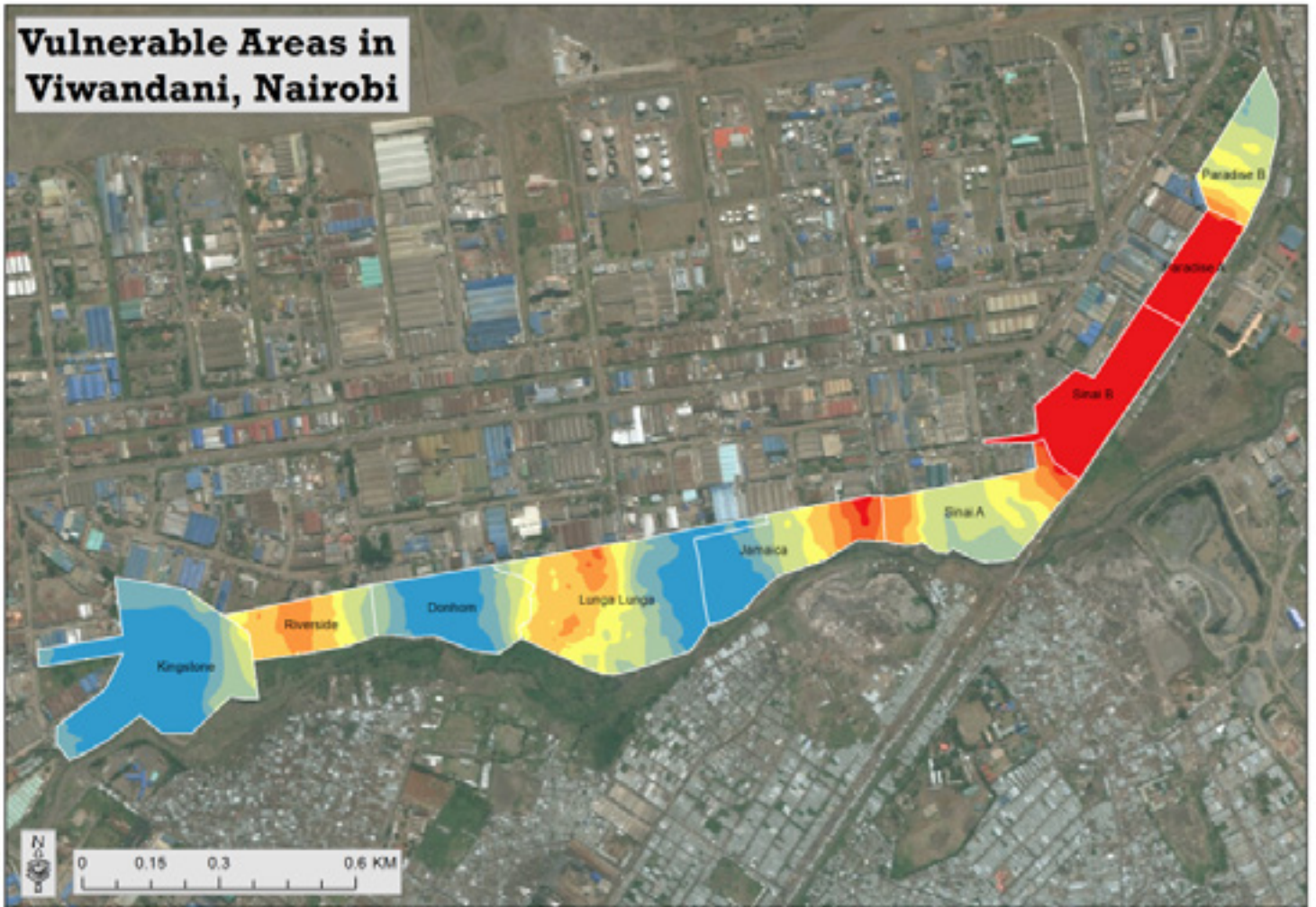


Figure 10: IDSUE Surveillance Villages in Korogocho



Figure 9: Hotspot Mapping of most vulnerable areas in Viwandani, Nairobi.

Vulnerable areas (in red) are areas that report very low income, high food insecurity, and high rates of household hunger. In the above examples of Viwandani, we have identified Sinai A, Sinai B and Paradise A as our 'surveillance villages' as they are the most vulnerable. Whereas Kingstone, LungaLunga, Donhom, Riverside and Kingstone are only covered in the baseline survey and not the surveillance survey. This cuts down almost two thirds of surveillance areas by focusing only on the most vulnerable villages.

SECTION 4

Data Collection Activities

Under IDSUE, there is now several years of robust data collection. From July 2014, the methodology has changed, as now only the most vulnerable surveillance villages are covered. Table 4 describes the differences between the various data collection activities.

A baseline dataset establishes the figures around key indicators for a specific area. It also helps identify the most vulnerable villages for surveillance monitoring. The food prices are needed to understand broader trends and assess the greatest stress on vulnerable households. All three information sources are analysed together in order to get a complete picture of the informal settlement. Each location provides strategic information for the city as whole, as only highly vulnerable areas in Nairobi are covered.

See Appendix A for Baseline Questionnaire, Surveillance Questionnaire, and Appendix C for Market Price listing and tables.

Activity for 2015

Develop thresholds for early action. Now that we know what to measure, where and how to collect this data - what are the appropriate thresholds for early action? Developing these action triggers will build upon an evidence base, but will also require buy-in from a wide range of stakeholders including government, civil society and researchers. This discussion and consensus building is the priority for IDSUE for 2015. A discussion on the way forward is presented in the Policy Recommendations Section.

Table 3 IDSUE Data Collection Typologies

Data Collection	Baseline	Surveillance	Markets
Unit of Analysis	Survey Entire Informal Settlement	Survey most vulnerable villages (sub – unit of informal settlement)	Track food and essential non-food items from markets/points of sale in the informal settlements. Identify three markets per informal settlement.
Frequency	At the beginning of urban surveillance. Followed up once every two years.	Monthly	Weekly
Objective	Assess level of deprivation, categorize type of slums (mostly casual labour, female headed households, etc.), identify areas for longer term surveillance	Monitor for slow-onset urban emergency. Track over time along most critical indicators	Track changes in food prices, which are likely to be main stressor for vulnerable households.
Indicators	Large set of indicators which will demonstrate levels of poverty, well-being, and access issues.	Small set of indicators which will show change over time and progression towards or away thresholds/triggers for action.	Individual market changes. Food Basket Index



SECTION 5

Baseline Results

History of IDSUE Data Collection

A total of 17,481 households (Table 4) were sampled in all the rounds of study with 11,734 households interviewed in the baselines (R5 to R10: August 2012 to July 2014) and 5,747 households interviewed in the five monthly surveillance rounds (S1 through S5: July 2014 and February 2015).

Round 5 (August 2012) through 7 (April 2013) included various settlements in Nairobi (Korogocho, Mukuru, Viwandani, Dandora, and Jericho) and Kisumu (Obunga, Nyalenda). This document only presents findings from Korogocho, Mukuru, and Viwandani.¹³ Round 8 (November 2013) covered Korogocho and Viwandani areas in Nairobi while round 9 (February 2014) covered Mukuru, Viwandani and Korogocho. Round 10 focused only on Korogocho (July 2014).

Table 4: Sample size and sites by round of data collection

Data collection round	Date	Sample sites	Sample size
Round 5 (R5)	August 2012	Nairobi (Mukuru, Dandora, Jericho); Kisumu (Obunga, Nyalenda)	2275
Round 6 (R6)	February 2013	Nairobi (Korogocho, Viwandani, Mukuru); Kisumu (Nyalenda, Obunga)	2764
Round 7 (R7)	April 2013	Nairobi (Korogocho, Viwandani, Mukuru); Kisumu (Nyalenda, Obunga)	2714
Round 8 (R8)	November 2013	Korogocho, Viwandani, Mukuru	1165
Round 9 (R9)	February 2014	Korogocho, Viwandani, Mukuru	2114
Round 10 (R10)	July 2014	Korogocho	702
Surveillance 1 (S1)	July 2014	Viwandani, Mukuru	1051
Surveillance 2 (S2)	September 2014	Korogocho, Viwandani, Mukuru	1500
Surveillance 3 (S3)	October 2014	Korogocho, Viwandani, Mukuru	1067
Surveillance 4 (S4)	November 2014	Korogocho, Viwandani, Mukuru	1064
Surveillance 5 (S5)	February 2015	Korogocho, Viwandani, Mukuru	1065

¹³The results for Kisumu and other locations are covered in the IDSUE 2013 Year 3 Research Report

Selected Results from Reporting period R5-R8 (2012-2013) - Baselines

Profiles of the Areas

Korogocho (Nairobi) is the oldest settlement of the three selected, with households residing there for an average 14 years. Mukuru (Nairobi) and Viwandani (Nairobi) are the most recent settlements, with an average length of residence of about 5 to 6 years in each area. The discrepancy in duration is one example of how informal settlements have different underlying socio-economic and demographic profiles. Korogocho, which is also the poorest informal settlement, is an area where households move to because they cannot afford to live anywhere else. This is supported by the lower incomes of Korogocho residents. Mukuru is relatively likely to have more balanced inflow and outflow of households, resulting in a lower average duration of residence.

Casual labour was the largest (49%) source of income in all the areas sampled. Monthly salaries (24%) were found mostly in the higher income areas of Mukuru and Viwandani while small businesses (13%), hawking (9%), and use of remittances (1%) were most common in the lower income areas of Korogocho. Overall, average household income (sum of all reported incomes within a household) was lowest in Korogocho (\bar{x} = 9,412 KES, M = 8,000 KES) and highest in Mukuru (\bar{x} = 14,274 KES, M = 12,000 KES). On average, over 90% of the household income is earned by the breadwinner (highest earner in HH). The economic difference between areas is of significance. Due to higher informal labour in Korogocho, the certainty of work in a month is less reliable and subject to fluctuations. These income dynamics provide the enabling environment for vulnerable households. The most vulnerable in Korogocho are likely to be the first affected in any economic downturn or reduction in work from informal labour sources. Within the context of Nairobi the type of informal work can vary greatly, anywhere from working in local factories to domestic help. Therefore, Korogocho has a more vulnerable economic profile, in addition to the lower average incomes which are observed. The combination makes it the informal settlement where any slow-onset stresses are to be observed (out of the three study sites).

With respect to food expenditure, households in the lowest income quintiles spent more than they earned on food in a 4-week recall period. Especially in Korogocho (102%), where households in the lowest income quintile spent over 100% of their income on food. We also found that a majority of households in all areas were moderately or severely food insecure (75%) based on Household Food Insecurity and Access Scale (HFIAS). About 30% households reported moderate to severe hunger by Household Hunger Score (HHS). Although the proportion (%) of children between the ages of 6 to 59 months suffering from malnutrition appeared to be low,



the actual number of children with GAM or at risk for malnutrition was fairly high especially in the lower income households and households reporting moderate or severe hunger. Further during the R5-R8 reporting period, a majority of households (89%) used tap water as the main source of drinking water. Most households in all areas met SPHERE standards for distance to water and for time queuing for water. However, only 60% of households meet the 15 L of water per person per day SPHERE standard. Overall, there was a decline in the use of coping strategies in both areas. More households experienced shocks which ranged from mugging, floods, burglary, to property destruction. See Appendix for detailed list of results.

Results for R9-R10 (2014)

A total of 21 14 households were sampled in round 9 (February 14) covering Mukuru, Viwandani and Korogocho.

Data collection in round 10 (July 14) focused on Korogocho only, as a result of the observed high food insecurity in the area. In Korogocho alone, the proportion of households reporting severe food insecurity in round 9 was 65%, prompting further investigation. Households sampled in round 10 were 702 (Table 4). Both rounds 9 and 10, in addition to rounds 5 through 8 represent baseline data.

Livelihoods

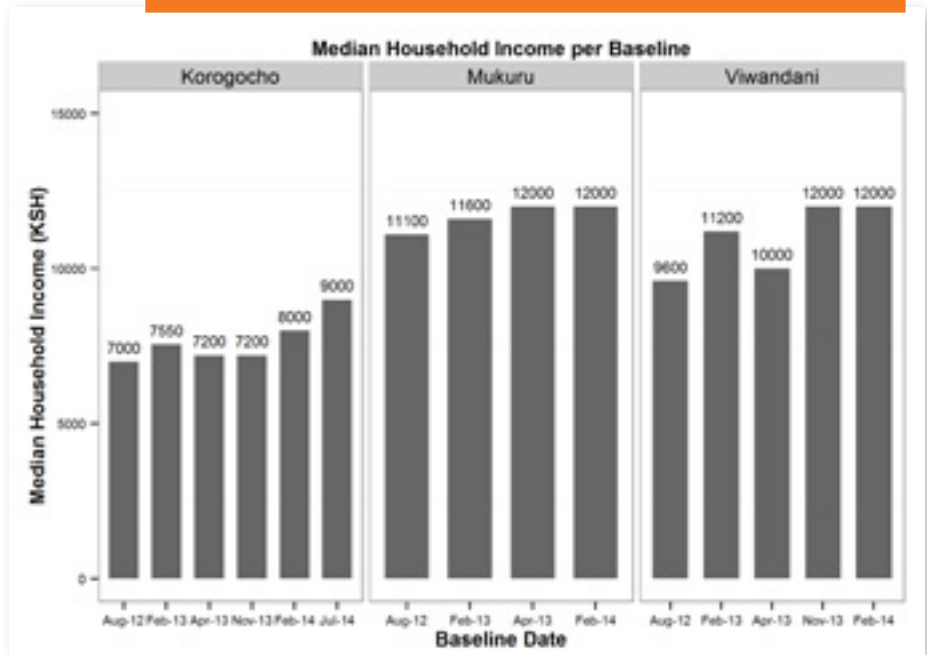
Average incomes are rising for each area over time (Figure 12). However the increases when adjusted for rising food prices, inflation, and cost of living are marginal at best.

Casual labour was still the largest source of livelihood at 45% in R9 while monthly salaries were mainly common in Viwandani (36%) and Mukuru (39%). Overall, 13% of households engaged in small businesses with Korogocho having the largest proportion (14%). Average household income in all areas appeared to have increased from Kes. 10082 in round 8 (November 13) to Kes. 12963 in round 9 (February 14). Urban poor households spend most of their income on food with the poorest (Lowest Income Quintile: Q1) households spending more than they earn on food. Over a 4-week recall period households spent over 50% of their income on food. Households in Korogocho spent the highest proportion (67%) of their income on food, especially in the lowest income quintile (107%).

In R10, representing Korogocho alone, average household income was Kes. 8153 down from Kes.8387 in R9.

Gender differences are also considerable which affects the ability of female headed households to meet basic needs. See Figure 11 below.

Figure 12. Median household income in Korogocho, Mukuru, and Viwandani during baseline data collection (August 12 to February 14)

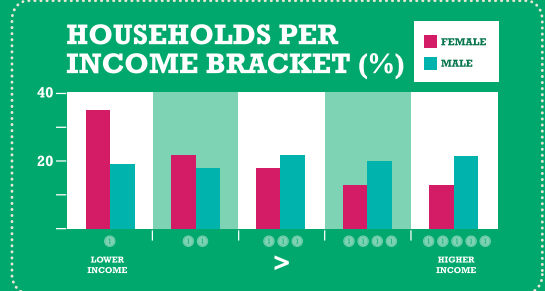
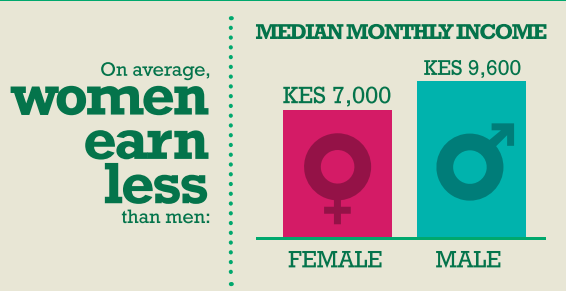


A COMPARISON OF MALE Vs. FEMALE SLUM DWELLERS

THE GENDER GAP IN URBAN KENYA

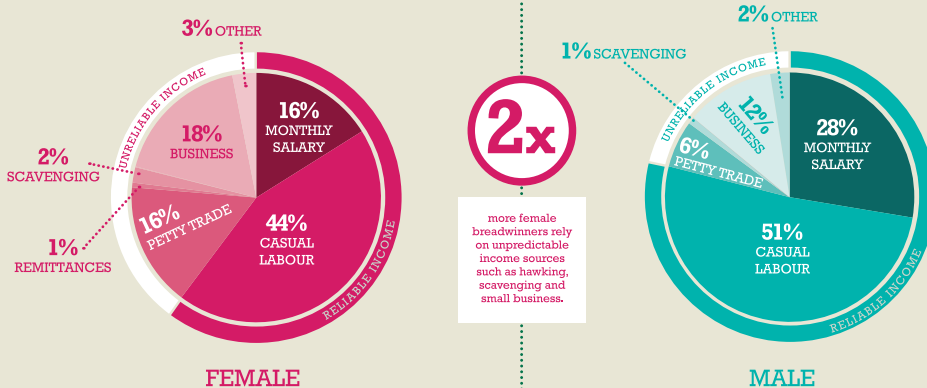
INFORMAL SETTLEMENTS IN URBAN KENYA

Women in informal settlements earn significantly less than their male counterparts. Therefore, households that rely on a sole female income fare much worse than households with both male and female income earners.



FEMALES DEPEND MORE ON UNRELIABLE INCOME SOURCES

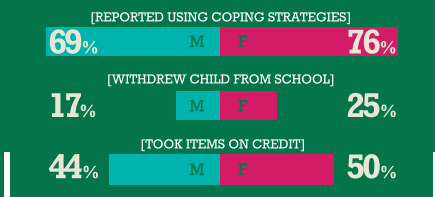
than their male counterparts



EVERY TIME A MAN MAKES 10/- > A WOMAN MAKES 7/-



COPING STRATEGIES



- RELIABLE INCOME:** MONTHLY SALARY / CASUAL LABOUR
- UNRELIABLE INCOME:** BUSINESS / SCAVENGING / REMITTANCES / PETTY TRADE (HAWKING) / OTHER
- COPING STRATEGIES:** WITHDREW A CHILD FROM SCHOOL / TOOK A LOAN / BEGGED FOR MONEY / SKIPPED A MEAL / USED CREDIT

Food security and malnutrition

Korogocho saw food security fluctuate to some degree, but the figures are still worrying for the current level of food insecurity and severe hunger.

The situation looks worse when we look at the lowest income quintile. Overall, households in the lower income quintile reported less meals/day for children, more household hunger, and more food insecurity. See Appendix C for selected Indicators for Korogocho R10.

GAM rates¹⁴ are usually under 3% for the three observed areas. At-risk malnutrition rates are typically high. On average 8.5% of children aged 6-59 months are at risk of malnutrition. In addition, 0.4% suffered from Severe Acute Malnutrition (SAM) while 1.4% suffered from Moderate Acute Malnutrition (MAM). These proportions were highest in Korogocho but did not show any significant change over time. In round 10, Korogocho alone recorded about 13% at risk of malnutrition while 2.5% had MAM.

Table 5: Food security and malnutrition indicators over time

Indicator names	Settlement	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14
Severely food insecure (% by HFIAS)	Korogocho	54	66	69	66	65
	Viwandani	29	23	19	26	29
	Mukuru	44	55	46	-	34
Severely hungry (% by HHS)	Korogocho	4	7	7	12	6
	Viwandani	2	2	0	3	4
	Mukuru	4	4	3	-	4
Severe Acute Malnutrition (% SAM)	Korogocho	0.6	0.6	1.1	0.5	0.2
	Viwandani	1.1	0.4	0.4	0	0.3
	Mukuru	0	0.3	0.3	-	0.6
Moderate Acute Malnutrition (% MAM)	Korogocho	1.7	1.9	1.4	1.5	1.9
	Viwandani	1.6	0.9	0.8	1.9	1.2
	Mukuru	0.8	0.8	0.9	-	1.2

Shocks and security

In 2014, security remained a major concern for households living in Nairobi urban informal settlements, with residents in Korogocho feeling the most unsafe. Households often use avoidance behaviour when they feel increased insecurity in their community. This is measured by asking households which avoidance strategies are being employed: coming home early, using an escort, or taking an alternative route home. Households who reported using at least one coping strategy for any area was over 59% for 2014. Using an avoidance strategy is a key indicator for IDSUE.

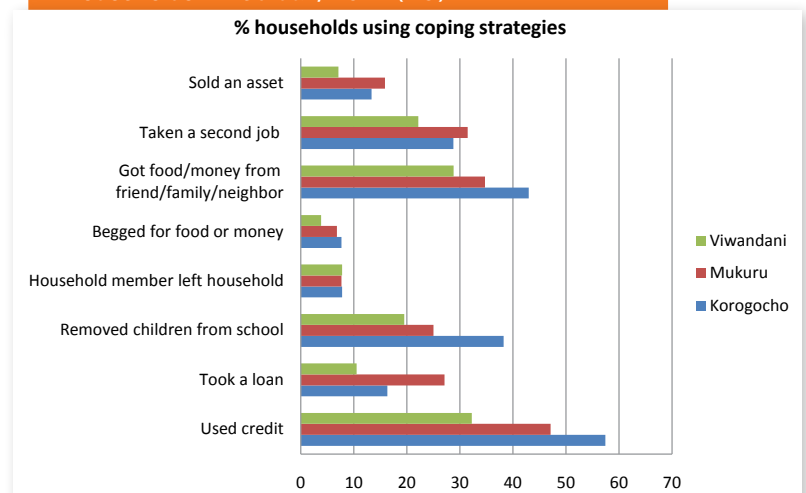
On average, 19% of households felt scared often. Those who stated that they never felt scared in the community were mostly in Mukuru (46%) and Viwandani (53%). More households in Korogocho often felt scared within the household than in Mukuru and Viwandani.

The frequency of shocks declined in all areas. About 24% of households reported mugging/stabbing as a shock experienced in the last 4 weeks, compared to 49% in Nov. 2013. Burglary was reported by 17% while floods were mainly experienced in Mukuru (24%) and Viwandani (26%). Only 6% reported having experienced a fire in the last 4 weeks. 61% of households in Korogocho reported experiencing harassment/intimidation, while 47% and 34% reported the same in Mukuru and Viwandani, respectively. In round 10, 16% of households in Korogocho reported experiencing a shock.

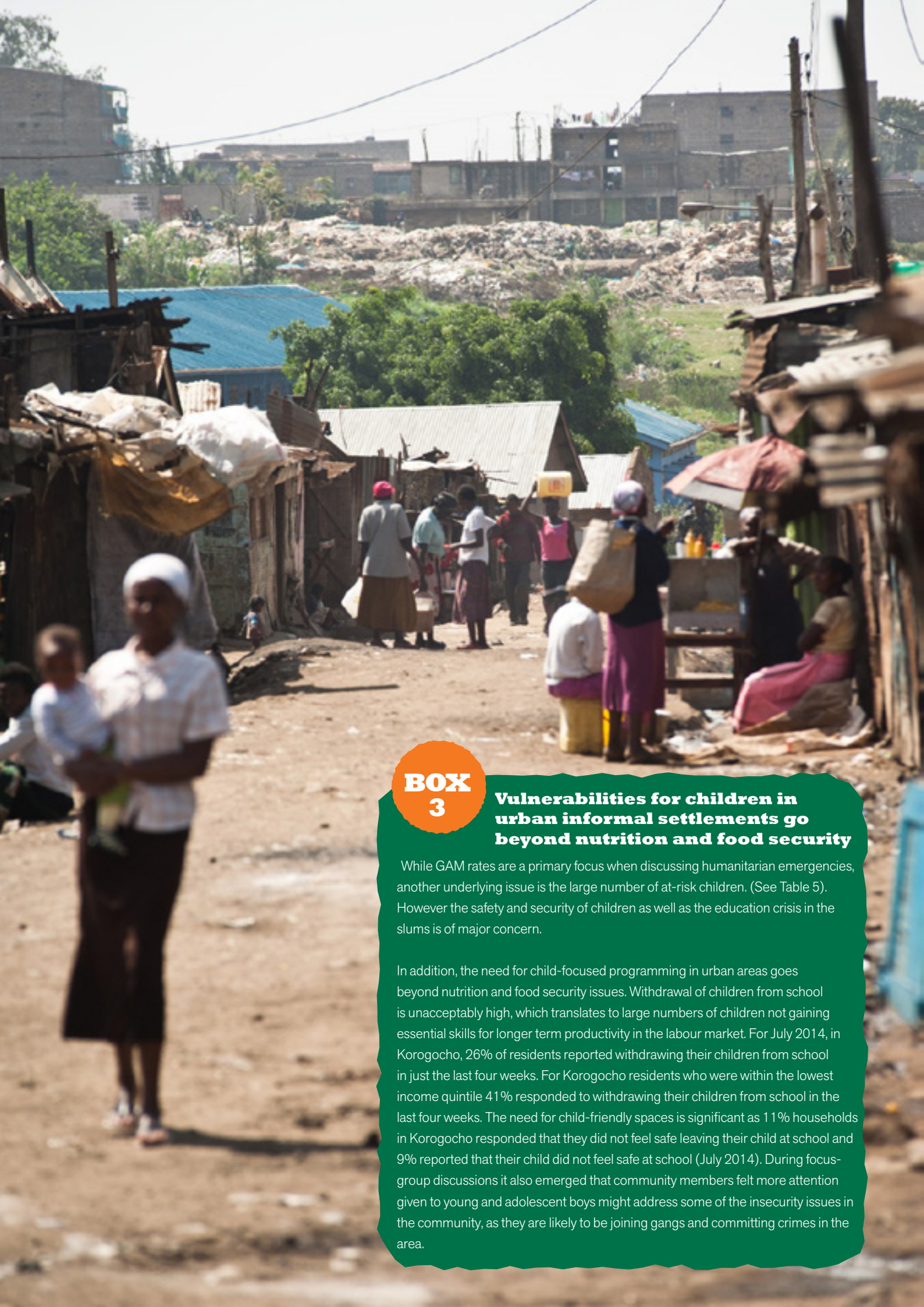
Coping strategies

An average of 72% of households used at least one of the coping strategies shown in Figure 13 below. Close to half the households (46%) used credit (purchasing on credit) as a coping strategy. This was mostly used in Korogocho (52%), the lowest income area. The average debt is highest in Mukuru, at Kes. 4536.78 per month while in Korogocho it is Kes. 2456.86 per month. Households especially those in lowest income areas (Korogocho) and lowest income quintiles spend more than they earn, and much of it goes to food. With rapidly changing prices, insecurity issues, high school fees and other factors that cause variations in income, households cope by borrowing to be able to meet these needs. A significant proportion (18%) also took a loan in order to cope with the harsh economic realities. A number of households also opted to remove children from school, mainly to assist parents in income generation. Priority is given to food expenditure as opposed to school expenditure. More households removed their children from school in Korogocho (38% in February 2014) than in Mukuru (25%) and Viwandani (20%).

Figure 13: Showing coping strategies used by households in February 2014 (R9)



¹⁴ Global Acute Malnutrition (GAM) rates for IDSUE are calculated using Mid-Upper Arm Circumference measures for 6-59 month children. GAM rates are calculated by adding the severe and moderate malnutrition figures for a specified area.



BOX 3

Vulnerabilities for children in urban informal settlements go beyond nutrition and food security

While GAM rates are a primary focus when discussing humanitarian emergencies, another underlying issue is the large number of at-risk children. (See Table 5). However the safety and security of children as well as the education crisis in the slums is of major concern.

In addition, the need for child-focused programming in urban areas goes beyond nutrition and food security issues. Withdrawal of children from school is unacceptably high, which translates to large numbers of children not gaining essential skills for longer term productivity in the labour market. For July 2014, in Korogocho, 26% of residents reported withdrawing their children from school in just the last four weeks. For Korogocho residents who were within the lowest income quintile 41% responded to withdrawing their children from school in the last four weeks. The need for child-friendly spaces is significant as 11% households in Korogocho responded that they did not feel safe leaving their child at school and 9% reported that their child did not feel safe at school (July 2014). During focus-group discussions it also emerged that community members felt more attention given to young and adolescent boys might address some of the insecurity issues in the community, as they are likely to be joining gangs and committing crimes in the area.

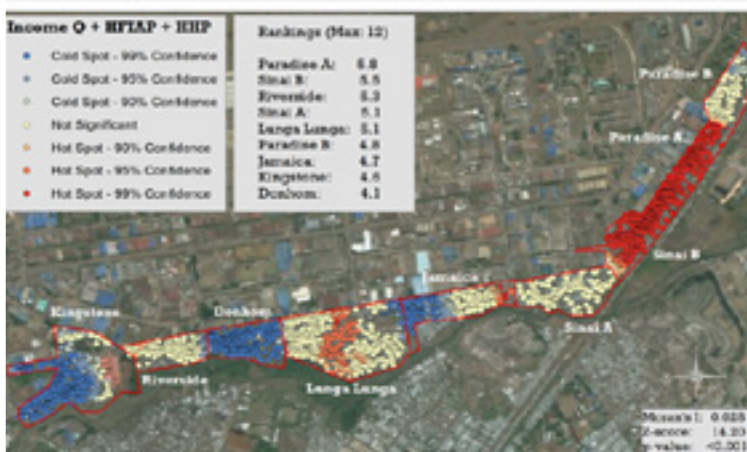
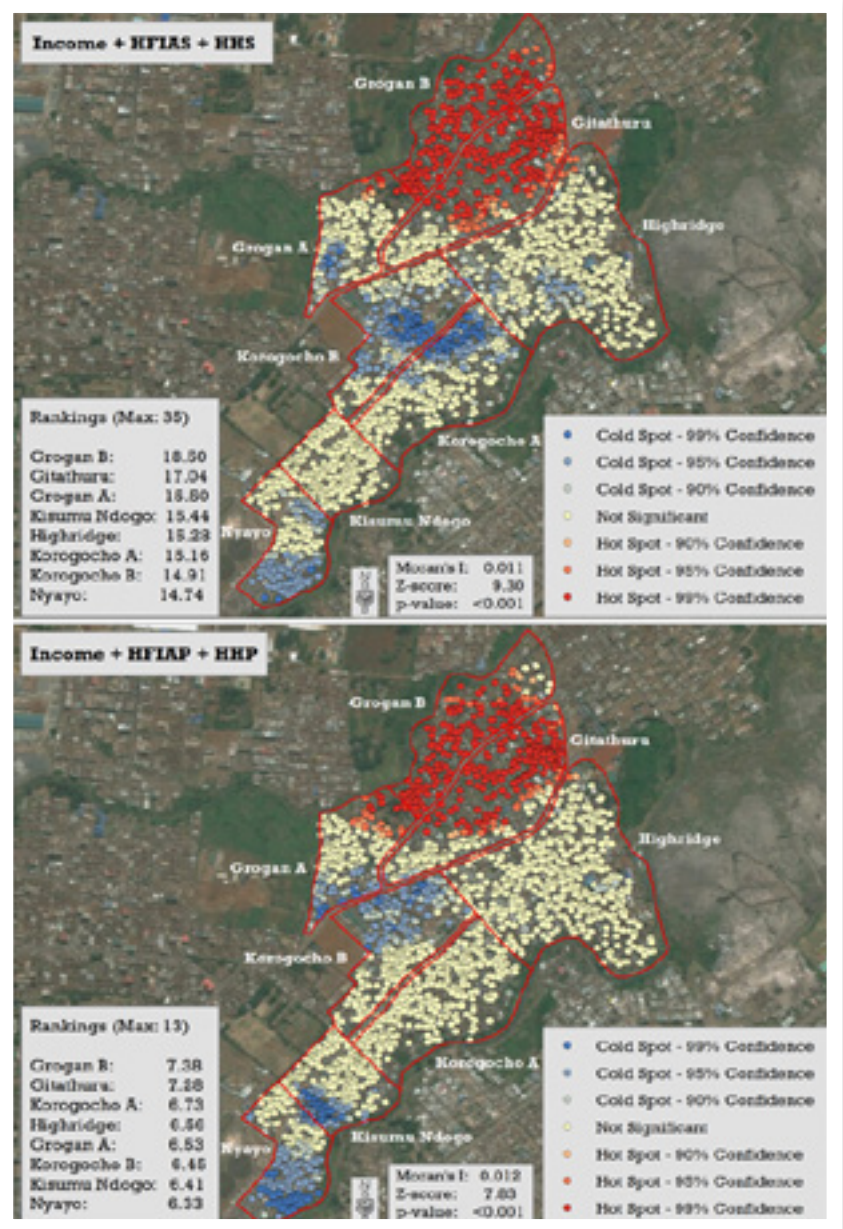
Village level inequalities

As mentioned in Section 1, there are high levels of inequality within urban informal settlements. Certain indicators differ greatly between villages. This means that within each larger settlement (Korogocho, Viwandani and Mukuru) the villages showed different trends particularly for food security and income.

Some of these differences are highlighted below.

The significance of these village-level inequalities are important as they verify the need to monitor the most vulnerable areas within a slum (and not the entire slum), as well as demonstrating that not all areas within a slum are the same. These differences are important for humanitarian interventions, as targeting can be based on a real-time evidence base which is built on areas which are in the most need.

It was therefore important for us to look at these data in more detail, and select the villages that showed more vulnerability and by relevant domain areas such as food security, income, coping etc. Village level results from all baseline rounds (August 2012 to July 2014) are shown below. Geospatial maps of the most vulnerable villages (high food insecurity, hunger, and low income) are illustrated in Figures 3, 4 and 5.



Livelihoods

Within Korogocho, median household income differed significantly by village ($p = 0.05$), with Kisumu Ndogo (8400 KES) having the highest median income and Grogan B the lowest (6000). Expenditure patterns also showed significant differences. Lower income villages spent more than 95% of their income on food while those with slightly higher incomes spent about 80% of their income on food. Similarly, the poorest households spent more on debt repayment compared to those with higher incomes. In Viwandani, the villages of Donholm (12800) had the highest income while Sinai B and Paradise A had the lowest (10000). In Mukuru, differences were also seen between villages with Railway (13500) having the highest income and Mombasa the lowest, 9000 KES median household income.

Lower incomes mean that households are forced to prioritize food expenditure and are unable to address other important needs such as health and education. During times when incomes are reduced, low-income households purchase food on credit, sell an asset and/or take loans in order to cope. Figure 17 illustrates further trends in income.

Interestingly, Korogocho which is a lower income settlement, compared to Mukuru and Viwandani, also demonstrates higher village level differences in income.

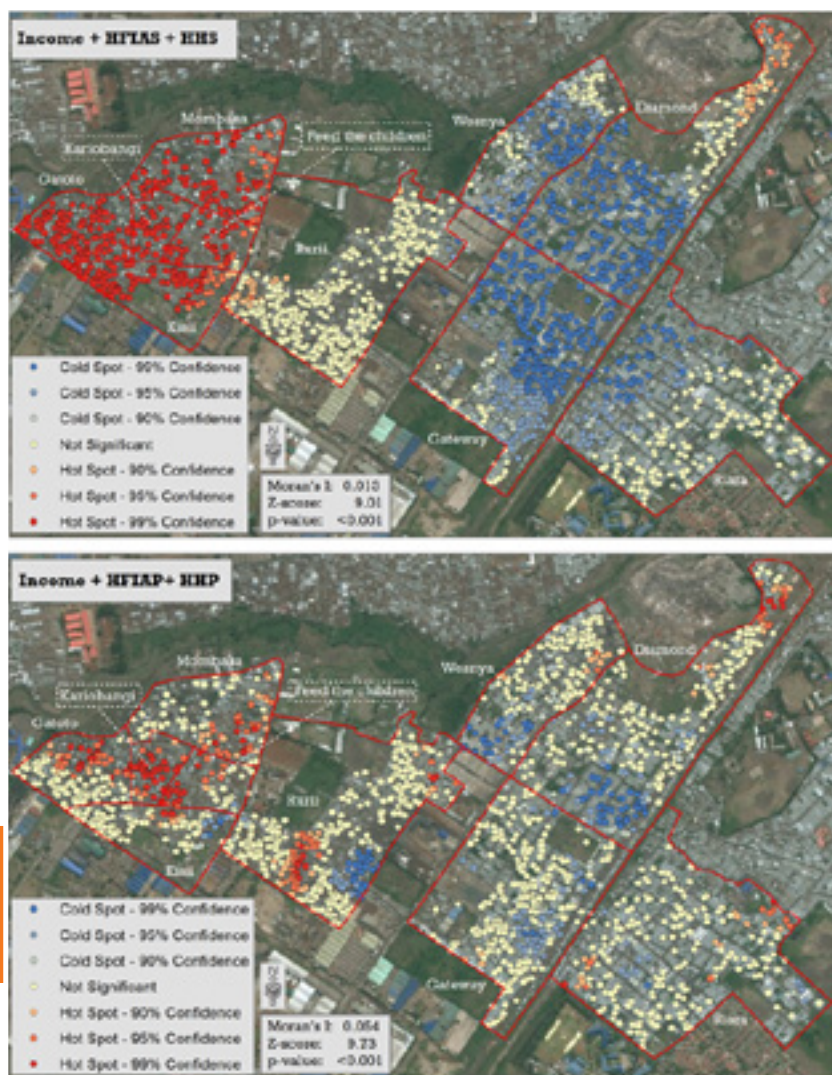
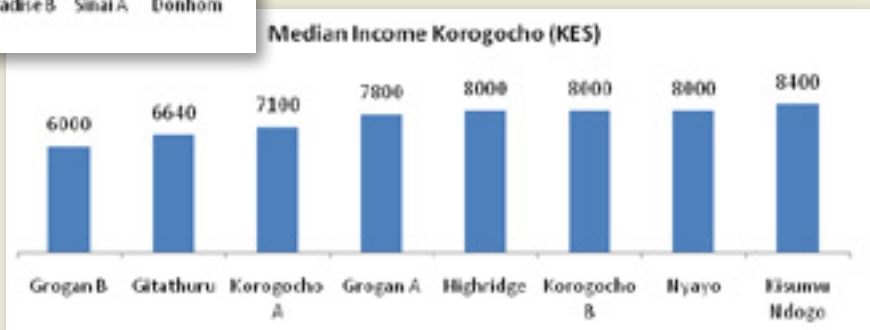
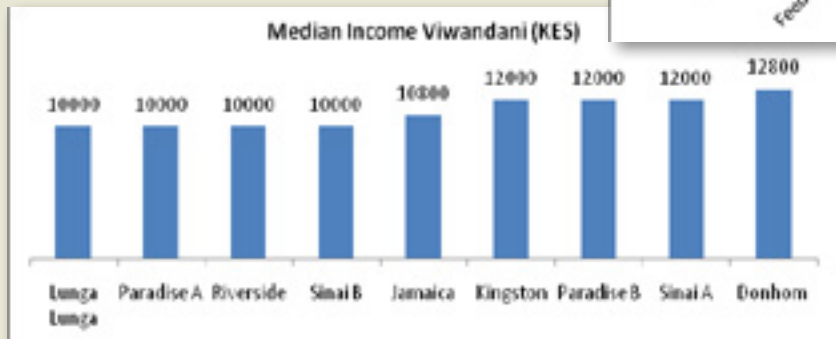
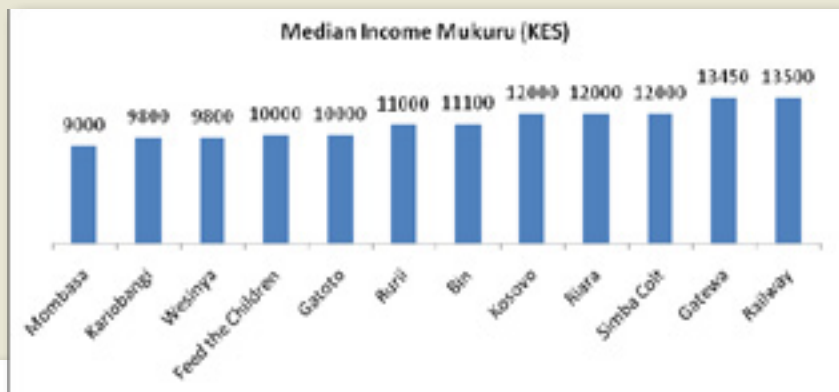


Figure 16: Hotspot mapping by different variables in Mukuru (Aug-12 to Feb-14)

Figure 17: Village level income distribution for three informal settlements. The distributions of incomes vary considerably in each informal settlement.





Food Security

Household Food Insecurity and Access Score (HFIAS)

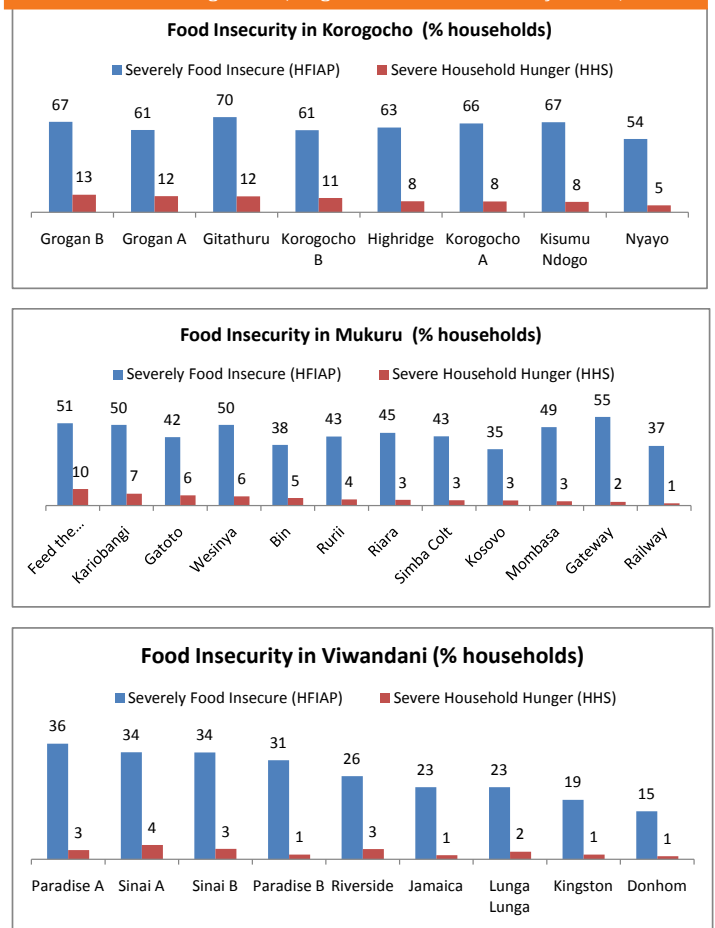
About 44% of households were classified as severely food insecure by HFIAS and 26% as moderately food insecure in all the settlements (Korogocho, Mukuru and Viwandani). However, there were significant differences between the settlements with Korogocho (63%) having the largest percent of those severely food insecure. In Mukuru, this proportion was 45% while in Viwandani it was 27%. Further differences were seen within the villages in each settlement. In Korogocho, 70% were severely food insecure by HFIAS in Gitathuru (poorest village by income) while 54% were severely food insecure in Nyayo. Within Viwandani 40% of households in Paradise A were classified as severely food insecure while the same was only 15% in Donholm. Almost 40% were food secure in Donholm and Kingston while only 19% were secure in Paradise A. Over 50% of households in Gateway, Kariobangi and Feed the Children, all in Mukuru were severely food insecure compared to about 30% in Kosovo and Bin.

Household Hunger Score (HHS)

Substantial differences were also realized in household hunger by HHS. Korogocho recorded the largest proportion of households severely hungry (10%) compared to Viwandani (3%) and Mukuru (5%). Further, within Korogocho, about 13% of households were severely hungry in Grogan A and B compared to only 4% in Nyayo. In Viwandani, this proportion was highest in Sinai A and B at 5% compared to 1% in Donholm and Kingston; while in Mukuru Feed the Children and Kariobangi villages recorded close to 10% in contrast with only 1% in Railway village. Figures 9, 10 and 11 below illustrate the food security findings for each settlement.

These village level inequalities are significant. They justify the need to routinely monitor the most vulnerable villages. Focusing on these areas enable a more efficient surveillance system which provides rich information on potential slow-onset emergency scenarios. In addition for targeting purposes for both urban emergency interventions and development programming, it is important to realize that all areas of an informal settlement are not the same. Level of vulnerability can differ significantly, and program design should account for these inherent differences.

Figure 18: Percent of households reporting severe food insecurity and household hunger by village in Viwandani, Mukuru and Korogocho (August 2012 to February 2014).



SECTION 6

Surveillance Results

Monthly Data Collection (July 2014 to February 2015)

These villages which were selected for monthly surveillance began in July 2014 in order to build into a surveillance system for Nairobi. The surveillance questionnaire was also modified to capture the most important indicators. The results for monthly surveillance are discussed below.

The below results are only for the selected surveillance (most vulnerable) villages for each informal settlement. For this section, when it states Korogocho, this refers to the three selected villages in Korogocho – and not a sample which is representative of all of Korogocho. We have kept this naming convention for ease of reference.

S1 to S5 results

During surveillance round 1 (S1) households in Mukuru seemed to be doing poorly compared to those in Viwandani. The average household income was lower in Mukuru; more households were severely food insecure (46%); more households often felt scared in the community (12%) and more households coped by selling an asset (13%) compared to Viwandani (6%). Further, households in Mukuru spent close to half (45%) of their income on debt, and this proportion was highest among households in the lowest income quintile (78%). This was further reflected in the 49% of those in Mukuru who used credit as a coping strategy.

A significant section (25%) of households took a second job in order to cope with the harsh economic realities. More households in Mukuru took a second job (29%) compared to Viwandani (21%). However, a higher percentage of the poorest households (18.37%) in Viwandani removed their children from school compared to Mukuru's poorest (9.6%).

During surveillance round 2 (S2), there was an increase in average household income in Mukuru and Viwandani while declining in Korogocho. Food expenditure as percent of household income increased in Viwandani (46%) and Korogocho (80%) but declined in Mukuru (53%) in comparison to S1. About half (49%) of households had acceptable food consumption score in all areas while almost about 48% of the poorest (Q1) HHs in Korogocho had borderline food consumption. Percent severely food insecure by HFIAS increased significantly in Korogocho & Viwandani but declined in Mukuru; however, severe household hunger (HHS) declined in both areas but increased in Mukuru.

Income and Livelihoods

More than half (54%) of the households interviewed rely on casual labour as their main source of livelihood, while 13% rely on small, unstable businesses, and 16% on hawking. Majority of hawkers (13%) were found in Korogocho. Viwandani recorded the highest median household income at kes.12000. The lowest income earners in all areas earn a median income of kes.4300, about 3 times less than the median for all the areas. Households in all areas spend an average of 30% of their income on debt. This proportion is highest among households in Mukuru at 42%. Key indicators for this section are summarized in Table 6 below.

Table 6: Income earned in the last 4 weeks

Key indicators	Korogocho					Viwandani					Mukuru			
	Sep-14	Oct-14	Nov-14	Feb-15	Jul-14	Sep-14	Oct-14	Nov-14	Feb-15	Jul-14	Sep-14	Oct-14	Nov-14	Feb-15
Median HH income (KES)	5600	6500	6000	6635	10000	11000	10000	10000	12000	9500	10500	10000	10000	10500
Median breadwinner income (KES)	5000	6000	5000	6000	10000	10000	10000	10000	10000	9000	10000	9000	10000	10000

Food Security and malnutrition

Households spend the largest proportion (average 55%) of their income on food. For households in the lowest income quintile, this is even higher with more than 100% of income spent on food among the poorest households. With regard to food security, 47% of households were classified as severely food insecure by HFIAS but this proportion was higher in Korogocho at 67%. Again this proportion was highest among households in the lowest income

quintile. HHS which is more suitable for high food insecure areas indicated that 6% of households were severely hungry. Table 7 below summarizes the main indicators in this domain.



Food vendor stall in Korogocho. Especially in Korogocho, most food vendors find food items from the local dump sites, such as the Dandora dump

Children with SAM and MAM are referred for treatment or supplementation programs¹⁵. Children with SAM, MAM, and at risk for malnutrition were found in all study areas across most rounds with the exception of September 2014 when absolute numbers were very minimal. Trends indicate an increase in malnutrition in Korogocho, particularly among the poorest (Q1) households. Although the proportion of children between the ages of 6 to 59 months suffering from malnutrition appears to be low, the actual number of children with GAM or at risk for malnutrition is fairly high (Figure 19), especially in the lower income households and households reporting moderate or severe hunger. Nutritional status of a population is one of the basic indicators used to assess and declare a humanitarian crisis. GAM is one such indicator where greater than 10% GAM in a population indicates a

Table 7: Food security indicators during S1 to

Key indicators	Viwandani					Mukuru					Korogocho			
	S1	S2	S3	S4	S5	S1	S2	S3	S4	S5	S2	S3	S4	S5
Severely food insecure (%) by HFIAS	40	50	42	37	38	46	39	41	30	37	63	75	68	61
Severe household hunger (%) by HHS	7	5	3.6	3.6	4	5.4	6	4.7	4.4	4	11	11	7	9
Moderately food insecure (%) by HFIAS	33	38	37	38	40	32	47	36	45	45	27	15	24	30
Moderate household hunger (%) by HHS	22	28	24	22	18	23	17	16	13	16	34	39	43	34
Poor & borderline food consumption (%)	-	50	54	53	31	-	34	42	37	32	67	68	71	57
Food expenditure as percent of household income (%)	53	46	48	47	48	53	53	56	52	50	80	71	76	65

*S1 refers to surveillance round 1; S2 refers to surveillance round 2; S3 refers to surveillance round 3 etc.

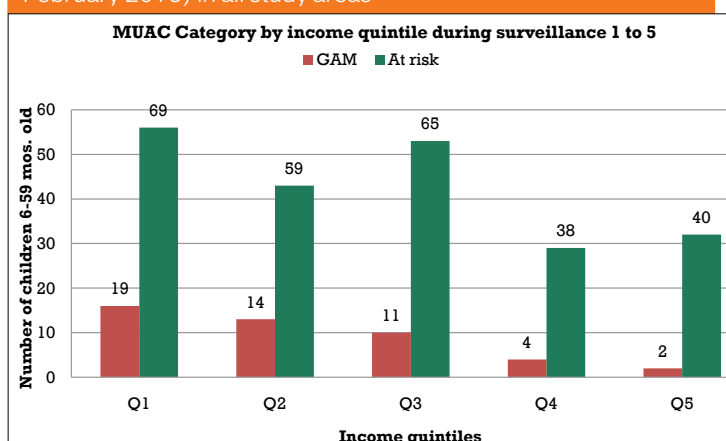
serious humanitarian emergency and 15% GAM indicates a critical emergency. This threshold was developed and has been effective in mostly rural contexts but has not been updated for large, urban populations. Ten percent of 500 children, i.e. 50 children, is much different than say, 10% of 15,000 children, i.e. 1,500 children. Large, urban populations, especially the poorest subset, barely have the facilities (clinics) or the resources to cope with such absolute numbers. Therefore, it is important to re-think the importance assigned to current thresholds for GAM when applied to urban contexts.

In the graph below, 321 children were either GAM or at-risk in all the study areas. This is just for families which were surveyed in the most vulnerable villages of the three IDSUE informal settlements, and not the slum populations at-large. The absolute numbers demonstrate that within these highly vulnerable villages - the at-risk population is significant, and larger than GAM figures, especially for poorer (lowest income quintile) slum dwellers. The need for early-warning clearly emerges when the at-risk population is assessed within the worst-off areas. The need for early-action becomes clear as there is a large group of people who can drop into humanitarian need from increased stresses. The early-action also enables more resilient households for whom the need for early-action is greatest.

Shocks and Security

On average, 20% of households felt scared often. Majority of these were in Korogocho (29%) and Mukuru (22%), particularly more pronounced in the lowest income quintile of Mukuru. More

Figure 19: Number of children (6 to 59 months old) at risk for malnutrition or with severe or moderate acute malnutrition (GAM) per income quintile during surveillance (July 2014 to February 2015) in all study areas



¹⁵ Middle upper arm circumference (MUAC) was used to determine the nutritional status of children between 6 and 59 months old. MUAC measurements below 124 mm indicate Global acute malnutrition (GAM), which includes cases of severe (SAM: measurements below 114 mm) and moderate acute malnutrition (MAM: measurements between 115 and 124 mm). MUAC between 125mm and 134 mm indicate children who are at risk for malnutrition.

households in Mukuru (20%) reported that they experienced at least one shock in the last four weeks compared to Viwandani (13%) and Korogocho (18%). Due to perceived insecurity, 55% of households in Mukuru went home early as an avoidance measure compared to 42% in Korogocho and 34% in Viwandani. Other avoidance measures that were used include; staying at home (6%), using escort (3%) and changing routes (3.3%). Some key indicators for this section are summarized in Table 8 below.

Negative Coping

About 53% of the households in all areas of study used credit (purchasing on credit) as a coping strategy. This was most evident amongst households in the lowest income quintile, particularly in

Korogocho (78%). With rapidly changing prices, insecurity issues, high school fees and other factors that cause variations in income, households cope by borrowing to be able to meet these needs. This is evident in the poorest households in Mukuru who spent an average of 65% of their income on debt. A significant proportion in all sites (23%) also took up a second job, sold an asset (10%) or removed their children from school (11%). Results for this section are summarized in Table 9.

Table 8: Shocks and security indicators during S1 to S5

Key indicators	Viwandani					Mukuru					Korogocho			
	S1	S2	S3	S4	S5	S1	S2	S3	S4	S5	S2	S3	S4	S5
Experienced any shock (%)	6	10	15	15	17	16	25	28	15	16	12	18	20	22
Often felt scared in community (more than once a week) (%)	9	10	16	17	16	12	22	29	24	25	16	35	29	37
% who used an avoidance measure	86	-	52	55	52	83	-	65	69	66	-	61	66	76
Avoidance measures used (%)														
Went home early	56	34	-	-	-	34	55	-	-	-	42	-	-	-
Used escort	2	1	-	-	-	10	5	-	-	-	4	-	-	-
Changed route	7	1	-	-	-	11	5	-	-	-	4	-	-	-
Stayed home	2	5	-	-	-	8	1	-	-	-	10	-	-	-
Other	2	1	-	-	-	0	1	-	-	-	1	-	-	-

*S1 refers to surveillance round 1; S2 refers to surveillance round 2; S3 refers to surveillance round 3 etc.

Table 9: Summary of negative coping strategies during S1 to S5

Key indicators	Viwandani					Mukuru					Korogocho			
	S1	S2	S3	S4	S5	S1	S2	S3	S4	S5	S2	S3	S4	S5
Used credit	30	57	47	49	42	49	57	56	58	61	55	67	61	68
Took a loan	2	10	6	4	6	15	7	4	4	6	6	5	7	4
Removed children from school	9	7	8	5	13	7	10	12	13	6	9	17	22	17
Begged for food or money	2	13	5	7	4	4	5	8	10	6	5	8	9	6
Received food/money from a friend/family/neighbour	38	33	24	31	30	36	32	36	33	25	23	35	36	33
Taken a second job	21	19	18	20	21	29	17	21	29	23	18	30	26	23
Sold an asset	6	10	4	5	9	13	13	8	13	18	10	15	11	8
Stayed home	2	5	-	-	-	8	1	-	-	-	10	-	-	-
Other	2	1	-	-	-	0	1	-	-	-	1	-	-	-

*S1 refers to surveillance round 1; S2 refers to surveillance round 2; S3 refers to surveillance round 3 etc.

Indicator trends from August 2012 to September 2014 (R5-S5)

The data presented in this section shows the trends of selected indicators for only the villages chosen for surveillance. The trends depict the performance of these villages both during the baselines (round 5 through round 10) and during surveillance rounds 1 through 5. For example, for Korogocho the results represent only the three selection villages over time.

Livelihoods

Casual labour remains the largest (48%) source of income in all the villages (all areas) sampled in all the rounds. However, a majority of

income earners (53%) in Korogocho are casual labourers, compared to 48% in Viwandani and 48% in Mukuru. Casual labourers earn daily wages depending on number of days worked per week. This number fluctuates, causing weekly income to vary. During economic downturns, oncoming emergencies, or local fiscal shocks, casual labour and other types of informal employment are most likely to be the first and most affected livelihoods.

The villages selected for surveillance have shown a slight increase in incomes in Viwandani and Mukuru while those in Korogocho did not show any significant change over time (Table 10).

Table 10: Median household income in Kenyan Shillings (KES)

Round (date)	Median household income (KES)		
	Korogocho	Viwandani	Mukuru
R5 (Aug'12)	5600	8400	9300
R6 (Feb'13)	6600	10000	9600
R7 (Apr'13)	5800	9600	10000
R8 (Nov'13)	6000	10250	-
R9 (Feb'14)	6150	11000	12000
R10 (Jul'14)	8000	-	-
S1 (Jul'14)	-	10000	9500
S2 (Sep'14)	5600	11000	10500
S3 (Oct'14)	6500	10000	10000
S4 (Nov'14)	6000	10000	10000
S5 (Feb'15)	6635	12000	10500

*Data represents trends in villages selected for surveillance and not the entire area

On average, over 90% of the household income is earned by the breadwinner (highest earner in HH). Over 60% of breadwinners in all areas were male but this varied within income quintiles and within areas, with a majority of female breadwinners being in the lowest income quintiles. Majority of female breadwinners (about 30%) are found in Korogocho, particularly amongst the poorest households. In all areas, female breadwinners earn significantly less than their male counterparts; earning about 60% of male income in all areas of study. When vulnerable households are overly reliant on one income earner, this dependency is a potential barrier to resiliency for the household. When the breadwinner suffers a physical injury (common in factory work), suffers a shock (perhaps due to insecurity), or falls ill – this dependency on one earner will translate into the household falling into extreme deprivation. When the household has a second earner, the risk is spread more evenly within the household. Such is the case for female headed households for example. These households have one earner and a higher dependency ratio, exacerbated by the fact a female will earn less than a male counterpart.

Income Quintiles

Household income differed significantly between areas and within rounds ($p = 0.05$). Therefore, income quintiles were specifically calculated for each round within each area. Each quintile represents approximately 20% of all the households in each sampling period. Households in the lowest income quintiles earn between 5 times less (Korogocho) to 4 times less (Viwandani and Mukuru) than those in the highest income quintiles.

A similar trend was evident with respect to food expenditure, where households in the lowest income quintiles spent more than they earned on food in a 4-week recall period. This is more pronounced in Korogocho ($\bar{x} = 107\%$) where households in the lowest income quintile spent over 100% of their income on food (Figure 23). This proportion increased over time from 105% during the baseline to 110% during the surveillance period, suggesting that the already financially vulnerable households in the lowest income quintiles are borrowing money or taking food on credit.

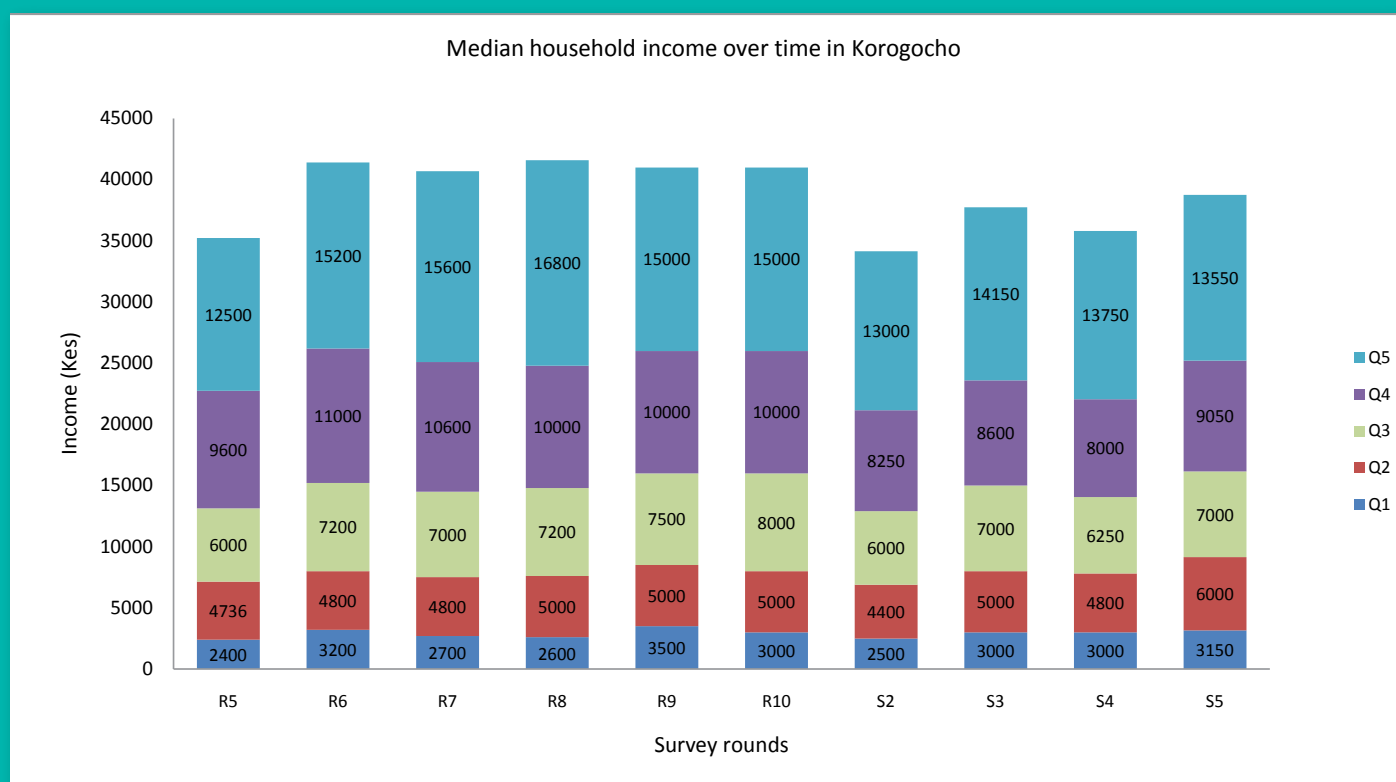


Figure 20: Median household income for surveillance villages in each data collection round in Korogocho
*Q1: Bottom quintile, Q2: Second quintile, Q3: Middle quintile, Q4: Fourth quintile, Q5: Top quintile

Figure 21: Average household income for surveillance villages in each data collection round in Viwandani *Q1 : Bottom quintile, Q2: Second quintile, Q3: Middle quintile, Q4: Fourth quintile, Q5: Top quintile

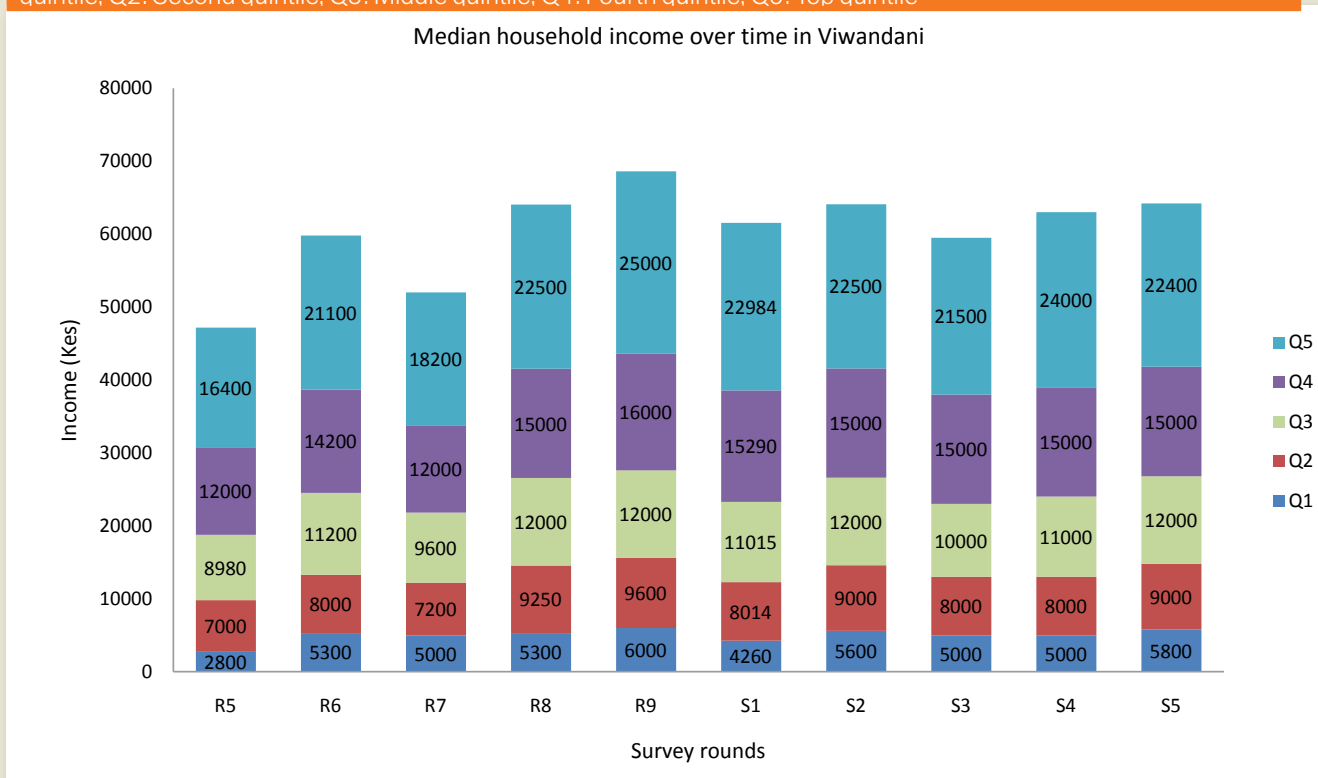
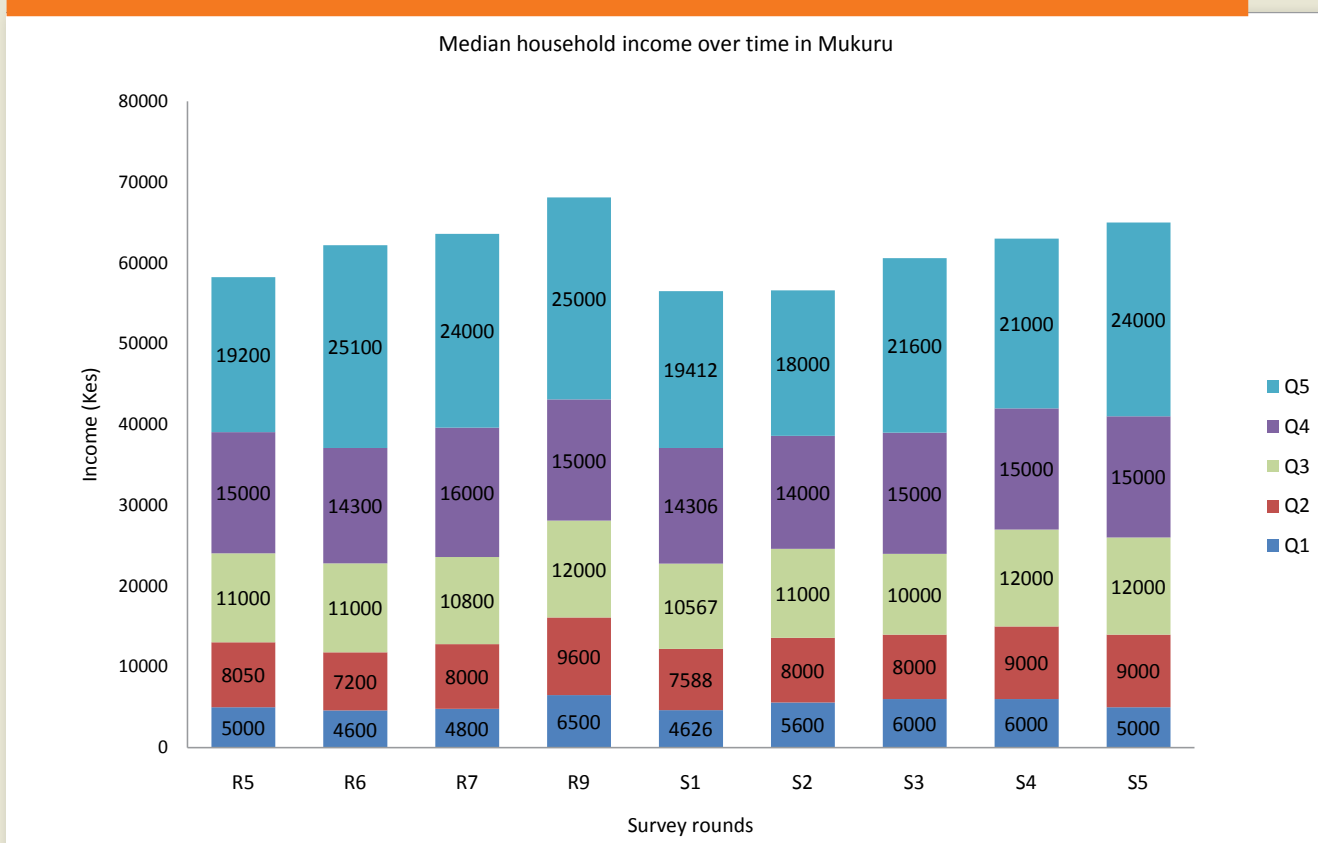


Figure 22: Average household income for surveillance villages in each data collection round in Mukuru *Q1 : Bottom quintile, Q2: Second quintile, Q3: Middle quintile, Q4: Fourth quintile, Q5: Top quintile



Households in the lower income quintiles relied more on casual labour, hawking, and scavenging as a source of livelihood. These households also reported more food insecurity, severe hunger and moderate/poor food consumption (Table 8). Higher stress levels, more perceived insecurity, and use of avoidance measures were

also reported in the lowest income quintiles. A higher proportion of households in the lower income quintiles also used one or more coping strategies, especially use of credit and taking up a second job (Table 8).

Food expenditure as % of household income per income quintile

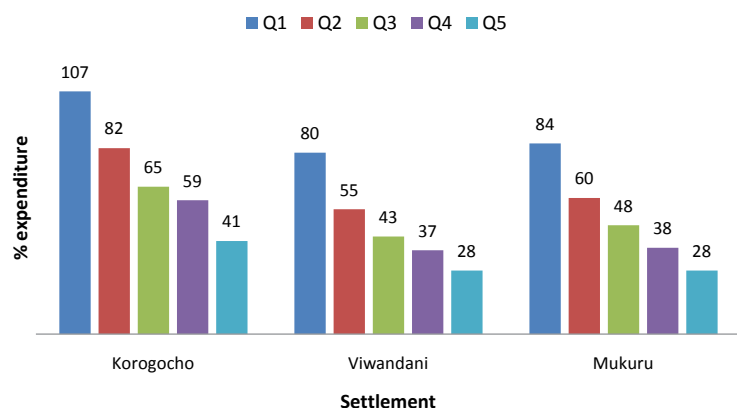


Figure 23: Food expenditure (%) per income quintile in the surveillance villages (Aug. 2012 to Feb. 2015) *Q1: Bottom quintile, Q2: Second quintile, Q3: Middle quintile, Q4: Fourth quintile, Q5: Top

Generally, food expenditure as percent of household income increased in Korogocho but did not show any significant change in Viwandani and Mukuru.

Household Food Security

Raw food is the main source of food (93%) for households in all study areas. Half of the households in all areas are severely food insecure (50%) according to the Household Food Insecurity and Access Scale (HFIAS). About 33% households report moderate to severe hunger based on Household Hunger Score (HHS). Although we began to measure the Food Consumption Score (FCS) during the surveillance round 2, we found that more than half (51%) of households have acceptable food consumption score; households in the lowest income quintile in Korogocho recorded the largest proportion (33%) of those with poor food consumption. Almost half (48%) of the poorest (Q1) households in Korogocho have borderline food consumption. Percent severely food insecure by HFIAS decreased significantly in the surveillance villages of

Table 11: Selected indicators per income quintile in the surveillance villages (August 2012 to February 2015)

Selected indicators	Income quintiles (Q1 represents poorest households)				
	Q1	Q2	Q3	Q4	Q5
Livelihoods					
Median HH income (kes)	4000	8000	10000	13550	20250
Median income earned over 4-wk period by breadwinner (kes)	4000	8000	9700	12000	15000
Food expenditure as percent of household income (%)	115	65	52	42	29
Female headed households	39%	23%	17%	13%	11%
Main source of income					
Monthly Salary	10%	21%	32%	33%	33%
Casual labour	56%	58%	50%	46%	40%
Petty Trading (hawking)	12%	8%	7%	7%	6%
Remittances	3%	1%	0%	0%	0%
Scavenging	4%	2%	1%	1%	0%
Stable Business	10%	7%	6%	11%	19%
Food security					
Severely food insecure by HFIAS	59%	42%	40%	31%	25%
Severe household hunger by HHS	27%	17%	13%	10%	6%
Negative coping strategies used					
Used credit	61%	57%	53%	48%	35%
Took a loan	11%	9%	8%	9%	7%
Removed children from school	18%	10%	9%	8%	8%
Begged for food/money	12%	8%	4%	4%	
Received food or money	43%	33%	30%	30%	23%
Taken a second job	29%	21%	17%	19%	18%
Sold an asset	14%	9%	7%	7%	7%

*Q1: Bottom quintile, Q2: Second quintile, Q3: Middle quintile, Q4: Fourth quintile, Q5: Top quintile

Table 12: Household food insecurity in selected (surveillance) villages over time

Settlement	Food security Indicator	R5	R6	R7	R8	R9	R10	S1	S2	S3	S4	S5
Korogocho	% Severe hunger (HHS)	7.8	6.7	8.2	14	4.8	20	-	11	11	7.2	9.3
	% Severe Food insecurity (HFIAS)	55	71	80	64	72	63	-	63	75	68	61
Viwandani	% Severe hunger (HHS)	6	3	0	3	7	-	7	5	3.6	3.6	4.2
	% Severe Food insecurity (HFIAS)	54	26	25	32	39	-	40	50	42	37	38
Mukuru	% Severe hunger (HHS)	6	6	7	-	6	-	5.4	6	4.7	4.4	3.9
	% Severe Food insecurity (HFIAS)	58	43	53	-	35	-	46	39	41	30	37

*Data represents trends in villages selected for surveillance and not the entire

Korogocho between November 2013 and July 2014 but increased in September 2014 before declining again between October 2014 and February 2015. Similarly severe hunger based on Household Hunger Score (HHS) decreased in both Mukuru and Viwandani but fluctuated up and down in Korogocho. Table 12 below shows a summary.

Water

A majority of households (91%) use tap water as the main source of drinking water. Most households (about 98%) in all areas meet SPHERE standards for distance to water (less than 500 m or 5 minute walk) and for time queuing for water (less than 30 minutes). About 66% of households in all areas met the 15L of water per person per day SPHERE standard in February 2015, and this increased over time, averaging 58% between August 2012 and February 2015.

Coping Strategies

Overall, there was an increase in the use of coping strategies over time. About half the households (50%) in all areas of study used credit (purchasing on credit) as a coping strategy. This was most evident in Korogocho (59%). The average debt as of May 2014 was highest in Mukuru, at kes. 4537 per month while in Korogocho it was kes. 2457 per month. With rapidly changing prices, insecurity issues, high school fees and other factors that cause variations in income, HHs cope by borrowing to be able to meet these needs. A significant proportion also removed their children from school in Korogocho

(16%) and Mukuru (10%). This proportion increased over time in all areas. More people also purchased food on credit over time. An increased number also sold an asset in Viwandani in order to cope with the harsh economic realities (Table 10).

Shocks and security

Fewer households experienced shocks which range from mugging, floods, burglary, to property destruction over time in Korogocho and Viwandani but trends did not change in Mukuru. More people rated security as bad in Korogocho (average 36%). In Viwandani and Mukuru, the situation seemed to have improved with more people rating security as good.

Table 12: Household food insecurity in selected (surveillance) villages over time

Settlement	Food security Indicator	R5	R6	R7	R8	R9	R10	S1	S2	S3	S4	S5
Korogocho	% Severe hunger (HHS)	7.8	6.7	8.2	14	4.8	20	-	11	11	7.2	9.3
	% Severe Food insecurity (HFIAS)	55	71	80	64	72	63	-	63	75	68	61
Viwandani	% Severe hunger (HHS)	6	3	0	3	7	-	7	5	3.6	3.6	4.2
	% Severe Food insecurity (HFIAS)	54	26	25	32	39	-	40	50	42	37	38
Mukuru	% Severe hunger (HHS)	6	6	7	-	6	-	5.4	6	4.7	4.4	3.9
	% Severe Food insecurity (HFIAS)	58	43	53	-	35	-	46	39	41	30	37

*Data represents trends in villages selected for surveillance and not the entire area

SECTION 7

Food Prices

PRICE TRENDS: August 2013-FEBRUARY 2015

Prices provide information about both the availability of and access to food, both of which are critical for food security and early warning analysis. A price represents the intersection of supply and demand and therefore describes the availability of that given commodity relative to demand. Because the price influences how much of a commodity a household can purchase, it also provides an indication of food access.¹⁶ Given that poor urban households spend a larger proportion of their total income on food expenditure, prices are an important signal to potential food insecurity at the household level. For example, households in Korogocho spend more than 80% of their total income on food on average. Households in the lowest income quintile spend more than (102%) what they earned on food. High and fluctuating food prices are a cause of food insecurity in urban informal settlements mainly as a result of low purchasing power amongst households who depend almost entirely on casual labour as their source of livelihood. Changes in the labour market and subsequent fluctuations in income make such households very vulnerable to food insecurity.

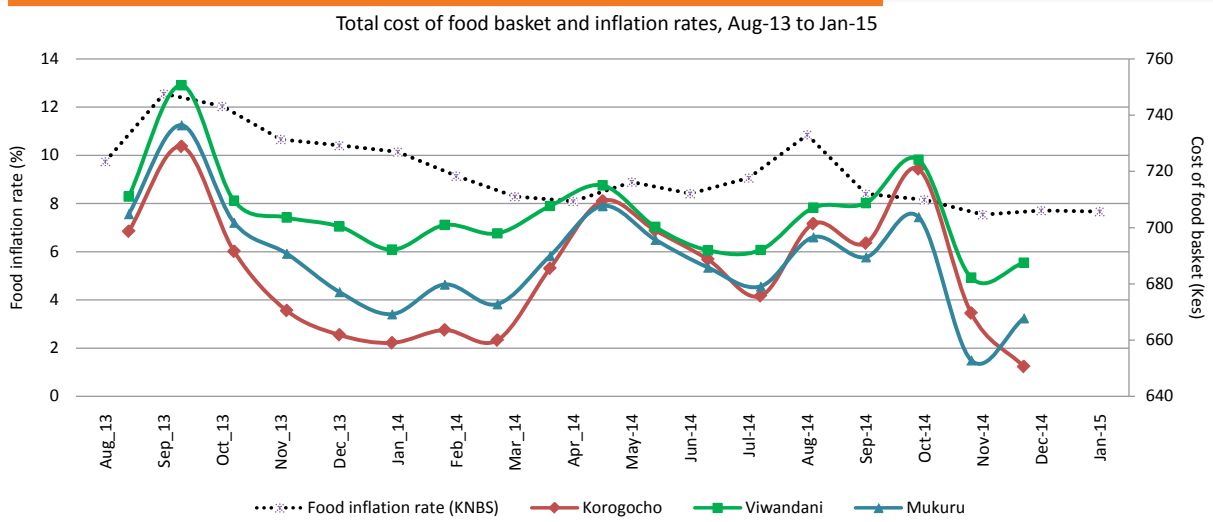
Month on month trends for the 2013/14 period showed higher food inflation in the months of July and August 2014 compared to the same months in 2013. However, October and November 2014 showed a decline in food inflation compared to the same months in 2013. December 2014 noted an all-time lowest in 2014 year due to a drop in cereal prices and global drop in fuel prices. Nationally, prices continued to drop over time into early 2015 (see dotted line for food inflation in Figure 24). This trend is likely to continue as a result of declining global fuel and cereal prices. However, households in the informal settlements are only likely to see a limited effect owing to other micro-economic factors such as infrastructure and emergencies which affect supply of goods.

¹⁶FEWSNET, Kenya Food Price Monitoring, 2009

SITUATION

- The cost of the food basket for the three sites hit the highest in the months of September 2013, May 2014 and November 2014, mainly driven by VAT increases and seasonality changes. For example, the cost of maize flour is dependent on the seasonal calendar (May is a lean season in both urban and rural settlements). There was a consistent increase from February to May 2014 even with a drop in food inflation rates between February and April. Generally, changes in prices in urban slums behave in an almost similar manner as national price changes (see Figure 24). However, the micro-economic factors such as competition within local markets, supply and access cause weekly price changes in informal settlements.
- Changes in VAT, inflation and other national policies have had a significant impact on prices in the urban informal settlements. Prices of milk, maize flour and potatoes increased by an average of 15% in September 2013 in the 3 sites compared to an equivalent increase of 7.6% in national prices for the same goods. This was probably as a result of a new VAT law (effected in September 2013) that imposed 16% tax on food items that were previously zero-rated, effectively increasing the prices of milk by 19.8%, 2kg maize flour by 10.27% and 2kg of potatoes by 15.5% up from the previous month. The overall cost of a food basket increased by about 5% in the same month. Further the County government levies taxes on produce brought into Nairobi County from other areas e.g. potatoes and tomatoes, making costs to increase.
- Korogocho had the lowest total cost of a food basket. Changes in prices are attributed to seasonal variations which affect production of vegetables, tomatoes, maize and beans; as well as the inter-play between supply and demand factors such as competition within markets in the slums.

Figure 24: Trends of the total cost of the food basket in three settlements



Total cost of food basket and inflation rates, August 2013 - January 2015



Note:

Consistent with FAO guidelines,¹⁷ the food basket contains a selection of food commodities commonly consumed by dwellers of urban informal settlements and one (1) non-food item. The commodities include cereals (maize flour), oils (500g cooking fat), milk (500ml), sugar (0.5kg) and beef with bones (0.25kg), potatoes (2kg), beans (1kg), vegetables (cabbage and kales) and paraffin (1 litre). The total cost of the basket is the sum of individual costs in each site. The basket aims to observe the monthly changes in commodity prices and subsequent expenditure patterns of households. An increase in total cost of the food basket represents an equal increase in prices and subsequent expenditure which affects household food security.

¹⁷ FAO Food price Index Revisited, 2011

FOOD COMMODITY PRICE TRENDS

- Maize flour prices increased consistently from July 2013 (Kes. 97.9 per 2kg) to June 2014 (Kes. 115.8) before declining to Kes.105 between July to December 2014. A 2kg pack of maize flour retailed at an average of Kes. 105.5 in November 2014. Month on month trends indicate higher prices of maize meal in the months of July, August and September 2014 compared to the same months in 2013. A combination of factors contributed to this trend. The below average production in 2013 and partly 2014 was attributed to poor rainfall distribution, delayed distribution of fertilizers and the increasing negative effects of acidity of soils in the high potential areas.¹⁸ The September 2013 VAT bill lifted the tax zero-rating on maize flour, effectively increasing prices. However, the long rains harvest in 2014 in Western and Rift Valley regions boosted supply of maize, causing prices to decline significantly in October and November 2014.
- Prices of dairy products, vegetables and potatoes are generally higher in the urban markets compared to national prices. Such goods are not produced in the urban settlements as opposed to rural settlements. Further, Nairobi County government imposes tax on potatoes, vegetables, tomatoes, etc. supplied from other counties, causing prices to rise. In contrast, sugar and maize meal prices are lower in urban markets. Retailers purchase goods such as cooking oil/fat, sugar and maize meal in bulk and repackage them into smaller quantities and sell lower than other traders in the city, maximizing profits on high frequency and small quantity patterns of purchase.
- The total cost of the food basket across all sites depicted a similar trend to the national food inflation rate except for spikes observed in September 2013 and May and August 2014. Prices dropped in July 2014 and continued to decline until December 2014, hence total cost of the food basket declined for all sites in that period.

Figure 25: Trends of sample food commodities in the three settlements in 2013/14 period

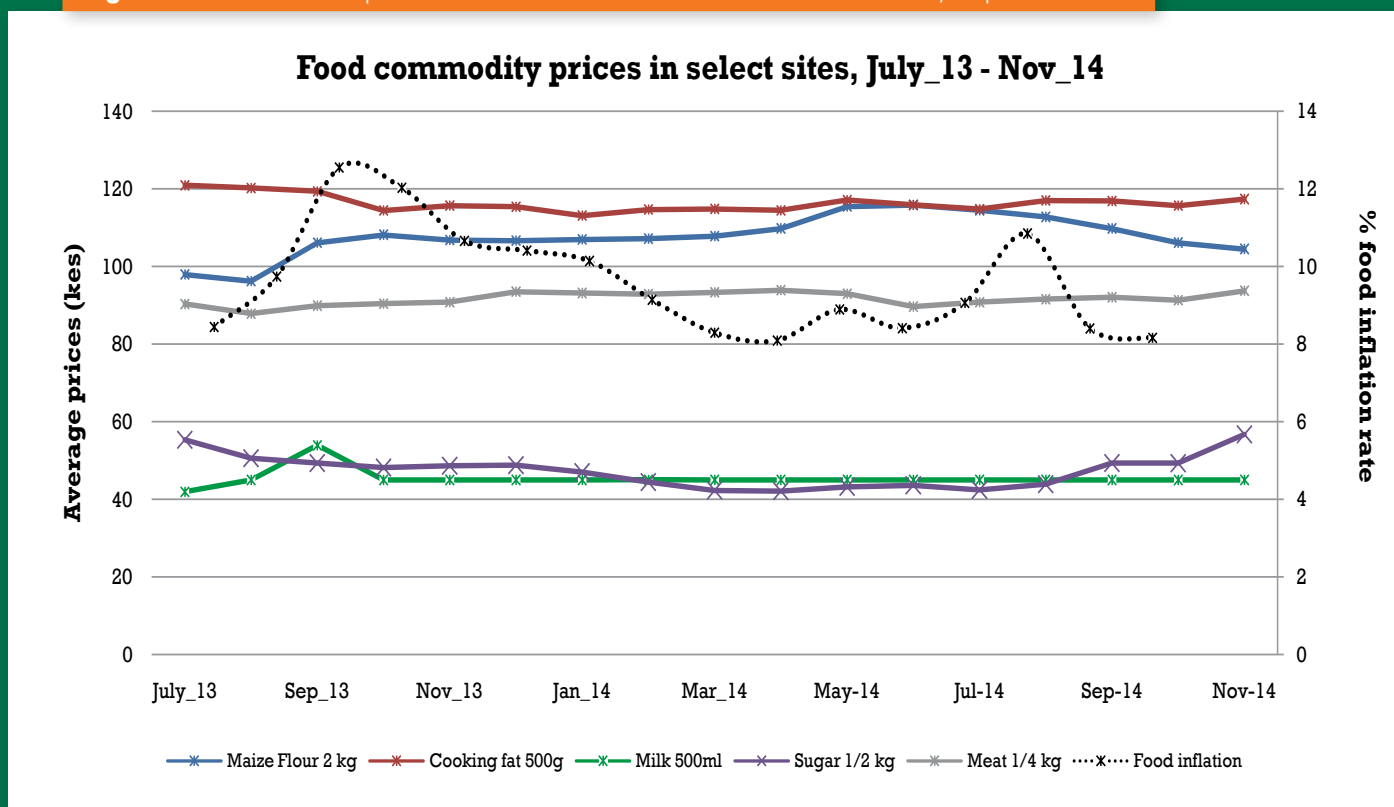


Table 14: Month on month trends: average retail prices of selected commodities

	July_13	July_14	Aug_13	Aug_14	Sep_13	Sep_14	Oct_13	Oct_14	Nov_13	Nov_14
Maize Flour2kg	97.9	114.5	112.8	106.1	106.1	109.8	108.1	106.1	106.8	104.5
Cooking fat 500g	120.9	114.8	120.3	117	119.4	116.9	114.4	115.7	115.7	117.4
Milk 500ml	41.9	45	45	45	53.9	45	45	45	45	45
Sugar 1/2 kg	55.4	42.4	50.6	43.9	49.4	49.4	48.2	49.3	48.6	56.8
Meat 1/4 kg	90.4	90.8	87.9	91.6	89.9	92.1	90.4	91.4	90.8	93.8
Food inflation	8.4	9.1	9.7	10.9	12.6	8.4	12	8.2	10.7	-

¹⁸ KFSSG, January to March 2015 short rains season assessment report

Outlook

Price changes were mainly driven by the cost of maize flour, which follows the seasonal calendar and fuel cost which is majorly determined by international prices. Trends in staple food prices, mainly maize flour indicate that prices will likely increase in the month of March 2015 as supplies decline owing to a continued dry season. On the other hand, manufactured goods like cooking fat, sugar and milk are likely to maintain a stable price but as has been noted earlier, prices fluctuate more rapidly in the urban informal settlements owing to emergencies and the tax regime which are often unpredictable.

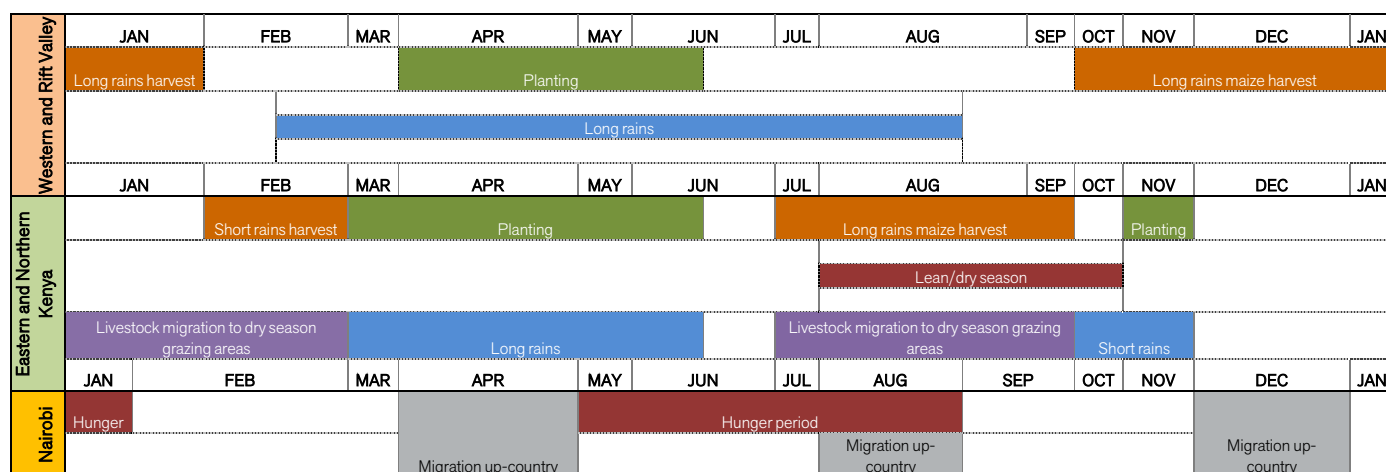
According to the 2015 short rains assessment conducted by the Kenya Food Security Steering Group (KFSSG), the food insecure population were 1.6 million people in February 2015.¹⁹ Short rains crops did not develop well in the south-eastern, marginal, agricultural areas. As such, cereals production was below average and this is likely to affect food supply in urban settlements.

Seasonality

Seasonal factors, domestic policies, and other local circumstances interact to cause high fluctuations of domestic prices of food and fuel in many monitored markets. Usually, prices of food items in the urban areas such as milk, cereals (maize grain, rice); and flour (wheat and maize) and beans, are highly dependent on the seasonal calendar described below. For instance, supplies from local farmers follow typical seasonal production trends across various livelihood zones while imports and supplies from traders located outside the urban areas are normally important during the lean seasons such as June-July in Nairobi.²⁰

Seasonality of prices is reflected in the changes observed in May 2014 when prices increased in the urban settlements by over 5%. May through July is a lean season in Kenya's Western and Rift Valley regions (Kenya's food baskets) characterized by planting. Supplies to urban areas are minimal, causing prices to rise significantly. However, in October and November prices begin to drop probably owing to increased supply from the long rains harvest.

Figure 26: Seasonal Calendar for Kenya: Typical year



Source: Adopted from FEWSNET and OPM/Concern, 'Review of urban food security targeting methodology and emergency triggers' 2013

¹⁹ FEWSNET, Food security outlook update, April to June 2014

²⁰ WFP, Comprehensive food security and vulnerability analysis, Kenya high density areas, 2010

SECTION 8

Early Warning Cash Transfer

Korogocho Case Study – An Emergency Cash Transfer Response

Of the three informal settlements monitored by IDSUE during 2014, the likelihood of an emerging emergency was greatest in Korogocho. The area has lower incomes, higher food insecurity, and personal security is a major concern. In addition, the area is populated with more vulnerable households, such as female headed households. External economic/fiscal shocks and economic downturns are likely to directly affect Korogocho households due to their vulnerability. A potential decrease in number of hours or days worked for casual workers (who are 78% of all breadwinners in Korogocho) have a direct effect on household expenditure as many of these households are without safety nets or social protection (less than 1% are enrolled in any government safety net). Increases in food prices are also likely to directly affect these households by decreases in food consumption, negative coping strategies.

Household finances also support the view that the situation in Korogocho was deteriorating. Households who used credit increased from 54 to 57% in November 2013 to February 2014. Those who took a loan increased from 14% to 16% in the same period. 38% of households removed their children from school (compared to 23% in Round 8). This is also striking being that Korogocho is also where many of the poorest households live and is therefore likely to have a lower school enrolment rate than other informal settlements in Nairobi. 26% of households received food from a friend or neighbor. 29% took a second job, and 13% sold an asset in the last four weeks. Most of these figures are worse than those in Mukuru and Viwandani.

The food security situation was the most troubling aspect in Korogocho in 2014. Based on Round 9 (February 2014) data, there was evidence of an emerging food security crisis in Korogocho. In February, there was a wide range of food security indicators which pointed to increased hunger and negative coping. During Round 8, in November 2013, there was a spike for several indicators which showed the situation in Korogocho deteriorating. However it was unclear whether to conclude if this was a temporary spike or part of a longer downward trend. With Round 9, it was becoming clear that a more significant shift was taking place and perhaps a slow-onset emergency was in its beginning stages. Since there are no global or national standard on the declaration of a slow-onset urban emergency, this analysis was based on how Korogocho had fared on its own.

While the 15% GAM rate was not crossed, it was clear that severe hunger increased. With this information provided by IDSUE data, there were two additional routes for verification undertaken. One, IDSUE data was verified by a nutrition baseline for Nairobi County, conducted by Concern Worldwide in May 2014. While this didn't imply Korogocho was the most affected area (according to the baseline GAM rates), it did verify that Korogocho had higher than

average malnutrition rates in Nairobi and that the current rates were higher than usual. The implication of the nutrition baseline was that the 2014 food security situation was worse than the usual 'chronic' state for Nairobi. Second, a series of focus group discussions were done in Korogocho (see box). These FGDs verified that increased negative coping strategies were undertaken by the community in recent months.

In the first two quarters of 2014, it became clear the situation was deteriorating at a stark rate, especially with respect to food security and negative coping indicators. After funds were established a cash transfer was decided as the optimal response strategy. Concern Worldwide has extensive experience responding to urban emergencies in the form of cash transfers and social protection. There was existing practices and procedures to respond to urban areas for an emergency cash transfer, and therefore the organization was well-placed to respond.

BOX 3

Korogocho Profile

Korogocho is characterized by high levels of informal labour, high insecurity, and high vulnerability, particularly a large number of female headed households.

Korogocho is a very densely populated, poor informal settlement in eastern Nairobi. It has much lower average incomes than other informal settlements. The length of residency in Korogocho (12 years) is significantly longer than Mukuru (5 years) or Viwandani (6-8 years), which implies residents are the chronic poor, and not new migrants. Only 28% of current residents have moved from rural areas, whereas others are moving from an urban area: 22% from another slum, 32% have moved within Korogocho and 16% have moved from a non-slum urban area.

The 2009 Census reports a population of 3,129 households.²¹IDSUE does a household listing in order to assess a representative sample. This listing showed that in fact 9,464 households reside in Korogocho in February 2014.

Incomes in Korogocho are lower compared to other areas of IDSUE surveillance. Average breadwinner income (usually over 90% of household income) is approximately 7,723 KES per month. This is compared to Viwandani, an area with less casual labor, of 11,788 KES per month. 67% of household income is spent on food expenditure in Korogocho. Livelihoods are primarily casual labor where the primary mode of payment is daily (78%). 38% of breadwinners are female, which is higher than other areas (31% in Mukuru, and 32% in Viwandani.)

Korogocho is also known as one of the most insecure informal settlements in Nairobi. Three-fourths of households report feeling scared in the community due to security. Two-thirds of households use avoidance measures. Both of these indicators have increased from Round 8 to 9.

²¹ Based on 2009 Census the population of Korogocho is 10,376 (3, 129 households).



Food security in Korogocho: Highlights

- Spikes in food insecurity tend to be in Quarter 1 of 2013 and 2014.
- More adults and children are eating meals outside the home²², especially in Korogocho where 62% of households in Feb. 2014 reported that children ate a meal cooked outside the home, up from 16% in August 2012. In Mukuru, 32% of households in Feb. 2014, as opposed to 8% in August 2012, reported the same. The same was true for Viwandani, from 17% in Aug. 2012 to 35% in Feb. 2014. Similar trend, although not as stark, for consumption of street foods.
- HFIAS: More households are food insecure in Korogocho (from 82% in Aug. 2012 to 91% in Feb. 2014). Severe food insecure households in Korogocho remain in the high-60s, consistently well above rates in Viwandani and Mukuru.
- HHS: Overall, more households in Korogocho report hunger than in Mukuru (30%) and Viwandani (22%). Households reporting little to no hunger significantly declined in Korogocho (from 73% to 57%) while households reporting moderate hunger increased from 23% to 37%. Households reporting severe hunger in Korogocho spiked to 12% in Nov. 2013, but returned to 6% (similar to previous rounds) in Feb. 2014.

²² Meals outside the home in the informal settlements involved very low quality food. The choosing of street foods is commonly agreed upon as a lower quality substitute and is one form of a negative coping strategy.

Households in Viwandani and Mukuru are showing significant decline in moderate household hunger (from 25% to 18% in Mukuru and from 24% to 10% in Viwandani). Households reporting severe hunger stayed the same at around 5% in both areas.

The Response

Due to the cash based economy of informal settlements, an emergency cash transfer was mobilized in September. Cash based interventions have been proven to be effective humanitarian instruments in urban contexts.²³ Cash transfers were made through MPESA directly to households. An amount of 2,000 KES per month for four months were made in November, December 2014 and January 2015. The amount is harmonized with the specified amount by the government for its Urban Food Subsidy Programme (UFSP).²⁴ An estimate of 2,000 households was justified through available budget estimates.

A transfer was made to 1950 households. Vulnerable households were identified through Community Conversations²⁵ (community groups which regularly meet) under Concern Worldwide programming in Korogocho. 2,200 household names were forwarded by these community groups.

²³ CaLP – Urban Emergencies Manual

²⁴ The UFSP has two objectives as outlined by Government of Kenya. 1 - To help the poor urban households meet their basic food needs. 2 - To set up a system for social protection in the urban context. The eligibility is defined as those households who are extremely poor (under 1 USD/day), lack capacity for casual employment,

²⁵ For more on Community Conversations see: (insert link).
of street foods is commonly agreed upon as a lower quality substitute and is one form of a negative coping strategy.



These households were then screened through a household survey done on mobile phones. All households were verified through these surveys as being properly eligible. The final criteria for inclusion were those households who had:

Criteria to qualify for Cash Transfer (any one of these to be included)

- GAM or At Risk Malnutrition under-five child in the household
- Dependents Ratio ≥ 5
- Single Female Households with Dependents
- Vulnerabilities – HIV/AIDs, living with disability or elderly in the household
- Severe Household Hunger
- Shocks
- Removed Children from School
- Under5 household in red after food and rent
- Under5 household in red after loans plus debts
- Lowest Income Quintile household. If household made under Kes. 3500.

Total qualifying households : 1947

Forthcoming

Evaluation of the Cash transfer will be done at the end of the four months, in January, to assess its impact on reducing vulnerabilities and food insecurity. An analysis and write-up is forthcoming.

When discussions with stakeholder groups takes place in 2015 to develop consensus on thresholds for early-action, the potential responses will also be examined. The cash transfer experience in Korogocho will be a valuable lesson to build on, in order to assess targeting, speed of beneficiary identification, impact of the intervention on the most vulnerable households in terms of food security and longer term resilience of vulnerable households.



SECTION 9

IDSUE results and implications: recommendations for emergency policy and practice

What are the key policy priorities that emerge from IDSUE?

There is a need to prioritize urban issues at a global level. The humanitarian sector is actively developing how to best work in urban areas as well as in partnership with development actors. The following is a list of recommendations, which have national and international implications for working on urban informal settlements, having emerged from some of the IDSUE research.

Recommendations for urban programming and practice

1- One size does not fit all

Inequality across informal settlements varies. Not all informal settlements are the same. Often 'urban policy' has a standard approach for informal settlements. This ignores the underlying dynamics at play. There are large differences across informal settlements and a high level of income inequality within informal settlements. The tendency to treat all slum dwellers similarly in terms of humanitarian and development interventions and targeting should be resisted. More effectively targeted urban programming can be achieved by understanding these huge disparities.

Humanitarian organizations can make evidence-based decisions if interventions should be designed spatially within one area or several areas if vulnerable and affected populations are clustered or widespread.

Furthermore, any slum-upgrading policy or social protection mechanism must incorporate slum-specific differences and dynamics. Traditionally, policies have treated slums as somewhat similar, neglecting the fact that there are huge inequalities across slums. These differences will affect targeting of social programmes, assessments of the most vulnerable (in terms of number), and provide more accurate assessments for future urban planning and policies.

2 –Averages Mask Reality, Focus analysis on the disparities and especially the worst off.

Especially for humanitarian organization who need to consider the importance of the lower-end distributions.

For IDSUE, the Lowest Income Quintile is the early warning demographic, as they are likely to be affected beforehand due to an inability to cope with shocks/stresses. The surveillance villages are where the most vulnerable in terms of income and food security reside.

Within urban contexts, because of such heterogeneous populations,

and robust growth and migration, focusing analysis on simple averages will conceal the true situation being faced by large numbers of the most vulnerable. It is important to be cognizant of socio-economic, gender, and spatial differences – all of which have great potential to reveal.

3-Focus on the Absolute Numbers in Need

The decline in the share of hungry or malnourished people should be considered a separate issue from the current number of hungry people. This matter is especially clear with reference to Kenya.

Many developing countries have made significant progress in improving food security and nutrition, but this progress has been uneven across both regions and dimensions of food security. For Kenya, this dichotomy is especially true. The share of undernourished people has decreased from 33% in 1990-92 to 24% in 2012-4. However the number of undernourished has increased from 8 million people to 10.8 million during the same time period.

IDSUE data also reflect similar messages. While figures for severe hunger for some informal settlements are low, often in the single digits – this obscures the fact that in urban areas the absolute numbers are quite large.

Table 15: Food insecurity and household hunger in absolute numbers in February 2014

FOOD SECURITY	Korogocho	Mukuru	Viwandani
	N=228	N=111	N=196
Severely food insecure (%) by HFIAS	164	39	76
Moderately food insecure (%) by HFIAS	45	25	53
Severe household hunger by HHS	11	7	13
Moderate household hunger (%) by HHS	110	19	26

*Data represents villages selected for monthly surveillance; N represents sample size for these villages

Policy Recommendations

1- Clarity of crisis:

Findings from IDSUE reveal a heterogeneous picture of urban poverty and vulnerability in the five study sites. This has both geo-spatial and gendered characteristics. While findings suggest a deteriorating situation for those living in the lowest income quintile, particularly female headed households, their situation does not classify as a crisis according to current humanitarian frameworks. They also feature on the “edge of the frame” in Kenya’s development and policy instruments. Mechanisms to situate those living in acute vulnerability and extreme poverty within these frameworks and instruments are required.

2 - Urban resilience: A resilience lens provides opportunity for greater integration of urban informal settlements within GoK emergency and development frameworks. Current frameworks should be recalibrated in order to better monitor urban slum populations and situate this alongside, and not as a counter point, to rural livelihoods and vulnerabilities. Progressive engagement of markets in order to make them work better for the poor, irrespective of address (rural – urban), are also suggested.

3 - National engagement: Framing urban poverty within development frameworks requires sustained engagement of national and sub-national decision makers in order to support and influence policy and practice, including resource allocations for social protection and livelihoods development as well as early response in the event of acute crisis. Early warning systems that monitor for emergencies whether slow onset or acute should be part of wider systems monitoring for developmental progress (or the absence of it). Key crisis responses should reinforce the very systems upon which an affected population depends, whether rural or urban, and extend the capacity of that system (social protection, security, health, education, labour markets, water, etc.) to meet a change in demand.

For 2015, there are three objectives for IDSUE:

1. **Operationalizing a surveillance system.** Scaling up the number of IDSUE surveillance sites, in strategic areas. Currently Concern directly collects this data in three informal settlements in Nairobi. For next year, Kenya Red Cross will collect data in three Nairobi urban informal settlements. World Vision will collect data in two informal settlements in Mombasa (Bangladesh and Moroto). Each area will need to provide strategic surveillance information for early-warning and early-action.
2. **Thresholds for Action.** Develop thresholds for early action. Now that we know what to measure, where and how to collect this data - what are appropriate the thresholds for early action? Developing these action triggers will build upon an evidence base, but will also require buy-in from a wide range of stakeholders including government, civil society and researchers. This discussion and consensus building is the priority for IDSUE for 2015. A series of workshops and meetings with various stakeholders will facilitate this process of agreement. The thresholds will also be coupled with appropriate responses and commitment for action.
3. **Nairobi Urban Coordination Body.** Incorporating a response and coordination platform in partnership with Nairobi County and Kenya Red Cross. An urban coordination working group which will meet quarterly, will review recent IDSUE data and track if certain areas are under stress. This body will be the convening body and implementing mechanism for an early-warning and response in Nairobi County. Additional linkages to development and urban planning will also be incorporated with time.



Appendices

APPENDIX A: Baseline questionnaire

CONCERN WORLDWIDE Indicators for Urban Emergencies (IDSUE) Baseline questionnaire																													
1.0 BACKGROUND																													
1.4	Household head name	<input type="text"/>																											
1.4b	Gender of household head (01=female, 02=male)	<input type="text"/>	<input type="text"/>																										
1.6	Study household id	<input type="text"/>																											
1.8	Fw: informed consent signed 0=no, 1=yes, 2=willing but unable to sign, 3=accepted int but refused sign	<input type="text"/>																											
RESPONDENT'S PARTICULARS AND OTHER INTERVIEW DETAILS																													
1.12	Fw: is respondent reference person named in q1.4? 0=no; 1=yes	[if 1, skip to 1.17]		<input type="text"/>																									
1.13	What is your name?	<input type="text"/>																											
1.14	Fw: does respondent live in this household? 0=no; 1=yes	[if 2, skip to 1.16]		<input type="text"/>																									
1.16	How are you related to (name of individual in q1.4)? (codesheet a ¹)	<input type="text"/>	<input type="text"/>																										
HOUSEHOLD LIVING																													
1.17	How many adults and children live in this household?	C. Total number of children under 5 years (0-59 months)	<input type="text"/>	<input type="text"/>																									
		A. Total number of children 5 -18 years	<input type="text"/>	<input type="text"/>																									
		B. Total number of adults 18+ years	<input type="text"/>	<input type="text"/>																									
1.17	How many of the following people live in this household?	D. Total number of people living with disability	<input type="text"/>	<input type="text"/>																									
		E. Total number of elderly persons (65+)	<input type="text"/>	<input type="text"/>																									
		F. Total number of people living with hiv/aids	<input type="text"/>	<input type="text"/>																									
1.18	How long has your household lived in this village?	Months	<input type="text"/>	<input type="text"/>																									
		Years	<input type="text"/>	<input type="text"/>																									
1.19	Where did this household come from before Settling in this slum?	Same slum	<input type="text"/>	01																									
		Other slum	<input type="text"/>	02																									
		Non-slum urban area	<input type="text"/>	03																									
		Rural area	<input type="text"/>	04																									
		Other country	<input type="text"/>	05																									
		Other (specify)	<input type="text"/>	96																									
1.19b	Why did you move here?	Look for employment	<input type="text"/>	01																									
		Breadwinner lost job/ deceased	<input type="text"/>	02																									
		High costs of living	<input type="text"/>	03																									
		Ethnic tensions (idps)	<input type="text"/>	04																									
		War/ civil strife (refugees)	<input type="text"/>	05																									
		Other (specify)	<input type="text"/>	96																									
1.20	Child anthropometrics (for each child in hh between 6 and 59 months [5 years]) record anthropometrics. (01=female, 02=male)	<table border="1"> <thead> <tr> <th>Child name</th> <th>Age (in months)</th> <th>Sex (m/f)</th> <th>Muac</th> <th>Oedema</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Child name	Age (in months)	Sex (m/f)	Muac	Oedema																				
Child name	Age (in months)	Sex (m/f)	Muac	Oedema																									

2.0.	SOURCE OF DRINKING WATER:							
2.1	What is the main source of drinking water members of your household have used in the last 2 weeks?	Piped / tap water Tanks Hawkers/water vendor Well/river/other surfacewater Other _____ (specify)	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> <tr><td>03</td></tr> <tr><td>04</td></tr> <tr><td>96</td></tr> </table>	01	02	03	04	96
01								
02								
03								
04								
96								
2.2	How long does it take you to walk from your house to this water source (one-way)?	<input type="text"/>	Entry: 0-60 Minutes					
2.3	How long have you Normally had to queue to get water in the last 2 weeks?	<input type="text"/>	Entry: 0-60 Minutes					
2.3S	How long does it take to fill up a 20 litre jerrycan?	<input type="text"/>	Entry: 0-60 Minutes					
2.4	Do you usually pay for this water?	[IF 2, SKIP TO 2.6] YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-1	Do you have at least one jerrycan at least 10 litres?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-2	If Yes: Do you use these for Transport AND Storage?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-3	Are your jerrycans covered?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-3a	If NO to SW-3: Does the jerrycan have a cover?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-4	Do the jerrycans have narrow necks?	Comment: Narrow neck for purposes of pouring. YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-5	Do you feel that your household has enough water for laundry and bathing?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02			
01								
02								
SW-6	Are you satisfied with the water facilities and are they adequate for water collection, storage, bathing, storage, bathing, hand washing and laundry?	Unsatisfied Satisfied More than satisfied	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> <tr><td>03</td></tr> </table>	01	02	03		
01								
02								
03								
2.6	How many 20 litre jericans of water has your household normally used per day in the last one week?	Number of 20 litre jericans	<input type="text"/>					
2.7	How would you rate the quality of water from your usual source in the last one week?	Very clean Clean Dirty Very dirty	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> <tr><td>03</td></tr> <tr><td>04</td></tr> </table>	01	02	03	04	
01								
02								
03								
04								

3.0. HYGIENE & SANITATION DOMAIN																		
3.1	What kind of toilet facility has your household mainly/most commonly used in the last 4 weeks?	Simple pit latrine VIP Latrine Pour-flush latrine/toilet Ecological Sanitation (Ecosan, Freshlife) Septic tanks NO facility/bush/field/flying toilet Other _____ (specify)	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> <tr><td>03</td></tr> <tr><td>04</td></tr> <tr><td>05</td></tr> <tr><td>06</td></tr> <tr><td>96</td></tr> </table>	01	02	03	04	05	06	96								
01																		
02																		
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04																		
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96																		
3.1a	Do you share the facility mentioned above?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02													
01																		
02																		
SS-1	Have you noticed human feces in your environment?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02													
01																		
02																		
SS-2	Can the toilet you use be locked internally?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02													
01																		
02																		
SS-3	How long does it take to walk to the toilet?	<input type="text"/> Entry: 0-60 Minutes																
SS-4	Are there separate toilets for females? (toilets which can only be used by females)	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02													
01																		
02																		
3.6	Does your HH pay to use the toilet facility?	YES NO	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> </table>	01	02													
01																		
02																		
3.9	At what times or after/before what activities did you wash your hands with soap yesterday?	[1=Yes; 2=No] After visiting toilet Before eating Before feeding a child After eating	<table border="1"> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>															
3.10	Where has your household MAINLY disposed of garbage in the last 4 weeks?	Garbage dump/pit Garbage disposal services Road/railway/riverdrainage /trench/all over Burning Other _____ (specify)	<table border="1"> <tr><td>01</td></tr> <tr><td>02</td></tr> <tr><td>03</td></tr> <tr><td>04</td></tr> <tr><td>96</td></tr> </table>	01	02	03	04	96										
01																		
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96																		
SS-5	Normally, how long does it take for you to walk from your house to the garbage pit dump? (Ask if response to 3.10 is 1 = Garbage Pit)	<input type="text"/> Entry: 0-60 Minutes																
SS-6	Which of the following have been affected by fire/water?	<table border="1"> <thead> <tr> <th></th> <th>Water</th> <th>Fire</th> </tr> </thead> <tbody> <tr><td>House/Structure</td><td></td><td></td></tr> <tr><td>Paths</td><td></td><td></td></tr> <tr><td>Water Facilities</td><td></td><td></td></tr> <tr><td>Sanitation Facilities</td><td></td><td></td></tr> </tbody> </table>		Water	Fire	House/Structure			Paths			Water Facilities			Sanitation Facilities			
	Water	Fire																
House/Structure																		
Paths																		
Water Facilities																		
Sanitation Facilities																		

4.0. FOOD SECURITY			
4.1	In last 4 weeks, what was the main source of food for your household?	Purchase from market (raw)	01
		Purchase from street vendors/kiosks (cooked)	02
		Own production	03
		Borrow/relief food/ safetynets	04
		Discarded food (from dump sites, market etc)	05
		Other _____ (specify)	96
4.2	How many meals did you consume yesterday (day and night)? [FW: PROBE TO EXCLUDE TEA ALONE; IF TEA WAS SERVED WITH SOMETHING ELSE LIKE BREAD, THEN INCLUDE]	Number of meals (not tea alone)	<input type="text"/>
4.3	Did you consume a meal prepared outside the home yesterday (day & night)? [FW: PROBE TO EXCLUDE TEA ALONE]	YES	01
		NO	02
4.5	Did you eat cooked food purchased from the streets Yesterday?	YES	01
		NO	02
4.6a	Are there any children less than 18 years old in this household?	YES	01
		NO	02
		[IF 2, SKIP TO 4.10]	
4.6	How many meals did children in your household eat Yesterday? [FW: PROBE TO EXCLUDE TEA ALONE]	Number of meals (not tea alone)	<input type="text"/>
4.7	Did children in your household eat a meal prepared outside the home yesterday? [FW: PROBE TO EXCLUDE TEA ALONE]	YES	01
		NO	02
4.9	Did children eat cooked food purchased from the streets Yesterday?	YES	01
		NO	02
4.10	<p>Now I would like to ask you about the types of foods that you ate YESTERDAY during the day and night.</p> <p>(Ask respondent to recount foods consumed and indicate frequency of consumption under appropriate food group)</p> <p>[INDICATE 0 FOR NOT CONSUMED]</p> <p>a. Grains/cereals (Bread, Nyoyo or any other food made from millet, sorghum, maize, rice, ugali, porridge, mandazi, chapati) <input type="text"/></p> <p>b. Roots and tubers (potatoes, sweet potato, cassava, nduma or any foods made from roots) <input type="text"/></p> <p>c. Legumes and nuts (Beans, peas, nyoyo, ndengu, nuts seeds or other foods made from these) <input type="text"/></p>		

d.	Dairy products (milk, yogurt, cheese, mala or food made from dairy)	<input type="checkbox"/>
e.	Flesh foods (meat, cow, goat, poultry, pork and liver/organ meats)	<input type="checkbox"/>
l.	Fish (all types of fish e.g. omena, tilapia,...et.c.)	<input type="checkbox"/>
f.	Eggs	<input type="checkbox"/>
g.	Vegetables (Carrot, dark green leafy vegetables (cassava, sweet potato leaves, osuga, kunde, etc), pumpkin, sukuma wiki, managu, terere, sucha, saga, mitoo, mrenda, pumpkin leaves, cabbage and locally available leaves) etc	<input type="checkbox"/>
h.	Fruits	<input type="checkbox"/>
i.	Oils and fat (Oils, fats or butter added to food/used for cooking)	<input type="checkbox"/>
j.	Sugar or honey (Sugar/honey added to food such as tea, porridge, bread)	<input type="checkbox"/>
k.	Others (condiments, tea, coffee)	<input type="checkbox"/>

5.0. HEALTH AND HEALTH SEEKING BEHAVIOUR																																																						
5.1	<p>Has any member of your household (adult or child) been ill in the last 2 weeks?</p> <p>[IF NO, SKIP TO 6.0]</p>	<p>YES <input type="checkbox"/> 01</p> <p>NO <input type="checkbox"/> 02</p>																																																				
5.2	<p>If YES, how many people were ill?</p> <p>Number of people</p>	<input type="text"/>																																																				
5.3	<p>If YES, how old is the person who was ill?</p> <p>Person 1 Person 2 Person 3</p>	<p>Years</p> <table border="1"> <tr><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td><input type="text"/></td><td><input type="text"/></td></tr> <tr><td><input type="text"/></td><td><input type="text"/></td></tr> </table>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																														
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5.4	<p>What illness did the person(s) have?</p>	<table border="1"> <thead> <tr> <th></th> <th>P1</th> <th>P2</th> <th>P3</th> </tr> </thead> <tbody> <tr><td>diarrhea</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>fever</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>cough</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>headache</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>vomiting</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>convulsions/seizures</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>difficult/fast breathing</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>measles</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>injuries</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>malaria/symptoms of malaria</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>mental illness</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>other (specify.....)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </tbody> </table>		P1	P2	P3	diarrhea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	fever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	cough	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	convulsions/seizures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	difficult/fast breathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	measles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	injuries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	malaria/symptoms of malaria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mental illness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	other (specify.....)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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5.5	<p>Was care/treatment sought for the illness from any source? [IF 2, SKIP TO 5.8]</p>	<table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>Person 1</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> 02</td> </tr> <tr> <td>Person 2</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> 02</td> </tr> <tr> <td>Person 3</td> <td><input type="checkbox"/> 01</td> <td><input type="checkbox"/> 02</td> </tr> </tbody> </table>		YES	NO	Person 1	<input type="checkbox"/> 01	<input type="checkbox"/> 02	Person 2	<input type="checkbox"/> 01	<input type="checkbox"/> 02	Person 3	<input type="checkbox"/> 01	<input type="checkbox"/> 02																																								
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5.6	<p>If YES, where was care/treatment sought outside of the home?</p>	<table border="1"> <thead> <tr> <th></th> <th>P1</th> <th>P2</th> <th>P3</th> </tr> </thead> <tbody> <tr><td>01=Public hospital</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>02=Public health center/clinic</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>03=Private hospital</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>04=Private health center/clinic</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>05=NGO/Mission hospital</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>06=NGO/Mission health center/clinic</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>07=Pharmacy/chemist</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>08=Traditional healer/herbalist</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>09=other (specify.....)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </tbody> </table>		P1	P2	P3	01=Public hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	02=Public health center/clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	03=Private hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	04=Private health center/clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	05=NGO/Mission hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	06=NGO/Mission health center/clinic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07=Pharmacy/chemist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	08=Traditional healer/herbalist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	09=other (specify.....)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
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5.6b	<p>If YES for sick, how much was spent on the specific illness?</p>	<table border="1"> <thead> <tr> <th>P1</th> <th>P2</th> <th>P3</th> <th>P4</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>	P1	P2	P3	P4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																												
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5.8	<p>In the last 2 weeks have you felt increased levels of stress?</p>	<p>YES <input type="checkbox"/> 01</p> <p>NO <input type="checkbox"/> 02</p>																																																				
6.0. INTERPERSONAL RELATIONSHIPS																																																						
6.1	<p>How often have you had disputes with any person in the household in the last four weeks? [IF 0 OR 8, SKIP TO 6.3]</p>	<p>Never <input type="checkbox"/> 00</p> <p>Rarely (once or twice in the last 4 weeks) <input type="checkbox"/> 01</p> <p>Sometimes (once every week) <input type="checkbox"/> 02</p> <p>Often (more than once a week in the last 4 weeks) <input type="checkbox"/> 03</p> <p>Not applicable for those that live alone <input type="checkbox"/> 08</p>																																																				

6.2	What was the severity of the dispute?	Mild (just quarreling) Moderate (verbal assault) Very severe (physical violence and/or abandonment)	01 02 03																																													
6.3	How often have you or another HH member had disputes with friends/neighbours outside your household in the last four weeks? [IF 0, SKIP TO 6.5]	Never Rarely (once or twice in the last 4 weeks) Sometimes (once every week) Often (more than once a week in the last 4 weeks)	00 01 02 03																																													
6.4	What was the severity of the dispute?	Mild (just quarreling) Moderate (verbal assault) Very severe (physical violence)	01 02 03																																													
6.5	How often in the last 4 weeks have you shared food with your neighbours	Never Rarely (once or twice in the last 4 weeks) Sometimes (once every week)	00 01 02																																													
		Often (more than once a week in the last 4 weeks)	03																																													
6.6	How often in the last 4 weeks has your neighbour shared food with you?	Never Rarely (once or twice in the last 4 weeks) Sometimes (once every week) Often (more than once a week in the last 4 weeks)	00 01 02 03																																													
7.0.	PERSONAL AND PROPERTY SECURITY DOMAIN																																															
7.1	Have you or any member of your household experienced (.) in the last 4 weeks? 1= YES 2= NO 8= DON'T KNOW IF 2 or 8 SKIP TO THE NEXT SHOCK	<table border="1"> <thead> <tr> <th colspan="3">Q 7.1</th> <th colspan="2">Q7.2</th> </tr> <tr> <th>YES</th> <th>NO</th> <th>N/A</th> <th colspan="2">Number</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> <tr> <td>01</td> <td>02</td> <td>08</td> <td></td> <td></td> </tr> </tbody> </table>	Q 7.1			Q7.2		YES	NO	N/A	Number		01	02	08			01	02	08			01	02	08			01	02	08			01	02	08			01	02	08			01	02	08			
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7.2	How many such events have occurred in the household in the last four weeks?	Fire Floods Mugging/stabbing Harassment/Intimidation Burglary/Poof Eviction Property destruction Rape/sodomy																																														
7.3	How often have you felt scared walking in the community in the last 4 weeks?	Never Rarely (once or twice in the last 4 weeks) Sometimes (once every week) Often (more than once a week in the last 4 weeks)	00 01 02 03																																													
7.4	How often have you felt scared being in your house in the last 4 weeks?	Never Rarely (once or twice in the last 4 weeks) Sometimes (once every week) Often (more than once a week in the last 4 weeks)	00 01 02 03																																													

7.5	How often have you/household member used avoidance measures in the last 4 weeks due to insecurity such as using escorts, using unusual routes,	Never	00
		Rarely (once or twice in the last 4 weeks)	01
		Sometimes (once every week)	02
	coming home earlier than usual etc?	Often (more than once a week in the last 4 weeks)	03
7.6	How would you rate security situation in the community?	Very bad	01
		bad	02
		Not very bad	03
		Good	04
		Very good	05
7.7	In the last four weeks did you feel safe leaving your child or children at school?	YES	01
		NO	02
7.8	In the last four weeks did your child feel safe at school?	YES	01
		NO	02
8.0.	HOUSING & TENURE DOMAIN		
8.1	Is your household renting or does it own this dwelling unit/the rooms in which it is living in this structure?	Owned	01
		Renting	02
		Free of charge	03
		Other _____ (specify)	96
SH-1	Do you feel safe with the structural integrity of your house? Does it feel safe?	Very unsafe	01
		Somewhat unsafe	02
		Okay	03
		Somewhat safe	04
		Very safe	05
SH-2a	Was your house damaged by a natural event? (fire, storm, flood)	YES	01
		[IF 2, SKIP TO SH-3]	NO
			02
SH-2b	If YES to SH-2a has it been repaired?	[IF 1, SKIP TO SH-3]	YES
			NO
			01
			02
SH-2c	If NO to SH-2b, was it destroyed beyond repair?	YES	01
		NO	02
SH-3	What do you use for light at night?	Electricity Generator	01
		Candle	02
		Lantern (Kerosene)	03
		Flashlight (torch)	04
		Firewood/Fireplace	05
		Moonlight	06

9.0. HOUSEHOLD LIVELIHOODS	
9.1	<p>What is the main source of livelihood for your household in the past 4 weeks?</p> <p>Monthly Salary <input type="checkbox"/> 01 Casual labour <input type="checkbox"/> 02 Petty Trading (hawking) <input type="checkbox"/> 03 Remittances <input type="checkbox"/> 04 Scavenging <input type="checkbox"/> 05 Safety Nets (e.g. Merry go round) <input type="checkbox"/> 06 Stable Business <input type="checkbox"/> 07 None <input type="checkbox"/> 08 Other <input type="checkbox"/> 96</p>
9.2	<p>How many people in this household currently (have earned income in last 4 weeks) have a source of income?</p> <p>Number of people <input type="text"/></p> <p>Skip to the next section if response is 00</p>
9.3	<p>What are the ages of the people who earn?</p> <p>Person 1 <input type="text"/> 9.2 (Years) <input type="text"/> 9.4 (sex) <input type="text"/> Person 2 <input type="text"/> <input type="text"/> <input type="text"/> Person 3 <input type="text"/> <input type="text"/> <input type="text"/> Person 4 <input type="text"/> <input type="text"/> <input type="text"/></p>
9.4	<p>What are the sexes of the people who earn? (01=Female, 02=Male)</p>
9.5	<p>What is their source of income (USE CODES IN 9.1)</p> <p>P1 <input type="text"/> P2 <input type="text"/> P3 <input type="text"/> P4 <input type="text"/></p>
9.5c	<p>What is the highest completed class in the level attended?</p> <p>00=None ; 01=Class 1; 02=Class 2; 03=Class 3; 04=Class 4; 05=Class 5; 06=Class 6; 07=Class 7; 08=Class 8; 09=Form 1; 10=Form 2; 11=Form 3; 12=Form 4; 13=University or higher</p> <p>Person 1 <input type="text"/> Person 2 <input type="text"/> Person 3 <input type="text"/> Person 4 <input type="text"/></p>
9.6	<p>Among the persons who earn income in 9.2, who is the breadwinner?</p> <p>(1=Yes; 2=No)</p> <p>Person 1 <input type="text"/> Person 2 <input type="text"/> Person 3 <input type="text"/> Person 4 <input type="text"/></p>
9.7	<p>What is the mode of payment for persons in 9.2?</p> <p>Hourly <input type="checkbox"/> 01 Daily <input type="checkbox"/> 02 Weekly <input type="checkbox"/> 03 Monthly <input type="checkbox"/> 04 Other(specify.....) <input type="checkbox"/> 96</p> <p>P1 P2 P3 P4 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
9.8	<p>How much did persons in 9.2 earn in last payment period? (INDICATE DEPENDING ON PAYMENT MODE)</p> <p>Hourly <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Other(specify.....) <input type="checkbox"/></p> <p>P1 P2 P3 P4 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
9.8a	<p>How much did persons in 9.2 above earn in the last 4 weeks?</p> <p>P1 P2 P3 P4 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
9.9	<p>How many hours per day on average did the persons in 9.2 work in the last week?</p> <p>Number of hours worked per day</p> <p>P1 P2 P3 P4 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
9.10	<p>How many days in the last week did the persons in 9.2 work?</p> <p>Number of days worked per week</p> <p>P1 P2 P3 P4 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>
10.0. COPING STRATEGIES	
In the last four weeks...	
10.1	<p>Have you purchased food or other essential household goods on credit because you didn't have the money to buy them outright?</p> <p>YES <input type="checkbox"/> 01 NO <input type="checkbox"/> 02</p>

10.1a	Have you or any member of your household taken a loan to buy food or other essential HH goods?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.2	Have you had to remove any of your children from school due to lack of school related costs?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.3	Has any member of your household left/moved due to lack of resources to maintain them?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.4	Have you or any member of your household gone out begging for food or money?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.8	Have you or any household member stolen food or money to buy food?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.9	Do you know someone in the community who stole food or money to buy food in the last one month?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.10	Have you or any household member received food or money from friend/neighbor/relative?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.11	Have you or any other household member had to take up a second job in order to buy food or other essential HH needs?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
10.12	Have you or any other household member sold an asset to get money to buy food or other essential household goods?	YES NO	<input type="text" value="01"/> <input type="text" value="02"/>
11.0. END OF INTERVIEW			
	I would like to thank you for taking your time to participate in this interview.		
11.2	FW: RECORD QUESTIONS AND COMMENTS RAISED BY RESPONDENT		
11.3	FW: RECORD COMMENTS ABOUT THE INTERVIEW		
	OFFICE/FIELD CHECKER'S DETAILS		
11.6	FIELD SUPERVISOR/TEAM LEADER'S CODE		<input type="text"/>

**CONCERN WORLDWIDE
Indicators for Urban Emergencies (IDSUE)
Surveillance Questionnaire**

Information and Consent

INFORMED CONSENT SIGNED? [0=No, 1=Yes, 2=Willing but unable to sign
3=Accepted interview but refused to sign]

STUDY HOUSEHOLD ID

Basic Information

How many people live in this household?

Do you have a child 0 to 5 months old in this household?

No Yes

CHILDREN 0 - 5 MONTHS. For each child 0-5 months in the household, write down their names on your notepad and ask the following questions about each one.

What is the name of the child?

How is <name> related to the household head?

- | | | | |
|-----------------|----------------------|-----------------|----------------------|
| Parent | <input type="text"/> | Not related | <input type="text"/> |
| Aunt | <input type="text"/> | Sister | <input type="text"/> |
| Brother in law | <input type="text"/> | Parent in law | <input type="text"/> |
| Brother | <input type="text"/> | Sister in law | <input type="text"/> |
| Child | <input type="text"/> | Son in law | <input type="text"/> |
| Cousin | <input type="text"/> | Step-child | <input type="text"/> |
| Co-wife | <input type="text"/> | Step-parent | <input type="text"/> |
| Daughter in law | <input type="text"/> | Uncle | <input type="text"/> |
| Grandchild | <input type="text"/> | Unknown | <input type="text"/> |
| Grandparent | <input type="text"/> | Spouse | <input type="text"/> |
| Nephew | <input type="text"/> | Other (specify) | <input type="text"/> |
| Niece | <input type="text"/> | | |

What is the gender of <name>?

Male Female

How old is <names> in MONTHS? [If don't know, enter 96]

Has <name> been sick in the past two weeks?

No Yes

Was care/treatment sought for the illness from any source?

No Yes

Did <name> consume any food other than breast milk yesterday during the day and night?

No Yes

How many meals did <name> consume yesterday (day and night)?

 Don't Know

Is there any other child 0-5 months old on the list?
[If yes, return to the start of recurring section]

No Yes

Basic Information																																																	
Do you have any children between 6-59 months in this household?	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
CHILDREN 6 - 59 MONTHS. For each child 6-59 months in the household, write down their names on your notepad and ask the following questions about each one.																																																	
What is the name of the child?	<input type="text"/>																																																
How is <name> related to the household head?	<table border="0"> <tr> <td>Parent</td><td><input type="text" value="01"/></td> <td>Not related</td><td><input type="text" value="13"/></td> </tr> <tr> <td>Aunt</td><td><input type="text" value="02"/></td> <td>Sister</td><td><input type="text" value="14"/></td> </tr> <tr> <td>Brother in law</td><td><input type="text" value="03"/></td> <td>Parent in law</td><td><input type="text" value="15"/></td> </tr> <tr> <td>Brother</td><td><input type="text" value="04"/></td> <td>Sister in law</td><td><input type="text" value="16"/></td> </tr> <tr> <td>Child</td><td><input type="text" value="05"/></td> <td>Son in law</td><td><input type="text" value="17"/></td> </tr> <tr> <td>Cousin</td><td><input type="text" value="06"/></td> <td>Step-child</td><td><input type="text" value="18"/></td> </tr> <tr> <td>Co-wife</td><td><input type="text" value="07"/></td> <td>Step-parent</td><td><input type="text" value="19"/></td> </tr> <tr> <td>Daughter in law</td><td><input type="text" value="08"/></td> <td>Uncle</td><td><input type="text" value="20"/></td> </tr> <tr> <td>Grandchild</td><td><input type="text" value="09"/></td> <td>Unknown</td><td><input type="text" value="21"/></td> </tr> <tr> <td>Grandparent</td><td><input type="text" value="10"/></td> <td>Spouse</td><td><input type="text" value="22"/></td> </tr> <tr> <td>Nephew</td><td><input type="text" value="11"/></td> <td>Other (specify)</td><td><input type="text" value="23"/></td> </tr> <tr> <td>Niece</td><td><input type="text" value="12"/></td> <td></td><td></td> </tr> </table>	Parent	<input type="text" value="01"/>	Not related	<input type="text" value="13"/>	Aunt	<input type="text" value="02"/>	Sister	<input type="text" value="14"/>	Brother in law	<input type="text" value="03"/>	Parent in law	<input type="text" value="15"/>	Brother	<input type="text" value="04"/>	Sister in law	<input type="text" value="16"/>	Child	<input type="text" value="05"/>	Son in law	<input type="text" value="17"/>	Cousin	<input type="text" value="06"/>	Step-child	<input type="text" value="18"/>	Co-wife	<input type="text" value="07"/>	Step-parent	<input type="text" value="19"/>	Daughter in law	<input type="text" value="08"/>	Uncle	<input type="text" value="20"/>	Grandchild	<input type="text" value="09"/>	Unknown	<input type="text" value="21"/>	Grandparent	<input type="text" value="10"/>	Spouse	<input type="text" value="22"/>	Nephew	<input type="text" value="11"/>	Other (specify)	<input type="text" value="23"/>	Niece	<input type="text" value="12"/>		
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What is the gender of <name>?	Male <input type="text" value="01"/> Female <input type="text" value="02"/>																																																
How old is <names> in MONTHS? [If don't know, enter 96]	<input type="text"/>																																																
Please enter the MUAC measurement for <name>	<input type="text"/>																																																
Does <name> have oedema? [If yes, please take picture of feet]	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
Has <name> been sick in the past two weeks?	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
Did <name> have diarrhoea in the past two weeks?	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
Was care/treatment sought for any illness from any source?	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
How many meals did <name> consume yesterday (day and night)?	<table border="0"> <tr><td><input type="text" value="00"/></td></tr> <tr><td><input type="text" value="01"/></td></tr> <tr><td><input type="text" value="02"/></td></tr> <tr><td><input type="text" value="03"/></td></tr> <tr><td><input type="text" value="04"/></td></tr> <tr><td><input type="text" value="05"/></td></tr> <tr><td><input type="text" value="96"/> Don't Know</td></tr> </table>	<input type="text" value="00"/>	<input type="text" value="01"/>	<input type="text" value="02"/>	<input type="text" value="03"/>	<input type="text" value="04"/>	<input type="text" value="05"/>	<input type="text" value="96"/> Don't Know																																									
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Is there any other child 6-59 months old on the list? [If yes, return to the start of recurring section]	No <input type="text" value="00"/> Yes <input type="text" value="01"/>																																																
ALL OTHER HOUSEHOLD MEMBERS [5 YEARS AND OLDER]. For each member of the household 5 Years and older, write down their names on your notepad and ask the following questions about each one. Start with the household head.																																																	
What is the name of the household member?	<input type="text"/>																																																

How is <name> related to the household head?	Household Head <input type="text" value="01"/>	Niece <input type="text" value="13"/>
	Parent <input type="text" value="02"/>	Not related <input type="text" value="14"/>
	Aunt <input type="text" value="03"/>	Sister <input type="text" value="15"/>
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	Grandparent <input type="text" value="11"/>	Spouse <input type="text" value="23"/>
	Nephew <input type="text" value="12"/>	Other (specify) <input type="text" value="24"/>
What is the gender of <name>?	Male <input type="text" value="01"/>	Female <input type="text" value="02"/>
How old is <names> in YEARS? [If don't know, enter 96]	<input type="text"/>	

ALL OTHER HOUSEHOLD MEMBERS [5 YEARS AND OLDER]. Continued...		
What is the highest level of education reached by <name>?	No schooling <input type="text" value="00"/>	Class 7 <input type="text" value="07"/>
	Class 1 <input type="text" value="01"/>	Class 8 <input type="text" value="08"/>
	Class 2 <input type="text" value="02"/>	Form 1 <input type="text" value="09"/>
	Class 3 <input type="text" value="03"/>	Form 2 <input type="text" value="10"/>
	Class 4 <input type="text" value="04"/>	Form 3 <input type="text" value="11"/>
	Class 5 <input type="text" value="05"/>	Form 4 <input type="text" value="12"/>
	Class 6 <input type="text" value="06"/>	College, University <input type="text" value="13"/>
Has <name> been sick in the past two weeks?	No <input type="text" value="00"/>	Yes <input type="text" value="01"/>
Was care/treatment sought for any illness from any source?	No <input type="text" value="00"/>	Yes <input type="text" value="01"/>
How many meals did <name> consume yesterday (day and night)?	<input type="text" value="00"/> <input type="text" value="01"/> <input type="text" value="02"/> <input type="text" value="03"/> <input type="text" value="04"/> <input type="text" value="05"/> <input type="text" value="96"/> Don't Know	
Has <name> earned an income in the last four weeks?	No <input type="text" value="00"/>	Yes <input type="text" value="01"/>
If No, does <name> normally have an income?	No <input type="text" value="00"/>	Yes <input type="text" value="01"/>
If YES, what is the main source of income for <name> in the past 4 weeks?	Monthly Salary <input type="text" value="01"/>	Scavenging <input type="text" value="05"/>
	Casual Labor <input type="text" value="02"/>	Safety Nets <input type="text" value="06"/>
	Hawking <input type="text" value="03"/>	Stable Business <input type="text" value="07"/>
	Remittances <input type="text" value="04"/>	None <input type="text" value="08"/>
		Other (specify) <input type="text" value="96"/>
How much did <name> earn in the last 4 weeks (total for the last month)? [If Don't Know, enter 96]	<input type="text"/>	

<p>Is there any other household member on the list? [If yes, return to the start of recurring section]</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																				
<p>Household Living Arrangements</p>																					
<p>How long has your household lived in this village?</p>	<p>Years <input type="text"/> Months <input type="text"/></p>																				
<p>Is this a single headed household?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																				
<p>Does your household have any of the following vulnerabilities</p>	<table border="0"> <tr><td>IDPs/ Displaced people</td><td><input type="text" value="01"/></td></tr> <tr><td>Persons with HIV and AIDs</td><td><input type="text" value="02"/></td></tr> <tr><td>Persons with disabilities</td><td><input type="text" value="03"/></td></tr> <tr><td>Pregnant women</td><td><input type="text" value="04"/></td></tr> <tr><td>Elderly persons (65+ years)</td><td><input type="text" value="05"/></td></tr> <tr><td>Persons with chronic illness (bedridden)</td><td><input type="text" value="06"/></td></tr> <tr><td>Opharns and vulnerable children</td><td><input type="text" value="07"/></td></tr> </table>	IDPs/ Displaced people	<input type="text" value="01"/>	Persons with HIV and AIDs	<input type="text" value="02"/>	Persons with disabilities	<input type="text" value="03"/>	Pregnant women	<input type="text" value="04"/>	Elderly persons (65+ years)	<input type="text" value="05"/>	Persons with chronic illness (bedridden)	<input type="text" value="06"/>	Opharns and vulnerable children	<input type="text" value="07"/>						
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Opharns and vulnerable children	<input type="text" value="07"/>																				
<p>Where did this household come from before settling in this slum?</p>	<table border="0"> <tr> <td>Same slum</td><td><input type="text" value="01"/></td> <td>Other country</td><td><input type="text" value="05"/></td> </tr> <tr> <td>Other slum</td><td><input type="text" value="02"/></td> <td>Always lived here</td><td><input type="text" value="06"/></td> </tr> <tr> <td>Non-slum urban</td><td><input type="text" value="03"/></td> <td>Other (specify)</td><td><input type="text" value="96"/></td> </tr> <tr> <td>Rural</td><td><input type="text" value="04"/></td> <td></td><td></td> </tr> </table>	Same slum	<input type="text" value="01"/>	Other country	<input type="text" value="05"/>	Other slum	<input type="text" value="02"/>	Always lived here	<input type="text" value="06"/>	Non-slum urban	<input type="text" value="03"/>	Other (specify)	<input type="text" value="96"/>	Rural	<input type="text" value="04"/>						
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Rural	<input type="text" value="04"/>																				
<p>Why did you move here?</p>	<table border="0"> <tr> <td>Look for Employment</td><td><input type="text" value="01"/></td> <td>War/Civil Strife</td><td><input type="text" value="05"/></td> </tr> <tr> <td>Breadwinner lost job/ deceased</td><td><input type="text" value="02"/></td> <td>Improved housing conditions</td><td><input type="text" value="06"/></td> </tr> <tr> <td>Lower cost of living</td><td><input type="text" value="03"/></td> <td>Better perceived security</td><td><input type="text" value="07"/></td> </tr> <tr> <td>Ethnic tensions</td><td><input type="text" value="04"/></td> <td>Evictions</td><td><input type="text" value="08"/></td> </tr> <tr> <td></td><td></td> <td>Other (specify)</td><td><input type="text" value="96"/></td> </tr> </table>	Look for Employment	<input type="text" value="01"/>	War/Civil Strife	<input type="text" value="05"/>	Breadwinner lost job/ deceased	<input type="text" value="02"/>	Improved housing conditions	<input type="text" value="06"/>	Lower cost of living	<input type="text" value="03"/>	Better perceived security	<input type="text" value="07"/>	Ethnic tensions	<input type="text" value="04"/>	Evictions	<input type="text" value="08"/>			Other (specify)	<input type="text" value="96"/>
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		Other (specify)	<input type="text" value="96"/>																		

Source of Drinking Water													
How many 20 litre jericans of water has your household normally used per day in the last 2 weeks?	<input type="text"/>												
How long (in minutes) have you normally had to queue to get water in the last 2 weeks?	<input type="text"/>												
Have any of the following been affected by water?	<table border="0"> <tr> <td>House/structure</td> <td><input type="text" value="01"/></td> <td>Water facilities</td> <td><input type="text" value="03"/></td> </tr> <tr> <td>Paths</td> <td><input type="text" value="02"/></td> <td>Sanitation facilities</td> <td><input type="text" value="04"/></td> </tr> <tr> <td></td> <td></td> <td>None</td> <td><input type="text" value="08"/></td> </tr> </table>	House/structure	<input type="text" value="01"/>	Water facilities	<input type="text" value="03"/>	Paths	<input type="text" value="02"/>	Sanitation facilities	<input type="text" value="04"/>			None	<input type="text" value="08"/>
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		None	<input type="text" value="08"/>										
Have any of the following been affected by fire?	<table border="0"> <tr> <td>House/structure</td> <td><input type="text" value="01"/></td> <td>Water facilities</td> <td><input type="text" value="03"/></td> </tr> <tr> <td>Paths</td> <td><input type="text" value="02"/></td> <td>Sanitation facilities</td> <td><input type="text" value="04"/></td> </tr> <tr> <td></td> <td></td> <td>None</td> <td><input type="text" value="08"/></td> </tr> </table>	House/structure	<input type="text" value="01"/>	Water facilities	<input type="text" value="03"/>	Paths	<input type="text" value="02"/>	Sanitation facilities	<input type="text" value="04"/>			None	<input type="text" value="08"/>
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		None	<input type="text" value="08"/>										
Food Security													
<p>I would like to ask you about all the different foods that your household members have eaten in the last 7 DAYS. How MANY DAYS in the past 7 DAYS did your household consume the following foods.</p> <p>Grains/cereals (Bread, Nyoyo or any other food made from millet, sorghum, maize, rice, ugali, porridge, mandazi, chapati) No. of days <input type="text"/></p> <p>Roots and tubers (potatoes, sweet potato, cassava, nduma or any foods made from roots) No. of days <input type="text"/></p> <p>Legumes and nuts (Beans, peas, nyoyo, ndengu, nuts seeds or other foods made from these) No. of days <input type="text"/></p> <p>Dairy products excluding milk in tea (milk, yogurt, cheese, mala or food made from dairy) No. of days <input type="text"/></p>													
<p>Flesh foods (meat, cow, goat, poultry, pork and liver/organ meats, all types of fish e.g. omena, tilapia,..etc...) No. of days <input type="text"/></p> <p>Vegetables (Carrot, dark green leafy vegetables (cassava, sweet potato leaves, osuga, kunde, etc.), pumpkin, sukuma wiki, managu, terere, sucha, saga, mitoo, mrenda, pumpkin leaves, cabbage and locally available leaves) etc. No. of days <input type="text"/></p> <p>Fruits No. of days <input type="text"/></p> <p>Oils and Fat (Oils, fat or butter added to food, used for cooking) No. of days <input type="text"/></p> <p>Sugar or honey (sugar/ honey added to food such as tea, porridge, bread) No. of days <input type="text"/></p>													
In the past 4 weeks, did you worry that your household would NOT have enough food? How often?	<table border="0"> <tr> <td>Never</td> <td><input type="text" value="00"/></td> </tr> <tr> <td>Rarely (once or twice in the last 4 weeks)</td> <td><input type="text" value="01"/></td> </tr> <tr> <td>Sometimes (once every week)</td> <td><input type="text" value="02"/></td> </tr> <tr> <td>Often (more than once a week in the last 4 wks)</td> <td><input type="text" value="03"/></td> </tr> </table>	Never	<input type="text" value="00"/>	Rarely (once or twice in the last 4 weeks)	<input type="text" value="01"/>	Sometimes (once every week)	<input type="text" value="02"/>	Often (more than once a week in the last 4 wks)	<input type="text" value="03"/>				
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Often (more than once a week in the last 4 wks)	<input type="text" value="03"/>												
In the past 4 weeks, were you or any household member NOT able to eat the kinds of food you preferred because of a lack of resources? How often?	<table border="0"> <tr> <td>Never</td> <td><input type="text" value="00"/></td> </tr> <tr> <td>Rarely (once or twice in the last 4 weeks)</td> <td><input type="text" value="01"/></td> </tr> <tr> <td>Sometimes (once every week)</td> <td><input type="text" value="02"/></td> </tr> <tr> <td>Often (more than once a week in the last 4 wks)</td> <td><input type="text" value="03"/></td> </tr> </table>	Never	<input type="text" value="00"/>	Rarely (once or twice in the last 4 weeks)	<input type="text" value="01"/>	Sometimes (once every week)	<input type="text" value="02"/>	Often (more than once a week in the last 4 wks)	<input type="text" value="03"/>				
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In the past 4 weeks, did you or any household member have to eat a limited variety of foods due to lack of resources?	<table border="0"> <tr> <td>Never</td> <td><input type="text" value="00"/></td> </tr> <tr> <td>Rarely (once or twice in the last 4 weeks)</td> <td><input type="text" value="01"/></td> </tr> <tr> <td>Sometimes (once every week)</td> <td><input type="text" value="02"/></td> </tr> <tr> <td>Often (more than once a week in the last 4 wks)</td> <td><input type="text" value="03"/></td> </tr> </table>	Never	<input type="text" value="00"/>	Rarely (once or twice in the last 4 weeks)	<input type="text" value="01"/>	Sometimes (once every week)	<input type="text" value="02"/>	Often (more than once a week in the last 4 wks)	<input type="text" value="03"/>				
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In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	<table border="0"> <tr> <td>Never</td> <td><input type="text" value="00"/></td> </tr> <tr> <td>Rarely (once or twice in the last 4 weeks)</td> <td><input type="text" value="01"/></td> </tr> <tr> <td>Sometimes (once every week)</td> <td><input type="text" value="02"/></td> </tr> </table>	Never	<input type="text" value="00"/>	Rarely (once or twice in the last 4 weeks)	<input type="text" value="01"/>	Sometimes (once every week)	<input type="text" value="02"/>						
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Sometimes (once every week)	<input type="text" value="02"/>												

Personal and Property Security Domain

<p>Have you or any member of your household experienced (.) in the last 4 weeks?</p>	<table border="1"> <thead> <tr> <th></th> <th>No</th> <th>Yes</th> <th>NA</th> </tr> </thead> <tbody> <tr> <td>Fire</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Floods</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Mugging</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Stabbing</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Harassment/Intimidation</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Burglary/Poof</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Eviction</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Property destruction</td> <td>00</td> <td>01</td> <td>08</td> </tr> <tr> <td>Rape/sodomy</td> <td>00</td> <td>01</td> <td>08</td> </tr> </tbody> </table>		No	Yes	NA	Fire	00	01	08	Floods	00	01	08	Mugging	00	01	08	Stabbing	00	01	08	Harassment/Intimidation	00	01	08	Burglary/Poof	00	01	08	Eviction	00	01	08	Property destruction	00	01	08	Rape/sodomy	00	01	08
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Fire	00	01	08																																						
Floods	00	01	08																																						
Mugging	00	01	08																																						
Stabbing	00	01	08																																						
Harassment/Intimidation	00	01	08																																						
Burglary/Poof	00	01	08																																						
Eviction	00	01	08																																						
Property destruction	00	01	08																																						
Rape/sodomy	00	01	08																																						
<p>How often have you felt scared walking in the community in the last 4 weeks?</p>	<table border="1"> <tbody> <tr> <td>Never</td> <td>00</td> </tr> <tr> <td>Rarely (once or twice in the last 4 weeks)</td> <td>01</td> </tr> <tr> <td>Sometimes (once every week)</td> <td>02</td> </tr> <tr> <td>Often (more than once a week in the last 4 wks)</td> <td>03</td> </tr> </tbody> </table>	Never	00	Rarely (once or twice in the last 4 weeks)	01	Sometimes (once every week)	02	Often (more than once a week in the last 4 wks)	03																																
Never	00																																								
Rarely (once or twice in the last 4 weeks)	01																																								
Sometimes (once every week)	02																																								
Often (more than once a week in the last 4 wks)	03																																								
<p>Have you or any of your household members needed to use an avoidance behaviour in the last four weeks? (e.g Coming home earlier than usual, Using an escort, Using a longer way/different route, Staying at home)</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>What is the total value (in KSH) of all [ITEM] PURCHASED, PRODUCED AT HOME, and RECEIVED AS GIFT during the LAST 1 MONTH?</p>																																									
<p>Water (for drinking and other household consumption / use) Toilet use fees Rent, including if paid together as a lump sum SCHOOL EXPENDITURE: Tuition fees, registration fees, exam fees, transport, uniforms, supplies, food, & other school related fees either paid or owed Loans taken this month (Borrowed to be paid back with interest) Debts incurred this month (money owed or due) Debt payments made this month Money spent on food this month HEALTH EXPENDITURE: Hospitalisation fees, medicines, consultation & treatments fees, laboratory & diagnostic test fees, traditional healers, pharmacy, etc.</p>	<table border="1"> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table>																																								
<p>COPING STRATEGIES</p>																																									
<p>In the past 4 weeks, Have you purchased food or other essential household goods on credit because you didn't have the money to buy them outright?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Have you or any member of your household taken a loan to buy food or other essential HH goods?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Have you had to remove any of your children from school due to lack of school related costs?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Has any member of your household left/moved due to lack of resources to maintain them?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Have you or any member of your household gone out begging for food or money?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks, Have you or any household member received food or money from friend/neighbor/relative?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Have you or any other household member had to take up a second job in order to buy food or other essential HH needs?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Have you or any other household member sold an asset to get money to buy food or other essential household goods?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								
<p>In the past 4 weeks Has your household had to move to a cheaper house in order to save on money to buy food or other essential household goods?</p>	<p>No <input type="text" value="00"/> Yes <input type="text" value="01"/></p>																																								

APPENDIX C: Trends of various indicators in surveillance villages in Korogocho (August 2012 to February 2015)

Main indicators	R5	R6	R7	R8	R9	R10	S2	S3	S4	S5
	N=141	N=180	N=170	N=187	N=228	N=231	N=161	N=346	N=345	N=344
Demographics										
Female headed households (%)	31	38	36	38	39	30	36	33	34	34
Income & Expenditure										
Median household income	5600	6600	5800	6000	6150	8000	5600	6500	6000	6635
Median income earned over 4-week period by breadwinner	5000	6000	5000	6000	6000	7300	5000	6000	5000	6000
Food expenditure as percent of household income	87	75	84	80	61	66	80	71	76	65
Water expenditure as percent of household income	7	4	6	5	4	3	4	4	4	3.3
Rent expenditure as percent of household income	30	16	24	19	14	14	17	15	13	14
Loans/debts as percent of household income	27	30	27	30	33	24	34	31	34	8
Main source of income										
Monthly Salary	7.1	10	6	6	10	10	8	9	7	11
Casual labour	50	52	54	50	51	52	54	55	60	56
Petty Trading (hawking)	26	17	18	18	14	13	21	19	14	13
Remittances	1.4	0.6	1.8	1.6	3.5	1.7	0	1	2	1.7
Scavenging	0	5	3	5	6	7	3	4	6	3.2
Safety Nets (e.g. Merry go round)	0	1	0	0	0.4	0	0	0	0	0.3
Stable Business	11	13	14	17	12	11	3	8	6	7.6
None	0	0	0	0	0.4	0.4	0	0	0	0
Other	5	2	4	3	3	4	2	0	2	0
Vulnerabilities										
Dependency ratio	3	3	3	2	3	2	2	2	2	2
Percent IDPs	-	-	-	-	-	-	-	0.3	0.3	0.3
Percent HIV positive	-	-	-	-	6	8	4	4	4	5.5
Percent disabled	-	-	-	-	8	6.5	2	4.6	4.6	4.4
Percent pregnant	-	-	-	-	-	-	-	4.6	4.9	7.6
Percent elderly	-	-	-	-	8	5	-	6.4	5.5	7.3
Percent bedridden	-	-	-	-	-	-	-	16.5	9.9	9.3
Percent OVCs	-	-	-	-	-	-	-	11.6	13	4.1
Water										
HH (%) meeting sphere standard for queuing time for water(≤ 30 minutes)	99	99	97	96	98	100	97	98	100	-
HH (%) meeting sphere standard for litres pp per day (15l/p/d)	46	61	54	71	64	57	65	57	57	63
Food security										
Severely food insecure (%) by HFIAS	55	71	80	64	72	63	63	75	68	61
Moderately food insecure (%) by HFIAS	36	18	17	26	20	24	27	15	24	30
Severe household hunger (%) by HHS	7.8	6.7	8.2	14	4.8	20	11	11	7.2	9.3
Moderate household hunger (%) by HHS	25	38	39	35	48	29	34	39	43	34
Poor food consumption (%) by FCS	-	-	-	-	-	-	17	10	8	8.1
Borderline food consumption (%) by FCS	-	-	-	-	-	-	50	58	63	49
Acceptable food consumption (%) by FCS	-	-	-	-	-	-	33	32	30	43
Health										
Percent reporting illness	79	49	61	56	60	60	-	-	-	-
Children 0-5 months reporting illness	-	-	-	-	-	-	2	2	2	2
Children 6-59 months reporting illness	-	-	-	-	-	-	14	20	16	14.5
Children 6-59 months reporting diarrhoea	-	-	-	-	-	-	4	10	6	7.6
Over 5 years reporting illness	-	-	-	-	-	-	25	59	48	43
Shocks and security										
Experienced any shock	6.4	13	25	22	15	14	12	18	20	22
Often felt scared in community(more than once a week)	40	33	35	31	21	24	16	35	29	37
Never felt scared in community	12	23	15	21	24	26	30	17	18	15
Often felt scared in household (more than once a week)	23	24	17	16	12	11	4	-	-	-
Never felt scared in household	25	36	27	37	45	47	59	-	-	-
Percent who used an avoidance measure								61	66	76
Negative coping strategies										
Used credit	60	44	54	55	65	59	55	67	61	68
Took a loan	24	16	15	11	15	11	6	5.2	7	4.4
Removed children from school	18	12	16	12	22	16	9	17	22	17
Begged for food/money	8.5	10	12	5	12	4	5	7.5	8.7	5.8
Received food or money	29	29	41	37	40	27	23	35	36	33
Taken a second job	-	-	-	-	34	25	18	30	26	23
Sold an asset	-	-	-	-	12	11	10	15	11	8.4

APPENDIX D: Trends of various indicators in surveillance villages in Viwandani (August 2012 to February 2015)

Main indicators	R5	R6	R7	R8	R9	S1	S2	S3	S4	S5
	N=132	N=176	N=163	N=155	N=196	N=180	N=173	N=361	N=359	N=361
Demographics										
Female headed households (%)	15	16	16	23	20	22	15	21	21	20
Income & Expenditure										
Median HH income	8400	10000	9600	10250	11000	10000	11000	10000	10000	12000
Median income earned over 4-wk period by breadwinner	8400	9650	9000	9700	9800	10000	10000	10000	10000	10000
Food expenditure as percent of household income	74	60	56	65	39	53	46	48	47	48
Water expenditure as percent of household income	4.3	3.6	3.7	3.7	3.9	6	4	4	5	4
Rent expenditure as percent of household income	18	15	15	16	15	20	16	17	19	15
Loans/debts as percent of household income	29	32	21	27	35	16	36	19	16	12
Main source of income										
Monthly Salary	26	28	22	26	32	27	30	28	28	26
Casual labour	52	49	54	46	44	44	45	46	47	49
Petty Trading (hawking)	8	3.4	1.8	10	1	2	4	4	4	3
Remittances	0	0	0.6	2	1	3	1	0.3	0.8	0
Scavenging	0	0.6	0	1.3	0	0	2	1.9	0.3	1.7
Stable Business	13	16	19	12	15	18	11	16	16	12
None	0	0	0	0	2	0	1	0	0	0
Other	1.5	2.3	3.1	3.2	5	2	4	0.3	0	0
Vulnerabilities										
Dependency ratio	2	2	2	2	2	2	1.4	1	1	1.4
Percent IDPs	-	-	-	-	-	-	-	0	0.3	0
Percent HIV positive	-	-	-	-	2	2	1.2	1.7	0.6	1.4
Percent disabled	-	-	-	-	2	0	2	2.5	0	1.1
Percent pregnant	-	-	-	-	-	-	-	5.3	3.1	3.6
Percent elderly	-	-	-	-	1	-	-	0.8	1.1	0.3
Percent bedridden	-	-	-	-	-	-	-	3	1.1	3
Percent OVCs	-	-	-	-	-	-	-	0.6	1.7	0
Water										
HH (%) meeting sphere standard for queuing time for water (≤ 30 minutes)	90	94	94	96	99	97	98	98	100	-
HH (%) meeting sphere standard for litres pp per day (15l/p/d)	58	56	49	47	51	46	62	49	55	64
Food security										
Severely food insecure (%) by HFIAS	54	26	25	32	39	40	50	42	37	38
Moderately food insecure (%) by HFIAS	15	28	30	25	27	33	38	37	38	40
Severe household hunger (%) by HHS	6	3	0	3	7	7	5	3.6	3.6	4.2
Moderate household hunger (%) by HHS	21	10	13	19	13	22	28	24	22	18
Poor food consumption (%) by FCS	-	-	-	-	-	-	8	8	10	4.4
Borderline food consumption (%) by FCS	-	-	-	-	-	-	42	46	43	27
Acceptable food consumption (%) by FCS	-	-	-	-	-	-	49	46	47	68
Health										
Percent reporting illness (q5_2)	47	51	47	46	55	-	-	-	-	-
Children 0-5 months reporting illness	-	-	-	-	-	3	2	1	1	1.9
Children 6-59 months reporting illness	-	-	-	-	-	22	15	21	13	15.8
Children 6-59 months reporting diarrhoea	-	-	-	-	-	2	3	11	5	5.5
Over 5 years reporting illness	-	-	-	-	-	56	39	37	32	44.6
Shocks and security										
Experienced any shock (q7_1 allc)	2.3	7.4	14	12	13	6	10	15	15	17
Often felt scared in community (more than once a week)	13	15	10	16	14	9	10	16	17	16
Never felt scared in community	54	49	55	55	47	41	64	47	44	39
Often felt scared in household (more than once a week)	7	6	4	5	7	4	4	-	-	-
Never felt scared in household	79	64	72	77	66	55	84	-	-	-
Percent who used an avoidance measure	-	-	-	-	-	86	-	52	55	52
Negative coping strategies										
Used credit	27	31	34	37	34	30	57	47	49	42
Took a loan	8	10	18	16	10	2	10	6.4	3.6	5.8
Removed children from school	11	5	6	9	11	9	7	7.8	4.5	13
Begged for food/money	0	1.7	1.2	6.5	4.1	2	13	5	7.2	3.9
Received food or money	22	23	20	28	36	38	33	24	31	30
Taken a second job	-	-	-	-	29	21	19	18	20	21
Sold an asset	-	-	-	-	10	6	10	4.4	5.3	8.6

APPENDIX E: Trends of various indicators in surveillance villages in Mukuru (August 2012 to February 2015)

	R5	R6	R7	R9	S1	S2	S3	S4	S5
	N=86	N=100	N=105	N=111	N=185	N=157	N=360	N=360	N=360
Demographics									
Female headed households (%)	13	28	24	14	10	10	11	10	8.6
Income & Expenditure									
Median HH income	9300	9600	10000	12000	9500	10500	10000	10000	10500
Median income earned over 4-wk period by breadwinner.	8400	8000	8500	10000	9000	10000	9000	10000	10000
Food expenditure as percent of household income	58	73	63	41	53	53	56	52	50
Water expenditure as percent of household income	4	4	4	4	5	4	4	5	4
Rent expenditure as percent of household income	17	17	17	15	20	17	16	21	16
Loans/debts as percent of household income	36	39	30	38	45	39	46	44	42
Main source of income									
Monthly Salary	33	41	26	39	44	34	34	35	33
Casual labour	41	42	54	45	44	47	46	51	51
Petty Trading (hawking)	11	5	9	3	2	5	7.2	5.6	5
Remittances	0	1	0	1	1	0	0.3	0	0
Scavenging	0	0	4	1	0	1	0.3	0.3	1
Stable Business	12	5	6	11	7	8	9.7	5.3	6
Other	5	6	2	1	1	1	0.3	0	0
Vulnerabilities									
Dependency ratio	2	2	2	2	2	2	2	2	2
Percent IDPs	-	-	-	-	-	-	0.3	0	0.6
Percent HIV positive	-	-	-	4	1	0	0.3	0	0.6
Percent disabled	-	-	-	3	1	1	1.1	0.6	1.4
Percent pregnant	-	-	-	-	-	-	7.2	6.9	2.8
Percent elderly	-	-	-	2	-	-	0.3	0	0.8
Percent bedridden	-	-	-	-	-	-	6.4	6.1	3.6
Percent OVCs	-	-	-	-	-	-	0.8	1.1	0.6
Water									
HH (%) meeting sphere standard for queuing time for water(≤ 30 minutes)	99	98	95	100	98	99	99	100	-
HH (%) meeting sphere standard for litres pp per day (15l/p/d)	42	59	49	57	56	75	69	70	72
Food security									
Severely food insecure (%) by HFIAS	58	43	53	35	46	39	41	30	37
Moderately food insecure (%) by HFIAS	17	35	26	23	32	47	36	45	45
Severe household hunger (%) by HHS	6	6	7	6	5.4	6	4.7	4.4	3.9
Moderate household hunger (%) by HHS	24	16	22	17	23	17	16	13	16
Poor food consumption (%) by FCS	-	-	-	-	-	4.5	3.9	3.9	2.5
Borderline food consumption (%) by FCS	-	-	-	-	-	29	38	33	29
Acceptable food consumption (%) by FCS	-	-	-	-	-	66	58	63	69
Health									
Percent reporting illness (q5_2)	56	85	56	55	-	-	-	-	-
Children 0-5 months reporting illness	-	-	-	-	1	1	4	2	3.6
Children 6-59 months reporting illness	-	-	-	-	20	28	26	32	23.3
Children 6-59 months reporting diarrhoea	-	-	-	-	4	6	10	18	11.4
Over 5 years reporting illness	-	-	-	-	51	54	54	50	48.3
Shocks and security									
Experienced any shock	13	22	21	20	16	25	28	15	16
Often felt scared in community(more than once a week)	17	36	29	14	12	22	29	24	25
Never felt scared in community	38	33	31	36	46	34	34	29	24
Often felt scared in household (more than once a week)	11	14	6	6	2	12	-	-	-
Never felt scared in household	65	62	65	69	74	57	-	-	-
Percent who used an avoidance measure	-	-	-	-	83	-	65	69	66
Negative coping strategies									
Used credit	56	50	42	51	49	57	56	58	61
Took a loan	38	27	11	32	15	7	4.4	4.2	5.6
Removed children from school	9	9	15	11	7	10	12	13	6.4
Begged for food/money	11	23	17	8	4	4.5	7.8	10	6.1
Received food or money	30	55	32	41	36	32	36	33	25
Taken a second job	-	-	-	33	29	17	21	29	23
Sold an asset	-	-	-	15	13	13	8	13	18

APPENDIX F: Trends of various indicators in all villages in three (3) settlements (August 2012 to February 2014 - baselines)

Household Demographics	Korogocho					Mukuru				Viwandani				
	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	Aug-12	Feb-13	Apr-13	Feb-14	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14
Sample size	428	553	546	584	705	455	630	582	705	459	623	578	581	704
Average household size (all ages)	5	4	4	4	4	3	3	3	3	3	3	3	3	3
Number of children under 5	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Length of residency (years)	14	14	13	14	12	5	5	5	5	7	7	6	6	8
Household head														
Age of household head (average)	-	-	-	-	39	-	-	-	31	-	-	-	-	33
Household heads under 18 years old (%)	-	-	-	-	0.9	-	-	-	1	-	-	-	-	0.4
Female household head (%)	25	34	34	40	31	20	25	23	29	17	19	17	22	17
MUAC for children 6 to 59 mos. old (%)														
Severe malnutrition (< 115 mm)	0.6	0.6	1.1	0.5	0.2	0	0.3	0.3	0.6	1.1	0.4	0.4	0	0.3
Moderate malnutrition (< 125 mm)	1.7	1.9	1.4	1.5	1.9	0.8	0.8	0.9	1.2	1.6	0.9	0.8	1.9	1.2
At risk for malnutrition (< 135 mm)	5.3	6.6	11.7	7.2	9.5	8	8.8	5.2	6.5	10.2	8.2	8	7.5	9.5
Where did household come from? (%)														
Rural area	51	41	32	39	28	35	35	39	36	56	54	47	37	51
Other slum	16	27	8	13	22	38	43	33	31	22	19	15	16	21
Same slum	11	9	40	30	32	5	4	13	15	1	2	17	27	7
Non-slum urban area	22	22	20	17	16	22	17	15	17	22	25	21	18	20
Other country	-	-	-	-	0.1	-	-	-	0.3	-	-	-	-	0.3
Why did you move here? (%)														
Looking for employment	-	-	-	-	33	-	-	-	59	-	-	-	-	74
Breadwinner lost job/deceased	-	-	-	-	4	-	-	-	1	-	-	-	-	1
High cost of living	-	-	-	-	20	-	-	-	10	-	-	-	-	4
Ethnic tensions (IDPs)	-	-	-	-	2	-	-	-	1	-	-	-	-	1
War/civil strife (Refugees)	-	-	-	-	0.7	-	-	-	1	-	-	-	-	0.1
Other	-	-	-	-	33	-	-	-	15	-	-	-	-	8
Water														
Pay for water (%)	88	86	88	88	89	98	99	98	99	96	96	97	96	96
Time to water source (minutes)	2	2	2	2	2	3	3	3	2	2	2	3	3	3
Time queuing for water (minutes)	4	5	5	10	9	5	6	5	4	13	8	6	6	5
Liters of water/person/day	17	19	17	20	18	17	19	16	21	19	20	16	17	18
Meeting 15L/day threshold (%)	52	56	55	69	61	48	58	47	67	61	61	48	51	51
Main water source (%)														
Piped or tap water	82	86	84	95	95	100	95	98	95	68	89	87	89	81
Water tanks	18	14	16	5	3	0	3	2	5	21	11	13	11	19
Water vendors	0	0	0	0	2	0	1	0	0	11	0	0	0	0
Lake, river, or well	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quality of water (%)														
Clean water	76	75	77	81	86	54	67	66	69	72	78	80	75	74
Very clean water	20	23	21	15	10	7	2	3	1	10	5	4	13	14
Dirty water	4	3	2	4	4	37	30	30	29	16	16	16	11	11
Very dirty water	0	0	0	0	0	3	1	0	1	2	0	1	1	1
Hygiene and Sanitation														
Pay to use toilet facility (%)	19	14	19	19	18	48	46	46	48	79	77	76	70	74
Share toilet facility (%)	-	-	-	-	95	-	-	-	98	-	-	-	-	98
Main toilet facility (%)														
Ecosan	-	-	-	-	1	-	-	-	28	-	-	-	-	20
Flush toilet	-	-	-	-	10	-	-	-	29	-	-	-	-	77
None	-	-	-	-	1	-	-	-	0	-	-	-	-	0
Other	-	-	-	-	0	-	-	-	0	-	-	-	-	0
Simple latrine	-	-	-	-	83	-	-	-	38	-	-	-	-	2
VIP latrine	-	-	-	-	5	-	-	-	5	-	-	-	-	1
Hand washing activity (%)														
After visiting toilet	69	59	64	61	55	76	81	76	80	57	66	63	77	66
Before eating	29	26	29	44	37	30	31	29	48	42	38	37	37	26
After eating	6	9	6	17	9	10	11	12	10	16	14	9	22	12

	Korogocho					Mukuru					Viwandani				
Garbage disposal practices (%)	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	Aug-12	Feb-13	Apr-13	Feb-14	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	
Disposal service	47	48	54	62	53	22	21	23	30	68	63	62	60	57	
Road/railway/trench/all over	50	47	42	26	36	44	30	33	31	27	29	32	33	38	
Garbage dump or pit	3	3	3	10	10	33	46	43	37	4	9	6	7	5	
Burning	1	3	2	2	1	1	3	1	1	1	0	0	0	0	
Food															
Dietary Diversity Score (HDDS)	6.7	5.7	6	5	-	5.6	5.7	5.7	-	6.9	6.1	6.4	5.9	-	
Main food source (%)															
Purchase raw food	98	96	97	94	93	98	99	97	92	95	93	96	97	92	
Purchase cooked food	1	4	2	5	4	2	1	2	7	5	6	5	3	8	
Produce own	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Borrow, relief food, safety nets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Discarded food	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of meals per day (average)															
Adult	2.4	2.6	2.6	2.4	2.4	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.7	2.7	
Child (under 18 years old)	2.7	2.7	2.9	2.6	2.7	2.8	3.3	3.3	3.1	3.2	3.2	3	3.3	3.2	
Consumed meals outside the home (%)															
Adult	19	24	23	23	34	23	19	22	29	35	29	25	27	31	
Child (under 18 years old)	16	38	25	22	62	8	15	10	32	17	22	8	15	35	
Consumed street foods (%)															
Adult	48	40	41	41	57	37	42	42	31	29	25	19	33	36	
Child (under 18 years old)	44	37	45	39	54	31	35	36	26	18	16	10	24	33	
Household Food Insecurity and Access (HFIA)															
HFIA Score (HFIA S)	10	10	11	12	11	8	8	8	6	5	5	4	5	5	
Food Secure (%)	8	11	10	7	9	11	9	12	24	21	38	33	35	32	
Mildly food insecure (%)	3	4	3	6	4	13	14	17	19	18	12	18	11	15	
Moderately food insecure (%)	35	19	19	21	23	31	23	25	24	32	27	31	28	24	
Severely food insecure (%)	54	66	69	66	65	44	55	46	34	29	23	19	26	29	
Household Hunger															
Household hunger score (HHS)	0.9	1.4	1.4	1.8	1.4	0.9	1.1	0.9	0.8	0.5	0.5	0.4	0.6	0.5	
Little to no hunger (%)	73	62	60	50	57	76	70	75	78	87	87	89	84	87	
Moderate household hunger (%)	23	32	33	38	37	20	26	22	18	11	11	11	13	10	
Severe household hunger (%)	4	7	7	12	6	4	4	3	4	2	2	0	3	4	
Health															
Households reporting illness (%)	49	42	46	50	49	47	51	46	48	34	37	38	34	44	
Average number of ill people/household	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Morbidity (%)	33	31	31	36	35	42	44	39	42	47	50	44	41	41	
Average age of ill persons	16	19	19	20	19	22	23	22	19	22	21	19	22	20	
Under 5 years old illness (%)	43	34	37	34	38	12	13	18	21	25	25	32	22	28	
Felt increased levels of stress (%)	-	-	-	-	58	-	-	-	54	-	-	-	-	43	
Type of illness (%)															
Diarrhoea	18	14	12	20	18	18	15	13	14	12	15	13	14	19	
Fever	41	39	42	25	22	50	44	48	23	49	49	49	37	22	
Cough	47	35	41	23	28	39	38	42	38	39	31	30	29	27	
Headache	27	26	30	28	23	30	32	35	14	42	34	30	28	21	
Vomiting	9	15	12	10	11	22	12	15	8	10	7	8	5	9	
Convulsions/seizure	0	2	1	2	2	1	1	0	1	1	4	3	2	1	
Difficult/fast breathing	8	11	11	12	12	6	8	8	8	9	4	4	9	5	
Measles	1	0	1	4	1	1	1	0	1	0	0	1	1	0	
Injuries	3	5	4	4	5	3	3	3	3	3	4	4	5	4	
Malaria	-	-	-	-	17	-	-	-	24	-	-	-	-	24	
Mental illness	-	-	-	-	0	-	-	-	0	-	-	-	-	0	
Other illnesses	6	35	27	26	23	37	32	31	20	2	27	32	37	21	
Sought care/treatment (%)	93	88	79	81	86	91	89	90	85	90	93	91	90	87	
Average cost of treatment (KSH)	-	-	-	-	1491	-	-	-	1536	-	-	-	-	1006	
Median cost of treatment (KSH)	-	-	-	-	200	-	-	-	200	-	-	-	-	250	

Type of treatment sought (%)	Korogocho					Mukuru				Viwandani				
	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	Aug-12	Feb-13	Apr-13	Feb-14	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14
Public hospital	16	8	5	17	11	7	5	5	16	14	9	6	5	9
Public health clinic	27	22	34	33	35	15	17	20	14	18	22	28	26	29
Private hospital	9	7	7	7	4	6	6	4	7	4	2	4	6	10
Private health clinic	13	15	17	11	11	12	10	12	13	12	18	14	12	7
NGO hospital	6	5	0	1	3	2	2	1	3	2	1	1	3	2
NGO clinic	11	11	8	4	9	2	6	3	1	5	2	3	1	3
Pharmacy/chemist	26	31	28	25	30	56	57	56	46	48	45	41	48	42
Traditional healer/herbalist	6	3	1	1	1	1	2	1	1	6	2	1	1	1
Other treatment	0	2	0	2	2	1	1	0	0	1	0	1	1	0
Interpersonal Relationships														
Disputes inside the household (%)														
Never	74	67	68	85	82	80	60	67	80	87	90	89	89	80
Rarely (1 or 2 times in 4-weeks)	15	25	23	9	11	10	27	22	13	9	7	10	7	11
Sometimes (once every week)	6	6	6	3	4	9	10	8	5	3	2	1	1	5
Often (more than once a week)	6	2	4	3	2	1	3	3	3	0	1	0	2	4
Severity of intra-household dispute (%)														
Mild (just quarrelling)	78	62	71	83	87	89	92	90	84	88	83	92	78	89
Moderate (verbal assault)	15	34	24	12	10	8	5	5	11	10	14	3	15	8
Very severe (physical violence)	8	4	5	5	4	2	3	5	5	2	3	5	7	2
Disputes with neighbours (%)														
Never	96	87	88	92	91	86	90	94	88	92	95	95	95	93
Rarely (1 or 2 times in 4-weeks)	4	11	8	4	5	9	8	4	8	7	5	4	5	6
Sometimes (once every week)	1	1	3	3	3	5	1	1	2	1	0	0	0	1
Often (more than once a week)	0	1	1	1	0	1	1	1	2	1	0	0	0	0
Severity of inter-household dispute (%)														
Mild (just quarrelling)	80	44	40	64	69	85	77	73	82	80	78	96	80	77
Moderate (verbal assault)	11	56	50	24	28	10	16	24	16	13	18	0	20	21
Very severe (physical violence)	11	0	11	13	3	5	6	3	2	8	4	4	0	2
Household shared food with neighbours (%)														
Never	61	59	55	66	63	51	52	55	58	71	70	73	69	69
Rarely (1 or 2 times in 4-weeks)	21	28	27	18	23	20	27	24	24	20	22	21	16	16
Sometimes (once every week)	11	9	15	12	11	17	12	18	12	5	5	4	11	9
Often (more than once a week)	7	5	3	4	3	11	9	3	6	4	3	2	4	6
Neighbours shared food with household (%)														
Never	61	59	56	66	64	61	56	58	62	72	69	71	74	70
Rarely (1 or 2 times in 4-weeks)	21	23	22	18	22	18	26	23	23	19	23	23	14	16
Sometimes (once every week)	12	13	17	12	12	13	11	16	11	8	6	4	9	9
Often (more than once a week)	7	5	4	3	2	9	8	4	4	2	2	2	3	5
Shocks and Security														
Experienced one or more shocks (%)	6	13	19	22	15	18	14	19	24	4	7	10	12	12
Total number of shocks experienced (average)	1.1	1.1	1.2	1.5	1.3	1.2	1.2	1.2	1.6	1	1.1	1.1	1.3	1.3
Overall number of shock events (average)	1.3	1.3	1.5	3.1	1.9	1.5	1.4	1.9	2.4	1.3	1.4	2.5	1.7	1.4
Shocks experienced in last 4-weeks (%)														
Fire	4	6	1	10	4	11	6	9	8	16	5	2	8	6
Floods	4	0	13	34	11	22	22	38	24	11	23	73	14	26
Mugging/Stabbing	77	76	74	56	23	57	51	52	30	42	53	20	54	20
Burglary	15	19	24	21	10	19	26	14	23	32	21	15	36	18
Eviction	4	4	4	18	13	5	10	3	6	0	7	0	10	7
Property destruction	4	6	2	12	7	9	6	5	17	0	2	0	3	15
Rape/sodomy	0	2.9	1.9	2.4	2.9	0	0	0	1.7	0	0	0	1.4	1.1
Harassment/intimidation	-	-	-	-	61	-	-	-	47	-	-	-	-	34
Number of shock events in 4-weeks														
Fire	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Floods	1	0	2	3	2	2	1	2	2	2	1	3	2	1
Mugging/Stabbing	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Burglary	2	1	1	1	2	1	1	2	1	2	1	1	1	1
Eviction	1	2	1	1	1	1	1	1	2	0	1	0	1	1

	Korogocho					Mukuru				Viwandani				
	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	Aug-12	Feb-13	Apr-13	Feb-14	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14
Property destruction	1	1	1	7	2	1	1	1	2	0	2	0	3	1
Rape/sodomy	0	1	1	2	2	0	0	0	1	0	0	0	1	1
Harassment/intimidation	-	-	-	-	1	-	-	-	2	-	-	-	-	1
Felt scared in community (%)														
Never	16	26	21	23	26	40	33	33	46	44	54	60	49	53
Rarely (1 or 2 times in 4-weeks)	23	28	27	22	29	15	22	20	26	27	21	22	20	17
Sometimes (once every week)	36	21	26	20	17	25	25	25	17	15	14	12	15	13
Often (more than once a week)	25	25	26	35	29	20	20	22	11	14	11	6	16	18
Felt scared in household (%)														
Never	41	46	40	46	46	61	67	73	75	72	68	77	72	77
Rarely (1 or 2 times in 4-weeks)	30	25	27	25	30	11	14	11	15	18	18	16	16	11
Sometimes (once every week)	19	14	21	11	13	13	13	9	6	6	10	5	6	6
Often (more than once a week)	10	15	12	17	12	15	6	7	4	4	4	2	6	7
Used avoidance measures (%)														
Never	19	33	32	33	31	55	39	40	58	52	63	58	49	49
Rarely (1 or 2 times in 4-weeks)	34	37	33	28	36	13	22	23	22	19	17	21	22	13
Sometimes (once every week)	27	17	18	21	17	16	22	17	13	15	12	11	8	11
Often (more than once a week)	20	13	17	18	15	16	18	20	7	15	9	11	20	27
Perception of community security (%)														
Very bad	22	22	25	33	22	16	10	8	4	10	6	4	11	7
Bad	41	35	31	24	30	26	30	29	21	21	25	23	19	19
Not very bad	19	25	28	26	33	26	29	36	40	31	23	22	28	33
Good	18	17	14	16	15	28	29	26	34	35	44	49	35	36
Very good	0	2	3	1	0	4	2	1	2	2	2	1	7	6
Did not feel safe leaving child at school (%)	-	-	-	-	4	-	-	-	22	-	-	-	-	18
Child did not feel safe at school (%)	-	-	-	-	4	-	-	-	19	-	-	-	-	15
Housing														
Own house	19	18	17	17	13	6	4	5	6	6	5	5	6	5
Rent house	81	80	80	82	86	93	94	94	94	93	95	94	93	94
Free house	0	1	3	1	1	0	1	1	0	1	0	1	0	0
Livelihoods														
Monthly salary	7	11	12	8	11	33	38	35	39	16	35	32	31	36
Casual labour	54	53	51	50	49	45	41	48	44	61	45	47	47	43
Hawking/petty trading	21	16	12	14	14	7	5	7	2	10	3	1	6	3
Remittances	1	0	2	1	3	0	0	0	1	0	0	1	1	1
Scavenging	0	3	2	2	3	0	0	1	0	0	0	0	0	0
Safety nets (e.g. merry go round)	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Business	13	13	18	21	14	10	11	8	11	11	13	16	12	13
Other	3	4	3	3	6	5	4	2	1	2	4	3	3	4
Average household income (KSH)	8585	10369	9187	9587	9412	13732	13665	13913	14274	11276	13995	12854	15013	14915
Median household income (KSH)	7000	7550	7200	7200	8000	11100	11600	12000	12000	9600	11200	10000	12000	12000
Number of people in household earning an income (average)	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.2
Expenditures (4-week recall average)														
Percent household income spent on food	105	86	90	89	65	65	68	78	43	97	58	61	63	39
Percent household income spent on water	5.3	3.9	3.9	5	3.8	4.2	3.8	4.2	4.7	6.1	4.2	3.9	3.7	3.5
Percent household income spent on rent	23	19	19	21	17	19	17	21	18	24	18	18	17	16
Percent household income spent on debts/loans	8	12	20	20	20	36	21	19	22	15	26	12	12	17
Percent household income spent on savings	-	-	-	-	4	-	-	-	14	-	-	-	-	12
Breadwinner														
Average breadwinner income (KSH)	8378	9981	8147	8637	8443	12438	12510	12714	12597	11370	12617	11701	13736	12724
Median breadwinner income (KSH)	6000	7200	7000	7000	7000	10000	10000	10000	11600	9000	10000	9600	11000	10500
Percent household income earned by breadwinner (average)	93	94	93	95	94	93	92	93	93	96	94	94	94	92
Female breadwinners (%)	32	37	40	38	38	22	21	19	21	25	24	28	30	21
Average age of breadwinner	36	36	37	38	37	31	31	31	31	33	32	31	32	32
Average grade level completed by breadwinner	-	7.9	7.8	8.7	7.9	9.9	10.2	10.1	10.2	-	9.7	9.7	9.9	9.9

	Korogocho					Mukuru				Viwandani				
	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14	Aug-12	Feb-13	Apr-13	Feb-14	Aug-12	Feb-13	Apr-13	Nov-13	Feb-14
Average number of hours worked/day	8.4	8.1	8.2	8.4	8.2	8.9	9.2	9.1	9.7	8.9	8.9	8.9	8.5	9.2
Average number of days worked/week	5.5	5.7	5.6	5.3	5.3	5.9	5.8	5.7	5.9	5.8	5.9	5.8	5.7	5.8
Mode of payment for breadwinner earnings														
Hourly (%)	0	0	0	2	0	1	0	0	0	0	0	0	1	0
Daily (%)	77	75	73	76	78	31	31	25	30	43	36	42	38	33
Weekly (%)	9	8	10	11	7	26	24	30	21	15	19	17	23	21
Monthly (%)	11	17	16	11	13	41	44	44	48	40	43	40	38	42
Other (%)	2	0	1	0	1	2	1	2	1	2	1	2	0	3
Coping (4 week recall)														
Used credit	53	43	53	54	57	55	49	51	47	47	31	36	34	32
Took a loan	29	15	12	14	16	29	19	17	27	17	13	22	16	11
Removed children from school	17	16	20	23	38	16	15	25	25	8	8	9	11	20
Household member left household	13	7	9	11	8	19	16	13	8	5	5	5	5	8
Begged for food or money	8	8	10	3	8	10	10	11	7	2	2	1	6	4
Stolen food or money	2.1	2.2	2	1	0.6	0.9	1	0.5	0.9	1.1	1.3	1.2	0.5	0.4
Know someone that stole	45	37	42	26	26	19	25	18	8	6	15	11	15	13
Got food/money from friend/family/ neighbour	29	30	40	31	43	38	46	36	35	23	22	19	25	29
Taken a second job	-	-	-	-	29	-	-	-	31	-	-	-	-	22
Sold an asset	-	-	-	-	13	-	-	-	16	-	-	-	-	7
Used 1 or more of the above	87	75	82	77	84	78	81	76	72	66	56	57	57	59

APPENDIX G: Monthly price trends in three (3) settlements in 2014 (Kes)

Korogocho												
Food	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Maize Flour (2 kg branded)	107.3	107.4	108.2	109.8	114.9	115.8	115.1	112.9	110.9	106	103	91
Vegetables (Sukuma) - 1 bunch:	6.3	6.2	6	6.5	5	5	5	5	5	5	5	5
Cooking fat (500 grams)	108.3	109.3	110.2	110.1	115	112.9	116.3	119.2	120.1	116	120	117
Beans (1 kg mkebe)	79.1	80.1	83.1	84	80.5	76.4	73	73.1	71.8	74	74	72
Milk (1 pkt - 500ml)	45	45.2	45	45	45	45	45	45	45	45	45	45
Potatoes (2kg tin)	56.4	58.4	60	72	87.5	85.6	77	56.3	72.9	79	87	69
Cabbage (1 medium head)	33.2	37.1	30.3	37.9	40.5	39.2	38.5	45.6	53.3	47	51	54
Sugar (1/2 kg)	47.4	45.1	43.4	42.8	41.9	42.5	41	43.8	47.9	48	55	51
Paraffin (1 litre)	89	89.2	88.1	89.1	90.2	91.9	94.8	91.1	89.7	88	86	81
Meat (beef with bones) (1/4 kg)	87.1	85.6	85.7	88.4	89	84.7	83	83.8	84.8	87	88	93
Total cost of basket	659	663.6	660	685.5	709.5	699	688.7	675.7	701.4	695	714	678
Cooked foods												
Githeri (1 cup)	12.4	12.1	12.4	12.5	14	13.6	14	14	15	15	15	15
Chips (1 portion)	17.4	18	19.8	20	21	21.1	22	21	24	29	30	30
Ugali (1 plate)	17	16.8	16.7	16.7	18.5	18.9	19	19	19	19	19	19
Rice (1 plate)	23.2	22.9	22.5	23.1	23	22.2	23	23	22	23	23	24

Viwandani												
Food	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Maize Flour (2 kg branded)	108.2	108.1	109.1	111.3	116.6	117	115.3	113.4	110.4	107	103	91
Vegetables (Sukuma) - 1 bunch:	5	5	5	5	5	5	5	5	5	5	5	5
Cooking fat (500 grams)	115.7	118.1	120.3	118.3	119.4	118.4	113.3	116.6	116.9	118	120	117
Beans (1 kg mkebe)	75.4	75.3	77.2	79.2	78.9	76.3	73.8	72.2	71.6	72	71	71
Milk (1 pkt - 500ml)	45	45	45	45	45	45	45	45	45	45	45	45
Potatoes (2kg tin)	65.7	67.5	69.4	76.1	75	68.1	64	53.8	63.8	69	78	67
Cabbage (1 medium head)	42.1	47.5	40.6	41.1	45	43.1	44	51.9	53.8	52	56	55
Sugar (1/2 kg)	47.5	45.6	42.5	41.9	43.8	44.7	42.9	44.6	51.3	51	57	50
Paraffin (1 litre)	92.5	93.1	91.9	94.2	93.5	95.8	97.8	96.1	95.8	96	91	87
Meat (beef with bones) (1/4 kg)	95	95.6	96.9	95.6	92.8	86.9	91	93.5	93.8	92	97	97
Total cost of basket	692.1	700.9	697.9	707.7	715	700.3	692	692	707.1	707	723	685
Cooked foods												
Githeri (1 cup)	15	15	15	15	15	15	15	15	15	15	15	15
Chips (1 portion)	20	20.6	22.8	22.2	30	30	25	27	30	30	30	31
Ugali (1 plate)	20	20	20	20	20	20	20	20	20	21	20	20
Rice (1 plate)	27.9	27.5	27.2	27.8	30	30	30	30	30	30	30	31

Mukuru												
Food	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Maize Flour (2 kg branded)	105.3	105.9	106.3	108.2	114.8	114.6	113.0	112.0	108.0	104.0	99.0	88.0
Vegetables (Sukuma) - 1 bunch:	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Cooking fat (500 grams)	115.3	116.6	114.1	115.0	116.9	116.3	116.0	116.0	114.0	114.0	114.0	114.0
Beans (1 kg mkebe)	70.6	71.9	76.3	77.2	78.1	73.4	67.0	66.0	66.0	67.0	67.0	65.0
Milk (1 pkt - 500ml)	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Potatoes (2kg tin)	60.6	65.0	67.5	70.0	75.0	69.4	67.0	59.0	73.0	73.0	78.0	68.0
Cabbage (1 medium head)	36.9	42.5	35.0	43.1	43.9	41.3	44.0	48.0	53.0	52.0	54.0	56.0
Sugar (1/2 kg)	46.2	42.5	40.9	41.6	43.9	43.6	43.0	43.0	49.0	51.0	54.0	50.0
Paraffin (1 litre)	86.8	87.9	85.3	87.1	87.9	89.6	87.0	88.0	85.0	86.0	83.0	79.0
Meat (beef with bones) (1/4 kg)	97.5	97.5	97.5	97.8	97.2	97.5	98.0	97.0	98.0	97.0	99.0	100.0
Total cost of basket	669.2	679.8	672.8	689.9	707.7	695.7	685.0	679.0	696.0	694.0	698.0	670.0
Cooked foods												
Githeri (1 cup)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Chips (1 portion)	20.0	22.5	27.5	27.8	30.0	30.0	28.0	29.0	31.0	30.0	30.0	34.0
Ugali (1 plate)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Rice (1 plate)	30.0	30.0	30.0	30.6	30.0	30.0	31.0	29.0	33.0	32.0	33.0	33.0



For more information, contact Jay Chaudhuri at jay.chaudhuri@concern.net



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