Baseline Survey for Informal Settlements Located within a radius of 12 Kms from Garden City, Nairobi County

Commissioned by ASPIRE Group and Conducted by Maji na Ufanisi

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Influencing Water Sector Resilience Governance, Knowledge and Practice

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Prof. Edward Kairu

Executive Director

Maji na Ufanisi

ACRONYMS AND ABBREVIATIONS

ANEW	Africa Civil Society Network on Water and Sanitation
BCC	Behavior Change Communication
CHAST	Children's Hygiene and Sanitation Training
CSR	Corporate Social Responsibility
EABL	East Africa Breweries Ltd
ECC	Early Childhood Centers
GSU	General Service Unit
HHs	Households
IE&C	Information, Education and Communication
KII	Key Informant Interviews
KURA	Kenya Urban Roads Authority
KeNHA	Kenya National Highways Authority
MDGs	Millennium Development Goals
MnU	Maji na Ufanisi
NGO	Non-Governmental Organization
NCWSC	Nairobi City Water and Sewerage Company
ORS	Oral Rehydration Salts
OSAC	Overseas Security Advisory Council
PHAST	Participatory Hygiene and Sanitation Transformation
SPSS	Statistical Programme for Social Scientists
URTIS	Upper Respiratory Tract Infections
WASH	Water, Sanitation and Hygiene
WES	Water and Environmental Sanitation
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction

The primary purpose of the baseline study (needs analysis) was to define actual local community needs based on objective observation and data collection and to identify potential 'relevant' interventions.

The baseline survey was conducted in five major areas within a radius of 12 kilometers from Garden City, Nairobi County. These included; Kasarani, Githurai, Baba Dogo, Mathari 4A, and Kariobangi North, all of them located in Nairobi County. Secondary data and information were also collected to complement the primary data that was collected during the baseline survey. This exercise was conducted with the aim of setting a baseline for planning and execution of CSR interventions in the target area through partnership between Actis, Aspire Group, EABL and Maji Na Ufanisi.

Garden City is an infrastructural development project under construction by Actis. The Garden City is being constructed on a 32 acres plot sold to Aspire Group by East Africa Breweries Limited for purposes of building a mixed use shopping complex. The complex will have various amenities such as state of the art shopping malls, car parks, swimming pools, public access parks and housing units with well-developed road infrastructure, telecommunications network and sufficient power supply. The project is situated next to EABL along Thika super highway. It is envisaged that the project will quench the high demand for decent housings and other amenities of the rapidly expanding new consumer class in Kenya and beyond.

This baseline survey was commissioned by Aspire Group for purposes of establishing CSR interventions within a radius of 12 Kilometers from Garden City. The findings from the target area revealed a cycle in which numerous factors contribute to ongoing socio-economic, health and environmental challenges. Living conditions within the informal settlements are difficult as is evidenced by low purchasing power of the area; limited sanitation facilities, deplorable learning facilities and environment, poor solid waste management/disposal, high levels of insecurity and poor access to safe drinking water as well as limited public health facilities.

Methodology

The baseline survey employed both quantitative and qualitative methods to meet the above stated survey objective. Interview questionnaires, transect walks and observations were used in data collection. According to the Kenya Population and Housing Census (2009) the surveyed areas fall under the larger Kasarani Constituency which has a population of 525,627 people and 164,326 households. Due to its proximity to Garden City, the expansive Baba Dogo informal settlement was chosen for the detailed household questionnaire administration. However, in addition to the household questionnaires, additional sectoral information was captured through interviewing key stakeholders in Kasarani, Githurai, Baba Dogo, Mathari and Kariobangi. These areas are located within a radius of 12 Kilometers from Garden City. Secondary data was also collected through desk top review from authentic sources that included Nairobi County Development Profile, Ministry of education data on enrollment and policy documents, Ministry of Health and Internal Security

Summary of Findings

Through the sampling methodology, a sample of 256 households participated in the survey in Baba Dogo informal settlement. From the findings, 55.6% of the respondents in the household survey were female while 44.4% were male. The highest number of respondents represented those in the business/trade (51.7%) with a significant proportion (26.5%) of respondents in formal employment. Another 14.5% represented those working as casual employees, mainly in the nearby factories / industries.

From the survey findings, the learning environment is not conducive. The area has few public learning facilities. The facilities are also dilapidated. From the study, in one of the schools that were visited, the teacher pupil ratio is 1:54, the pupil toilet ration is 1:67 for girls and 1: 65 for boys. This is far below the recommended ratios by the Ministry of Education which is 1:40, 1:25 and 1:30 for teacher pupil, girls and boys respectively. Most schools in the area have uneven play grounds and no sports equipment's thus limiting sporting activities in schools.

From the survey, it was evident that the target areas experienced irregular water supply. Piped water from the Nairobi City Water and Sewerage Company (NCWSC) accounts for the largest proportion of water source (74.2%) for households. About 62.5% of the respondents said that they buy their domestic water from vendors. This is quite high as water vendors are known to sell water at higher prices.

In regards to solid waste management, almost half (43.8%) of the households in the target area dispose their waste in un-designated dumpsites. According to the survey, 41.2% use disposal bags which are then collected by organized youth groups in their communities. These groups operate in all informal settlements that were visited and households pay between Kes 200 and Kes 300 per month for the services.

The most common explanation for inadequate water supply and access was that water cartels were interfering with the supply of the existing water and sanitation facilities, which subsequently lead to an increase in the price. These cartels are known to install illegal pipes that tap into the main water supply hence taking control of water flow into informal settlements.

There are very few sanitation facilities in the study area. For instance, from the survey findings, Mathere 4A did not have a single sanitation facility. The existing few sanitation facilities are private and charge kes 5-15 per visit. Their location is a security threat at night and especially to girls and women. This result of open defecation. The area has few connection to trunk sewage system.

The target area has several industries but most of the employment opportunities are limited to highly skilled people. The residents here rely on small scale business/vendors and as casual laborers in the industries. Most of youth and adults lack employment opportunities hence the livelihoods and wellbeing of their families are compromised.

From the survey, 69.2% of the respondents earn less than Kes 10,000, while 24.2% earn between Kes 10,000 and Kes 20, 0000 per month. Baba Dogo is surrounded by industries which seldom undertake Corporate Social Responsibility activities as confirmed by key informants.

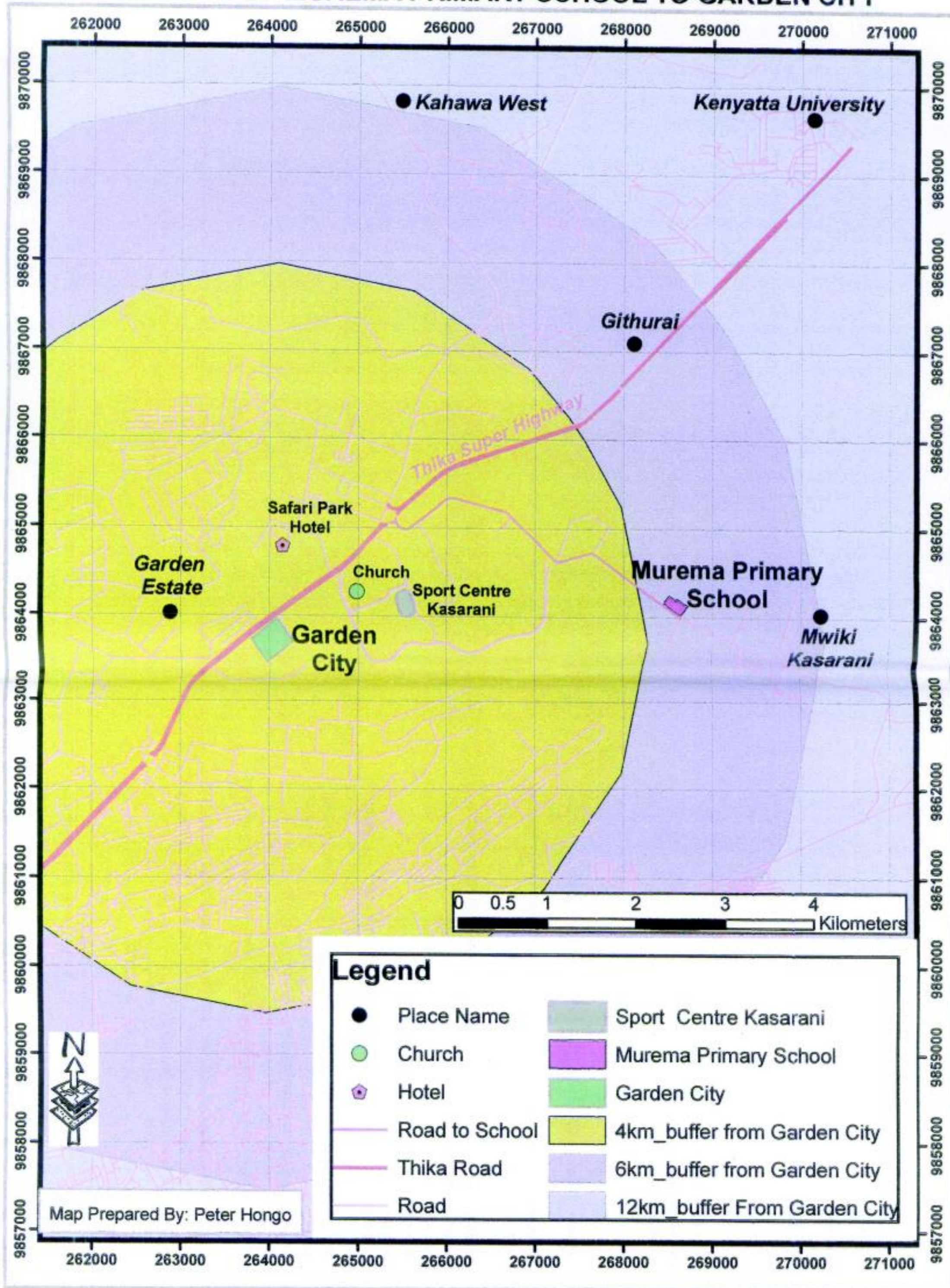
The findings from key informants and secondary data identified the large part of the study area as hot spots for insecurity (crimes and criminal dens) in Nairobi City County. The main contributing

factors for this high crime rates include high poverty levels, high unemployment, low education levels, poorly equipped police service, low social cohesion and political instigation and substance abuse by the youth.

The heath facilities are few and far flung. The services are poor and there is inadequate medical personnel. There are many incidences of diarrhea and other waterborne diseases which are attributed to high morbidity and mortality rates among under five children. There are many cases of HIV/AIDS, rampant gender inequality as well as limited understanding by citizens on their rights as enshrined in the constitution.

There are limited access roads, power supply as well open market centres. The main source of energy supply to the residents is charcoal and kerosene.

Garden City Community Needs Analysis – Survey Areas


PROXIMITY OF MUREMA PRIMARY SCHOOL TO GARDEN CITY
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Kahawa West
Kenyatta University
Githurai
Thika Super Highway
Safari Park Hotel
Garden Estate
Church
Sport Centre Kasarani
Garden City
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Church
Hotel
Road to School
Thika Road
Road
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Murema Primary School
Garden City
4km_buffer from Garden City
6km_buffer from Garden City
12km_buffer From Garden City
N
Map Prepared By: Peter Hongo

Recommendations

From the survey, the following aspects are particularly deserving of CSR support from Actic. It is understood that potential implementation of intervention is the subject of further discussion with Actis. Below are the thematic areas and proposed interventions.

Education

- Construction of new water and sanitation facilities
- Construction of new water and sanitation facilities /rehabilitation of dilapidated ones in Murema Public Primary Schools. Below are other components under this intervention
- Construction of simple incinerators for waste management, hand washing facilities and water points
- Construction of storm drains and tree planting
- Rain water harvesting
- Children Hygiene and Sanitation Training (CHAST) and School Led Total Sanitation (SLTS)
- Establishment of environmental gardens, school environmental clubs, WASH clubs and Child to Child Health clubs
- Levelling of sports ground in primary schools
- Provision of Sports equipment
- Advocacy training on child rights, bill of rights and gender issues
- Adoption of Murema Primary School and Baba Dogo Secondary School for long term improvements
- Construction of additional class rooms and provision of desks
- Establishment of resource centers well equipped with computers and e-learning materials.
- Development of Career advisory services in Baba Dogo Secondary School

Sports

- Establishment of slums sports teams/clubs
- provision of sports equipment and opportunities
- Organizing intra and inter slums tournaments

Community Water and Environment Sanitation

- Construction of storm drain systems
- Construction of communal water and sanitation facilities
- Construction of waste solid recycling facilities
- Training on PHAST and Community Total Led Sanitation
- Trainings on climate proofing(solid waste management

Employment and skilling

- Construction of a resource centre
- Establishment of business incubator/small business training centre
- Capacity enhancement on business management skills and income generation opportunities(Voluntary Savings and Loan Associations-VSLA)
- Linkages with micro credit institutions
- Introduction of career advisory system to employers
- Establish skills mapping process to improve future employability
- Establish linkage between Kenyatta University and Garden City for internship programmes and employment.
- Community capacity enhancement and networking to engage the primary duty bearer (National and County Governments) for service provision

Health

- Heath facilities Infrastructural improvement/upgrading
- Training of community own resource persons/Community Health Workers
- Community knowledge enhancement on HIV/Aids, Malaria and TB among other topical diseases
- Conducting outreach health clinics
- Formation and training of community health committees

Security

- Installation of security lights/masts
- Peace building trainings
- Conflict management training
- Training on Youth Adult partnership

CHAPTER 1: INTRODUCTION

Maji na Ufanisi (MnU)

Since inception, MnU has been directly involved in the implementation of water and sanitation solutions at different spatial and organizational levels. MnU has over fifteen years' experience supporting Community Based Organizations (CBOs) and local level NGOs to reach the neediest and most vulnerable groups in informal settlements in Nairobi and Mombasa, small towns and rural areas of Kenya.

MnU works with these organizations to establish basic Water and Environmental Sanitation (WES) capabilities within the communities and to improve their ability to sustainably access and manage these important economic resources.

Actis Group

Actis is a global pan-emerging market private equity firm established in 2004 and based in Britain. The firm was founded based on experiences inherited from over 60 year legacy as part of the UK's development arm, the Commonwealth Development Corporation or CDC. The firm is established through 50% private equity contribution and 50% ownership by the British Government. The major investors to the equity are World Bank and International Development Corporation Agency. The firm is currently focusing on investing in development projects within the emerging markets especially in India, South Africa and the rest of Sub Saharan Africa.

Currently, the firm has over US$5 billion being managed by 105 investment professionals. These professionals are overseeing investment of these funds through appointment of 65 companies which have employed over 101,000 professionals. Aspire group is one of these 65 companies sponsored by Actis to invest in infrastructure development projects within the emerging markets on behalf of the equity firm.

Actis investment is driven by a distinctive strategy which responds to two trends. Viz: Rising domestic consumption driven by the rapid expansion of the new consumer class, and the need for sustained investment in domestic infrastructure; education, energy, financial institutions, healthcare and real estate. To ensure success of their investment strategy, the firm has resolutely remained local.

This closeness to the local emerging markets helps in providing competitive intelligence and access to opportunities derived from the close relationships on the ground. The obtained market intelligence information helps Actis to match this local insight with a global sector approach. This yields great results. So far, the firm has recouped US$ 2.2 billion from US$ 867 million invested since its establishment. The firm boasts of having particular strength in working with families and founders to professionalize their businesses. The aforesaid is realized by taking successful local brands and building them into world-class companies.

Actis has a commitment to investing responsibly especially in the emerging markets. The firm has a policy of ensuring that civic society, their investors and employees all benefit from how the equity firm invests capital as it builds successful sustainable business.

Garden City

Garden City is an infrastructural development project under construction in Nairobi County by Actis. The City is being constructed on 32 acres plot sold to Aspire Group by East Africa Breweries Limited for purposes of building a mixed shopping complex with various amenities.

The amenities include state of the art shopping malls, car parks, swimming pools, public parks and housing units with well-developed road infrastructure, telecommunications network and sufficient power supply. The project is situated next to EABL along Thika Super Highway. It is envisaged that the project will quench the high demand for decent housings and other amenities of the rapidly expanding new consumer class in Kenya and beyond.

The main objective of Garden City project is to make a positive impact in terms of economic and infrastructural growth in Kenya. The project is envisaged to contribute to sustainable economic and environmental development in the country. This is being achieved through creation of jobs and fresh employment opportunities which will emanate from supply chain through sourcing of local goods to meet the market demand in the Garden City.

The establishment will also provide job opportunities while ensuring observation of the set standards to ensure no negative environmental impact results from the development of the project. The planned car park shade will have solar panels roof envisaged to produce 1mega watts of solar power.

These immense economic, environmental and social contributions by Garden City project are in line with Kenya Vision 2030 being implemented through phased medium terms plans. The envisaged positive contribution to various pillars within the Vision 2030 has made Garden City to be granted partners status by the Kenya Vision 2030.

In line with Actis commitment to investing responsibly, Aspire Group is planning to create a good relationship and safe neighborhood between those who will inhabit Garden City and those living around Garden City especially the citizens within the surrounding informal settlements. This is to be realized through Corporate Social Investment (Responsibility) by Aspire Group. As is the case with many such institutions, Aspire Group is focusing on making the contribution by engaging local partners to implement their CSR component.

To get a reliable and reputable partner, the Aspire Director, Mr. Stuart Blandford approached EABL CSR Manager, Ms. Jean Kiarie who introduced him to the CEO of Maji Na Ufanisi, Prof. Edward Kairu. During the meetings which followed, it was agreed that Garden City and MnU would explore a partnership to implement CSR projects within a radius of 12 Km around Garden City/EABL.

To start off, Aspire Group advanced Maji na Ufanisi Kes 319,000 in January 2014 to undertake a baseline survey with particular emphasis on WASH in the immediate informal settlement, Baba Dogo and also capturing socio-economic needs in other thematic areas such as Learning, Livelihoods, Security, Sports, Health and Environment within informal settlements located in the wider Kasarani Constituency.

Projection of CSR and Partnership Development

Mr. Stuart (Aspire Group) proposed the establishment of a frame work through which MoUs will be developed and signed to concretize the above cited partnership. In the first phase, Garden City and MnU will seek to sign MoUs for implementation of education, water and sanitation Interventions as core with some livelihoods and security components. The second phase will be signing of MoUs between, MnU and Garden City for implementation of interventions under other thematic areas. The projects will be implemented in phases within a long term frame work.

1.1 Purpose and Objectives of the Survey

In Kenya, nearly 60% of Nairobi's population lives in informal settlements (Kenya Census 2009). The steady increase in population has created a number of socio-economic challenges; key among them is water which has gradually become a scarce commodity. The little that is available often gets polluted as a result of various human activities hence making Nairobi experience a gradual decline of available potable water. Other major challenges include high levels of insecurity, poor disposal of solid waste, lack of education facilities, high levels of unemployment and inadequate health services.

Maji Na Ufanisi in conjunction with Aspire Group, the development manager of Garden City establishment are in the initial stages of designing a CSR programme around the site of Garden City.

Maji Na Ufanisi and Garden City will work towards improving access to water and sanitation services, learning facilities, livelihoods and health in informal settlements within a radius of 12 kilometers from Garden City through a programme to be implemented in Phases for a target period of 7 years with effect from 2014. It was essential that MnU uses its vast experience particularly in successes and challenges of WASH in order to ensure consistent, accurate and meaningful data. It is in this context that this baseline survey was conducted in order to set baseline indicators.

1.1.1 Project Objectives

1. Improve learning facilities and other social amenities
2. Improve water, environmental sanitation and hygiene facilities in the target area;
3. Create employment and skill enhancement opportunities in the target area
4. Contribute to security enhancement in the target area
5. Promote sport activities in the target

1.1.2 Objectives of the Baseline Survey

The baseline survey was aimed at establishing the current status on WASH/WES, Livelihoods and Education in order to provide indicators and plan appropriate interventions in the target area.

Specifically, the Baseline Survey sought to;

1. Establish baseline values of indicators against which strategic objectives will be measured.
2. Identify challenges that hinder socio-economic development in the target areas.
3. Identify challenges hindering effective management of community water resources within the project target areas;
4. Identify challenges hindering effective learning in schools within the target areas.

CHAPTER 2: METHODOLOGY

2.1 Survey Instruments

The survey instruments consisted of a household questionnaire and a key informant check list guide. The sections in the household questionnaire required the respondents answer questions based on outlined thematic areas. The questionnaires were pre-tested by enumerators and necessary revisions made before the actual exercise of data collection.

2.2 Sampling and Questionnaire Administration

The survey covered five major areas within a radius of 12 kilometers from Garden City, namely; Kasarani, Githurai, Baba Dogo, Mathari North, and Kariobangi North. According to the Kenya Population and Housing Census (2009), these areas fall under the larger Kasarani Constituency which has a population of 525,627 people and 164,326 households in 2009. Due to its proximity to Garden City, Baba Dogo informal settlement was chosen for the detailed household questionnaire administration.

Baba Dogo has eight sub-settlements with homogenous characteristics namely; Kariadudu, Laundry, Gathecha, Lucky summer, Glucola, Mugure, Baba Dogo and Kasabuni. These settlements have a combined population of more than 20,000 people. A total of 256 randomly sampled households from Baba Dogo informal settlement participated in the survey. The sample size was calculated through application of Cochran formula for sample determination. Trained enumerators administered the questionnaires to household heads.

This sample makes it possible to arrive at statistically significant conclusions from general observations of the targeted households. The response rate was noted to differ across different variables of study in this survey.

This explains why responses in some questions are higher or lower than the target. The collected data provided the team with a better understanding of the situation of households in the areas targeted by the survey. All of the questions that were asked in the quantitative survey have been analyzed.

2.3 Key Informant Interviews and Transect walks

On the other hand, participants in the key informant interviews were selected purposively, given that the respondents were selected on the basis of their pre-eminent roles in the community, either as committee members or community leaders/opinion leaders.

In addition to the household questionnaires, more information was captured through interviewing key stakeholders in Kasarani, Githurai, Baba Dogo, Mathari and Kariobangi. The key stakeholders included;

- Director, Aspire Group;
- Mathari Youth Sports Association Members;
- County Administration; Chiefs, Assistant Chiefs of Mathari, and Kasarani;
- Chairman, Githurai Open Air Market;
- Head Teachers; Kasarani, Marura, Baba Dogo, Kariobangi North and Murema primary schools;
- District Youth Officer Kasarani;

- Police Inspector Kasarani;
- Community Policing member, Mathari; and
- Clinical Officer, Baba Dogo Health Center;

The information sought from these key informants were added to the selected thematic areas. This information was not included in the household questionnaires but was deemed to be essential. The thematic areas were; livelihoods, learning facilities, environment, security, health and social amenities. The survey team and staff from MnU did transect walks across the areas making observations and taking vital photos to complement the overall survey. Desktop analysis on all thematic areas was also undertaken through secondary data

2.4 Selection and Training of Enumerators

All the enumerators hired for this assignment were qualified local residents who have knowledge of the geographical area and have good reputation and people skills. All the enumerators participated in a preparatory training prior to the survey. The training programme included sessions on the purpose of the survey, the role and responsibilities of the enumerator and interviewing techniques, amongst others.

2.5 Data Collection, Coding, Entry and Analysis

Data collection was done on the basis of a household questionnaire. The survey was conducted from house to house in the selected areas, using the methodology described above. Upon completion of the interviews in the field, the questionnaires were coded and entered using Epi info 5.0 software. This data was subsequently cross checked for accuracy. The data was then exported to SPSS 16.0 for analysis. Lastly, frequency tables were used to discern any significant tendencies.

2.6 Possible Bias and Methodological Limitations

1. “Respondent bias.” Respondents may have an interest in providing incorrect answers because they think that they may benefit later, especially in the event that their responses lead to support from Aspire/Actis. In each household, the enumerators explained the objectives of the survey to avoid this bias.

2. "Enumerator bias." The opinions of the enumerators and their supervisors can skew the results. For example, when enumerators show verbal or non-verbal responses to what is “correct” during the interview. The team tried to minimize this bias during training and pre-testing.

3. “No response bias.” The fact that household interviews were conducted from 9 a.m. to 4 p.m. meant that some heads of households were not at home during the survey and thus were not included in the survey.

4. "Privacy bias." In order to ensure the respondents’ confidentiality, the enumerators were advised to ensure that crowds are not present during the interview.

To reduce the risks of bias, the survey team leaders ensured that they:

- Dedicated time and effort to select experienced enumerators, familiar with the survey area;

- Started with a pre-survey (pilot test) and supervised enumerators during the survey; and
- Verified the completed questionnaires each day and provided feedback to the enumerators before conducting fieldwork the following day.

CHAPTER 3: KEY FINDINGS – EDUCATION AND SPORTS

3.1 Education

3.1.1 Status of Education in Kenya

Kenya Vision 2030, which aims at making Kenya a globally competitive and prosperous country by 2030, singles out education and training as one of the levers that will drive Kenya into becoming a middle-income economy. In addition, the Constitution (2010), the Basic Education Act of 2013, and Sessional Paper No. 14 of 2012 on Reforming Education and Training Sectors in Kenya, provide for Free and Compulsory Basic (pre-primary, primary and secondary) Education as a human right to every Kenyan child.

Vision 2030 places great emphasis on the link between education and the labor market, the need to create entrepreneurial skills and competencies, and strengthen partnerships with the private sector in investment and provision of education and training in the country. It also recognizes the need for a literate citizenry and sets targets for enhancing adult literacy. This is consistent with the MDG 2 and Education for All (EFA) goals on universal access and completion of education.

According to the Constitution of Kenya, the County Governments shall be in charge of pre-primary education and village polytechnics. The National government, through the Ministry in charge of Education, is responsible for the provision and coordination of education, training, research, education policy formulation and implementation and quality assurance at all levels of learning.

Currently, the sector is managed by the Ministry of Education, Science and Technology. The main focus of the ministry has been on increased levels of access, retention, equity, quality, relevance and the overall effectiveness of the education sector. Other policy objectives include exploiting knowledge and skills in science, technology and innovation for global competitiveness.

The mandate of the Education Sector is to respond to the Constitution (2010) and Kenya Vision 2030 and in so doing to propose strategies to address wastage and inefficiency; improve financial management and accountability, and to make education in Kenya inclusive, relevant and competitive regionally and internationally.

The main issues facing the education sector have been challenges of access, equity, quality, relevance and efficiency in the management of educational resources. In 2003, the Ministry of Education embarked on a series of reforms geared towards attaining the education related Millennium Development Goals (MDGs) and Education for All (EFA). The recommendations of the 2003 National Conference on Education and Training informed the development of the Sessional Paper Number 1 of 2005. It outlined short, medium and long term sector targets which included the Attainment of Universal Primary Education (UPE) and Education for All (EFA) by 2015.

The following specific targets were set then:

- A primary school (Net Enrolment rater) NER of 100 % by 2015;
- A completion rate of 100 % by 2010;
- Achievement of a transition rate of 70 % from primary to secondary school level from 47 %, paying special attention to girls" education by 2008;
- A 50% Net Enrolment Rate (NER) in Early Childhood Education (ECDE) by 2010;
- Gender parity at primary and secondary by 2015;
- Development of a National Training Strategy for TIVET by 2005, and ensuring that TIVET institutions are appropriately funded and equipped by 2008;
- Achievement of a 50% improvement in levels of adult literacy by 2015; and 13 ;
- Expansion of public universities to have a capacity of at least 5,000 students each by 2015, and an increase in the proportion of all students studying science-related courses to 50 %, with at least one third of these being women, by the year 2010.

The education sector in Kenya has experienced massive expansion in enrolment and number of institutions over time. According to the Ministry of Education's Management Information System (EMIS), the number of public and private primary schools increased from 6,058 in 1963 to 27,489 in 2010, while the number of secondary schools has increased from 151 to 7308 over the same period. Enrolment in primary education has grown from 892,000 pupils in 1963 to about 9.4 million pupils in 2010, whilst enrolment in secondary education has grown from around 30,000 students in 1963 to 1.7 million students in 2010.

The increase has been accelerated by the introduction of Free Primary Education (FPE) and Free Day Secondary Education (FDSE) programmes in 2003 and 2008 respectively. At the TIVET level enrolments stood at 82,843 in 2010. Enrolment into the university sub sector stood at to 180,978 in 2010[1]

Since 2003, the Kenya Government and donors have been funding the Free Primary Education. The Ministry of Education has been allocating Ksh 1020 per pupil in public primary school since 2003 to date. The funds are meant for purchase of text books, pay for utilities (water, electricity), maintenance costs as well as laborers not employed by the Ministry of Education.

The amount hardly meets the administrative and development requirement in any single school. To ensure retention especially in the arid and semi-arid regions of Kenya, the government runs feeding program under The School, Health and Nutrition Programme in partnership with the Ministry of Education and the World Food Programme. The program targets 1.5 million pupils country wide.

In Nairobi, a total of 171 (111 public primary schools and 60 non formal primary schools) are benefiting from the program reaching a total of 133,600 pupils. This has contributed in increased enrollment within the target schools.

The Ministry does not allocate funds for construction of infrastructure. The implication is that the increase in school enrollment has had no corresponding increment of infrastructure in terms of

[1] Ministry of education, republic of Kenya; A policy framework for education. Aligning education and training to the constitution of Kenya (2010) and Kenya vision 2030 and beyond. April 2012

additional classrooms, desks, water and sanitation facilities. The schools in urban informal settlements are most hard hit as they have been under city or municipal council management.

3.1.2 Status of education in Nairobi County

Nairobi County is one of the 47 counties created under the Kenya constitution 2010. Its capital Kenya's capital and largest city in the country. Nairobi County was founded in 2013 on the same boundaries as Nairobi Province, after Kenya's 8 provinces were subdivided into 47 counties. Nairobi County has different types of basic learning institutions (by March 2014) as shone in table 3.0.

Table 3.0: Data on formal and informal basic education institutions in Nairobi County

School Type	No.	Population	Boys	Girls
Public Primary	203	205 450	101 259	104 191
Private Primary	360	33 420	16 868	16 552
Non-Formal Primary	800	131 138	64 443	66 695
Grand total	**766**	**370 008**	**182 570**	**187 438**

According to the Nairobi County Development Profile (2013) the County has 2,906 Early Childhood Centres (ECC), 1,235 primary schools and 319 secondary schools. The total enrolment in ECDC is 292,126 with a teacher pupil ratio of 1:45. On the other hand, the total enrolment in primary schools is 429,281 pupils and the teacher pupil ratio in primary schools 1:56. These ratios are higher than the Ministry of Education standard which is 1:40.

Nairobi County has enhanced learning through the provision of desks, dormitories, libraries, classrooms, dining halls, kitchens, food/school feeding, bursaries, laboratories, and boreholes. These programs by the Nairobi County are encouraging but given the low financial resources experienced by the County the challenges will persist and multiply.

The County has plans to promote sporting activities in all constituencies of Nairobi. Rehabilitation of all playing grounds is underway, provision of games attire and equipment has been rolled out and big plans drafted.

3.13. Status of Education in Kasarani District

Kasarani District is in Nairobi County and is in the Eastern part of Nairobi, about 10 km from the city Centre along Road. Its population likely exceeds 200,000 persons. It borders Juja Constituency in Kiambu County. Presently, Kasarani has 26 public primary schools, 23 pre units and 1 special school.

The strain on the few public schools especially in the areas visited in this research (Githurai, Baba Dogo, Kariobangi, and Mathari) has resulted in the mushrooming of informal ECCs and primary schools. Due to the high poverty levels in the area, many households are unable to afford formal education resulting in many of the children being enrolled in informal schools. The formal public schools visited in the target areas were found to be in deplorable state. This affects the learning outcomes negatively.

Pic 3.0: An informal school in Baba Dogo informal settlement

However, the education programs carried out by the Nairobi County has seen several public primary schools benefit through rehabilitations of existing facilities, construction of new facilities and establishment of new schools.

In the target area the following schools have benefited from facility improvements by the Nairobi County Government; Comboni Primary school, Garden Estate Primary school, GSU primary, Marura primary, Baba Dogo primary, Roysambu Primary, and Mahiga Primary. These primary schools handle large population of pupils from low income households and requires exerted efforts to improve their learning facilities.

According to the findings from the key informants, sports seemed to be an important driver in bringing youth together. Football was mentioned as the favourite sport in the target area. There are organized sports clubs, which include Mathari FC, Tusker FC, and Kariobangi Sharks who recruit footballers from the five targeted areas and beyond. These teams sometimes get sponsorships from politicians and well-wishers.

Schools within these areas have challenges concerning sports which include uneven football pitches lack of sports attire and sports equipment. The survey also sought to know whether there are community halls /grounds and resource centres in the target areas. From the responses, only Kariobangi North (St. John's Centre) and Githurai were reported to have a few of these amenities. All key informants suggested that sport facilities needed to be improved and sponsorship solicited from companies so as to create employment opportunities for youth and foster social cohesion.

Murema Primary School

The school is situated along Kasarani - Mwiki road and lies between hunters and sun ton stage. It sits on a seven acre piece of land which was set aside by the hunters land buying company for a community school. Murema primary school came about in a quest to decongest the then existing public primary schools; St. Dominic's and Kasarani. In January 1995, pupils from the surrounding enrolled in those schools were sent to Murema primary school from class 1 to 4.

Murema Primary school which is within 4.8 km from Garden City has a population of 1728 pupils. Girls are 859 while boys are 869. There are 33 T.S.C teachers in which 29 are ladies and 2 gentlemen. The Teacher pupil ratio in the school is 1:54 while the Ministry of Education recommended ratio is 1: 45, the pupil toilet ratio is 1:72 for girls and 1:72 for boys as there are 12 sanitation units for girls and 12 units for boys. This implies that the school has a deficit of 23 sanitation units for girls and 18 for boys.

The desk pupil ratio in the school is 1:4 instead of recommended 1:3. The school head hinted that, this has partially contributed to drop in academic performance in the school which has seen a drop from position 3 in the district in the years 2011 and 2012 to position 5 in 2013 academic year. According to the senior teacher in Murema primary school, the uneven playground, lack of sports uniforms and equipment limit extra curriculum development of pupils enrolled in this school. A visit to the other neighboring public primary schools revealed more or less similar challenges. This is an indicator that a lot of talent which could be developed right from primary school is lost.

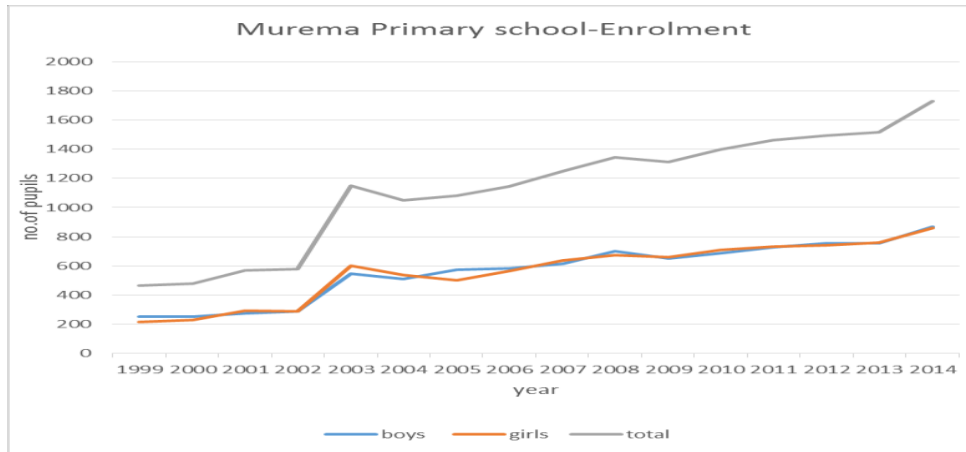
If pupils get the sporting support and opportunity, majority will have identified their talents and would engage in the same as they transit to youth age and young adulthood eventually contributing to employment and crime reduction.

Several reasons can be attributed to the above mentioned disparities. The population of middle and low income earners in Nairobi is growing at a higher rate. This has a multiplier effect on the growth of education needs. It’s therefore seen that schools situated in middle and low income areas have high pupil population putting a strain on school facilities.

Pic 3.1: Mismatch: Increased enrollment against limited space leading to overcrowded classes in Murema Primary School

Pic 3.2: Uneven play ground in Murema Primary School

Figure 3.0 Enrollment trend in Murema Primary School between 999-2014. The Free primary education has led to increased enrolment in the school at the same time straining existing facilities and academic performance



It is clear from figure 3.0 that:

- Student enrolment has been increasing over the years between 1999-2014
- The enrolment ratio for both boys and girls is by and large, at par; and
- The sharp increase of enrolment in 2003 was as a result of the introduction of Free Primary Education.

Secondary Schools in Nairobi County

There are 82 Secondary schools in Nairobi County. In this, 60 are public while 22 are private.

Public Secondary Schools in Kasarani District

There are three Public day secondary schools in Kasarani district which are; Kamiti Secondary, Garden estate Secondary, and Baba Dogo Secondary schools

Baba Dogo Secondary School

Established in 2009, Baba Dogo Secondary School is a Public mixed day located in Kasarani District, Nairobi County. The school has a population of 571 students; 357 are boys while 214 are girls. The school has a teaching staff of 13 male and 14 female.

The Secondary school is approximately 3 km from the Garden City and adjacent to Baba Dogo Primary school where most of the pupils transit to after completing their Kenya Certificate of Primary Education. Most of the students are drawn from the low income areas of; Korogocho slum, Kariobangi slum, Lucky Summer slum, Manguo slum, Glue Cola and Kariandundu slums.

In regards to sports, the school shares the play field with Baba Dogo Primary School and its students participate in girls' and boys' football, volley ball and netball. The school has a non-functional computer lab which has 40 computers but no internet.

Regarding infrastructure, the school has 10 classrooms with 2 streams in both form one and four and 3 streams for both form two and three .Each classroom has approximately 60 students against

the standard number of 35. Currently, the school is in the process of constructing semi-permanent classrooms to decongest the classrooms. According to the deputy-Mr. Paul Mutisya, parents are not in a position to contribute enough money to do permanent classrooms as they are poor. The only allocation the Government gives is ten thousand shillings per year per student which goes towards purchasing textbooks, meals and administrative costs.

Baba Dogo Secondary School has 4 sanitation units serving 214 girls and 4 sanitation units serving 357 boys. Teaching staff has 3 sanitation units. All the units are pit latrines.

In terms of priorities, the deputy head teacher sited; more classrooms, modern kitchen and more sanitation facilities, putting up a perimeter wall and upgrading the sports pitch

Kenyatta University

The higher institution of learning is commonly known as KU and is located in Kiambu County on Thika dual carriageway. KU sits on 1,100 acres (4.5 km^2) of land. The university was chartered in 1985, offering mainly education-related courses, but has since diversified, offering medicine, environmental studies, engineering, law, business, agriculture, and economics. It has a student body of about 32,000, the bulk of whom (17,000) are in the main (Kahawa) campus. Currently it is one of the fastest growing public universities.
The institution is the second largest in Kenya after The University of Nairobi.

Since its inception, Kenyatta University has become one of the leading Public Universities in Kenya. This is demonstrated not only by the steady increase in students and staff numbers over the years, but also by the rapid expansion of the programmes offered by the university.

Resource Centre – Kibera Soweto East

This project was part of the Kenya Slum Upgrading Programme. The Kenya Slum Upgrading Programme (KENSUP) is the result of a meeting in November 2000 between the then President of Kenya and the Executive Director of UN-HABITAT at which the Executive Director offered to spearhead a slum upgrading programme for Kenya starting with Nairobi's largest slum, Kibera. The objective of the programme was to improve the overall livelihoods of people living and working in slums through targeted interventions to address shelter, infrastructure services, land tenure and employment issues, as well as the impact of HIV/AIDS in slum settlements.

The overriding goal of KWATSAN was to enhance Soweto East community inclusion in KENSUP through education and economic development, by supporting small scale community based initiatives in water, sanitation, road and waste management. Drawing lessons from previous isolated attempt to improve informal settlements, KWATSAN sought to address simultaneously, issues of increasing access to improved water, improved sanitation, solid waste management, drainage and access road in an integrated approach.

UN-HABITAT, together with the Ministry of Housing and the City Council of Nairobi started the slum-upgrading activities in Kibera in June 2004. The project was implemented through Maji na Ufanisi (MnU) in collaboration with the Government of Kenya (GoK) and Kibera community.

Resource Center

- Functional physiotherapy center that treats an average of 15 patients per day, when school closes, the number increases 60 patients
- Chemist facility that serves an average of 50 patients per day
- Functional cyber café that is fully engaged every day, in a word, there are four computers and customers queue for access, the demand increases over the weekend the weekends.
- Available communal meeting facility
- Secure car parking facilities

Pic 3.3: Kibera Soweto East Resource Centre

Pic 3.4: Youth meeting in the resource Centre

3.2 Sports

3.2.1 Status of Sports in Kenya

According to the Sessional Paper of 2005[2], the Government through the Ministry of Sports, Culture and Arts recognizes the importance of sports in building capacities both in individuals and communities that enable them participate effectively in socio-economic development. Engagement in sports is essential for nurturing and sustaining good health. It plays a key role in creating opportunities for individuals and communities to play and work together, thus creating a cohesive society that is an essential base for a strong and prosperous nation. The Ministry of Sports Culture and Arts also recognizes sports as an activity which can increasingly be used in the development of children and youth. It recognizes that sport and play are fundamental to youth development and can be used for teaching youth essential values and life skills, such as teamwork, cooperation, respect and crime prevention.

However the implementation of the paper has yet to be concluded, as there are vital components the Ministry of Sports and Culture are planning to include in the revised paper. Some of these components concern issues related to devolution which will indicate the way the National Government will coordinate sports activities with the fully established County Governments. Key informants from the Ministry pointed out that the Government has not completed working on a National Sports policy which will guide the manner in which sports issues are dealt with at a national level.

[2] SESSIONAL PAPER NO. 3 OF 2005 ON SPORTS DEVELOPMENT, MINISTRY OF GENDER, SPORTS, CULTURE & SOCIAL SERVICES

3.2.2 Status of Sports in Nairobi County

The Nairobi City County yet to publish a County Sports Policy which would supplement the already established Nairobi City Integrated Urban Development Master Plan. According to the Director of Education, Sports and Culture, Nairobi County, plans are underway to rehabilitate public sports grounds and at the same time promote sporting activities in all constituencies of Nairobi.

However funding is one of the major challenges the County is facing in this regard. The Nairobi Integrated Development Master Plan[3] lists only 18 registered public playgrounds throughout the City which indicates a severe undersupply of recreational and open spaces for the more than 400,000 primary school age children in the City. The other public play grounds, mostly located in informal settlements in the county are not officially registered as sports grounds and are in dilapidated conditions.

3.2.3 Status of Sports in Kasarani District

The key informants from the target areas identified sports as a key component in promoting peace, security, development, nurturing talent and human rights. Among the sporting activities in the target area included, football, basketball, netball and volleyball. Football was mentioned as the favourite sports activity in the target area which had organized sports clubs such as: Baba Dogo United FC, Mathari FC, Tusker FC, and Kariobangi Sharks.

The clubs consist of 90% of youth from the five target areas who participate in national and mini leagues within the County. Most of these clubs were reported to lack financial resources and equipment which would enable them to perform well. They were reported to rely on well-wisher to sponsor their activities.

[3] The Project on Integrated Urban Development Master Plan for the City of Nairobi in the Republic of Kenya, Final Report, (DRAFT),May 2014

Pic 3.5: A view of Baba Dogo sports ground in Baba Dogo informal settlement.

The survey also sought to know whether there are community halls /grounds and resource centres in the target areas. The Nairobi Integrated Development plan only lists Kariobangi North (St. John's Centre), Soweto Kahawa west and Guthurai as having a few of these amenities within the target area. All key informants pointed out that sports and recreational facilities existing in the target area needed rehabilitation as the play a vital role in peace building and social cohesion.

Some of the Key informants in Baba Dogo mentioned that the County Government had attempted to rehabilitate Baba Dogo Sports Ground; however the rehabilitation has not been completed due to lack of funding. Most children from the community use this playground for their recreational activities, however based on the picture above, the play ground is in a sorry state and has been encroached by individuals who use part of it as an undesignated dump site.

CHAPTER 4: KEY FINDINGS – ACCESS TO WATER, SANITATION AND HYGIENE

4.1 Access to Water

The survey identified four sources of water accessed by the households. These included piped water from the water company (NCWSC), private water vendors, borehole water and unprotected shallow wells. The piped water from the NCWSC accounts for the largest proportion of water source (74.2%). About a quarter of households surveyed sourced their water from private water vendors while a small proportion (0.4%) sourced water from boreholes and unprotected shallow wells. However, considering the mode of transmission of many water-borne diseases, any small proportion of population using untreated water can have a major negative impact on the rest of the population in terms of disease transmission through water and food contamination.

> Water Pressure is so low
>
> *"Most households here only get water on Saturdays and Sundays, when the pressure is higher, but from Monday to Friday we seldom receive water in our plots. It looks like this water is diverted to the industries that use a lot of water."*
>
> Mama Shiro* A key respondent in Kasabuni, Baba Dogo

Pic 4.0: Water cartels: a community member buying water from an illegal water point

According to the area Chief of Utalii location, most of the residents within Utalii have limited access to water and sanitation. Population in the entire Mathari area is always increasing due to ease of starting small scale businesses, close proximity to the city center and the affordable house rent. Similarly other challenges identified by the area Chief included limited access to

educational facilities, high levels of insecurity, health related issues and unemployment, especially among the youth.

It is therefore important for awareness interventions to focus on water demand management (storage, treatment, and conservation) for the target population as well as education and socio-economic improvement of the area.

Table 4.0: Source of drinking water most often used by HHs

Sources of water	Frequency	Percent
1. Piped water from NCWSC	190	74.2
2. Private water vendors	64	25.0
3. Borehole	1	0.4
4. Unprotected shallow well	1	0.4
Total	256	100.0

It is assumed that water supplied from the NCWSC is safe because it is treated at source. On the other hand, water from private vendors, boreholes and shallow wells is prone to contamination by disease-causing pathogens because it is either not treated or it is contaminated from the points of source.

Table 4.1: Quantity of water Consumed in HH per day

Quantity Consumed by HH per day	Frequency	Percent
10 litres	1	0.4
20 litres	45	18.8
25 litres	16	6.7
30 litres	168	70.0
120 litres and above	2	0.8
Total	240	100.0

Proper household sanitation and hygiene practices are dictated by the amount of water which is available to individual households. Each and every household may have different needs for water at different times and in different quantities and qualities. The baseline survey data showed that over 90% of households which might have at least 5 persons per household use at least 20-30 litres of water per day.

Based on this, the data indicates that majority of the households surveyed do not meet the Sphere and World Health Organization's (WHO's) water quantity standards of 20 litres per person per day. A small proportion of the respondents showed that they meet this threshold. The segment of the community using at least 20-30 litres is a source of concern as relates to minimum standards of water, sanitation and hygiene practices aimed at improving people's

lives. This segment of the community would therefore be the first priority in regard to any intervention within the sector.

Pic 4.1: One of the illegal water points in Mathari 4A informal settlement

4.1.1 Water Cartels

Most key informants blamed the high cost of water on the water cartels interference with the supply of water services. The key informants explained that the cartels act maliciously to gain from the water shortages by blaming the high prices on NCWSC. The key informants observed that the water connections provided by the water cartels were illegal and had consistent flow of water. Observations show that these water connections are not metered by the NCWSC hence an indicator of illegal water vending and loss of revenue to NCWSC.

4.1.2 Daily household expenditure on water

The proportion of the respondents who purchased water was about 50% with those spending less than Kes 10 accounting for 11.8%, those spending between Kes 10 and Kes 20 (22.1%) and those spending between Kes 20 and 50 (14.7%). Another category of respondents whose water bill is included in the house rent accounted for 33.8%. The implication on the kind of mode of water payment and time of payment is likely to impact the manner in which water is accessed and used on a daily basis within households.

This is especially true with reference to the fact that a significant number of respondents do not have stable sources of income, which can guarantee them sustainable access to quality water. In the event that such a category of people do not have a source of income, they are likely to be unable to access water for both sanitation and hygiene purposes.

Many factors may contribute to inadequacy of water within the households in the target area including distance coverage, time spent to fetch water and other challenges. For households with insufficient water, the following reasons were cited by key informants:

- Water points are far away; and

- Lack of adequate water storage facilities.

The amount of water used by households is often an indicator of overall wellbeing. Discussion with the key informants noted that water challenges persist in Baba Dogo due to hoarding which is spearheaded by cartels in cohort with water company employees.

4.1.3 Water Vending

The responses from the survey showed that there are various types of sources of water. Asked whether there are water vendors in their areas, about (62.5%) of respondents said they do exist. More than 32.4% of the respondents said water vendors aren't there while 5.1% were not sure whether there were water vendors.

Table 4.2: Sources of water which venders supply to HHs

Vendors' sources of water	Frequency	Percent
1. Piped NCWSC	150	87.7
2. Illegal tapping	12	7.0
3. Unprotected shallow wells	1	0.6
4. Other	8	4.7
Total	171	100.0

The survey data show that majority of the respondents reported that vendors get their water from the piped NCWSC while, a significant proportion of 7.0% get water from illegal connections. Other households get water from unprotected shallow wells and other sources. As earlier noted, these water supply systems are prone to contamination and likely to cause water borne diseases.

4.1.4 Distance to water sources and responsibility for fetching water

Typical of most African societies, women and girls were often cited by key informants as the household members responsible for fetching water. Thus the burden of collecting water is placed upon the female household members.

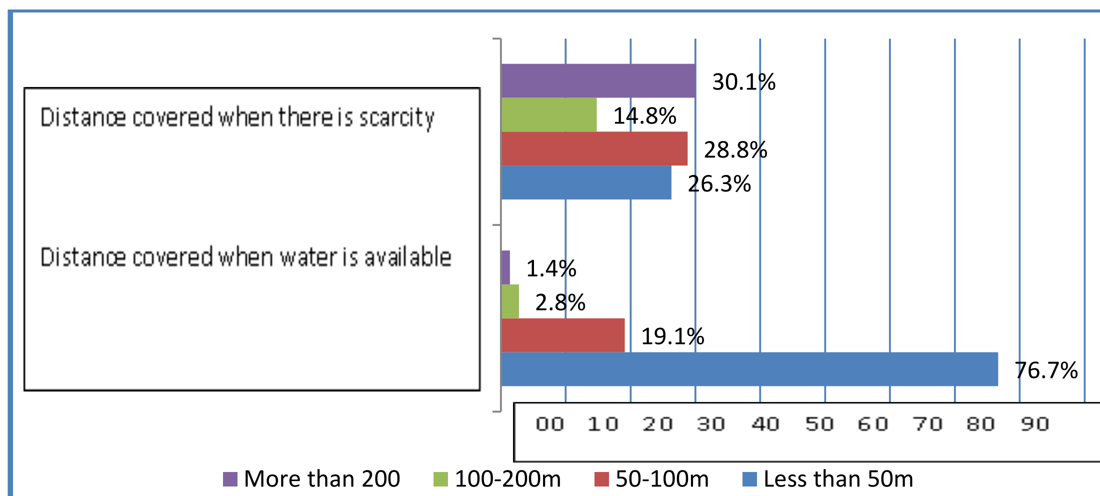
Table 4.3: HH members responsible for fetching water

Who fetches water?	Frequency	Percent
1. Man	59	24.1
2. Woman	172	70.2
3. Boy child	9	3.7
4. Girl child	5	2.0
Total	245	100.0

Household distances to nearest water points may determine the quantity of water that may be used daily. The Sphere standards recommend that water sources should be within 200 meters of one's residence. Short distances to water points ensure easy access and also ensure safety

for those fetching water. This may also play a role in ensuring the quantity of water a household has for daily use and may determine the water, sanitation and hygiene practices undertaken. During periods of abundance, 76.7% of respondents reported that they sourced water from a distance of less than 50 meters from their residences, another 19.1% within 100 meters and 2.8% within 100-200 meters. Even though water sources are near, it is notable from key informants that the water is not regular due to several other reasons including interference with the water supply.

Figure 4.0: Distance covered by households to fetch water



During scarcity periods, 30.1% get their water from more than 200 meters. This is a point of concern because such long distances to water sources could determine the quantity of water a household has for use on a daily basis. Water scarcity was noted by key informants to be rampant during the Nairobi International Show period in September of each year when higher volume of water is diverted to the Show Ground. However, there are other isolated cases when water just becomes scarce especially informal settlements due to the activities of water cartels.

It is notable from figure 3.2 (page 18)that distances covered to fetch water increase during water scarcity within Baba Dogo and other target areas as more household members travel for longer distances to fetch water. This is well beyond the Sphere Minimum Standards set out in the Water and Sanitation Charter, which specifies that water sources should be within at most, 500 meters from the HHs. Contrary to this, the survey showed that during dry seasons, majority of the respondents travelled for more than a kilometer to their respective sources of water.

Another characteristic of water source is the long queues. The survey data showed that 63.1% of respondents reported that there are long queues at the water sources compared to 35.7% who said there are no long queues. This is likely to discourage people from going to fetch water regularly for their domestic needs thus impacting negatively on the entire household's sanitation and hygiene practices and waste of valuable time for other domestic chores.

Traditionally, the role of fetching water for domestic use is bestowed on the female gender. This role is either performed by the household wife/mother or girl child. This is also reflected by the survey data which showed that 70.2% of respondents reported that water is fetched by the woman compared to only 24.1% by the man. However, the boy child is reported to fetch water (3.7%) more than the girl child (2.0%). This could be due to security reasons or the jericans being heavier for the girls, especially within the target areas.

4.1.5 Water treatment

Water treatment is considered key in ensuring that water is safe for consumption, as the quality of water consumed affects the household health as well as affecting overall spending. In the same context, it is evident that water used for domestic needs should be of high quality in terms of safety.

This is demonstrated by the survey data where over half of the respondents reported that they treat the water they use in their respective households. The water treatment methods ranged from boiling (32.9%), use of Waterguard™ tablets (25.1%) and filtering (3.7%) while 37.0% take no participation. It is worth noting that any intervention that would provide safe water to these households would in the long run help them save spending on fuel used to boil water.

Table4.4: Water treatment methods in HHs

Methods	Frequency	Percent
1. Boiling	80	32.9
2. Water guard tablets	61	25.1
3. Filtering	9	3.7
4. Other	3	1.2
5. Don't treat water	90	37.0
Total	243	100.0

The fact that 37.0% of the respondents do not treat their water before using it, irrespective of the source, presents a public health concern regarding the vulnerability to water-borne diseases such as diarrhea/dysentery and typhoid.

Though there is a general awareness of such water-borne diseases, cholera (35.2%), diarrhea (48.5%), typhoid (38.1%) and amoeba (8.5%) of cases, other respondents had also reported that untreated water causes such diseases *as malaria, pneumonia, bilharzia*, stomachache, vomiting among others. This shows that some people do not know the water-borne diseases. This therefore, also calls for a public health effort to educate the public about the various diseases and in particular, the water-borne diseases, their transmission, signs and symptoms among others.

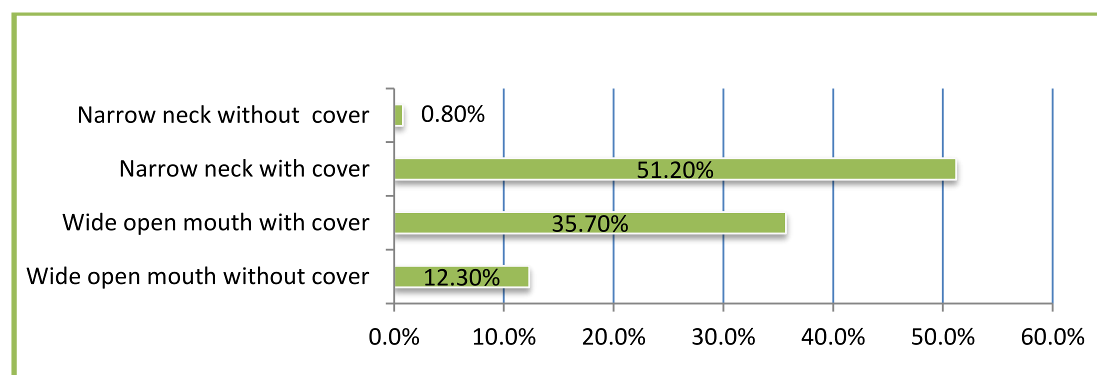
Table 4.5 prevalence of Water-borne diseases in the study area

Water borne-diseases	Responses	
	N	Percent (%)
Cholera	82	22.5%
Diarrhea	113	31.0%
Typhoid	139	38.1%
Amoeba	31	8.5%
Total	365	100.0%

The prevalence of water-borne diseases is closely linked to the ways people fetch and store their water for domestic uses. There are various water storage containers available within households in the survey area. According to the survey different types of water containers exist e.g.; with a wide mouth without a cover, wide mouth with cover, narrow neck with cover and narrow neck without cover.

Data showed that majority of respondents preferred the narrow-necked with cover containers (51.2%), followed by the wide-open containers with cover (35.7%). Preference of containers with cover is likely informed by peoples' efforts to prevent water contamination by disease causing pathogens and dirt. This notwithstanding, the survey data showed a significant proportion of respondents (12.3%), use wide open containers without cover and 0.8% use narrow neck containers without cover for their water storage. This practice, in addition to whether they treat or don't treat their water, exposes them to water-borne diseases mentioned earlier.

Figure 4.1 Container used for water storage in the HHs



Good water storage within households is not adequate on its own to prevent diseases. This is because the way water is drawn from the storage container is equally crucial in determining the water quality for use. Thus, this survey assessed the way households collect water from the storage containers, including use of specific clean mug, any other mug and others. The survey data showed that about half of the respondents (47.6%) used a specific clean mug, 27.4% use

any other mug, while 25.0% use other ways to collect water from the containers. The last two categories of respondents represent a group with risky and pre-disposing practices.

4.1.6 Household water uses

The purpose to which water is used was almost uniformly distributed across the households. Water uses include cooking, washing, drinking and bathing. The four uses of water are very crucial to the practice of sanitation and hygiene as well as having a nutritional impetus. This implies that any factor that could bring about a negative access to water may cause an imbalance with regard to the four areas of water uses. It is therefore advisable that interventions targeting these households be undertaken to sustain these four crucial pillars of sanitation and hygiene.

Table 4.6: Water uses within HHs

Water uses	Responses	
	N	Percent
Cooking	252	24.9%
Washing	256	25.3%
Drinking	253	25.0%
Bathing	251	24.8%
Total	1012	100.0%

4.2 Access to Decent Sanitation

4.2.1 Availability of latrines

Excreta disposal is very crucial in regards to sanitation in households. In relation to this, the survey sought to find out whether the respective households have a latrine for sanitation needs and the findings reveal that all respondents (100%) have access to latrines or toilets. However, the quality of the latrines varies widely. Key informants also noted that unhygienic excreta disposal pre-disposes people to risks of various diseases such as food-borne and water-borne diseases.

Table 4.7: Access to toilets during daytime and night times

Time	Types of sanitation facilities used by household members				
	Private	Communal - within plot	Commercial	Other	Total
a) Daytime	43	206	5	2	256
	16.8%	80.5%	2.0%	0.8%	100 %
b) Night time	39	215	1	1	256
	15.2%	84.0%	0.4%	0.4%	100 %

The analysis of the data shows that 95.5% of respondents reported that they are within a distance of less than 50 meters from the toilets. Only 4.5% reported that their toilets are between 50-100 meters away from their residences.

Pic 4.2: A dilapidated pit latrine in Kariobangi North

According to the data from the survey, majority of respondents reported using communal toilets within their residential plots (80.5%). Another 16.8% use private toilets and 2.0% use commercial toilets and only 0.8% use other means.

Information from the survey shows that at night, only 15.2% of respondents use private toilets while 84.0% use communal toilets within the plots.

Another 0.4% use commercial and other methods of relieving themselves. In the case of Kasarani and Marura Public Primary schools, which fall under the target area and serving over 2500 pupils, the sanitation situation is in dire need of rehabilitation since the pupils find it difficult to use the facilities.

Pic 4.3: Pupils using some of the sanitation facilities which are in a deplorable state

The survey also indicated that Githurai open air market is in need of water and sanitation facilities because at the moment the market has one sanitation block with four cubicles serving 5,000 traders on a daily basis. The market has no water supply and it has no sewer line and it has a poor drainage system. The Market also does not have means to handle solid waste.

Similarly, in Mathari 4A, there is an informal settlement with a population of 5,000 people who practice open defecation (flying toilets).

Pic: 4.4: An isolated pit latrine emitting effluents to sewer line in Mathari 4A informal settlement

This settlement is said to have no water and sanitation facility. The residents buy water from unhygienic water kiosks neighbouring the area. Another significant finding in this area was the high prevalence of HIV/Aids in the area as well as water borne and other water related diseases.

Future development interventions should be aimed at construction of buildings with inbuilt toilets so as to reduce the distances, especially at night time and also making efforts to ensure that residents can afford the fee charged by commercial toilets. The number of communal toilets should also be adequate and strategically placed to meet the needs of all the residents.

4.2.2 Disposal of sanitary pads

The survey inquired whether it is important to have a bin for disposal of sanitary pads.

Pic 4.5: No privacy: One of the girl's sanitation facilities In Kasarani Primary School. The facility has poor lighting and lacks doors in its cubicles. The facility also has only one sanitary disposal bin.

The results from the survey showed that an overwhelming proportion of 94.5% of respondents expressed their opinion that there should be a disposal bin for sanitary pads inside commercial toilets. Only 5.5% reported otherwise. It should further be noted that gender considerations dictate that design and construction of sanitation facilities should take cognizance of the special needs of the female gender unfortunately, the available disposal bins are few and far between.

Table 4.8: Sanitary pads disposal

Where sanitary pads are disposed off	Frequency	Percent
1. Toilet	37	15.7
2. Dump sites	104	44.1
3. Paper bags, disposed off with other waste	54	22.9
4. Drainage pits	3	1.3
5. Sanitary bin	3	1.3
6. Everywhere	15	6.4
7. Don't know	20	8.5
Total	236	100.0

Observations and discussion with a key informant in Kasarani area noted that the school uses sanitary disposal bins, which is quite encouraging since the other areas in the informal settlements within the study area totally lacked such facilities. This is a good practice which should be replicated in other schools.

4.2.3 Disposal of children's feaces

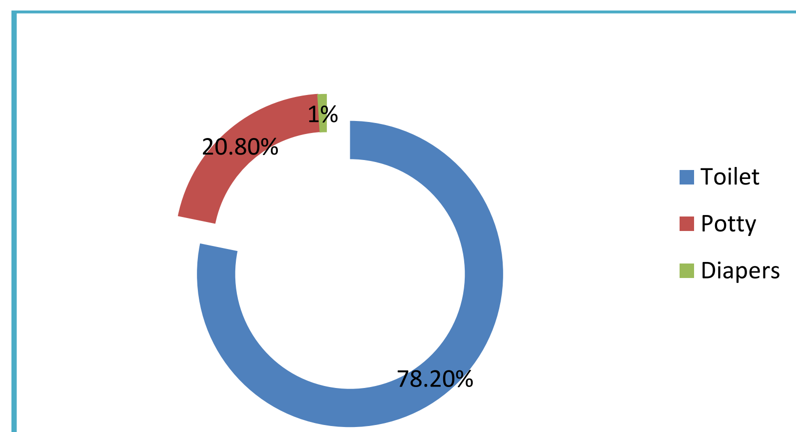
The rationale of availability of toilets and/or potties for small children is also underscored by the survey data. Asked about where they see children relieving themselves, the respondents reported various types of how and where children relief themselves; 57.7% of respondents have seen their children relieve in the toilets, 33.3% in the potty, 6.9% use diapers and 2.1% relieved themselves anywhere.

Table 4.9: Where children relieve themselves more often

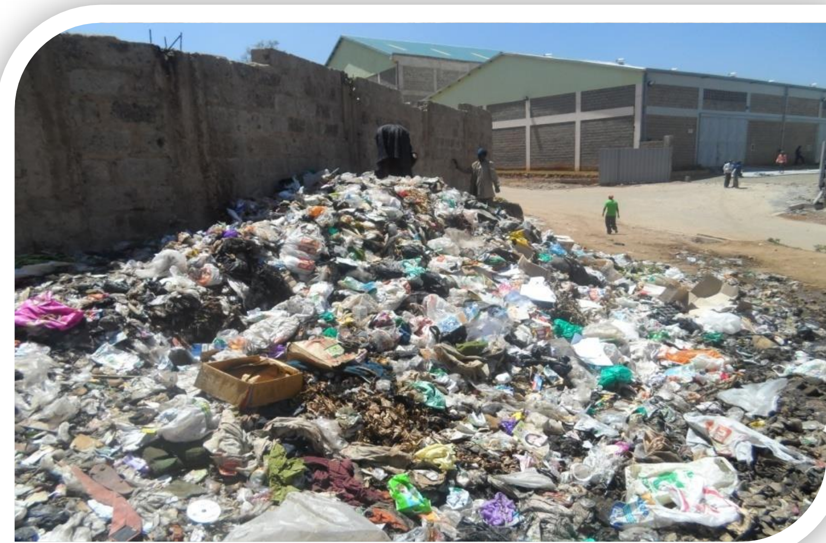
Where children relief themselves	Frequency	Percent
1. Toilet	109	57.7
2. Potty	63	33.3
3. Diapers	13	6.9
4. Anywhere	4	2.1
Total	189	100.0

The disposal of child excreta is also an important public health concern. This was therefore another aspect of interest for the survey, which showed that 98.9% of respondents reported that they disposed the feaces in the toilets and only 1.1% by use of other methods. Preference for children relieving themselves also showed that majority (78.2%) of respondents favoured the toilet as a way of child relieving, 20.8% preferred the potty, and 1.0% preferred use of diapers. The essence here is that the public should be educated on appropriate means of disposing children's excreta because of the health risks/dangers posed by the same.

Figure 4.2 Preferred places for children to relieve themselves



4.2.4 Flying Toilets



Pic: 4.6: Uncontrolled solid waste disposal which includes "flying toilets"

Due to inadequacy and inaccessibility to toilet facilities, people normally have erratic solutions for relieving themselves especially for long calls. Some of them resort to plastic paper bags (commonly known as "*flying toilets*"). The survey sought to find out whether some household members use plastic paper bags for defecation. The findings revealed that 12.1% of respondents' household members use plastic paper bags, while an overwhelming majority of 87.9% reported that they do not use.

At Mathari 4A informal settlement, one enumerator observed during transects walk that "flying toilets" are a normal way of waste disposal.

Disposal of the plastic bags after their use for defecation is a public health concern. It is important that awareness creation on safe disposal of such bags used for defecation should be emphasized.

Table 4.10: Where plastic bags are disposed

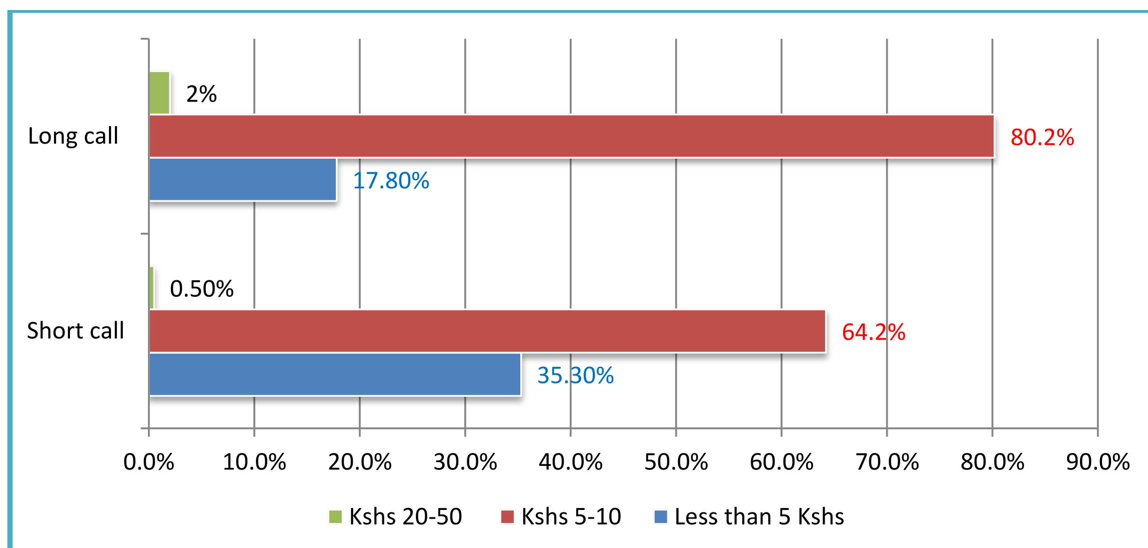
	Frequency	Percent
Refuse pits	6	23.1
Drainage line	9	34.6
Bushes	7	26.9
Other places	4	15.4
Total	26	100.0

From table 4.3, it is notable that for the household members, who use plastic bags, 23.1% are disposed in refuse pits, drainage lines (34.6%), bushes (26.9%) and other means (15.4%). However, the data does not differentiate whether the refuse pits and drainage lines are covered or not.

4.2.5 Amount of money HHs are willing to pay for communally managed toilets

The affordability of toilets is very crucial since it determines the kind of sanitary practices a household may embrace. In urban settings, toilets used may be individual, communal or private commercial facilities. The survey sought to know how much the residents of the target area whose house members used flying toilets were willing to pay for short and long calls. The results showed that 35.3% and 17.8% of respondents are willing to pay less than Kes. 5 for short and long calls, respectively. A proportion of 64.2% and 80.2% would pay between Kes.5-10 for short and long calls, respectively and only 0.5% are willing to spend Kes.50 for the same services.

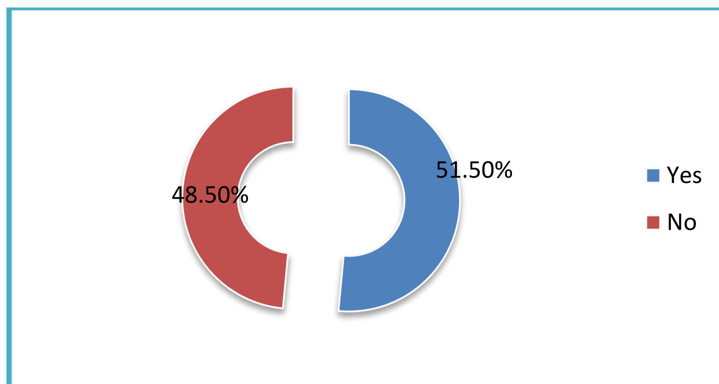
Figure 4.3: Amounts that HHs are willing to pay for short/long calls



In regard to the economic activities and monthly household income in the study area, it is important to note that majority of the respondents are comfortable with spending Kes 5-10 for either short or long calls. These are the common rates elsewhere in the City of Nairobi where people use public toilets. The importance of such observation is that intervention programmes aimed at improving sanitation and hygiene in such settings should put into account, residents' economic activities, monthly household incomes and how much people are willing to spend on such facilities/amenities.

The survey data showed that at least about half (51.5%) of the respondents said the toilets are adequate in their area, compared to 48.5% of respondents who reported that the area has a deficit of toilets.

Figure 4.4: Adequacy of existing toilet/latrine for all residents



The reported toilet inadequacy portrays a huge public health concern as relates to human waste disposal in the area. This implies that about half of the population is likely to have no access or difficult access to toilets. Even for those who reported adequacy of toilets in the area, many may not be able to access them due to other factors such as finance and location.

4.3 Household hygienic practices

4.3.1 Hand-washing

The practice of hygiene is another issue of public health importance. One practice which is often emphasized is hand washing. The survey therefore sought to find out the time when people wash their hands. In response to the question "When do you wash your hands?" The results show that respondents washed their hands at different times on various occasions such as before preparing food, after handling garbage, before eating and after touching children's excreta. Of these situations, 80.1% of cases reported that they washed hands before they prepared food, 73.2% said they washed hands after handling garbage, 93.5% before eating and 10.2% after touching child's excreta (see table 23). It should be noted that most adults consider children feaces to be harmless contrary to scientific evidence.

Table 4.11: Hand washing occasions

When respondents wash hands	Responses	
	N	Percent (%)
After defecation	231	26.8
Before preparing food	197	22.8
After handling garbage	180	20.9
Before eating	230	26.7
After touching child's excreta	25	2.9
Total	863	100.0

The aspect of hand washing is closely tied to that of how the hands are washed and what is used to wash them.

Pic: 4.7: Inappropriate hand washing facilities in Murema Primary School

There are various ways of what is used to wash one's hands including use of soap, lotion, ash and water. In assessing what the residents in the survey area use for hand washing, the results showed that an overwhelming proportion (88.9%) said they use soap and water compared to 11.1% who reported using only water. From a public health and good hygiene point of view, use of soap or any other germ killing agent is highly recommended. This is to eliminate the disease causing pathogens which are likely to be ingested by people when they use dirty hands to feed. The proportion of those who do not use soap is significant and efforts should be directed at such group to encourage them to use a disinfecting agent when washing their hands.

It is observed from the data that majority of respondents reported that they washed their hands at such times before food preparation, after handling garbage and before eating. The survey also sought to find out from the respondents why people wash their hands. From the findings, 88.9% of cases said they wash their hands in order to prevent diseases, 54.2% said it is because of cleanliness, 13.4% said that it smells nice and only 0.4% because of other reasons. The positive response especially about disease prevention should be underscored and intervention designed to sustain that drive toward why people should wash their hands.

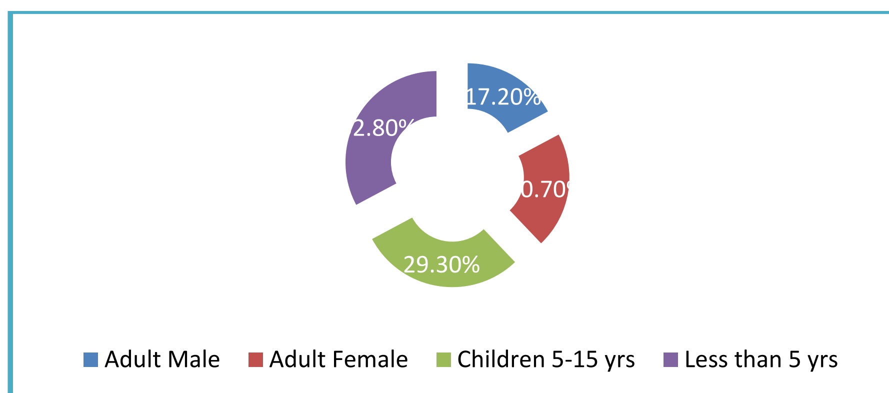
Table 4.12: Importance of hand washing

Importance of hand washing	Responses	
	N	Percent (%)
Prevent diseases	225	56.7
Smells nice	34	8.6
Cleanliness	137	34.5
Other	1	0.3
Total	397	100

4.3.2 Cases of diarrhea within households

The above results showed that an overwhelming proportion (75.2%) of respondents said they did not have any member of their households who had suffered from diarrhea in the last two weeks) compared to 24.8% who reported that they had had cases of diarrhea (in their respective households. The survey data also reported that, of those reporting diarrhea cases in their households, 17.2% of the episodes were by adult males, 20.7% by female adults, 29.3% by children between 5-15 years, and 32.8% by children less than five years of age. Notably, discussion with key informant interviews in all other villages in Kasarani, Githurai and Mathari 4A also shows that diarrhea is common due to cases of open defecation.

Figure 4.5: Cases of diarrhea within households



The indication here is that diarrhea is more common among children, especially those of <5 years of age. The data also show that at least every person in the household is vulnerable to diarrhea, irrespective of the age. Therefore, public health interventions should be designed in such a fashion as to take into consideration the differentials in age and gender. Priority interventions should target the more vulnerable groups such as the children under five years and the female gender, in general.

4.3.3 Causes of diarrhea within the community

Diarrheal disease in the target area was attributed to various causes such as contaminated food, dirty water, dirty hands and weather. There were other people who did not know the causes. The survey data showed that majority of the respondents (68.0%) attributed diarrhea to dirty water, 64.9% to contaminated food, 15.9% to dirty hands. A significant proportion of 6.3% of respondents did not know the causes of diarrhea.

Table 4.13: Causes of diarrhea in the community

Causes of diarrhea in the community(a)	Responses	
	N	Percent (%)
Contaminated food	155	40.4
Dirty water	165	43.0
Dirty hands	38	9.9
Weather	2	0.5
Do not know	15	3.9
Others	9	2.3
Total	384	100

Pic: 4.8: A recipe for diarrhea/cholera: A trader cooking close to an open drainage in Baba Dogo

It can be deduced from these finding that public knowledge about causes of diarrhea in the surveyed community is still low and interventions should be directed at raising the community knowledge about the causes, transmission, signs and symptoms as well as the treatment and management, control and prevention measures.

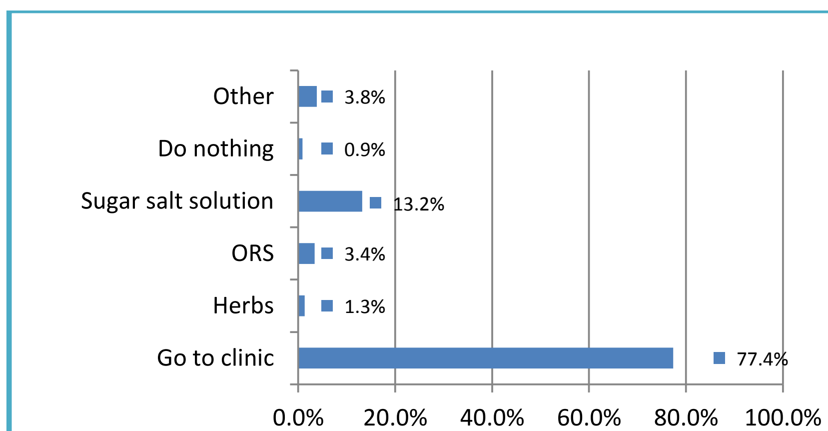
4.2.4 Management of diarrhea amongst children

Diarrhea cases are managed through use of various interventions. In children, management of the disease may be done conventionally or unconventionally including hospital-based interventions, use of oral rehydration solution (ORS), and use of herbs among others.

Pic 4.9: Unhygienic food handling in Marura Primary School, Kariobangi North which can be a recipe for diarrheal disease

In the survey area, it was reported by majority (77.4%) of the respondents take the children to the clinic compared to 0.9% who would do nothing in the event of an episode of diarrhea to the children. Less than two percent (1.3%) would use herbs, 3.4% would use ORS and a significant proportion of 13.2% would use sugar/salt solutions in managing diarrhea in children.

Figure 4.6: Diarrheal management in children



The above data implies that a significant proportion of respondents would not take the sick children to hospital but would administer management strategies on their own or do nothing. It should be noted that diarrhea is a very deadly disease and fatal cases may be high if they are poorly managed. Therefore, future interventions should focus on both hospital-based and home-based healthcare services depending on the severity of the prevailing symptoms. While home-based interventions may be a priority for most people, they should be encouraged to seek hospital-based healthcare services which ensure appropriate diagnosis and prescriptions for appropriate treatment.

4.3.5 Solid waste disposal

The survey data showed that the respondents use plastic bags, illegal dump sites, refuse pits, open grounds, rivers amongst other methods of household solid waste disposal. It was found out that the majority (43.8%) of respondents in the survey area use un-designated dumpsites and 41.2% use paper bags which are then collected by youth groups in the area.

Pic 4.10: Solid waste-a source of income for the youth in Baba Dogo

Some residents reported using plastic bags and throwing them into the nearby rivers/streams (2.1%), while others put the solid waste in paper bags and throw them into the open grounds (8.6%).

Table 4.14: HHs Solid waste disposal

Waste disposal	Frequency	Percent (%)
Put into plastic bag and throw in a river	5	2.1
Illegal dumpsites	102	43.8
Put into paper bag, throw around	20	8.6
Put into paper bag, youth group collects	96	41.2
In a refuse pit	10	4.3
Total	233	100.0

4.3.6 Gender role in solid waste disposal

Management of domestic solid waste at the household level was also an aspect of assessment by the survey. It is shown that majority of households surveyed reported that a wife in a household is the one mainly responsible for household solid waste disposal.

Pic: 4:11 Effects of uncontrolled solid waste disposal posing health risks

This is represented by a proportion of 57.5% compared to the household husband at 21.0%. In other households, the boy child (7.3%) and girl child (5.2%) are responsible for waste disposal. A further 9.0% of respondents reported that any or all household members are responsible for waste disposal.

Table 4.15: HH member responsible for solid waste disposal

HH member responsible for waste disposal	Frequency	Percent (%)
Husband	49	21.0
Wife	134	57.5
Girl child	12	5.2
Boys	17	7.3
All family members	21	9.0
Total	233	100.0

Ideally, it then follows that household based wives should be the target group for interventions aimed at educating the community in appropriate domestic solid waste management and disposal. Nonetheless, in a general sense, all household members should be targeted for education interventions in household solid waste disposal.

The indication from the data is that apart from the organized youth groups, domestic solid waste is mainly not disposed off appropriately in the survey area. Specifically, throwing of solid waste into the river/stream, undesignated dumpsites and open grounds is not only an environmental nuisance but also pollutes water, air and cause diseases or attracts disease transmission vectors like rats.

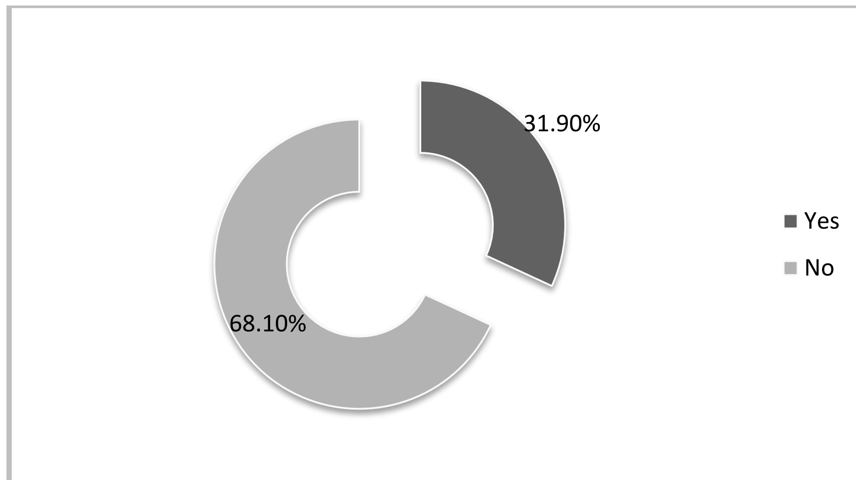
Pic: 4.12: Solid waste from neighbouring industries in one of the surveyed areas

It is therefore in the public and environmental health interests that future interventions should be designed in order to develop strategies which advocate for appropriate disposal of domestic solid and liquid waste. Such may include construction of a local protected waste storage pits/sites before collection and disposal by concerned authority, construction of incinerators among others. Such measures will not only safeguard the environment but will also reduce the health risks posed to human beings and animals.

4.3.7 Access to County Government solid waste disposal services

Disposal of solid waste does not end at the household but also extends outside. This is where the waste is collected from the house's temporary storage site for final external disposal. This collection and disposal is organized on specific days either weekly or bi-weekly and collected by County Lorries. Within the area under the study it was observed that youth groups participate in the collection and disposal of solid waste.

Figure 4.7: Access to County Government solid waste disposal services



The survey results show that majority of respondents (68.1%) do not receive solid waste disposal services compared to only 31.9% who access the services. This means that majority of the residents have resorted to other means of disposing their domestic solid waste such as engaging locally organized youth groups or even throwing the waste into the nearby rivers/streams, bushes or unprotected open grounds.

It is worth noting that the Nairobi County Government has failed to provide such services regularly in most of the informal settlements within the County and whenever they do such services, they are very sporadic. Key informants interviews and transect walks in Kasarani and Kariobangi North revealed that most sanitation facilities are pit latrines which are connected to septic tanks as there is no local trunk sewer system in the area in spite of the large population of about 150,000 people.

Pic: 4.13: Youth group members collecting garbage without protective

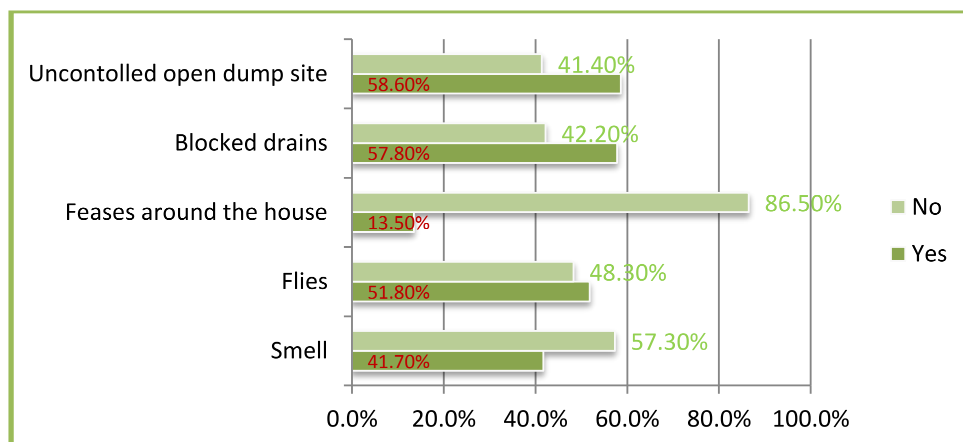
An organized sustainable mechanism should be designed to address the solid waste management challenge. This can be approached from the community's locally available resources i.e. use of the bottom-up approach strategy to ensure that interventions are community-based. In Kariobangi, the groups revealed that they charge between Kes 200 to 300 per household per month for waste disposal services. The drainage system in Kariobangi was noted to be frequently blocked and overflowing into the streets.

Pic: 4.14: A clogged and incomplete drainage system in one of the slums in the survey area

4.3.8 Household hygiene observations

The survey also used observation as a technique of data collection in the target area. The observations mainly focused on five areas regarding the general cleanliness around the households. These included pungent smell, flies, and feaces around the houses, blocked drainage systems and undesignated open dumpsite. The results are shown in the figure below.

Figure 4.8: Observation of the general cleanliness surrounding areas of the HHs



The qualitative data from the survey reinforced the fact that there are poor practices regarding waste disposal in the survey area. According to the findings, 58.6% use undesignated open dump sites, compared to 41.4% who reported lack of the same. These were observations made by the enumerators in addition to household and key informant interviews.

Undesignated open dump sites are not only an eye sore/public nuisance but also a public health risk. Such practice also facilitates the blockage of waste water drains as indicated by 57.8% of observations compared to 42.2% observations. Drainage systems are likely to be blocked by waste such as polythene bags and other solid waste generated from the households and the surrounding industries.

Pic: 4.15: Solid waste disposal in an open dumpsite in Majengo slum, Kariobangi

The haphazard waste disposal in undesignated dumpsites in the area is also closely linked to the issue of flies, which transmit various vector-borne diseases such as diarrhea. This is reflected in the over half of the observations (51.8%) who reported that there are flies around the households surveyed. Since majority of households surveyed did not have feaces scattered around, then the presence of flies around is likely to be linked with the uncontrolled open waste disposal dumpsites and blocked drainage systems.

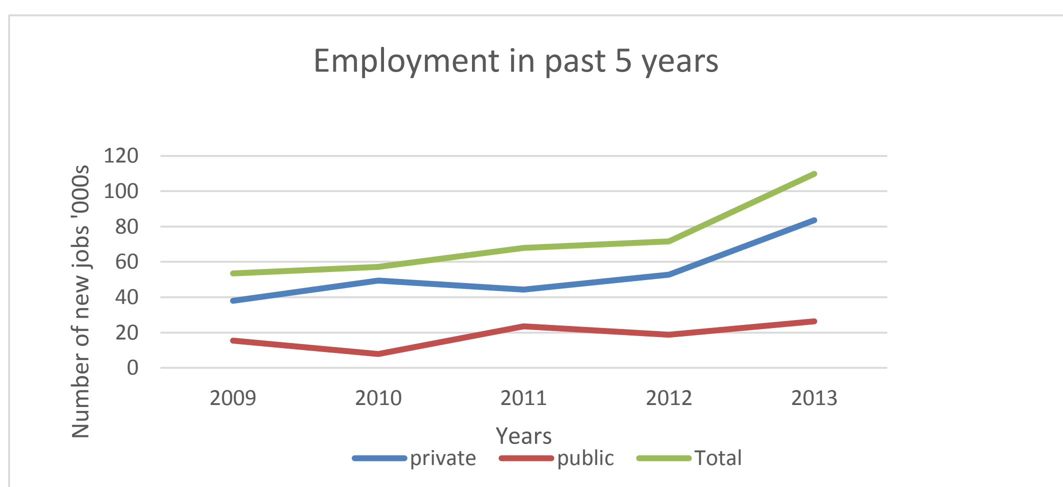
CHAPTER 5: KEY FINDINGS – EMPLOYMENT AND SKILLING

5.1 Status of Employment and Skilling in Kenya

Kenya's population growth rate has been decreasing over time, it dropped from 3.8 percent in 1979 to 3.3 percent in 1989 and to 2.9 percent in 2009. Because of this, young people (aged between 18 and 34 years old) constitute more than a third of the entire population, while nearly 80 percent of Kenyans are less than 35 years old. This represents great economic and social opportunities, but also enormous challenges[4].

Unemployment is a major challenge in the country as is the situation in many developing countries. The rate of unemployment is estimated at 8.6 per cent, having improved from 12.7 per cent in 2005/6[5]. The World Bank estimates that approximately 800,000 Kenyans join the labor market each year and only 50,000 succeed in getting professional jobs. Not surprisingly, the high level of unemployment has been blamed for escalating incidents of crime and insecurity in the country. However, from the Economic Survey Report 2014[6] there has been a gradual increase in formal sector new jobs especially in 2012-13 as shown in the table below.

Figure 5.0: Employment statistics in Kenya in the last 5 years



Adapted from Kenya Economic Survey Report 2014

Skill Building

In Kenya the number of fully registered Technical, Industrial, Vocational, Entrepreneurship Training (TIVET) institutions rose from 180 in 2009/10 to 411 in 2011/12. Consequently, total enrolment in TIVET programmes increased from 36,586 in 2009/10 to 79,114 in 2010/11[7]. The low enrolment in TIVET programmes is attributed to the rise in demand of university education that has seen the setting up of university campuses across the country.

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[4] UNDP Report 2013 'Kenya's Youth Employment Challenge' Pg. 5

[5] http://www.kippra.org/ Kenya Economic Report 2013 Pg 8

[6] Kenya National Bureau of Statistics; Kenya Economic Survey Report 2014

[7] http://www.kippra.org/downloads/Kenya%20Economic%20Report%202013.pdf

The private sector players have contributed a lot to imparting skills to students who have completed secondary education. The number of middle level private colleges offering modern training and hands-on experiential modules are increasing in most urban and rural areas.
The NGOs have also contributed in setting multi-purpose centers and more so constructing resource centers offering alternative knowledge and skills growth. The philosophy behind community resource centers is the belief that community problems need community solutions.

In the recent past Maji na Ufanisi, with financial assistance from UNHABITAT, constructed and commissioned a multi-purpose resource center in Kibera informal settlement which caters for school going children and out-of-school youth as well as offering services to persons living with disabilities. The center has served many purposes such as a social hall, an internet room, and a library. The youth who otherwise would have indulged in negative coping mechanisms due to unemployment stress have gained life skills through the center that include entrepreneurship and social work.

In this regard and given the rising numbers of school leavers in Kasarani, Maji na Ufanisi will use the same model together with communities in Kasarani to set up a community resource center.

Some of the Government key projects aimed at reducing unemployment and promoting skill building include the creation of The Constituency Development Fund (CDF), The Youth Enterprise Fund, The Women Enterprise Fund, and The Uwezo Fund. These funds have been used to increase entrepreneurships, group formations among the youth and women as well as to train them on hands-on skills. The Uwezo fund also target persons living with disabilities on empowering them economically.

The various trainings harnessed through the above funds across the country include but not limited to; book keeping, marketing, business planning, communication skills and life skills. All these trainings enable the beneficiaries to engage in entrepreneurship which reduce unemployment.

5.2 Status of employment, skilling in Nairobi County

Nairobi has a population of between 3.2 to 3.5 million and there are 17 constituencies represented in the National assembly by elected members of parliament. The Nairobi Governor, Dr. Evans Kidero is managing a bigger allocation of National Budget compared to other 46 Counties as well as the Youth Enterprise and Women Enterprise Funds. The Youth Enterprise Fund targets 20 youth groups per constituency whereas the Women Enterprise Fund targets 40 women groups per constituency[8]. This means that in the 17 constituencies within Nairobi County 340 youth groups and 680 women groups are supported economically.

5.3 Status of employment and skilling in Kasarani Constituency

Kasarani constituency, under which Garden City is being established, has an estimated population of 338,925 people according to the 2009 population census. Kasarani constituency was allocated KES 85 Million of CDF in 2013/14 budget which enabled achievement of education, health, and

[8] Nairobi County Development Profile: Ministry of Devolution and Planning. (May, 2013)

infrastructure outcomes[9]. The major challenge of the Fund has been the poor investment decisions influenced by political leaders who sit on the CDF Boards. This is one of the largest low income area and was allocated KES 15.2 Million from the Uwezo Fund which if compared to the population size is insufficient amount.

Generally, the major livelihoods within Kasarani constituency includes small scale businesses (kiosks, hawking, open air markets) and casual jobs in nearby factories. From the assessment, residents mainly spend their income on rent, food and children's education.

[9] http://www.cdf.go.ke/disbursement/60-disbursements-for-ordinary-allocations-for-finacial-year-20122013-as-9th-october-2012

CHAPTER 6: KEY FINDINGS – SECURITY

6.1 Status of Security in Kenya

According to ANNUAL CRIME REPORT FOR THE YEAR 2011, the security situation in the country for the year 2011 was characterized by an increase in all categories of crime reported to police. The crime figures reported nationally increased by 4,954 cases or 7%, as compared to the year 2010.The police records showed an increase in homicide, offences against morality and other offences against persons, robbery, breaking, stealing, and theft by servants, vehicle and other theft, criminal damage, economic crimes, corruption, offences involving police officers and other penal code offences.

The causes of crime in the country has been attributed to the following

(i) Poorly equipped police service
  - inadequate motor vehicles;
  - outdate communication equipment;
  - police civilian ratio is 1: 850 instead of 1:450 which is the recommended international standard
  - Poor documentation

(ii) Poor working environment
  - Dilapidated houses;
  - Poorly furnished offices;
  - Inadequate houses and limited privacy;

(iii) Corruption within the rank and file in the policy force
  - Culture of impunity within the government rank and file;
  - Appointment and promotions based on political and ethnic consideration/connection instead of meritocracy;
  - Political and ethnic protection ;
  - Low level of education among majority of police service recruits

(iv) Competition for limited natural resources especially among the nomadic areas of Kenya (water and pasture) due to prolonged droughts in pastoralist areas

(v) Inequitable distribution of resources

(vi) Proliferation of small arms and light weapons

(vii) International terrorism (Al shabab)

(viii) Organized criminal groups aligned and sponsored by politician

(ix) High rates of unemployment among the youth

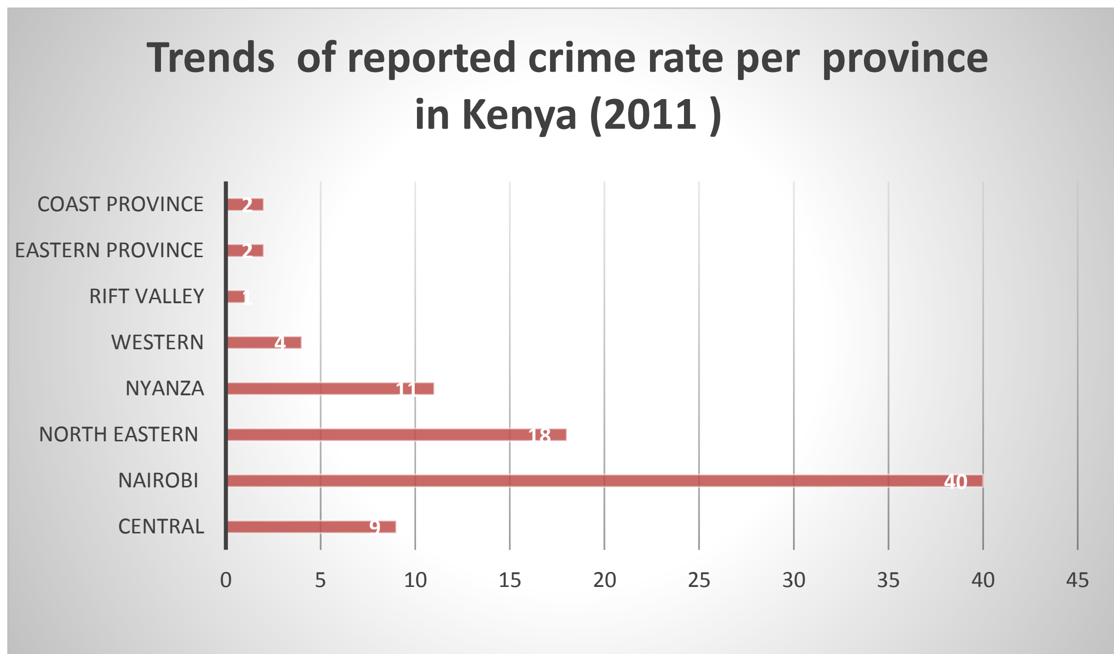
(x) Cattle rustling

(xi) Substance/drug abuse

(xii) Extreme poverty among sections of community

(xiii) Lack of employment opportunities

Figure 6.0: Kenya Police, Annual Crime rate for the year 2011 per province



6.1.1 Impact of insecurity in Kenya

- Negative security advisory internationally
- Possibility of closure of international(multi-lateral and bilateral organisation) operations in the Country leading to negative publicity
- Closure of retail business
- Lose of foreign exchange as tourists and foreign investors run way
- Loss of human life
- Loss and destruction of property
- Loss of foreign investors
- Loss of sources of meaningful livelihoods
- Poor business environment
- Unemployment
- Social disintegration

Table 6.0: Comparative crime figures for the months of January – December 2010/2011

S/N	Category of the crime	2010	2011	Diff	% Diff
1	Homicide	2239	2641	402	18
2	Offence against morality	4817	4703	-114	-2
3	Other offences against persons	20012	20144	132	1
4	Robbery	2843	3262	419	15
5	Breakings	6453	7325	872	14
6	Theft of stock	2244	2269	25	1
7	Stealing	11986	13797	1811	15
8	Theft by servant	2591	2889	298	12
9	Vehicle and other thefts	1365	1768	403	30
10	Dangerous drugs	5081	4649	-432	-9
11	Traffic offences	103	100	-3	-3
12	Criminal damage	3327	3345	18	1
13	Economic crimes	2662	3036	374	14
14	Corruption	62	52	-10	-16
15	Offences involving police officers	37	27	-10	-27
16	Offences involving tourists	1	0	-1	-100
17	Other penal code offences	4956	5726	770	16
18	**Total**	**70779**	**75733**	**4954**	**7**

6.1.2. Past and Present Security Mitigation Measures Undertaken in Kenya

To counter insecurity, several initiative have been made by both national and county government in past and present. The key informants interviewed during the baseline concurred with these initiatives and recommended enhancement of the same. The following are the ongoing initiatives which the government has called upon the other stakeholders to support.

- Street/roads lighting within major highways and slums areas through private public partnership initiative (as was done in the past through adopt a light initiative).
- Community policing that include cooperation between policy and civilians in policing and information sharing

- Nyumba Kumi initiatives which entail forming neighborhoods clusters of 10 households which are close to each other, knowing the owners/residents by name and what they do for livelihoods
- Peace building through intra and inter community dialogue
- Community capacity building on conflict prevention and management
- Engaging youth in meaningful livelihoods opportunities
- Collaboration between various stakeholders (Police, National campaign Against Drugs Abuse Authority, NGOs and CSO, Community and Youth) to eliminate substance abuse

6.2 Status of Security in Nairobi County

According to the 2006 World Bank study[10], feelings of insecurity ranked high in the Nairobi city's informal settlements. Nearly two-thirds (63%) of the households concerned reported that they did not feel safe inside their settlements.

Surprisingly, this perception did not vary by gender. Just over a quarter (27%) reported that a member of their household had actually experienced a criminal incident over the previous 12 months, with a higher proportion (31%) of male than females (23%) being affected. According to UN-HABITAT (2007), over the last two decades violent crimes such as armed robbery, carjacking, murder, mugging, physical and sexual assault have been on the increase in Nairobi city. Firearms trafficking, largely a consequence of civil wars in neighbouring countries, is a major contributor to crime and violence in the city. Criminal youth gangs are also a growing phenomenon in Nairobi slums and its periphery.

The United States Department of State (OSCA)[11], Bureau of diplomatic security notes Kenya to be critically rated for both crime and transitional terrorism. Nairobi is noted to lead and the crime is said to occur anywhere any time within the city. According to Kenya police crime rates 2012[12], Nairobi leads other counties with 40% of the reported crime rate in the country.

Most of the reported crimes involve burglaries, business invasions, carjacking and kidnaping with increased terrorism attacks. The report implicated most of slum areas including Mathari, karibangi, Baba Dogo, Kawangware, and low middle class estates like Githurai, Huruma and kayole as dens for the gangs.

In Nairobi, criminal acts are committed within any part of the city and its periphery. However, there are specific crime prone areas(hot spots) in the city which include, town centre targeting banks and retailer shops, the stretch between Pangani and Githurai along Thika Super highway, Kariobangi, Baba Dogo, Kawangware, Dondora, Umoja/Donholm, Eastleigh, Mathare and Kawangware. Some of the past and present most wanted criminal lived in these slums which have acted as their operation base.

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[10] World bank crime study, 2006, Nairobi, Kenya

[11] Kenya 2012 OSAC crime and safety Report Nairobi-2012

[12] Kenya crime statistics –Kenya Police 2012

The Nairobi County Government acknowledges the deteriorating security situation in the city and surrounding areas. It has been noticed that the ingredients of insecurity are high unemployment, poverty, inadequate security personnel, illicit drugs, and illegal firearms. The County Government has an objective to reduce unemployment by 30% and improve security by 30% by 2017. The ongoing activities following this objective include; community policing, recruitment and training of more security personnel, rehabilitating and constructing chiefs and administration police units, erecting security lights in insecure areas, and intensifying police patrols.

6.3 Status of security in Kasarani District

The existing police crime data (from the Kenya police website) cover the whole of Nairobi as county. The report has no zeroed to specific sub counties within the city. It though mentions the crime hot spots in the county. The areas under study is specifically mentioned for carjacking, burglaries, illicit drugs, mugging and extortion by proscribed gangs/groups

During the Garden City baseline survey, the key informants who were interviewed from the five study areas (Mathari 4A, Kariobangi North, Githurai and Kasarani) bordering Baba Dogo agreed that there are high levels of insecurity. The common cases of insecurity include muggings, burglaries, extortion and in some cases, rape. Insecurity episodes were said to happen mostly at night. In Kasarani area, cases of car-jacking were reported to be frequent. The respondents cited the main causes of insecurity as idle and jobless youth, police laxity, drugs and school dropouts.

CHAPTER 7: KEY FINDINGS – OTHER NON FOCUS THEMATIC AREAS

7.1 Health

7.1.1 Status of health services in Kenya

World Health Organization (WHO) estimates that 1.8 million people die every year globally from diarrheal diseases including cholera with under five children accounting for 90% of the deaths. A special session on children of the United Nations Assembly (Building a World fit for Children May 2002)[13], reported that nearly 5,500 children die every day from diseases caused by contaminated food and water and 70% of this deaths occur in developing countries.

Poor sanitation costs Kenya KES 27 billion or US$s324 (Water and Sanitation Programme report 2012[14]).This is 0.9% of Kenya GDP. Over 5.6 million Kenya have no access to sanitation facilities and defecate in open. These people who cannot access safe sanitation are socially and economically marginalized. In Nairobi, they are found in the informal settlements/slums. Disease prevalence is also common within these settlements.

According to Kenya Demographic Health Survey (KDHS 2009), Infant mortality rate was 52/1000 lives birth while under 5 mortality rate was 74/1000 lives birth nationally, down from 115 and 77 deaths in 2003 Kenya Demographic Health Survey. The child mortality rate in the Nairobi slums has been placed at over two times the rate for Nairobi in general: 151 deaths per 1,000 births compared to 61/1,000 for children under five years of age (JHPIEGO, 2007). 26% of children die as a result of diarrhea each year in the urban slums (JHPIEGO, 2007).

One study conducted from January 2003 to December 2004 found that acute respiratory infections accounted for 26% of deaths among children under five in Korogocho, a neighboring slum of Mathare Valley (Kyobutungi et al., 2006). Slum children have less access to healthcare, including immunization, and subsequently face higher mortality rates than even their rural counterparts. For instance, infant, child, and under 5 mortality rates are higher in the slum communities of Nairobi compared to rural Kenya.

Full immunization coverage is also 25 percent lower in the slums compared to rural Kenya while the incidence of common childhood illnesses are two to three times higher in the slums relative to rural areas-African Population and Health Research Center (APHRC) (2002)[15]. Population and Health Dynamics in Nairobi's Informal Settlements. This is a significant number of deaths and reflects lack or limited access to health care and services within the slums areas which include the study area. Over 43 % of the children within Mathare and other slum areas from within did not

[13] The United Nations General Assembly Special Session on Children 8-10 May 2002

[14] Water and Sanitation report 2012

[15]African Population and Health Research Center (APHRC) (2002)[15]. Population and Health Dynamics in Nairobi's Informal Settlements study

have immunization cards implying they may not have received complete immunization thus pre disposing them to high morbidity and mortality emanating from immunizable diseases[16]

Factors Contributing to Poorer Health of Slum Dwellers

Many factors specific to the informal settlement context contribute to the poorer health of the residents. Environmental factors include i) physical factors that have a direct effect on health – overcrowding, poor water and sanitation and poor hygiene all increase the risk of communicable diseases and social factors such as alienation, unemployment, ethnic tensions and violence which tend to have a more indirect effect on health.

Coverage of key child survival interventions is lower in the informal settlements for Nairobi County and the national average (NUHDSS 2003 and KDHS 2003). However, results from ACF-USA nutrition survey 2008 suggest that coverage of measles vaccination in Mathare slum is high, at 90.5%. Preliminary results from the Concern worldwide baseline survey of 2009 indicated coverage of vitamin A as 58%, while de-worming was 37%[17].

7.1.2 Status of health services in Nairobi County

Rapid urbanization has resulted in high population density in Nairobi County. Nairobi's population is approaching 4 million inhabitants with 60% of the population living in informal/slums areas. The county faces the challenge of providing all social amenities especially in the informal settlements like Mathari, Kariobangi, Kawangware, Kibera and Mukuru and low middle class estates like Huruma and Githurai areas.

Public Health Issues

Public health department under the ministry of health deals with capacity enhancement of the public on preventive health issues. In Nairobi County, Nairobi Urban and Demographic Surveillance System (NUHDSS) run by APHRC is responsible for collating health information and data within the city slums. The available data from the surveillance work done in the past highlights the chronic poor public health situation of the slum dwellers, who experience high rates of morbidity and higher rates of mortality from preventable causes than their rural counterparts and the national averages. There is high rate of squeeze on household budgets in the face of increasing prices of food and nonfood items. This means that there is proportionally less available to spend on health care, water and sanitation. This is likely to exacerbate the chronic disease problem and other preventable diseases within the slums if not addressed. The underfunding of NUHDSS has limited it from gathering and synthesizing adequate health data from the slums.

Mortality

Disaggregated data show that infant and under-five mortality rates for the poorest slum residents are often higher than in similar groups in rural areas (APHRC 2002, UN Habitat 2003). Infant mortality rate in Nairobi slums is 96 per 1,000 live births – higher than any other region of Kenya and 25% higher than the national average of 77 Under-five mortality rates in the slums (151 per

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[16] Nutritional Anthropometric and mortality survey, children under five years of age, Mathare and part of Kasarani division, Nairobi. UNICEF 17th - 25th November 2008

[17] ACF-US Sentinel site surveillance 2009

1,000 live births) are more than double the Nairobi average of 62 and greater than for rural Kenya (113 per 1000 live births) (UN-Habitat, 2006; APHRC, 2002).

Morbidity

Survey results from study done by KEMRI (KEMRI/CDC nutrition survey March 2008) and ACF (ACF-USA Sentinel site surveillance 2009), indicate morbidity rates among under-two year olds ranges from 25% to 54%. The main causes of morbidity are respiratory symptoms, fever and diarrhea. The high morbidity due to respiratory symptoms corresponds with pneumonia as first cause of death in under-fives. Morbidity rates in 2003 were reported as 33% (Taffa and Chepngeno 2005).

HIV/TB

According to the Kenya AIDS Indicator Survey (KAIS) 2007, the prevalence of HIV in Nairobi Province (9.3%) is the second highest after Nyanza (15.4%) and higher than the national average (7.8%). Disaggregated data for the slum population is not available. However, the urban poor are significantly more likely than their rural counterparts to have an early sexual debut and a greater incidence of multiple sexual partnerships (Nii-Amoo Dodoo et al 2007). This increased likelihood of engaging in risky sexual behaviour puts the urban poor at greater risk of contracting HIV and, as a consequence, TB.

Summary of Key Preliminary Findings from Kenya Aids Indicator Survey (Kais) 2012

(i) HIV prevalence among adults aged 15 to 64 years decreased nationally from 7.2%, as measured in KAIS 2007 to 5.6% in 2012.

(ii) HIV prevalence among children aged 18 months to 14 years was 0.9%.

(iii) HIV prevalence among adults varied by region, with the highest prevalence in Nyanza and lowest prevalence in the Eastern North region. While most regions showed a decreased prevalence from 2007, substantial drops were identified in the Coast, Nairobi and Rift Valley regions.

(iv) Levels of HIV testing have increased with 72% of adults aged 15 to 64 years in 2012 reporting ever having been tested for HIV, a significant increase from 34% in 2007.

(v) Despite the increase in HIV testing levels, 53% of survey participants found to be infected during KAIS 2012 were not aware of their HIV infection. However, this was a substantial improvement from 2007 where over 80% of HIV-infected persons did not know they were infected.

(vi) The proportion of men who were circumcised increased nationally from 85% in 2007 to 91% in 2012. Nyanza region observed the highest increase in male circumcision rates, from 48% in 2007 to 66% in 2012.

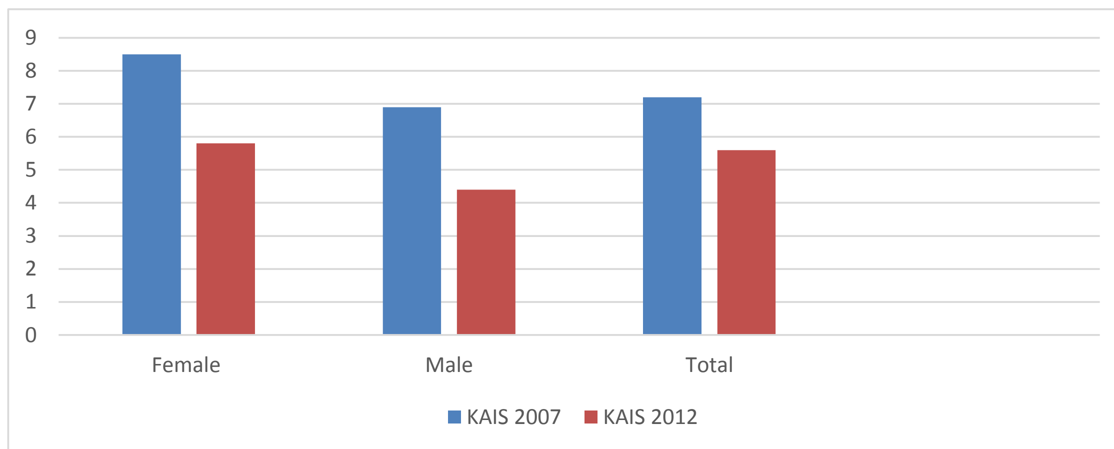
(vii) Low levels of consistent condom use were observed among individuals who reported a sexual partner of discordant or unknown HIV status. This observation held for both women and men aged 15 to 64 years.

(viii) Ninety-two percent of women who gave birth between 2007 and 2012 and attended antenatal care (ANC) for those pregnancies had been tested for HIV infection at ANC, compared to 65% in 2007. Of those who were diagnosed with HIV at ANC, 90% received either maternal or infant antiretroviral prophylaxis to prevent mother-to-child transmission of HIV (PMTCT).

(ix) Reported use of co-trimoxazole was 42% among HIV-infected persons aged 15-64 years. However, use of co-trimoxazole among those who were aware of their HIV infection was high, at 89%.

(x) Fifty-eight percent of HIV-infected persons aged 15-64 years were eligible for antiretroviral therapy (ART) treatment for HIV infection based on a CD4+ T-cell count of 350 cells/µl or less or reported history of current tuberculosis treatment. Of those, 63% were currently on ART. Among those on ART, 78% achieved viral suppression. However, viral suppression among all HIV-infected persons, regardless of awareness of HIV status and ART use was low, at 40%[18].

Figure 7.0: HIV prevalence among women and men aged 15 - 64 years, KAIS 2007 and 2012 in Kenya



(Source: The economic impacts of AIDS in Kenya by Lori Bollinger Sept 1999)

Access to health care

Access to health care services is restricted as there are a low number of health facilities relatively to population size. Health facilities that are available tend to provide poorer quality of service, often operating without formal licences or standard protocols and with severe shortages of medical equipment and supplies (APHRC 2002). Residents tend to pay more for similar services than in other parts of Nairobi (Taffa and Chepngeno 2005).

Slum dwellers tend not to use public health facilities (where treatment is cheaper and in theory free for under-fives and pregnant women) because most of them are not located in the settlements.

[18] Kenya aids Indicators surveys 2012. Preliminary report, National Aids and STIs control Programme. Ministry of Health, Kenya, September 2013

7.1.3 Status of Health Services in Kasarani District

Kasarani Constituency which is the target area had no immunization records by end of November 2008[19]. Without records to track child immunization, many children in the slum areas miss most of the jabs. Failure to complete immunization pre disposes under five children to weak immunity and high morbidity and mortality rates.

A study conducted in 2009-10 by Africa Population and Health Center show that out of a total 503 health facilities in the above mentioned informal settlements, only 1 percent were public, 16 percent were private not-for-profit and 83 percent were private-for-profit. This last category largely consists of unlicensed clinics with no working guidelines or standard protocols. These substandard facilities are where most women seek maternal and child health services as well as other medical services.

The upsurge in private clinics in the urban and peri-urban areas is because they are perceived as friendly, accessible, and well stocked, and perhaps spend time in building relationship with clients. According to Nairobi City County Health care facilities report 2013[20], there are 80 government health facilities with 53 offering immunization services while 30 offer curative services. Over 90 % of the in upper market and middle class parts of the city. The report acknowledges the facilities are in dilapidated state and lack most of services due to ill -funding.

The study area of Kasarani has 62 key health facilities that the residents rely on for health care (Baseline report on Gender Based Violence KWCWC 2012)[21]. Notably, there are only three hospitals serving the residents.

Table 7.0 - Health Facilities in Kasarani District

S/NO	HEALTH FACILITY	GOK	FBO	NGO	PRIVATE	TOTAL
1	HOSPITALS	0	2	0	1	3
2	HEALTH CENTRES	2	3	0	10	15
3	NURSING HOME	0	0	0	1	1
4	DISPENSARY	10	2	0	29	41
5	CLINICS	2	0	0	0	2
	TOTAL	14	7	0	41	62

[19] Nutritional Anthropometric and mortality survey, Children Under 5 years of age, final report. Mathare and parts of Kasarani division. UNICEF 17th November -25th November 2008

[20] Nairobi County Profile 2013

[21] Baseline Survey Report on Gender Based Violence by John K.Otsola for Kenya Women and Children Wellness Centre funded by USAID 2012

The following inferences can be made from the information provided in table 5.0:

- There are only 3 hospitals in the district of which two are faith based and one private;
- There is only one nursing home which is also private; and
- Of the 62 health facilities, 41 representing 66.1% of health facilities are private in nature hence for profit.

Kasarani District Health Facilities Workforce

There is a total workforce of 347 in the health facilities in Kasarani. This presents a deficit of 54.1% of the health workforce that calls for the need of different stakeholders to supplement the existing workforce.

Table 7.1 - Kasarani District Health Facilities Workforce

S/NO	CADRE	CURRENT STAFF	DEFICIT
1	Medical Doctors/Dentists	13	14
2	Registered Clinical officers	55	45
3	Nurses	200	497
4	Lab Tech	36	14
5	Pharm. Tech	22	28
6	PHO's/PHT	14	0
7	Nutritionists	7	43
	TOTAL	347	641

Source: Baseline Survey Report on Gender Based Violence by John K. Otsola for Kenya Women and Children Wellness Centre funded by USAID 2012

From table 7.1, it can be seen that the staffing levels indicate a shortage of 45.9% which inevitably affects the quality of health services that are provided in Kasarani District.

Kasarani District Major Health Facilities:

The following are the most frequently utilized health facilities in Kasarani. Maji na Ufanisi would need to form and forge partnerships with the 19 major health facilities in Kasarani in the event they would like to implement a health programme. The Geolocation coordinates are critical in utilizing the Google map interface to locate the said facilities.

Table 7.2: Kasarani District Major Government Health Facilities:

S/N	Facility Name	Area Located	Geolocation
1	BABA DOGO HEALTH CENTRE	BABA DOGO	(-1.2441, 36.88416)
2	KAHAWA HEALTH CENTRE	KONGO SOWETO	-1.18716, 36.91278)
3	KAMITI HEALTH CENTRE	KAHAWA WEST/JUJA K	(-1.1761, 36.89342)
4	KARIOBANGI CHESIRE HOME DISP	KARIOBANGI NORTH	(-1.25123, 36.88111)
5	KARIOBANGI HEALTH CENTRE	KARIOBANGI NORTH	(-1.25174, 36.87978)
6	KARIOBANGI MCH / FP DISP	KARIOBANGI NORTH	(-1.25174, 36.87978)
7	KASARANI SHC	KASARANI	(-1.21821, 36.90139)
8	LITTLE SISTERS OF ST FRANCIS	MWIKI	(-1.23415, 36.92214)
9	MATHARE NORTH HEALTH CENTRE	UTALII	(-1.25323, 36.86485)
10	NYS HEALTH CENTRE	UTALII	(-1.24995, 36.86425)
11	1 NYS PUBLIC HEALTH	UTALII	(-1.24995, 36.86425)
12	P & T MCH DISP	MATHARE NORTH	(-1.247265, 36.872106)
13	UTALII COLLEGE DISP	UTALII	(-1.25503, 36.85362)
14	GSU HEADQUARTERS HEALTH CENTRE	GARDEN	(-1.24233, 36.86556)
15	GSU HQ MCH / FO CLINIC	GARDEN	(-1.24233, 36.86556)
16	KAMITI G.K. PRISON HOSPITAL	KAHAWA WEST/JUJA K	(-1.17611, 36.89343)
17	KENYATTA UNIVERSITY CLINIC	KIWANJA	(-1.17123, 36.93214)
18	MATHARE POLICE DEPARTMEN CLINIC	GARDEN	(-1.256133, 36.849069)
19	KAHAWA MATERNITY UNIT	KONGO SOWETO	(-1.18716, 36.91278)

SOURCE: Baseline Survey Report on Gender Based Violence by John K. Otsola for Kenya Women and Children Wellness Centre funded by USAID 2012

The key informants interviewed during the baseline survey conducted by MnU indicated that the health challenges in the study area included inadequate drugs, limited number of health personnel and dilapidated health infrastructure. However, the Nairobi County has embarked on the rehabilitation of some of the Health centers within the Nairobi County in the Nairobi County Development Plan May 2013 and work is yet to start.

Pic 7.0: A private clinic in Mathari 4A informal settlement

Secondary data analysis revealed that a key challenge in the informal settlement targeted in this survey is that, a significant proportion of female adolescents become mothers at very young ages, with 34% of those aged 18–19 having had a child[22]. The lack of jobs and other stable livelihood opportunities also affects young people living in slum settlements disproportionately, as shown in the Kenya World Bank report[23]. The analysis in this World Bank document by Ndugwa et al. underscores the need to identify and address the risky factors and reinforce the protective ones in order to improve schooling, economic, sexual, and reproductive health outcomes of young people in slum settlements.

Provision for good and supportive school environments, constructive leisure activities, relevant sexual and reproductive health information and services, and opportunities for enhancement of economic skills would go a long way in protecting and raising slum children into healthy and productive citizens in future. Key discussion with community health workers in Baba Dogo emphasized this challenge amongst young people.

The key health challenges facing women in slum settlements include high vulnerability to HIV/AIDS, high maternal mortality rates and low utilization of life-saving safe motherhood services such as obstetric care[24] and high unmet need for family planning (Ndugwa et al.,). The low levels of income and low quality of maternity services are key contributing factors to the high maternal mortality rates in informal settlements around Baba Dogo.

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[22]UN-Habitat. State of African cities 2010. Governance, Inequalities and Urban Land Markets. Nairobi, Kenya: UN-Habitat; 2010.

[23]World urbanization prospects: the 2009 revision.

[24]Fotso JC, Ezeh A, Madise N, Ziraba A, Ogollah R. What does access to maternal care mean among the urban poor? Factors associated with use of appropriate maternal health services in the slum settlements of Nairobi, Kenya. Maternal Child Health J. 2009

7.2 Infrastructure

7.2.1 Status of Infrastructure in Kenya

The Kenya Vision 2030 aspires for a country with integrated roads, interconnected railways, communication ports, airports, infrastructure Waterways and communications as well as provision of adequate energy. In fact, it has long been recognized that an adequate supply of infrastructure services is an essential ingredient for productivity and growth. Since 2003, Kenya has witnessed significant growth in the infrastructure sector.

A successful public-private partnership in air transport has made Kenya's airline a top carrier in the region and its international airport a key gateway to Africa. More than 90 percent of the population has access to GSM cell signals. Institutional reforms in the power sector have reduced the burden of subsidies on the public by approximately 1 percent of GDP.

The Government of Kenya is currently inviting partners to develop Standard Gauge Rail (SGR) linking the Port of Mombasa with the cities of Nairobi, Kenya and Malaba, Uganda, while the Nairobi Commuter Rail Network at Syokimau Railway Station is 95% complete, and procurement has begun for the remaining new railway stations. In addition, detailed designs for construction of the 6 kilometer Long Branch that extends from Embakasi to the Jomo Kenyatta International Airport are complete.

Road

Road infrastructure is one of the key components of communication and development of nations.. The Kenya Roads Act No 2 of 2007 is an Act of Parliament that provides for the establishment of the Kenya National Highways Authority, the Kenya Urban Roads Authority and the Kenya Rural Roads Authority. Kenya National Highways Authority (KeNHA) is responsible for the management, development, rehabilitation and maintenance of national roads, while Kenya Urban Roads Authority (KURA) is the body corporate in charge of management, development, rehabilitation and maintenance of all public roads in the cities and municipalities in Kenya except where those roads are national roads.

Generally Kenya’s infrastructure is slowly improving but still has a long way to go. Thika road construction project, which kicked off in April 2009, is now complete and the new superhighway has been officially opened. Thika super highway is one of the major arteries leading into and out of Nairobi city. It provides a route to the current Eastern and North Eastern provinces and linking the country to Ethiopia and Somali.

The target area in reference to the slums has limited road access despite the fact that it is in close proximity to the Thika super highway. This is mainly because both KeNHA and KURA concentrate more on construction and maintenance of highways and trunk roads. The development/improvement of small roads in slum areas in mostly overlooked. This current poor state of roads network is an impediment to social –economic growth leading to high cost of business operation, and low productivity.

Clearly, the overall development and maintenance of physical infrastructure are prerequisites for rapid economic growth and poverty reduction. However this documents zero in to energy and trade as they synergistically influence production costs, employment creation and access to markets.

7.2.2 Trade Status in Kenya

From 2003, the era of economic recovery strategy, Kenya's trade policy framework has focused on trade promotion strategies, sector-specific strategies, commodity-specific strategies and regional and international trade regulations which all seek to ensure that maximum benefits from trade are secured. Informal and formal trade in Kenya accounts for approximately 10 per cent of GDP and 10 per cent of formal employment.

Trade has been among the most rapidly-expanding sectors of the economy since the introduction of trade liberalization in the 1990s. However, constraints, including poor governance, poor infrastructure, high business transaction costs, insecurity, unfair competition from cheap imports and difficulties in accessing external markets, have encouraged trade growth into the informal traders, with millions of micro enterprises either operating in markets or in make-shift kiosks [25](Republic of Kenya, 2003).

The high level of informality in Kenya' trade sector has the potential to result in several kinds of market distortions, particularly those relating to taxation, labour employment and produce marketing. Informality also leads to lower tax revenues to Government from a sector that uses public services and facilities.

Moreover, although the informal sector is the source of livelihood for many people who cannot access the formal employment market, the sector, when unregulated, comes with other social and environmental costs, such as environmental degradation and non-enforcement of health standards. The Economic Pillar of Kenya Vision 2030 seeks to achieve a sustained 10% Gross Domestic Product (GDP) growth rate.

7.2.3 Trade Status Nairobi/Kasarani

The Integrated Urban Development Master Plan for City of Nairobi[26] confirms that open air markets in Nairobi plays an important role in the city economy in terms of employment generation and delivery of urban services, accounting for about 60% of working population and 20% of GDP.

The open markets also serve as alternative trading spaces for hawkers, offers a wide variety of choices of goods effectively lowering the prices of common goods and are often more conveniently located to traders and buyers than supermarkets. Largely open air markets are owned by the Nairobi City County government and were constructed during the colonial era.

Over the years, the number of traders and buyers has increased considerably, putting pressure on the infrastructure and capacity of existing facilities. For this reason, the market conditions have dilapidated, lack basic hygiene facilities and require upgrading and expansion to remain viable. For instance, Wakulima market was built in 1966 and has a holding capacity of 300 traders, currently accommodates about 7,000 traders.

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[25]

[26]Integrated Urban Development Master Plan for City of Nairobi was developed report of 2014, page 2-34

Tegemeo Institute for Agricultural Policy and Development (TIAPD)[27] study on where consumers in Nairobi purchase their food, shows that consumers in Nairobi spend slightly more than one shilling in 10 of their basic food budget in large supermarket chains, more than eight of the 10 shillings are spent in traditional outlets such as dukas(shops), open air markets, roadside kiosks, dairies, and butcheries.

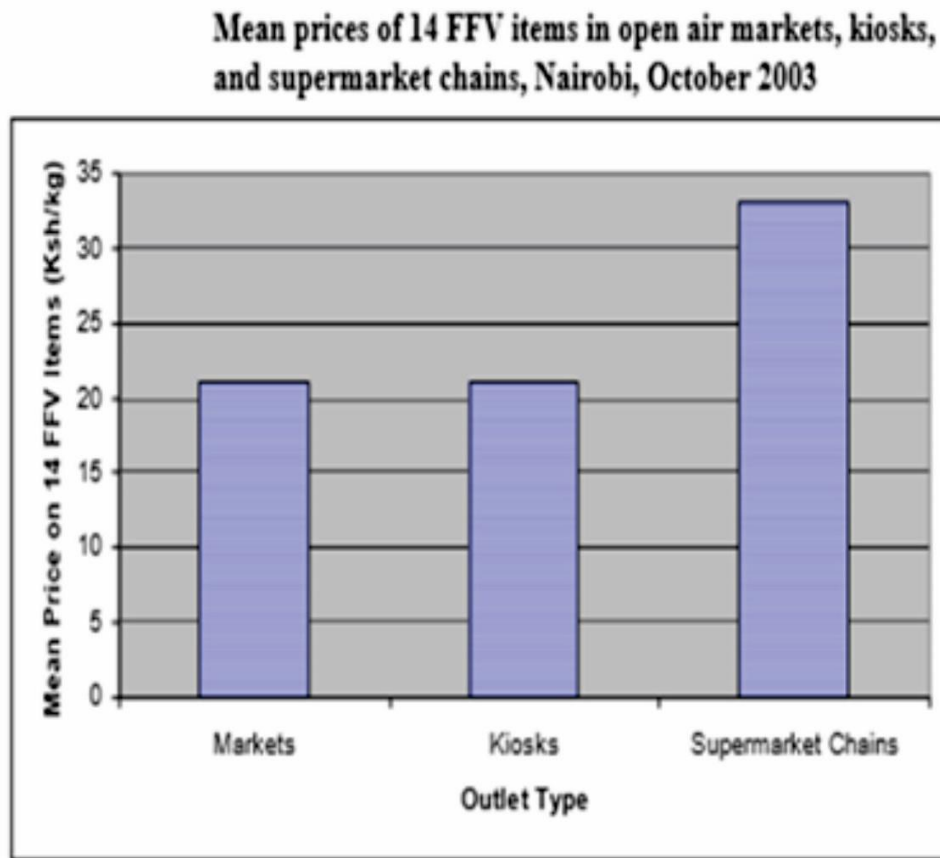
Essentially large supermarket expenditures come from the wealthiest 20% of consumers; the bottom 80% of consumers spend 99 out of every 100 shillings on basic food commodities in open air markets, kiosks, or other traditional outlets.

(TIAPD, 2004) shows reason for the continuing dominance of open air markets and kiosks in basic food sales – and for supermarket chains' heavy reliance on upper income consumers – is that;

- The open outlets charge much lower prices
- Open air markets and kiosks are much more convenient for the large mass of urban consumers
- Some kiosk owners and market stall vendors are also know to provide short-term credit to preferred customers, giving them an additional advantage over supermarket chains

[27]Tegemeo Institute for Agricultural Policy and Development, 2004; *where do Consumers in Nairobi Purchase their Food and why does this matter? The need for investment to improve kenya's "traditional" food marketing system.*

Table: 7.3: Open Markets



Source: Tegemeo Institute for Agricultural Policy and Development, policy brief, 2004 pg 3

7.2.4 Public markets interventions

The Assistant Director of Market and Trading Service, Nairobi City County, pointed out that, NCC market conditions have dilapidated and require upgrading and expansion to remain viable. He identified Wakulima Market as one of the few markets in the County that has been planned for relocation.

Table 7.4: Types and capacities of Nairobi Council Markets by Ward

Types and Capacity of City Council Markets by Ward

Type of Market	Name	# of Stalls	Owner	Location/Ward
A. Wholesale Markets	Wakulima Market	8	CCN	Kamukunji
B. Hawkers Markets	Muthurwa Hawkers Market	10,000 (traders)	NCC	Kamukunji
C. Rental Markets	Landhies Road	72	NCC	Kamukunji
	Shauri Moyo	308	NCC	Shauri Moyo
	Jogoo Road	450	NCC	Maringo
	Umoja I	320	NCC	Umoja
	Westlands	109	NCC	High Ridge
	Westland Curio	300	NCC	High Ridge
	Quarry Road	274	NCC	Pumwani/Bondeni
	Ngara	319	NCC	Ngara
	Karen	83	NCC	Karen
	Githurai	298	NCC	Githurai
	New Pumwani	44	NCC	Eastleigh South
	Dandora A-F	392	NCC	Dandora
	Kariokor	206	NCC	Ziwani
	City Market	143	NCC	Central
D. Development Tenant Purchase Markets	Kenyatta	608	NCC	Kenyatta Golf Course
	Kayole	159	NCC	Kayole
	Kahawa West	335	NCC	Kahawa
	Mathare North	53	NCC	Mathare A
	Umoja II (A & B)	72	NCC	Umoja

Type of Market	Name	# of Stalls	Owner	Location/Ward
E. Self-constructed Markets	Kibera	678	NCC	Kibera
	Jericho	476	NCC	Hamza Lumumba
	Kariobangi North	696	NCC	Kariobangi North
	Kariobangi South	156	NCC	Kariobangi South
F. Open Air Markets	New Ngara	open air	NCC	Ngara
	Kiamaiko (Goats)	open air	NCC	Mathare
	Maasai	open air	NCC	Central
	Sunken (High Court)	open air	NCC	Central
	Yaya	open air	NCC	Kibera
	City Stadium	open air	NCC	Kaloleni
	Maziwa	open air	NCC	Shaurimoyo
	Jericho	open air	NCC	Uhuru
	Kahawa	open air	NCC	Kahawa
	Mutindwa	open air	NCC	Harambee
	City Park	open air	NCC	Parklands
	Toi	open air	NCC	Kibera
	Kangemi	open air	NCC	Kangemi
	Kawangware	open air	NCC	Kawangware
	Korogocho	open air	NCC	Korogocho
	Gikomba	open air	NCC	Pumwani
	Kayole Soweto	open air	NCC	Kayole
	Westgate	open air	NCC	Westlands
	Woodley	open air		
	Dandora Terminus	open air	NCC	Dandora

Source: The project on Integrated Urban Development Master Plan for the City of Nairobi, 2014

7.3 Energy

7.3.1 Energy Status in Kenya

7.3.1.1 Biomass

Biomass is the most dominant and the principal source of primary energy for the majority of the population in Kenya. According to the 2004 statistics from the Government, sustainable biomass energy supply was estimated at 15.4 million tonnes annually against a demand estimated by the National Environment Management Authority (NEMA) to be over 38.1 million tonnes (AFREPREN/FWD, 2006, GoK 2004b NEMA, 2005). Therefore, the supply/demand deficit of biomass energy supply in the country is about 60%.

5.6.2.2 Kerosene

Kerosene is mainly used for lighting, cooking and heating at the domestic level. About 89% of the urban residents have access to and use kerosene with urban households consuming on average, 90 litres a year and is mainly used for cooking (36% of the households) and for lighting (82% of households) and for heating water (39% of the households). At the local market, kerosene is supplied and distributed by multi-national oil companies as well as smaller oil companies. Kerosene has a very effective distribution chain that ensures that it reaches the most remote of places. This has been enabled by numerous kerosene retailers who buy kerosene for resale. However, due to the high number of "middlemen" along the kerosene distribution chain as well as taking into account the transportation and distribution costs, kerosene ends up being a high cost fuel.

7.3.1.2 Liquefied petroleum gas (LPG)

In Kenya urban areas, LPG is mostly used as a supplement for electricity, charcoal and kerosene. It is mainly used for cooking and lighting. Most of the households (99%) use LPG for cooking while 18% and 17% of households also use it for water heating and lighting, respectively. There also exists an elaborate supply and distribution chain for LPG within the locality of the urban poor. LPG is mainly supplied and distributed by the multi-national oil companies, however, just as the case for kerosene, numerous distributors who buy LPG from the large multi-nationals and retail it to the urban poor.

7.3.1.3 Electricity

In Kenya, Electricity it is generated from various source which include hydro (large and small), thermal (oil) and renewable sources such as geothermal energy. The Ministry of Energy estimates the effective power generation capacity in the country as 1,177.1MW, against a peak demand of 930 MW, which was projected to rise by 14% per annum to 1,370 MW by July 2008 (MoE, 2006). The demand for electricity in the past, outstripped supply, precipitating a significant level of unserved demand. However, the situation has improved and the generation currently boasts of a modest and rapidly shrinking reserve margin of about 14%.

7.3.2 Energy status in Nairobi/Kasarani

7.3.2.1 Biomass

In Nairobi biomass energy is mostly used in the form of charcoal. Nairobi households like charcoal because it does not produce a lot of smoke and its calorific value is twice that of wood and it therefore last longer, especially when used with improved cook stoves. Charcoal is considered to be relatively affordable, economical and convenient. Charcoal is sold, on average, at about $ 5 per 36-kg bag.

7.3.2.2 Kerosene

In Nairobi, Kerosene is the most common fuel among poor households, who use it for cooking, lighting, and water-heating. It is also used in the formal sectors of the economy for industrial and commercial purposes. Kerosene is popular among the urban poor because they consider it quick and easy to use.

7.3.2.3 LPG

As with the national trend, Liquefied petroleum gas (LPG) in the Nairobi is mainly used as a supplement to electricity, kerosene and charcoal. In spite of the high upfront cost of LPG (for cylinders and appliances), its penetration has recorded some significant level of success, albeit among the middle and high-income urban households.

LPG is provided in cylinders of sizes ranging from 3 kg to 15 kg for domestic applications, with the smaller cylinder sizes (3 kg and 6 kg) being the most common sizes among the poor residents of Nairobi.

7.3.2.4. Electricity

Electricity is the main source of modern energy in Nairobi country. However, the current situation in Nairobi is such that provision of electricity is largely confined to high and middle income groups in urban areas, as well as the formal commercial and industrial sectors. The poor, who are the majority and live mostly in informal settlement areas, have limited access to electricity. There are several factors that ham-per access to electricity among the urban poor population. Chief among them is the high upfront cost of components such as meter boards, circuit breakers and cabling according to a survey done in Kibera slums

7.4Cross cutting issues

7.4.1 Advocacy

7.4.1.1 Status of Advocacy at the National level

The Constitution of Kenya 2010 is anchored on the fundamental human rights principles which are reinforced in nearly all the chapters. The constitution envisages all sectors to appreciate their role in integrating human rights in their legal and policy frameworks. It has a whole chapter dedicated to the protection of specific civil, political, economic and social rights.

The bill of rights places the obligation of ensuring these rights area fulfilled within the spirit of the constitution shoulders the government with obligation. Unless citizens clearly understand their rights as enshrined in the constitution, they will have limitations to claim their rights. The poor and marginalized groups will continue to be the most affected.

The Kenya constitution 2010 prescribes the structures which ought to be put in place to support and guide both national and county governments in implementation of the constitution. At the top of these structures is creation of the Constitution Implementation Commission (CIC). This commission has been mandated with responsibility of supporting various arms of the government (National and County). It has overall mandate of ensuring the constitution is implemented to the letter and the spirit of the same.

The CIC has put in place various mechanisms to ensure effective implementation of human rights as enshrined within the bill of rights in chapter 4 of the constitution. These mechanisms include the following

- Apply a participatory approach of undertaking a stakeholders analysis to properly locate the different responsibilities relating to different rights;
- Facilitate stakeholders to identify any priority legislation;
- Monitor and oversee sectoral implementers as they implement the Constitution in order to ensure that they integrate the human rights approach in their policies and administrative/operational practices, and, the Bill of Rights and international human rights instruments into relevant sectoral laws and policies additionally, the thematic area will
- Organize capacity building forums on human rights and the rights approach for CIC commissioners and staff and different implementing stakeholders

The responsibility of implementing this bill of rights is not restricted to the above mentioned government structures only. The constitution stipulates roles and mandates of other stakeholders including citizens in implementation of the constitution.

The constitution envisages active participation of citizens and civil society/NGOs in decision making process on issues that affect them. Such include planning and budgeting, policy formulation and enactment, management of development projects at county level and contributing other matters at the national and international levels among others.

Thought the constitution provides for the above aforesaid rights and responsibilities, majority of Kenyan population and especially the rural and urban poor have limitation in ensuring the primary duty bearers meets their obligation as enshrined in the constitution. These limitation include the following.

- Few citizens have read and internalized the constitution
- Literacy level is low among the rural and urban poor hence reading and understanding the constitution which is written in English is a challenge
- Poor culture of reading among Kenyans
- Systemic political patronage and manipulation by the elites that always ensure the poor are kept in dark as far as their rights are concerned
- History of intimidation and fear among Kenyans such that they still don't believe they can force /sue the duty bearer to provide service as enshrined in the constitution
- Apathy among the poor and resigning to fate
- Limited capacity and skills among the poor and the lower middle class members of the community to meaningfully engage their leaders and government in demanding for their rights

Despite the constitution stipulations and spirit, little effort has been made towards participatory urban and rural governance. There is also limited planned and timed participation of citizens and transparency in implementation of projects and service provision by the primary duty bearer. The poor continue to be rampaged by high poverty levels, diseases, heavy taxation with minimum service by the government and HIV/Aids among other issues while the duty bearer continue to tremble on their rights with impunity. Women, girls and youth continue to be discriminated and limited by retrogressive cultures and customs.

Basically, the CSOs, citizens and private sector ought to form sector lobby and advocacy groups to marshal support for campaigning for implementation of various bills, Acts and policies that will operationalize the constitution. There exist many laws and policies which are in draft from. These bills, Acts and policies cross cut in all spheres of Kenyans lives. They include policies and laws on gender, water, sanitation, youth, children, livelihoods, and health, education, security and governance issues.

Various reports and adverts from the Constitution Implementation Committee indicate the same government structures which ought to implement the provisions of the constitution continue to break the same with impunity and or have developed lethargy in implementing the same. The Citizens, CSOs, Private sector need to put pressure on the government through positive engagement to ensure implementation of these provisions.

7.4.1.2 Advocacy at the Nairobi County level

The Nairobi County Government has developed her development Master Plan (County Integrated Development Plan 2013- 2017). The development plan is a blue print on how the county government will address development within the county. There are range of issues right from health, security, infrastructure, industries, youth, education, livelihoods, and sanitation among many others.

Thought the master plan is good and very well focused, few residents in the county are aware of its contents and have been able to access the same. This so with majority of Nairobi residents (60%) who are slums dwellers. The national government has been allocating 15% of the national budget to the 47 Counties. Nairobi County got the lion's share of the budget (Kes 15.2 billion of the Kes 198 billion in FY 2013)[28]. Most of these funds ended up being utilized to meet recurrent costs. For instance, in typical year, only 4% of the City County budget is allocated to service delivery, with the remainder being spent on wages and operational costs.

Nairobi County continues to experience heavy burden of solid waste which is generated daily, safe water inaccessibility especially to the slums dwellers who are the majority in the city, high insecurity rates emanating from international terrorism to localized crimes, dilapidated road nets works, high unemployment rates, HIV/Aids, inadequate public learning institutions among others.

For the County Government to deliver, a lot of advocacy and capacity building need to be done. There are many policies and acts that the county executive and legislature need to put in place to operationalize the above development plan. So far, there has been little coordination between NGOs working to reduce poverty in the city and the City County Government itself. An enabling frame work to forge linkages between state, civil society and the private sector is still lacking. Without citizen's participation and involvement, the previous culture of lip service, corruption and impunity will continue to prevail. The slums dwellers and the urban poor in the county will continue to languish in vicious circle of poverty.

The above scenario essentially justifies the need for CSOs and citizens within the county to form lobby and advocacy groups for meaningful engagement with the county government to ensure she delivers on her development projects and services pledged in the Nairobi County Integrated Development Plan.

Maji na Ufanisi which is the organisation which undertook the Garden City baseline survey has been having advocacy as one of the key programme components. She has been capacity enhancing slums dwellers on how to positively engage with the duty bearers to claim for their rights not on under water and environmental sectors but also other sectors. She has been in the forefront in advocating for formulation of water and sanitation sectors policies and Acts that ensure service delivery to the poor and marginalized.

7.4.2 Gender Inequality

7.4.2.1 Gender inequality at the National level

Throughout Kenya's history, women have been subjugated to consistent rights abuses while shouldering an overwhelming amount of responsibilities. A prominent example of this relates to agriculture, which creates over 80 percent of Kenya's jobs and 60 percent of income. Currently, women in Kenya do the vast majority of agricultural work and produce/market the majority of food. Yet they earn only a fraction of the income generated and own a nominal percentage of assets. Only 29 percent of those earning a formal wage throughout the country are women, leaving

[28] http://www.nation.co.ke/News/politics/Counties-to-receive-Sh198bn-payout-/-/1064/1656948/-/h7cabq/-/index.html

a huge percentage of women to work in the informal sector without any federal support[29]. The effect is severe—nearly 40 percent of households are run solely by women and, because of a lack of fair income, nearly all these homes suffer from poverty or extreme poverty.

Women continue to be educated at an inferior rate to their counterparts, increasing their reliance upon men. They are also limited from owning, acquiring, and controlling property throughout Kenya, regardless of social class, religion, or ethnic group. If women attempt to assert property rights over men or in-laws, they are often ostracized by their families and communities. This practice of disinheritance seems to be on the rise, particularly in areas hit hard by poverty.

Other grave women's rights abuses continue to be practiced throughout the country. Examples include wife inheritance, widows "inherited" by male relatives of the deceased husband; and ritual cleansing, the requirement of sex with a man of low social standing to "cleanse" a widow of her dead husband's "evil spirits." These cultural practices maintain low self-esteem for women while completely ignoring the threat of HIV.

Gender inequality denies some citizens their rights especially women, girls and youth due to cultural practices that propagate the same. These include property ownership, unequal employment opportunities, right to inheritance, unequal education opportunities and support to acquire the same among others. When these rights are denied, the affected population segments are negatively affected as the same predisposes them to high poverty levels. To survive, they recourse to engaging in social excess which include illicit/commercial sex for women and girls, substance abuse and engagement in criminal activities by the youth. The end result unwanted pregnancies, Infections with HIV/Aids and sexually transmitted diseases, vicious circle of poverty and early deaths.

To address the above cross cutting issues in line with the constitution, the government of Kenya created ministry of Gender, Youth and sports and the National Gender and Equality Commission (NGEC) to ensure effective coordination and implementation of policies and strategies that are responsive to the related issues. The over-arching goal for NGEC is to contribute to the reduction of gender inequalities and the discrimination against all; women, men, persons with disabilities, the youth, children, the elderly, minorities and marginalized communities.

The commission runs several projects meant to address the gender inequality. These projects are funded by:

- Ford Foundation;
- United Nations Population Fund;
- Deutschestiftung Weltbevodkerung (DSW); and
- Government of Kenya.

However, commission is at her infancy and has had little impact in larger parts of the country. The gender inequality issues cross cut in almost all the 42 ethnic groups in the country and respective no class, education or social standing. Some are so deep rooted such that even the learned individuals within the society find themselves directly or indirectly practicing these inequalities.

[29] http://www.fsdinternational.org/country/kenya/weissues

There is no clear cut gender inequality practices in both urban and rural settings. However, in urban areas the inequality is through unequal employment opportunities, sexual harassment, and unequal education opportunities for both boys and girls especially in the slum areas, unequal duty matrix for both male and female at household level and sexual harassment which has connotation to the same.

The gender inequality issues cannot therefore to this end, be categorized at National and Nairobi County levels. The issues cross cut and need to be addressed at all levels.

The Kenya constitution 2010, chapter 4 has various bills of rights for all the citizens. If the constitution is implemented to the letter and spirit, the issues of gender inequality would be reduced to a very low level which would perhaps be insignificant.

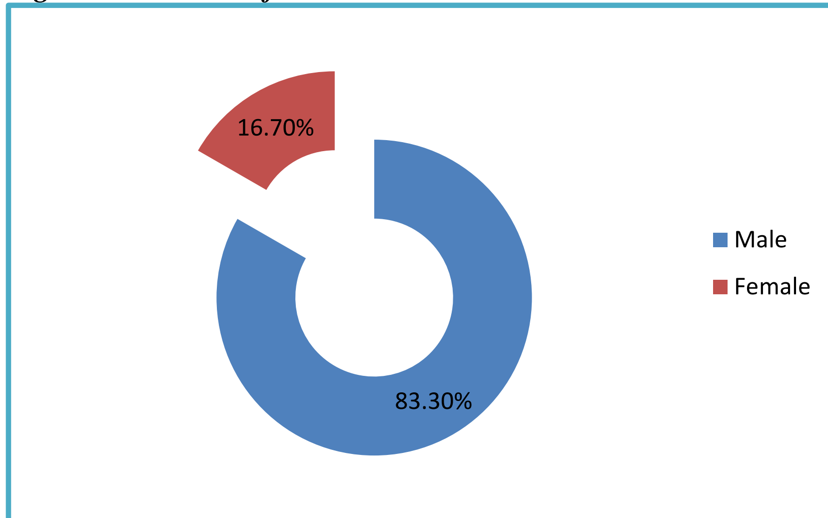
Most CSOs have been addressing issues of gender inequality as a cross cutting issues in their programs. Many employers have come up with affirmative actions in employment and gender policies in their places of work. Despite these efforts, the deep rooted cultures and customs continue to be the greatest challenges and obstacles in reversing the trend. To this far, it is therefore imperative for all stakeholders to continue with concerted effort of addressing gender inequality vide formulation and enactment of gender policies and affirmative actions, gender campaigns and sensitization as cross cutting issues in all their undertakings.

7.4.2.2 Gender in Kasarani District

Gender and age of the respondents

Of the 256 respondents interviewed, 55.6% were female while 44.4% were male. The age range of respondents was between eighteen years on the lower side with sixty five years being the age of the oldest respondent. The survey data showed that majority of the respondents are still in their youthful and productive ages of between 18 to 39 years. These are the age brackets of people, who may require more water for various social, economic and biological needs. This is indicated by a proportion of 58.5% for those aged between 18-28 years and 26.5% for those aged 29-39 years. Also a significant proportion of 11.8% represents respondents aged between 40-60 years with only 0.4% of those above 60 years of age.

Figure 7.1 Gender of the Household Head



The survey data showed that though the respondents were mainly female, the male gender was pointed out to be the heads of the households. This is represented by 83.3% with only 16.7% of households being headed by the female gender. This is true especially as it relates to the African socio-cultural value system which regards the male gender as the bread winner of the family.

The few female headed households could be due to various reasons such as single mothers, widows or divorced women amongst other reasons. From a programmatic perspective, household heads should be involved in any interventions if success is to be attained. This is because, as the head of the households, they are the decision makers or the influencers of their respective household activities including water, sanitation and hygiene interventions.

7.4.3 HIV/AIDS

7.4.3.1 HIV/AIDS at National level

Kenya declared Aids a national disaster in 1999. President Arab Moi in his address during a meeting attended by among others, the members of Kenya National Assembly proclaimed that “no family in Kenya is untouched by HIV/AIDs” Aids …. Is a real threat to our very existence”…[30] During this meeting, the president announced establishment of National Aids Control Council.

HIV/AIDs is a cross cutting issue as its impact cuts across all the spheres of human life.

[30] http://news.bbc.co.uk/2/hi/africa/538071.stm

Micro level

(i) Labor Supply: The loss of young adults in their most productive years affect overall

Economic output in the country,

(ii) When AIDS is more prevalent among the economic elite, then the impact is much larger than the absolute number of AIDS deaths indicates

(iii) The direct costs of AIDS include expenditures for medical care, drugs, and funeral expenses, indirect costs include lost time due to illness, recruitment and training costs to replace workers, and care of orphans, if costs are financed out of savings, then the reduction in investment could lead to a significant reduction in economic growth

Macro level

The household impacts begin as soon as a member of the household starts to suffer from

HIV-related illnesses: The following will follow

(i) Loss of income of the patient (who is frequently the main breadwinner)

(ii) Household expenditures for medical expenses may increase substantially

(iii) Other members of the household, usually daughters and wives, may miss school or work less in order to care for the sick person

(iv) Death results in: a permanent loss of income, from less labor on the farm or from lower remittances; funeral and mourning costs; and the removal of children from school in order to save on educational expenses and increase household labor, resulting in a severe loss of future earning potential.

Table 7.5: HIV burden in and indicator ranking in Nairobi County

Category	Total population	Rank
HIV adult prevalence (overall	(2009) 3,138,369 47	8.6%
Number of adults living with HIV	182,072 47	40 %
Number of children living with HIV	16,968 45	45%
Total number of people living with HIV	199,040 47	47%

7.4.3.2 HIV/AIDS at Nairobi County

Nairobi County City has a population of over 3.5 Million people. Over 60% of the population live within the slum areas/informal settlement. Access to basic necessities such as health services and decent means of livelihoods are rare[31]. HIV/AIDs infections have been reported to be high in among the poor within the informal settlements. Poverty lead to engagement in social excess that expose the slum dwellers to HIV/AIDs[32].

Table 7.6: Nairobi County HIV treatment access annually Indicator

Indicator		Indicator	
Adults in need of ART	77,014	Children in need of ART	12,282
Adults receiving ART	65,184	Children receiving ART	5,930
County ART adult coverage	85%	County ART children coverage	48%
National ART adult coverage	81%	National ART children coverage	38%
County ranking of ART coverage among adults	12	County ranking of ART coverage among children	10

Source. The National Aids Control Council 2014

[31] The urban poverty vulnerability in Kenya. Background analysis for Oxfam GB urban program focused on Nairobi

[32] http://www.nacc.or.ke/countyprofiles/Nairobi%20County%20Profile.pdf

HIV/AIDS Interventions in Nairobi County

Priority areas

(i) Strong county political and community leadership for a multi- sectoral HIV response
(ii) Mobilizing additional local resources to increase and sustain the HIV response
(iii) Expanding HIV treatment programmes and increasing community involvement in driving demand for increased uptake and adherence among both adults and children
(iv) Increasing social welfare services to HIV-positive persons and others affected by HIV
(v) Expanding HIV prevention services among sex workers, men who have sex with men, and injecting drug users

Messages

(i) Improve access to and uptake of sexual and reproductive health services for girls and women
(ii) Improve education among young people to reduce sexual risks by delaying sexual intercourse
(iii) Keep girls in school to help delay sexual debut, pregnancy, and marriage
(iv) Promote and scale up universal access to voluntary medical male circumcision for HIV-negative men and boys
(v) Mobilize the community and peer support to create demand for and increase women's access to and uptake of antenatal care, as well as delivery in health facilities
(vi) Mobilize the community and partners to scale up access to pediatric antiretroviral therapy
(vii) Only 9 per cent of poor households with orphans are beneficiaries of

From the above date at national and county level, it is evident that the socioeconomic impacts of HIV and aids is broad and devastating. Any programme to be implemented in Nairobi County ought to have HIV/Aids as cross cutting issue al through.

CHAPTER 8: CONCLUSION AND RECOMMENDATIONS

8.1 Conclusions

Education and Sports

The findings from this baseline survey provide anecdotal data and facts on various thematic areas that were studied. The baseline survey reveals glaring facts and data on the state and deplorable living conditions of citizens living within the sprawling informal settlements around the Garden City. The area under the study is characterized by large population of young and middle aged people (18 – 49 years) living in unplanned and densely populated informal settlements that have limited basic human services and facilities. These are deserving citizens who require support to make their ends meet hence any intervention by state actors and non-state actors will be a great relief to them.

In the Kenyan Constitution, 2010, the bill of rights clearly lays obligation of basic service provision to the Government while citizens have equivocal responsibility. The government is equally charged with role of providing education and creation of opportunities for economic development, sports and leisure opportunities for the citizens.

The findings of the baseline survey point out that there are few public schools in the target area. The learning environment is also not conducive, as the water and sanitation facilities are in dilapidated conditions. Most of these schools have overcrowded class rooms and inadequate learning materials.

The primary schools' population in Nairobi County is 429,281 pupils and the teacher pupil ratio in primary schools is 1:56 where the pupil-toilet ratio was found to be 1: 67 for girls and 1: 46 far below the set minimum standard by the Ministry of Education (1:25 for girls 1:30 for boys). Zeroing to a specific example, Murema primary schools which is within 4.8 km from Garden City has a population of 1817 pupils. The Girls are 1040 while boys are 777. The Teacher pupil ratio in the school is 1:54 while the ministry of education recommended ratio is 1: 45, the pupil toilet ratio is 1:87 for girls and 1:65 for boys as there are 12 sanitation units for girls and 12 sanitation units for boys.

The parents living in these informal settlements resort to enrolling their children in the few existing informal schools whose learning environment is no better than County Government Schools. Given the value of education in any society and community, Aspire and MnU need to consider an intervention that will target public schools within the slum areas around garden city. Such intervention will go a long way in creating the visibility of Aspire/Garden City within these target slums areas and also the county.

The survey also indicates very limited sports opportunities both in schools and within the community. The situation compounded with limited livelihood opportunities gives the youth an avenue to engage in social excesses/vices such as; drug abuse, criminal activities, and illicit sex. Some of these vices expose them to HIV/AIDS, early and unplanned pregnancies as well as tendencies to drop out of school.

Water and Sanitation

The survey has specifically identified a situation where some of the target areas lack communal water and sanitation facilities. 80.5 % of residents use communal toilets within their residential plots, another 16.8% use private toilets and 2.0% use commercial toilets. In most of the targeted informal settlements, there is hardly public land remaining and this compounds the situation. For any public facility to be put up, very rigorous social mobilization and lobbying the line County and National Governments departments has to be made to get approvals. Many a times, some of the shanties and business sites have to be demolished to pave way. With the experience Maji Na Ufanisi has is handling similar projects, it will be possible to manage this process within the target area.

The above situation compels the populace to resort to open defecation as the few existing sanitation facilities are private and they charge a high user fees compared to the residents income. The primary duty bearer (government) does not recognize these informal settlements hence, no allocation of resources for such facilities is made. Few nongovernmental organization are also working in these areas and especially those providing services on WATSAN.

From the survey report, water is obtained from illegal and unhygienic connections operated by cartels who charge a high fee for the service (Kes 20-30). From the survey, over 37 % of the households interviewed do not treat their domestic water. The above aforesaid, pre-disposes the whole population to high risks of diarrhea, dysentery, cholera and other water borne and poor environmental sanitation diseases such as upper respiratory tract infections especially among the young children and aged.

Employment and Skilling

The survey also reveals that majority of the inhabitants have limited employment opportunities and skills to engage in meaningful and gainful income generating activities. Means of livelihoods and the opportunities is key to human development. Any employment opportunities which can be accorded to the residents of these informal settlements will have a lasting impacts on their lives. It is therefore important for Maji Na Ufanisi and Aspire to consider coming up with a sustainable employment and skilling interventions which will target various population within these informal settlements.

It is worth noting that the Kenyan Government has made strides to spur economic growth for takeoff from a low level economy to a middle level economy through pillars set under Vision 2030. The Government has therefore called upon its Citizens, Private Investors, Friendly International Governments, International and National Non-Governmental Organizations, Bilateral and Multi-lateral institution to support the realization of these pillars. This will provide the Government with a suitable platform to execute its development objectives set in the Vision 2030.

The scenario calls for interventions hence the move by Aspire and MnU to support the communities and institutions here with targeted intervention under any of the covered thematic

areas will go a long way in impacting positively to the lives of these residents within these target slums.

Security

The survey revealed Nairobi County specifically the target area is prone to high insecurity. Statistics from the Kenya Police Commission, UN-HABITAT and OSAC has identified the slums around Garden City as crime hotspots.
High crime rates have been attributed to poorly equipped police service, high poverty levels, substance abuse, and high unemployment rate.

Other Non-Thematic Areas

In addition to the above pre-dispositions, the residents are also faced with the challenges of limited access to public health facilities, poor road network, power supply and market facilities. The survey also identified compelling cross cutting issues which need to be addressed during the targeted programme implementation. The issues are: advocacy, gender, HIV and AIDS.

The baseline survey therefore provides compelling evidence and anecdotal data that justifies the call for concerted effort by key stakeholders around Garden City, to pull their resources together in response to the identified needs.

Maji Na Ufanisi, Aspire Group and EABL need to consult and agree on phased interventions within the thematic areas covered under the baseline survey. The CSR may not address all the issues highlighted in the survey but there are certainly areas that the three organizations can target for visibility and buying the good will from the Garden City surrounding slums dwellers and government. The highly recommended ones would include Education and Sports, Water and Sanitation, Employment and Skilling, and Security.

8.2 Recommendations

From the findings and the above conclusions Maji Na Ufanisi recommend the following interventions:

Education and Sports

i) School integrated water, environment and sanitation project

The justification for this intervention is based on the baseline survey findings that show total enrolment in primary schools is 429,281 pupils and the teacher pupil ratio in primary schools is 1:56 where the pupil-toilet ratio was found to be 1: 67 for girls and 1: 46 far below the set minimum standard by the Ministry of Education (1:25 for girls 1:30 for boys). Water access in the schools is characterized by inadequate, inappropriate and dysfunctional hand washing facilities. The schools lack proper and adequate drainage systems and limited means of waste disposal. Most of existing girls' sanitation facilities do not have door shutters, this limits their privacy and lowers their dignity.

Under World Health Organization, there are set water and sanitation facilities standards which each country ought to bench mark their services on. As per the findings above, these standards have not been met. The conditions pre-dispose the young children in these schools to water and poor sanitation diseases such as cholera, diarrhea and dysentery.

Table: 8.0 Short-term (immediate): School integrated water, environment and sanitation project

Proposed Intervention	Time frame
Construction of new water and sanitation facilities /rehabilitation of dilapidated ones in Murema Public Primary Schools. Below are other components under this intervention	1 year
Construction of simple incinerators for waste management, hand washing facilities and water points	1 year
Construction of storm drains and tree planting	1 year
Rain water harvesting	1 year
Children Hygiene and Sanitation Training (CHAST) and School Led Total Sanitation (SLTS)	1 year
Establishment of environmental gardens, school environmental clubs, WASH clubs and Child to Child Health clubs	1 year
Levelling of sports ground in Murema primary school	1 year
Provision of Sports equipment	1 year
Advocacy training on child rights, bill of rights and gender issues	1year

ii) School infrastructural improvement and support in provision of learning materials

From the baseline survey, there are many schools whose population exceeds the existing classrooms. This has been evidenced by classes with over 100 pupils in a classroom. To

improve the quality of learning and academic performance, E-learning through establishment of school computer laboratories/ resource centres would be handy while provision of sports opportunities would build and nurture extra curriculum talents of the pupils. Some will likely take sports as their future profession.

Table: 8.1 Medium and Long-term School infrastructural improvement and support in provision of learning materials

Proposed Interventions	Time frame
Adoption of Murema Primary School and Baba Dogo Secondary School for long term improvements	2-5yrs
Construction of additional class rooms and provision of desks	3-5 yrs.
Leveling of schools play grounds and provision of sports equipment's in other surrounding public primary schools	3-5yrs
Linkage of Garden City with Kenyatta University for Internships programme skill development and employment opportunities	2-5yrs
Establishment of resource centers well equipped with computers and e-learning materials.	3-5yrs
Development of Career advisory services in Baba Dogo Secondary School	2-5 yrs
Advocacy trainings on child rights, bill of rights and gender issues	2-5 yrs

Sports

Engagement in sports is essential for nurturing and sustaining good health. It plays a key role in creating opportunities for individuals and communities to play and work together, thus creating a cohesive society. The youth in particular are the most active in recreation and competitive sports. Through participation in sports, the youth acquire values such as respect, discipline, hard work, social integration and teamwork. It is therefore important to prioritize on promotion of sports in Kasarani in order to nurture talents of the young and encourage cohesion and peace building at community level.

Table: 8.2: **Kasarani Sports initiative Programme**

Proposed Intervention	Time Frame
Rehabilitation of Baba Dogo playing ground	1-2 yrs
Sponsor community football tournaments in Kasarani	1-2yrs
Provision of sports equipment to the community clubs	1-2yrs
Advocacy for sports service provision at county and national level	1-2 yrs

Water and Environment Sanitation project

From the survey findings, the target areas lack or have limited water and sanitation facilities both at community and household levels. The survey provides data indicating poor solid waste management evidenced by poor disposal, lack of designated dump sites, clogged and nonexistent drainage and sewer systems.
There is also limited community knowledge on diseases caused by water and unhygienic environmental conditions as well as treatment of domestic water. Water source in majority of the slums studied is from illegal water vendors which expose the water to contamination.

Table 8.3 Medium-term and long term: Integrated community water and environmental sanitation projects

Proposed Intervention	Time frame
Construction of communal water and sanitation facilities in the target area	2-5 yrs.
Construction of storm drain systems in Baba Dogo,	2-5 yrs.
Training on PHAST and Community Total Led Sanitation (target the 4 slums) **Advocacy training(target the 4 slum areas)**	2-5 yrs.
Trainings on climate proofing	2-5yr.
Gender and HIV mainstreaming	2-5yrs

Table: 8.4 Medium and Long-term: Integrated community water and environmental sanitation projects

Training on	3-5yrs
Construction of waste solid recycling facilities in Baba Dogo/ Mathere 4 A	3-5yrs

Livelihoods programme

The findings from the baseline survey point to high poverty levels, unemployment and limited livelihoods opportunities, with majority of the households earning less than Kes 10,000 per month. The amount is used to pay for rent, transport, water, medical care as well as meeting their children education requirements and other necessities. The income hardly meets household's basic needs. The recommendation here is to have a resource centre which will act as business incubation centre and or small business training centre. There is need to have targeted trainings/capacity enhancement workshops for the various population segments. The trainings to should focus on business management skills and ways and means of raising funds to venture into business and other life skills. The aforesaid would offer skilled labour to Garden City business people and residents. Training on voluntary saving and loan association for Youth and Women within the target slum areas will offer those who may not get the opportunity for employment an avenue for self-employment.

Table: 8.5 Short term employment and skilling programme

Intervention	Time frame
Introduction of career advisory system to employers at garden city	1 yr
Establish skill mapping process to improve future employability	1 yr
Capacity enhancement on business management skills and Income generation opportunities(Voluntary savings and loan Associations-VSLA)	1yr
Community capacity enhancement on advocacy	1 yr

Table: 8.6 Medium and long term employment and skilling programme

Establish a communal resource centre focusing on business incubation and small business training among other areas within the target areas.	3-5 yrs.
Training on integrated solid waste management	2-5yrs
Construction of waste solid recycling facilities in Baba Dogo/ Mathere 4 A	2-5yrs
Establish a communal resource centre focusing on business incubation and small business training among other areas. Either within the Garden estate or Baba Dogo	2-5yrs

Market Water and Environment Sanitation project

As noted by the Integrated Urban Development Master Plan for City of Nairobi and confirmed by Assistant Director of Market and Trading Service, Nairobi City County. The number of traders and buyers has increased putting pressure on market facilities. Given the role of water and sanitation in promoting personal and environmental health, this document recommends. The construction of water and sanitation infrastructure in the Nairobi market facilities, accompanied by hygiene education.

Table: 8.7: Medium-term: Integrated Market water and sanitation projects

Proposed Intervention	Time frame
Construction of communal water and sanitation facilities in Nairobi City market	2-5 yrs.
Training on PHAST targeting the traders in the markets where water & sanitation facilities are constructed	2-5 yrs.

Street lighting

As noted beforehand, electricity is the main source of modern energy in Nairobi country. However, the poor, who are the majority and live mostly in informal settlement areas, have limited access to electricity due to the high upfront cost of components such as meter boards, circuit breakers and cabling. Given the role of street lighting in improving small scale trading in the informal settlements as well as improvement of security, the document recommends.

Table: 8.8: Medium-term: Integrated Street lighting projects

Proposed Intervention	Time frame
Street lighting in the informal settlements (Nyumba Kumi) Babadogo, Githurai, Mathare 4A, Ngomongo, Maruruini, Gituamba, Tusker village, Ruaraka village and Soweto kahawa.	2-5 yrs.

Security

From the survey report, the slum areas surrounding Garden City are characterized by high levels of insecurity majorly due to unemployment, idle youth, lack or limited livelihoods opportunities and substance abuse among others. For any business to thrive, security is paramount. For any community to develop and move from vicious circle of poverty and under development, security and peace must prevail. There is need for multi-pronged approach in tackling the challenge of insecurity within the slums surrounding Garden City. For any intervention to succeed, all stakeholders ought to be involved. These will include the various populations segments within the target slum areas, County and National Government as well as local leadership. Approached such as community involvement vide community policing and Nyumba Kumi initiatives by Government need to be supported as well as consideration of providing security lights. This intervention need to be looked at in both long and short term.
Below is the proposed intervention under this thematic area.

Table 8.9: medium term: Kasarani security initiative programme

Proposed Intervention	Time frame
Erection/Construction of high mast solar powered security lights in Baba Dogo	2-5 yrs.
Youth Adult partnership training for peace building and security	2-5 yrs.
Promotion of peace building initiative and conflict management	2-5 yrs.
• **Promotion of sports for social cohesion improvement(establishment of slums sports teams/clubs, provision of sports equipment's and opportunities)** • **Advocacy for service provision**	2-5 yrs.

Health

There are very few, far flung and ill equipped government health facilities. From the survey, the public health facilities constitute 1% of the existing ones. Another small percentage is under non-state actors (NGOs/Churches. From statistics from the Kenya Medical and Dentist Board indicate that most of the health facilities within the slums areas and even some of the middle income estates are run by persons not trained as medical practioners and or not well trained/qualified medical personnel.

The services offered including the drugs are of low quality and substandard. The above scenario exposes the inhabitants to high health risk when coupled with poor personal and environmental hygiene practices. The Young children and pregnant mothers are the most affected as their ages and conditions pre dispose them to most tropical diseases such malaria, diarrhea, URTI while mother die to pregnancy complication or lose their children during delivery due to lack qualified services. The limited livelihoods mean the residents here cannot afford standard medical services and care. Intervention to alleviate the health challenges faced by the slums dwellers here will have a high impact on the wellbeing of these citizens

Table 8.10: long term: Kasarani health programme

Proposed Intervention	Time frame
Establishment of maternity wing in at Baba Dogo health centre	2-5 yrs.
Initiate health outreach clinics	2-5 yrs.
Provision of Ambulance	2-5 yrs.
Promotion of sports for social cohesion and security improvement(establishment of slums sports teams/clubs, provision of sports equipment's and opportunities)	2-5 yrs.

Capability Statement

Maji Na Ufanisi has over 10 years' experience in designing and implementing water and environmental sanitation projects in schools and communities both in urban informal settlements and rural areas. She has similar experience in running youth programs, livelihoods as well as cross cutting issues such as HIV/AIDs and gender mainstreaming. MnU philosophy and approach enables communities to take increasing control over their resources and decisions that directly affect their lives.

The organization has multi skilled personnel within the Programmes Department specifically in thematic areas that deal with: water and sanitation; school WASH; youth empowerment, improved livelihoods and health training.

Maji na Ufanisi has wide and elaborate network and partnerships with: International Non-Governmental Organizations; National Non-Governmental Organizations; Faith Based and Community Based Organizations; and Government line Ministries who can be called upon and relied on whenever extra skills are required in the implementation of the proposed various projects and programmes. The organization's Human Resource Policy allows it to easily engage extra human resource capital that may be required in the execution of its strategic objectives and implementation of any discrete project/programme that may be agreed on, with MnU Development Partners.

The organization has wide experience of handling and managing large volumes of work within the stipulated time frame and ensuring the required quality and value for money. MnU has worked with similar companies and institutions to implement their CSR facilities. The organization has continuously received large sums of funds from local and international organizations and institutions to implement programmes within her strategic plan. The organization has been a host be several organization and programs such as ANEW and CSUDP where MnU had overall financial and managerial oversight over these organizations/programme vested to her by the donors. This makes Maji Na Ufanisi the most suitable partner in the execution of this Corporate Social Responsibility initiative for ASPIRE and EABL.

REFERENCES

1. AFREPREN/FWD (2006) Influencing Policy through the Active Involvement of a Research Institution in the Performance Contract Process - Lessons from the Experience of AFREPREN/FWD, Nairobi, Energy, Environment and Development Network for Africa (AFREPREN/FWD)

2. GOK (2003) GOK (2003) Economic Survey 2003, Nairobi, Government of Kenya (GOK)

3. GOK (2004) Sessional Paper No.4 of 2004 on Energy, Nairobi, Government of Kenya (GOK)

4. GOK (2004) Sessional Paper No.4 of 2004 on Energy, Nairobi, Government of Kenya (GOK)

5. Kenya Demographic Health Survey (KDHS 2009),

6. (JHPIEGO, 2007). Johns Hopkins Program for International Education in Gynecology and Obstetrics

7. Kyobutungi. C(2009). HIV/AIDS and the Health of older people in the slums of Nairobi, Kenya: http://www.biomedcentral.com/1471-2458/9/153

8. National Environment Management Authority (2005), Energy in Nairobi, Government of Kenya (GOK)

9. Nii-Amoo Dodoo et al, (2007). Are slum dwellers at heightened risk of HIV infection than other urban residents? Evidence from population-based HIV prevalence surveys in The Nairobi Slum. African Population and Health Research Center (APHRC), Kenya Medical Research Institute (KEMRI).

10. Ndugwa et al (2011) Overview of migration, poverty and health dynamics in Nairobi City's slum settlements.World Bank document

11. Oxfam GB, (2009) Concern Worldwide & CARE International in Kenya

12. Taffa and Chepngeno, (2005) Determinants of Health Care seeking for Childhood illnesses in Nairobi slums. African Population and Health Research Center

13. Taffa and Chepngeno (2005) Child Morbidity and Healthcare Utilization in the Slums of Nairobi, Kenya 2005 African Population and Health Research Center

14. United Nations Assembly (2002). Building a World fit for Children. New York

15. UNDP Water and Sanitation Programme report (2012)

ANNEXES

Annex 1: List of Key Informants

	Key Informant	Designation
1.	Mr. Stuart Blandford	Director Aspire
2.	Mr. Kevin Omondi	Mathari Youth Sports Association
3.	Mr. Rono	Clinical Officer – Baba Dogo Health Centre
4.	Ms. Elizabeth Kitaka	Assist. Chief Ruaraka Sub Location
5.	Mr. J N Njoroge	Chief Utalii Location
6.	Mr. C. Okoth	Assistant Chief Mathari 4a Sub-Location
7.	Mr. Olum	Chairman of Mathari 4A area
8.	Mrs. Nduta	Community policing member, Mathari area
9.	Mr. Romano	Chief Githurai Location
10.	Mr. Karanja	Chief Kasarani Location,
11.	Mr. Mathenge	Police Inspector Kasarani
12.	Mr. Njoroge	District Youth Officer Kasarani
13.	Mr. Benson Migwi	Head teacher Kasarani Primary school
14.	Ms .Nyamao	Head teacher Murema Primary school
15.	Mr. Asman Owiti Namusia	Chief Kasarani Ward
16.	Ms. Jane Gachanja	Community Health Worker
17.	Ms. Damaris	District Gender Officer
18.	Mr. Benson Migwi	Kasarani Primary school Head teacher
19.	Mr. Njoroge	Chairman Githurai open air Market
20.	Mr. James Owiti	Nurse at St Johns dispensary

Annex 2: Detailed Household Questionnaire

Introduction

I am XX working for Maji Na Ufanisi as an Enumerator for a survey to collect data and document expectations and needs in the area of Water and Environmental Sanitation in Baba Dogo and areas surrounding Garden City. The information you provide will help Maji Na Ufanisi to understand the situation and to improve service delivery in your community.

- Your responses will be kept safely and only be used to further the objectives of Maji Na Ufanisi. What you say will not be quoted individually. Thank you. *(The enumerator can translate this to Kiswahili or local language as appropriately)*

Demographics						
House Number						
Name of Respondent			Male		female	
Telephone/Mobile no. Of respondent (or member of household)						
1. Who is the head of this household?	a. male		b. female		c. Child-headed	
2. How many members are in this household?	1. Males		2. Females		Total	
3. How old are you?	a. under 18	b. 18-28	c. 29-39	d. 40-49	e. 50-59	f. 60+
4. What are your sources of income?						
5. What is your average monthly income?	0-10,000	10,000-20,000	20,000-30,000	30,000-40,000	Above 40,000	

Water					
5. What is the source of water in your household?	a. piped municipal water	b. private water vendors	c. borehole	d. unprotected shallow wells	e. other (specify)
6. How much water in jerrican do you use per day?	a. 15-litre jerrican	b. 20 litre jerrican	c. 25 litre jerrican	d. 30 litre +	
10. How much do you spend in buying the water you use per day?					
7. What do you use your water for?	a. cooking	b. washing	c. drinking	d. bathing	e. other (specify)
8. Are there small scale water vendors selling water in your community?	yes	no	Not sure		
9. Where do the vendors obtain the water they sell?	Piped municipal water	Illegal tapping	Unprotected shallow wells	other	
9. How far is the nearest water point to and from your house?	a.<less 50 meters	b.50-100 meters	c.100-200 meters	d.Over 200 meters	
10. Who is responsible for fetching water in the family?	a. man	b. woman	c. boy child	d. girl child	
11.what distance is covered to fetch water a) when there is no scarcity b) When there is scarcity	a.<less 50 meters	b.50-100 meters	c.100-200 meters	d.Over 200 meters	
	a.<less 50 meters	b.50-100 meters	c.100-200 meters	d.Over 200 meters	

12. Are there long queues in the point you draw your water?	yes	no	other	
12. What methods do you use to treat water for drinking?	a.boiling	b. Waterguard tablets	c. filtering	d. other (specify)
13. Are you aware of diseases associated with drinking untreated water? If yes mention				
14. What kind of container do you use for storing water for drinking in your household? (Enumerator to make observation and comment)	a.Wide open mouth without cover b.Wide open mouth with cover c.Narrow neck without cover d.Narrow neck with cover e observations..			
15. How do you collect water from this container?	Scoop from the container a. using a specific clean mug b. using any other mug	Other (Specify)		
Sanitation/Latrines				
16. i) Does your HH have access to a latrine or a toilet?	1. yes	2. no		

ii) Is the toilet/latrine	a. private	b. Communal (within the plot I stay	c.Commercial	
17. What is the distance from the household to the latrine/toilet?	a.<less 50 metres	b.50-100 metres	c.100-200 metres	d.Over 200 metres
18. Where do you go for long and short call during the day?	Private	(Communal (within the plot I stay	Commercial facility	Other -specify
19. Where do you go for long and short call during the night?	Private	Communal	Commercial facility	Other- specify

20. Where do women and girls dispose sanitary pads?		
21. Is it important to have a bin for disposing used sanitary pads inside commercial toilets?	1.yes	2. no
22. If commercial sanitation facility, how much do you pay? A. For a short call. for a long call	a. less than 5 KES a less than 5KES	b.5 – 10 KES b. 5-10 KES

23. How much do you pay on average to use the facility per month for the whole family? a) If it is commercial facility b) if it is private facility.

20Where do you see your child relieve him/herself more often?				
24. How do you dispose your child feaces?				
25. Where do you prefer your child to relieve him/herself?				
26. Do any of your family members sometimes use plastic bags for defecation? If yes, where do you dispose it?	a.Refuse pit	b.drainage line	c. bushes	d. other

27. If provided with latrine, managed by your community, how much are you willing to pay? a. For short calls b. For long calls	a. for short call	b. for long call

28. Are the existing toilets/latrines facilities enough for all residents within this area? 1. Yes 2. No

Household Hygiene

29. When do you wash your hands? INDICATE AS MANY AS APPLICABLE. ENUMERATOR TO LISTEN TO VARIED RESPONSES	a) After defecation	d) Before eating
	b) Before preparing food	e) After touching child excreta
	c) After handling garbage	f) Others

30. What do you use to wash your hands?	a.Soap & water	a. Ash & water
	e. Water only	d. Other

31. Why is it important to wash your hands?	a. Prevent disease	b. Smell nice	b. Cleanliness	d.Others

32. Has anyone in your household suffered from diarrhea in the last 2 weeks? (Diarrhea being 3 or more loose stools in 24 hours)	1.Yes	2.No

33. If yes, who was it?	a. Adult Male	c. Adult female	b. Children 5-15years	c. < 5years

34. What are the cause's diarrhea in your community?	a. Bad food	b. Dirty water	c.Dirty hands	d.Weather	e.Do not know	f.Others

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>35. What do you do If your child has diarrhea?</td><td>a.Go to clinic</td><td>b.Herbs</td><td>c.ORS</td><td>d.Sugar salt solution</td><td>nothing</td><td>f.Others</td></tr>
<tr><td colspan="7">36. How do you dispose solid waste in the household?</td></tr>
<tr><td colspan="7">37 Who is responsible for disposing solid waste in the family? A. Husband b wife c. Girl-child d. Boys</td></tr>
<tr><td colspan="7">38. Do you access the municipality solid waste disposal services? If no how do you dispose piles of solid waste?</td></tr>
<tr><td colspan="7">Observation of Environment</td></tr>
<tr><td rowspan="6">39. Observe the general cleanliness of surrounding areas of the households.</td><td colspan="2"></td><td colspan="2">Yes</td><td colspan="2">No</td></tr>
<tr><td colspan="2">Smell</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Flies</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Feaces around the house</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Blocked drain</td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Uncontrolled open dump site</td><td colspan="2"></td><td colspan="2"></td></tr>
</table>

Signature of Enumerator...

Date..Mobile no. Of enumerator.............................

Annex 3: Key Informants Interview Tool

A. Security

1. Tell me about insecurity in this area.
2. Who are most affected by insecurity (probe for women, men or children)
3. What are some of the causes of insecurity in this area?
4. How has the response of security agents been?
5. Would you say the response has been effective?
6. How does insecurity affect the daily lives of the residents?
7. What recommendations would you give to improve security in this area?
8. Do you have anything else to add?

B. Households economic security/ Livelihood

1. What is the main source of Income for the majority of households in the area?
2. What is the approximate monthly income per house hold in this area?
3. How is the money earned spent. (on what does the HHs spend their income mostly)
4. What are the economic opportunities available in the area? (probe for youth, women and men)
5. What should be done to improve the economic situation of most households here?
6. Do you have anything to add?

C. Sports

1. In your opinion what are the sports facilities available in this area?
2. What is the most popular sport according to you in this area? (Football, volley ball, karate, etc.)
3. Do the residents have organized sports team/events? If yes tell us more about it? How are they organized?
4. In your view what are the benefits of the sports.
5. Do you have community halls/grounds? If yes specify.
6. According to you, what do you think should be done to improve sports in this area?

D. Health facilities

1. What heath facilities/clinics are available in the area? Are they public or private?
2. What are some of the challenges facing health facilities in this area? (Probe for distance, number of doctors, lack of drugs, low standards etc.)
3. What should be done to improve access to health care access in this community?

E. Learning Environment

1. Are there informal schools in this area, how many are they?
2. How many public schools are there in this area?

3. Are their some children who do not transition to secondary from primary? Where do they go after primary/ what do they do?

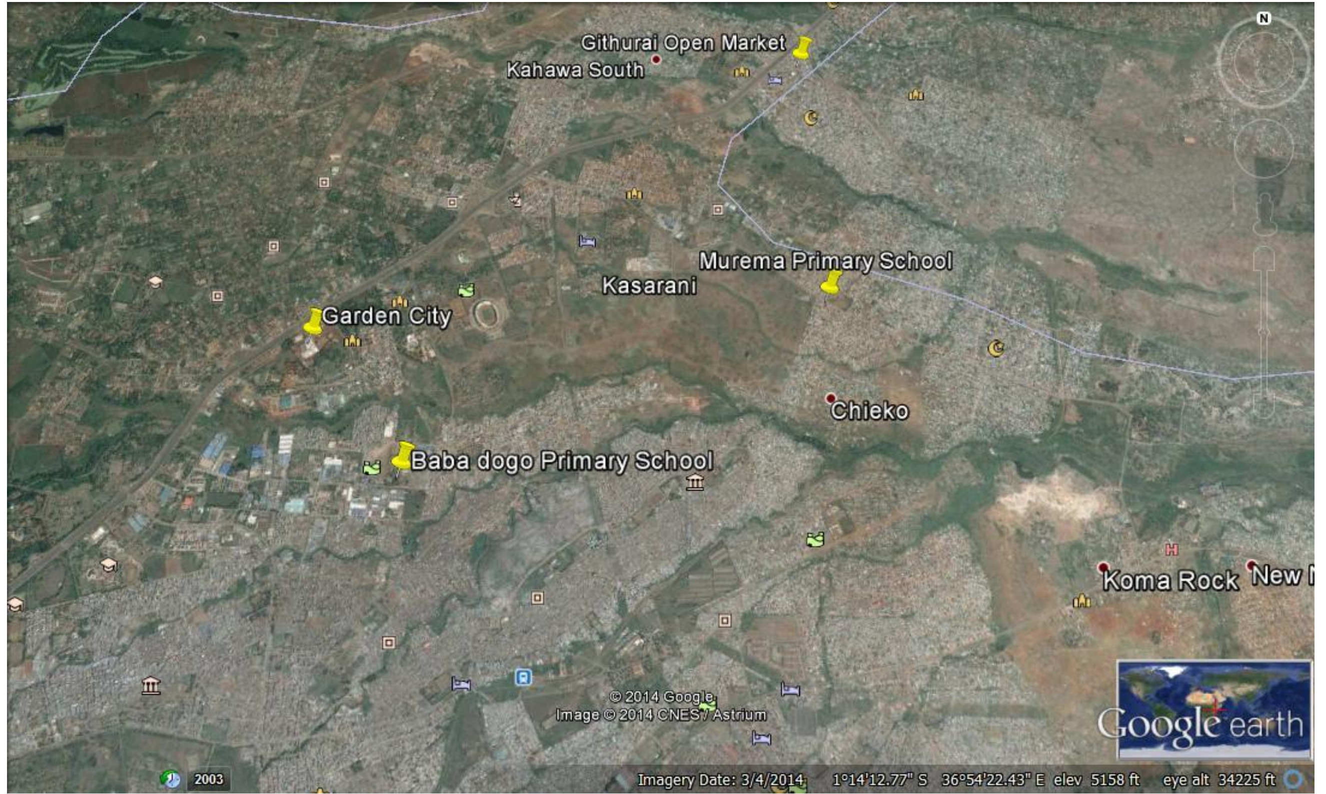
4. Challenges the schools are facing per category? (Probe for pregnancy, drop outs, drug abuse, child labor, Insecurity, peer pressure)
5. What should be done to improve quality of education in this area, how about access?

F. Environment

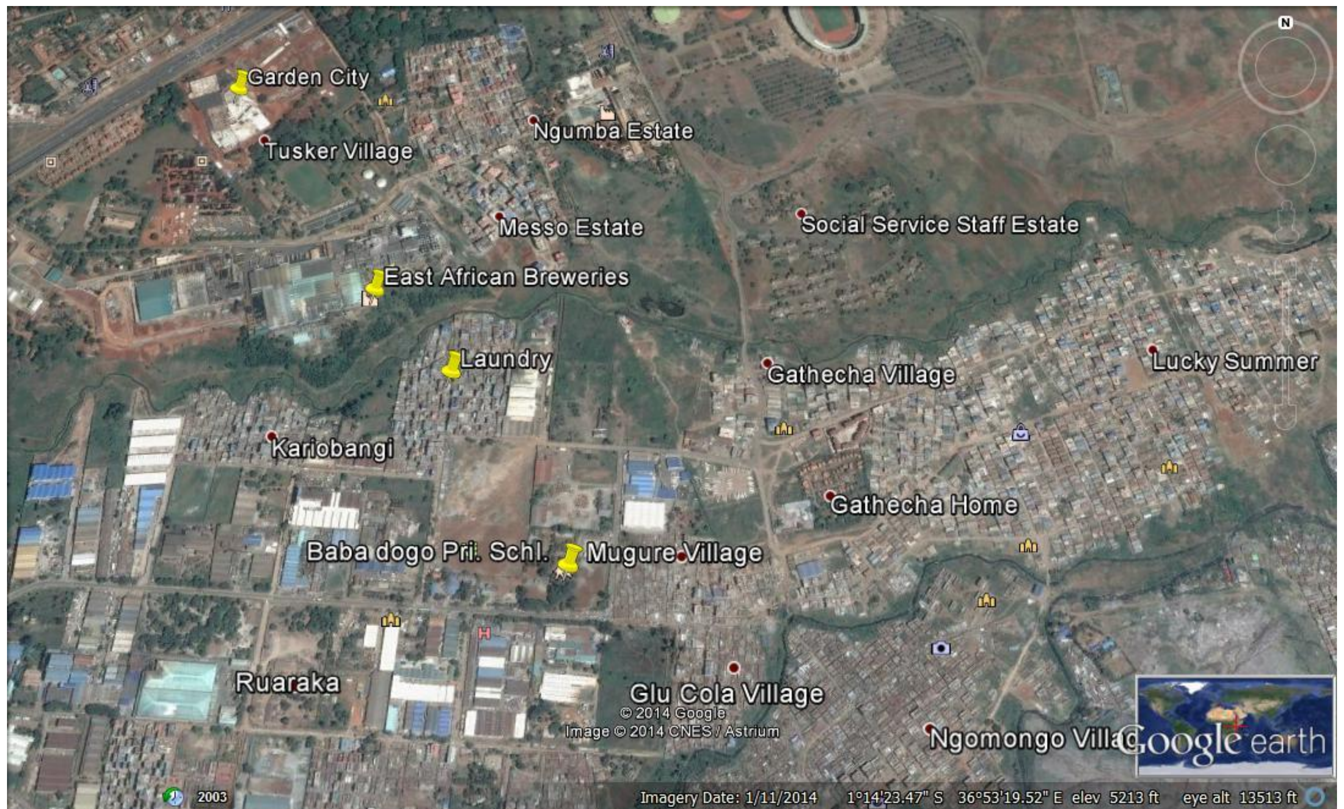
1. Name disasters which are frequent in this area? (Probe for fires, floods etc.)
2. How does the community cope with these disasters?
3. In your view what causes the disasters?
4. Who assists during such times of disaster? (Probe for NGOs, CBOs, companies, church, GoK, etc.)
5. Are there groups involved in environmental conservation/management? Which groups are these?
6. What should be done to improve the living environment in this area by the County Government?
7. Any other comment?

Annex 4: Maps

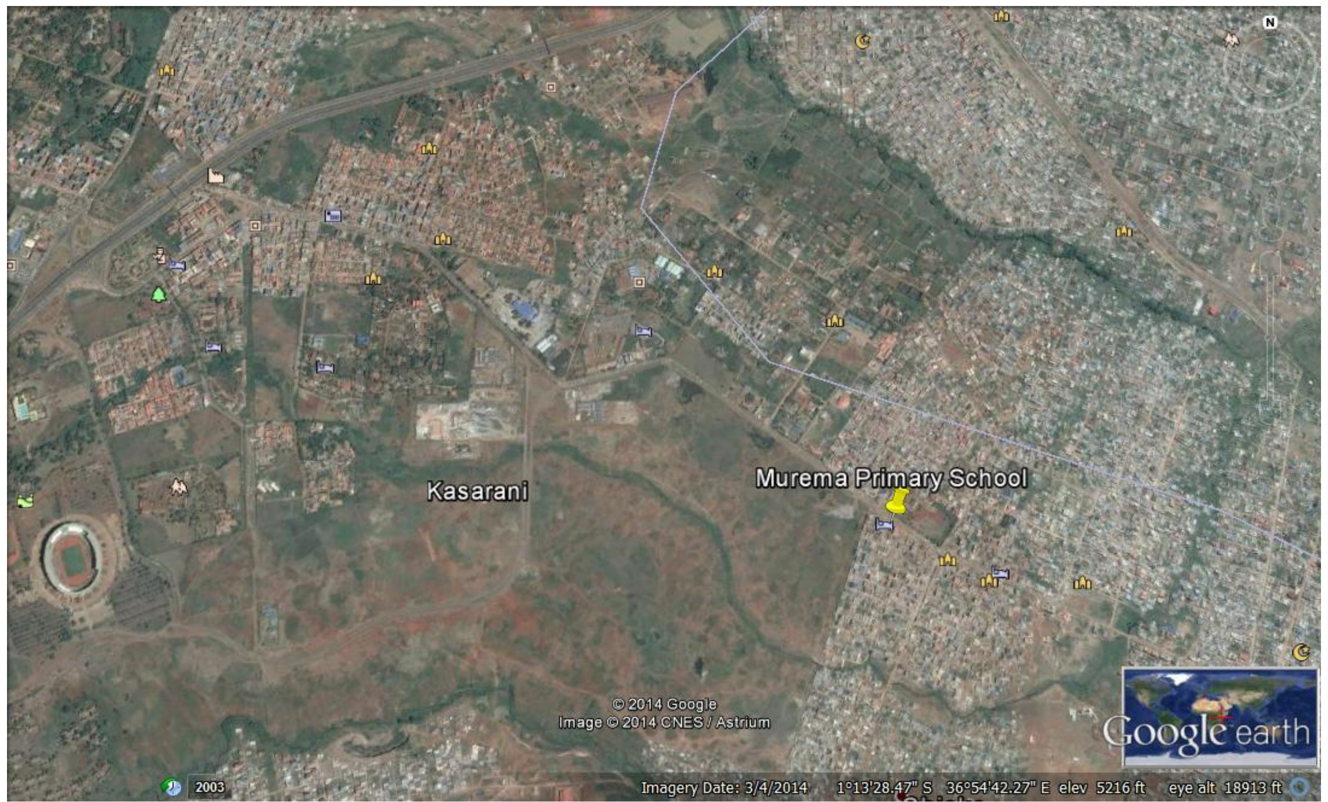
Map 1: Garden City CSR Catchment area (12Km Radius from Garden City)



Map 2: Baba Dogo area



Map 3: Area around Murema Primary School



Map 4: Public Markets within Garden City Catchment Area