



REPUBLIC OF GHANA

MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT

ASHAIMAN MUNICIPAL ASSEMBLY

**GREATER ACCRA METROPOLITAN AREA (GAMA) SANITATION AND WATER
PROJECT**

**CONSULTING SERVICES FOR COMMUNITY ENGAGEMENT/MOBILIZATION,
DESIGN AND IMPLEMENTATION SUPERVISION FOR THE PROVISION OF
IMPROVED SANITATION AND WATER SUPPLY IN NEW TOWN COMMUNITY -
ASHAIMAN MUNICIPAL ASSEMBLY**

FINAL BASELINE SURVEY REPORT



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JANUARY, 2016

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ACRONYMS

ASHMA	-	Ashaiman Municipal Assembly
CSO	-	Civil Society Organisations
EHSD	-	Environmental Health and Sanitation Directorate
GAMA	-	Greater Accra Metropolitan Area
GES	-	Ghana Education Service
GHC	-	Ghana Cedis
GHS	-	Ghana Health Service
HH	-	Household
HHH	-	Household Head
GWCL	-	Ghana Water Company Limited
KVIP	-	Kumasi Ventilated Improved Pit
LGPCU	-	Local Government Policy Coordination Unit
LIUC	-	Low-Income Urban Community
MA	-	Municipal Assembly
MESSAP	-	Municipal Environmental Sanitation Strategy and Action Plan
MFI	-	Micro-finance Institution
MLGRD	-	Ministry of Local Government and Rural Development
NHPC	-	National Population and Housing Census
OPD	-	Out-patient Department
PCU	-	Project Coordinating Unit
SWP	-	Sanitation and Water Project
VIP	-	Ventilated Improved Pit
WASH	-	Water, Sanitation and Hygiene
WC	-	Water Closet

Summary of Community Level Data

Population

The total population of Ashaiman New Town as extrapolated to 2015 based on the 2010 Housing and Population Census and Municipal Environmental Sanitation Strategy and Action Plan (MESSAP) is 16,842. However, the population obtained from the baseline survey at 75% coverage (sample size) is 17,858 significantly higher than the projected NPHC 2010 and MESSAP value. See Table S1 below for summary of demographic indicators.

Table S1: Summary of demographic indicators

	NPHC 2010 AND MESSAP	GAMA SWP COMMUNITY BASELINE SURVEY (at 75% coverage)
Population	16,842	17,858
Household Size	3.7	5.061
Estimated No. of Households	4,552	3,528

Location of New Town Community

The New Town community is located in the Ashaiman Municipal Assembly along the Ashaiman-Zenu road. This community lies within the Moni-Obaanye electoral area and has an estimated land size of 1.27 km². Figure S1 below presents a location map of the New Town community.

Total Number of Households

With an estimated total population of 23,811 and an average household size of almost 5.061 based on the survey, the total number of households is estimated at 4,705¹. Based on analysis of the baseline data, there is an estimated average of 9 households per house.

Access to Sanitation Facilities

About 66% of the households rely exclusively on public toilets while people who use shared compound toilets accounted for 18% of the households surveyed. Households with dedicated toilet facilities account for 8% of the while less than 1% practice open defecation. The most common household toilet facility type is pit latrine with slab/VIP (69.7% of households use VIP toilet facilities). 10% indicated having water closet (WC) flush to septic. Accessing a public facility takes between 5-20 minutes. Conditions around most of the public toilets are characterised by mal-odour, flies and soiled floors. Excreta containment and haulage/transport are largely through the use of septic tanks and cesspit emptying trucks. Other residents rely on manual means in evacuating filled pits.

¹ Based on the baseline survey

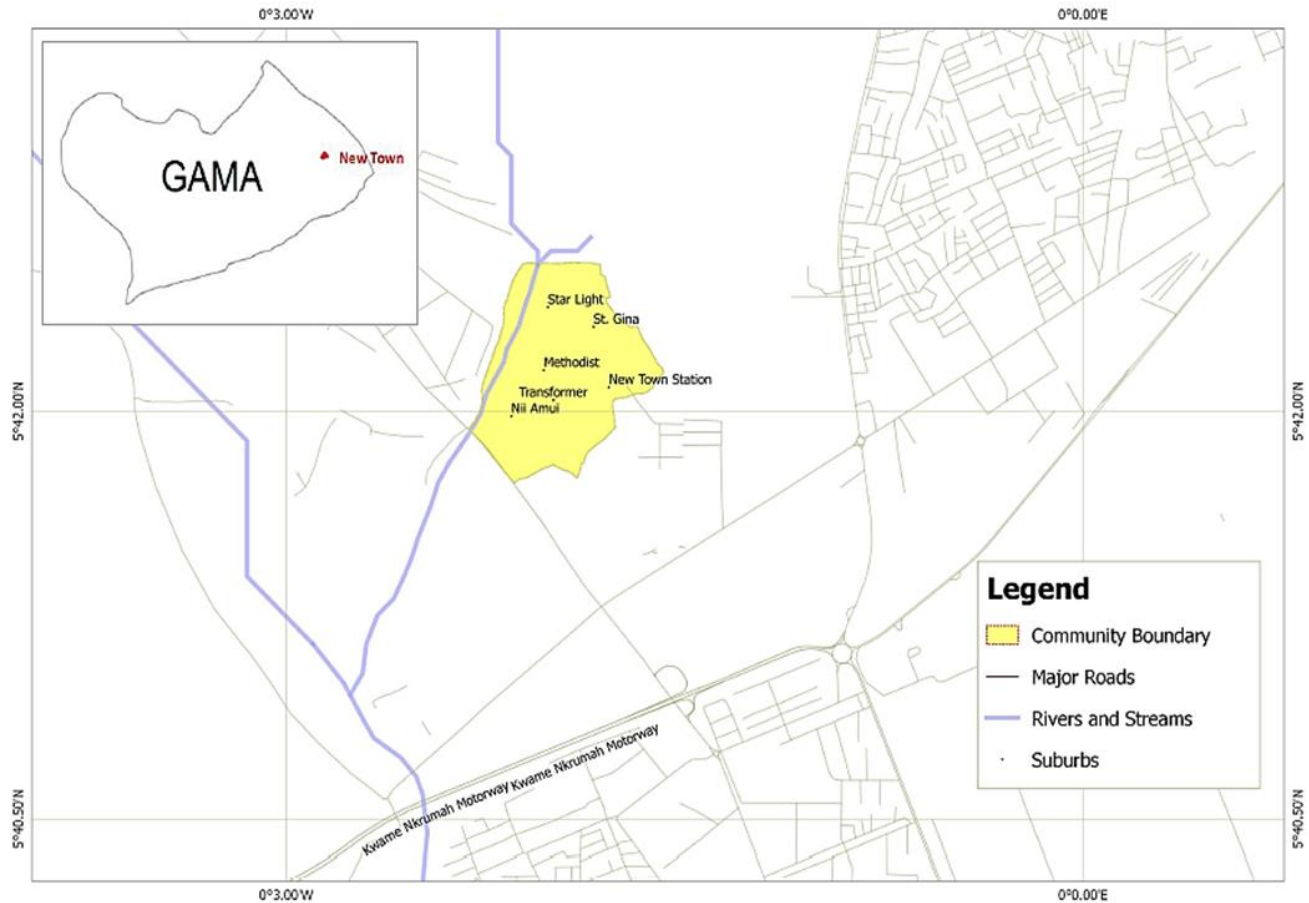


Figure S1: Location Map of Ashaiman New Town

Drainage

There is inadequate drainage in the community. Natural gullies and earth drains are the most common means of storm water conveyance as there are few channelized concrete drains.. 47% and 58% of the households dispose of wastewater from kitchens and bathrooms respectively, into a nearby drain or gutter. Some of the existing drains are silted/ choked with waste as a result of use as refuse disposal receptacles and wash-off of refuse disposed at vacant lots into drains.

Incidence of flooding

There is limited flooding in most parts of the community. However, some poorly drained areas experience occasional floods after heavy down pours. Only 16% of the respondents indicated flooding incidence in their areas. Inadequate drainage and indiscriminate disposal of refuse are identified to be major contributors to flooding incidence.

Average household size

The average household size of Ashaiman New Town is 5.061 with 59.1% being adults.

Microfinance Institutions (MFIs) in the community

There are no recognized MFIs within New Town. However, adjoining communities such as Official Town and Market Square have MFIs as listed below.

- New Global Investment
- AGT Micro-finance
- We Care Investment
- Franmay Capital
- Advans Ghana
- Express Savings and Loans Company
- Ezi Savings and Loans Limited
- First Capital Plus Company Limited
- Midland Savings and Loans Limited
- Opportunity International Savings and Loans Limited
- Unicredit Ghana Limited

Ghana Water Company Limited (GWCL) piped water coverage

15%, 91% and 98% of the households indicated relying on GWCL water supply for drinking, cooking and general purposes respectively.

1. Introduction

1.1 General

The Government of Ghana, acting through the Ministry of Local Government and Rural Development, is implementing the Greater Accra Metropolitan Area Sanitation and Water Project (GAMASAWAP), funded through an International Development Agency (IDA) grant. This seeks to increase access to improved sanitation and improved water supply in the Greater Accra Metropolitan Area (GAMA), with emphasis on low income urban communities, and to strengthen management of environmental sanitation across the GAMA.

An important component of this project is the upgrading of sanitation for a total of 250,000 people in low-income urban communities (LIUCs) selected within the 11 Metropolitan and Municipal Assemblies (MMAs) in the project area. For the purposes of this project, low income urban communities have been defined as those in which at least 75% of households live in a single room, and at least 75% of households use public toilets or other unacceptable toilet facilities.

Project interventions will include:

- Partially subsidized sanitation facilities for compound housing meeting project criteria;
- Establishment of public toilets under sustainable Public Private Partnership (PPP) management arrangements, where compound level facilities are not possible;
- Technical assistance and facilitation of micro-finance for single households to build improved sanitation facilities;
- Development, if necessary, of fecal sludge management services so as to enable the servicing of all facilities in the selected community;
- Improved water supply arrangements;
- Implementation of a program to promote improved hygiene-related behavior;
- Where appropriate, development of sustainable improved local-level management of drainage systems;
- Improvement of local-level solid waste management in order to ensure effective drainage and reduce solid waste accumulation in latrine pits.
- An action learning initiative to generate empirical evidence on the gender dimensions, impacts and implications of sustainable urban sanitation for poor men and women, girls and boys. The action learning will assess and gather evidence on the gendered implications of the intervention regarding policy, financing, design, operation, maintenance, use and sustainability.

1.2 Objectives

The objectives of the assignment are to:

- a. Support the Municipal and Metropolitan Assemblies (MMAs) in engaging low income urban communities (LIUCs) to establish existing baseline and end line situations for sanitation, water supply, and hygiene conditions and practices, as well as Socioeconomic and demographic characteristics of the low income community

- b. Support the design and construction supervision of sanitation and environmental infrastructure to improve services in the LIUCs.
- c. Support the design implementation of hygiene promotion and behavioral change campaigns, including due consideration of gender aspects.
- d. Establish a simple, sustainable community-based monitoring and feedback system.

The above is to be achieved in close collaboration with the communities, local and central agencies concerned, and with the formal and informal private sector, where appropriate.

In the case of the Ashaiman Municipal Assembly (ASHMA), Ashaiman Newtown was selected as the LIUC by the Municipal Assembly (MA).

1.3 Scope of Services

The scope of services for the assignment includes:

- a. Prepare a base map of the target community by defining the geographic area/mapping in consultation with the MA
- b. Carry out a baseline study and inventory of water, sanitation and hygiene (WASH) infrastructure and services, habits, preferences, water and sanitation related health data/characteristics
- c. Conduct gender informed needs and preference assessment to identify technically, socially, financially, and environmentally appropriate solutions
- d. Recruit and train local community activists to support the work of a dedicated Sanitation Improvement Facilitation Team (SIFT)-comprise community members, Consultant and other relevant stakeholder and facilitate communication with the community, including hygiene promotion
- e. Hold public consultations to validate the baseline assessment and discuss possible interventions and future management arrangements with clear roles for the community and all other stakeholders
- f. Develop a list of feasible sanitation and water supply service options in discussion with MA, Capacity Building Team/Environmental Health and Sanitation Directorate (CBT/EHSD), Ghana Water Company Limited (GWCL), and project staff
- g. Prepare designs for the sanitation infrastructure in accordance with appropriate local standards
- h. Identify and negotiate preferred sanitation solutions with the community
- i. Identify and agree on a body to represent the community
- j. Prepare a budgeted plan for infrastructure investment and development of services and service providers (if relevant)
- k. Mobilize resources, with the support of the CBT, submitting plans through the MA to the Local Government and Policy Coordination Unit (LGPCU), and in discussion with

microfinance partners where household or compound level infrastructure (toilets, bathrooms, water connections) is involved

- l. Assist the MA to select and supervise contractors for community infrastructure with the support of the CBT
- m. Support the formative research on hygiene promotion, and the delivery of the resulting campaign messages, with the support of the CBT and the EHSD.
- n. Establish community-based monitoring and feedback system for all the services provided under the project, and facilitate the production of the first three 6-monthly reports to the MMA, EHSD and GWCL.
- o. Undertake an end line study, update the inventory of WASH infrastructure and services and create an updated community WASH scorecard

1.4 Expected Outputs/Deliverables

The expected outputs of the assignment include the following:

- a. Community base maps
- b. An inception report including an updated work programme and selection of communities for survey
- c. WASH inventory and community scorecard
- d. WASH Service and Infrastructure Options
- e. Environmental and Social Screening Report
- f. Environmental Impact Assessment (EIA) scoping report (if EIA is required); Resettlement Action Plan (RAP) report (if required)
- g. EIA, Environmental Management Plan (EMP) and RAP/ARAP reports (if required)
- h. Detail Design, Tender Documents and Financing Plan
- i. Design of a community-based monitoring and feedback system
- j. Post Intervention WASH Inventory and Community Scorecard
- k. 3 No. Bi-annual Monitoring Report
- l. 11 No. Quarterly Monitoring Report
- m. Final/Completion Report

1.5 Objective of Baseline Study

The household baseline survey and inventory of WASH facilities and services was conducted to ascertain the existing situations for sanitation, water supply, and hygiene conditions and practices, as well as socio-economic and demographic characteristics of Ashaiman Newtown.

The thematic areas of the information gathered include:

- Demographic and socio-economic characteristics- e.g. population, age, occupation, income, education, etc.

- Environmental Sanitation- e.g. access and type of toilet facility, household refuse collection, disposal, liquid waste disposal, drainage, flooding, etc.
- Water Supply- e.g. available water sources, storage facilities, usage, service costs, regularity of supply, etc.
- WASH knowledge, attitudes, practices and behaviours (KAPBs)- e.g. frequency of hand washing practices, personal hygiene, sanitation related diseases, willingness/ability to pay (WTP/ATP) for improved WASH services, etc
- Housing and occupancy- e.g. type of housing, tenancy, etc.
- General information- e.g. soil types, etc.

2. Methodology of Baseline Survey

2.1 Literature Review

The following documents were assembled and reviewed in planning the assessment and audit protocols and procedures:

- National Population and Housing Census Report (NPHC, 2010)
- Municipal Population and Housing Census Report, 2010
- Household Sample Surveys in Developing and Transition Countries (UN, 2005)
- Municipal Environmental Sanitation Strategy and Action Plan (MESSAP)
- Revised Environmental Sanitation Policy, 2009
- National Environmental Sanitation Strategy and Action Plan, (NESSAP, 2010)

Information gathered from the review was used to inform the development of the sampling techniques and frame for the baseline survey.

2.2 Study Tools

Both qualitative and quantitative methods were used in the baseline survey. The quantitative involved the administration electronic-based structured household questionnaires using smart phones and tablets. The e-based questionnaire was developed and recommended for use by the LGPCU in collaboration with the MA and consultant. The e-based questionnaire was developed on the Kobo Collect Platform. A sample questionnaire provided by the Project Coordinating Unit was reviewed and modified appropriately (see Annex 1).

The qualitative methods used included key person interviews (KPIs), physical observations and literature review. Key persons interviewed included the local representatives of community at the assembly (assembly men), opinion leaders, Environmental Health Officers (EHO) responsible for the community and caretakers/owners of communal WASH facilities.

For uniformity of results, the LGPCU provided a number of key indicators which were discussed and agreed upon. The final indicators employed in the baseline survey for measuring the status of five (5) sub-sectors comprising: demographic and socio-economic characteristics; environmental sanitation; water knowledge, attitudes and practices; housing and occupancy characteristics (see Box 1.1).

Box 1.1: WASH Baseline Indicators and Findings for Ashaiman New Town

Demographic and socio - economic characteristics

The community can be described as an adult (aging) one with 59.1% of the people being at least 18 years. The community has an average household size of 5; 1.5 more than the regional average. Many of the households are headed by males with the majority within the age bracket of 31-40 years. Two out of every twenty household head do not have any form of education. Many more boys attend school than girls of same school going age. Professions such as petty trading, artisanship, manual labouring, public services and agriculture are some of the main sources of occupation in the community. Typical sources of income include business and trading; employment; employment and labour and remittances.

Environmental Sanitation

Prevalence of open defecation is very low at less than 1%. However exclusive use of public toilets is high at 66.3% (i.e. six out of every ten households). Pit latrines with slab/VIP toilets are the most dominant household toilet facility types. 70% of the households dispose rely on door-to-door waste collection services. Use of refuse collection bins is the most common means of storing household waste. 51% of the households use sacks and polythene bags. Disposal of sullage into nearby gutter (mostly roadside drains) and open lots/bare ground is the norm.

Water

Drinking water source is mainly sachet water. Water for cooking and general uses is mainly sourced from GWCL pipe-borne water. In-house water supply from GWCL is relatively high (25%) considering the community being a LIUC. Water supply from the urban supplier is satisfactory (45% of households that rely on GWCL water supply indicated continuous flow). Small containers and jerry cans are the common water storage receptacles by most of the households.

Knowledge, Attitude & Practices

Majority of the respondents indicated washing their hands only after visiting the toilet and before eating. Handwashing with soap under running water every time is practiced by only 4% of the households. Almost a quarter of the households indicated the availability of handwashing facilities at the toilets used by the households. The main reason for handwashing is to keep hands clean and to prevent oral/faecal diseases. The predominant WASH related disease in the community is Malaria.

Housing and occupancy

The most common house type is the compound house (83%). More than half of the community's households dwell in single rooms, and a further one –third dwell in a hall and chamber. Six out of every ten household live in a rented a rented house. Most residences in the community are built of cement/brick blocks with iron sheet roofs.

2.3 Sampling Procedure

2.3.1 Household Sample Design

In designing the sampling frame, the total number of households for the community was first determined based on projected 2015 population provided by the project monitoring and evaluation team of LGPCU and the average district household size indicated in the 2010 Population & Housing Census Summary Report of Final Results by the Ghana Statistical Service (GSS). 75% of the estimated total number of households was used as the sample size. Table 2.1 below shows the representative number of households sampled as per the 75% threshold indicated by the LGPCU and the actual number of households (HH) interviewed in the study community.

Table 2.1: Estimation of Sample Size (No. of Households)

Population (2015) ²			Average District HH Size	Est. No. of HH	75% Threshold by LGPCU	Minimum by	Actual No. of HH Interviewed
Male	Female	Total	3.7	4,552	3,414		3,528
8,269	8,573	16,842					

The survey area was stratified according to the suburbs within the community. The suburbs were clustered into ten (10) enumeration areas. Using acquired orthophotos showing the various suburbs, a listing of buildings and selection of dwellings for household listing was carried out for each suburb. This provided a sampling frame for selection of households. A household was defined as a single-person household or a group of people living in the same housing unit, sharing meals and jointly providing food and other essentials for living.

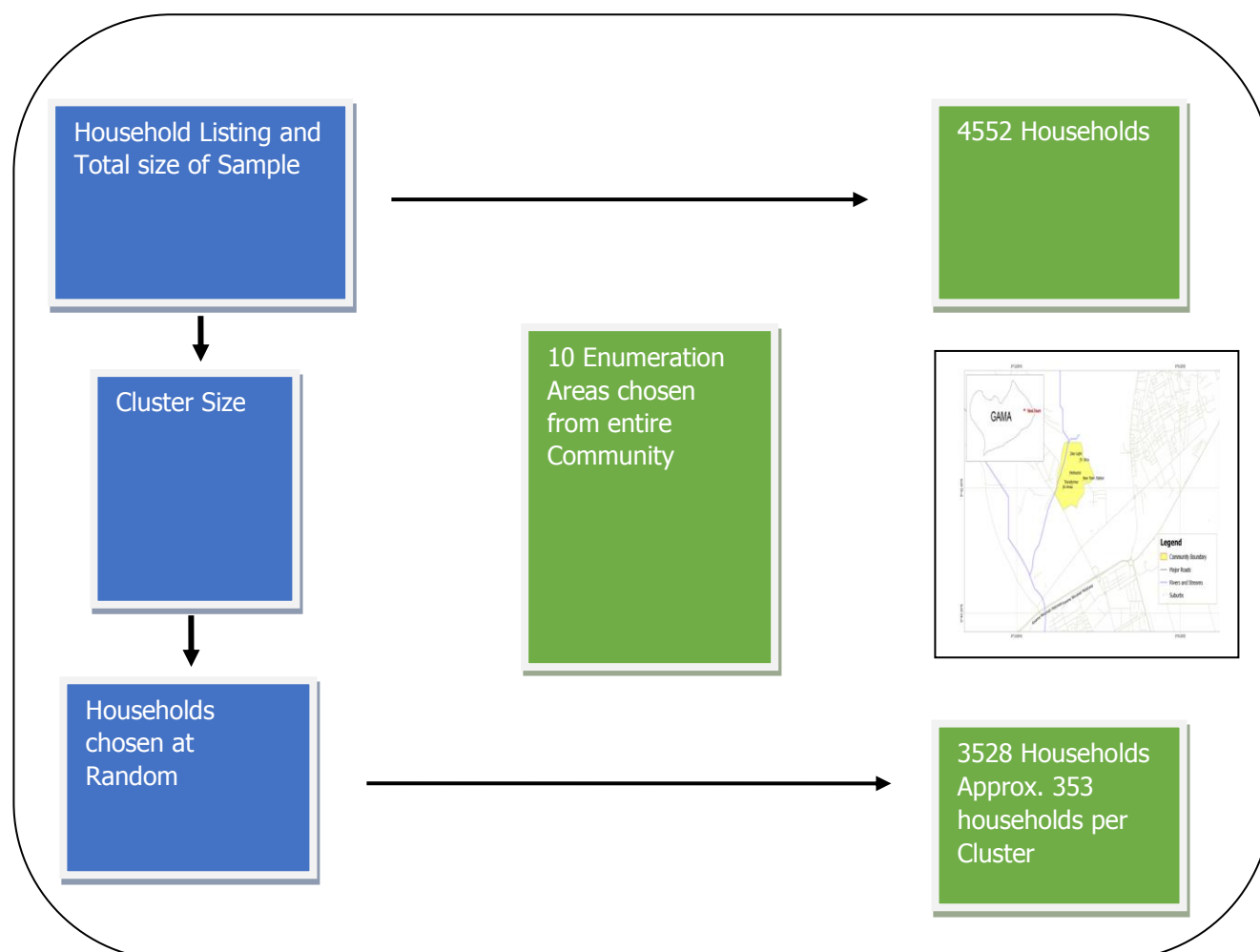


Figure 2.1: Layout of sample design

² Provided by LGPCU M&E Team

2.3.2 Personnel Mobilisation and Training

The field data collection/survey team comprised forty (40) enumerators, three (3) field supervisors and data validation & quality control officer. In meeting the Client's requirement for community involvement indicated in the Terms of Reference (ToRs), at least 35% of the enumerators were from within the community or district. The enumerators also included Environmental Health Officers from the MA. A one-day training session was organised for the enumerators and a recap done on the first day of enumeration. The training involved:

- Overview of the project and project area
- Introduction to the baseline survey themes
- Introduction to the Kobo Collect and e-questionnaire
- Administration of the e-questionnaires/mock data collection

2.3.3 Community Entry and Demarcation

Based on our initial interactions with the local assembly representative (assembly man) during the inception stage, the local assembly representative acted as the main entry point to the community. The MA's public address vans were used in sensitizing the community on the survey. The sensitization lasted for three (3) days covering the entire community. Key members/ opinion leaders in the community helped in establishing the boundaries of the community and suburbs.

2.3.4 Data Collection and Quality Control

The survey covered all the suburbs in the communities. Selection of households for interview was done randomly. Only adult representatives of households were targeted. Data collection lasted for a week including a weekend.

Data collected by the enumerators was checked by the supervisors as a first level of quality assurance. The second level of quality assurance involved checking of all data entry records on the phones and tablets with data received on the web-based KoboCollect platform. Internal consistency checks and daily reporting of entries were also carried out.

3. Demographic, Socio-Economic Characteristics

3.1 Population Characteristics

The total number of persons in households in Ashaiman New Town is approximately 23,811 based on the survey. Adult³ population in the community is 59.1% (see Figure 3.1 below). The community can therefore be described as an adult populated area.

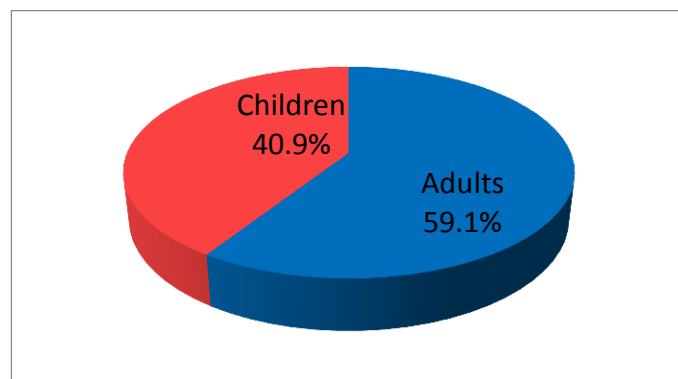


Figure 3.1: Adult- children ratio

Males below the age of eighteen (18) are 8.2% higher than their female counterparts as shown in Table 3.1 below.

Table 3.1: Sex distribution of children under 18 years

DESCRIPTION	NUMBER	PERCENTAGE
Boys under 18 years	3952	54.1%
Girls under 18 years	3354	45.9%
Total	7306	100.00%

3.2 Household Head and Number

Table 3.2 below shows the number of households enumerated (3,528) with an average household size of 5.061 which is higher than the Greater Accra regional average of 3.8. The total number of households by projection is therefore estimated at 4,705. Based on analysis of the baseline data, there is an estimated average of 9 households per house.

Table 3.2: Household characteristics

INDICATOR (Based on 75% baseline survey coverage)	VALUE
Number of persons in household	17858
Number of households	3528
Average household size	5.061

³ +18 according to the Ghana Statistical Service National Population and Housing Census (GSS-NPHC) 2010

3.3 Household Headship

Household headship is dominated by males at 59.78% (see Figure 3.2 below) which compared to the national average of 65% is quite low.

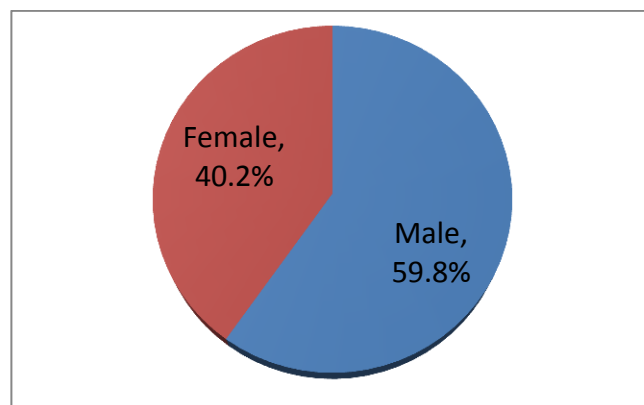


Figure 3.2: Household headship by gender

36.79% of the household heads are aged between 31-40 years and a quarter (i.e. 25.06%) are within the age bracket of 41-50 years. 22.5% fall within the ages of 51-70+ (see Table 3.3 below).

Table 3.3: Age of household head

AGE OF HOUSEHOLD HEAD	No. OF HHH	PERCENTAGE
less than 21 years	21	0.60%
20 -30_years	532	15.08%
31 - 40_years	1298	36.79%
41 - 50_years	884	25.06%
51 - 60_years	537	15.22%
61 - 70_years	193	5.47%
above 70 years	63	1.79%
	3528	100.00%

3.4 Nationality of Household Head

The community has an almost universal (99.6%) Ghanaian population and a percentage higher than the national average of 98%. The remaining less than 1% is constituted by other nationalities such as Nigerians, Nigeriens, Togolese, Malians, Burkinabes and Ivorians (see Table 3.4 below).

Table 3.4: Nationality of household head

NATIONALITY	No. OF HH	PERCENTAGE
Ghanaian	3515	99.63%
Togolese	7	0.20%
Nigerian	2	0.06%
Burkinabe	2	0.06%
Nigerien	1	0.03%
Beninois	1	0.03%
	3528	100.00%

3.5 Ethnicity of Household Head

39.73% of the households are headed by Ewes. The Akans follow next with 28.37% and the Ga-Dangme 19.79%. Other ethnic groups in the community include Mole-Dagbani, Guans and Gurma. Table 3.5 below shows the percentages.

Table 3.5: Ethnicity of household head

ETHNICITY	No. OF HH	PERCENTAGE
Ewe	1399	39.73%
Akan	996	28.37%
Ga-Dangme	695	19.79%
Mole-Dagbani	234	6.66%
Others	104	2.96%
Guan	51	1.45%
Grusi	15	0.43%
Mande-Busanga	12	0.34%
Gurma	9	0.26%
	3515	100.00%

3.6 Education

As shown in Table 3.6 below, 8% of the household heads have not had any form of education (formal and non-formal). A similar percentage (8.82%) had obtained tertiary education (e.g. Training/Nursing Colleges, Universities). 43.20% have also attained middle school education with a further 20.80% attaining secondary education. The rest have had primary and non-formal education.

Table 3.6: Household head education level

HHH EDUCATION LEVEL	No, OF HH	PERCENTAGE
Tertiary	311	8.82%
Secondary	734	20.80%
Middle school	1524	43.20%
Primary	486	13.78%
Non formal	187	5.30%
None	286	8.11%
	3528	100.00%

With regard to children attending school, 2.4% more of boys are in school compared to 88.6% of girls who attend school, unlike the national trend where school enrolment of girls are higher (see Table 3.7 below).

Table 3.7: School attendance by boys and girls

DESCRIPTION	NUMBER	PERCENTAGE
Boys attending school	3598	91.0%
Boys not attending school	354	9.0%
	3952	100%
DESCRIPTION	NUMBER	PERCENTAGE
Girls attending school	2971	88.6%
Girls not attending school	383	11.4%
	3354	100%

3.7 Occupation and Economic Characteristics

As shown in Figure 3.3 below, about 8.0% of household heads are employed in the formal (teaching, banking, public service) sector as a sole occupation. The over 90% who are self-employed in the informal sector are into petty trading, artisanship, apprenticeship, labour work, food vending, agriculture. 37% of the economically active are into petty trading. Those into farming (both livestock and crop only) constituted only about 1% which may be an indication of how highly urbanized the community is. Household heads with multiple occupations (two or more occupations) constituted 8.3% while those who plied other occupations (e.g. pastoring, driving, pensioner, etc.) constituted 14.7%. A significant percentage (i.e. 15%) of the household heads are artisans.

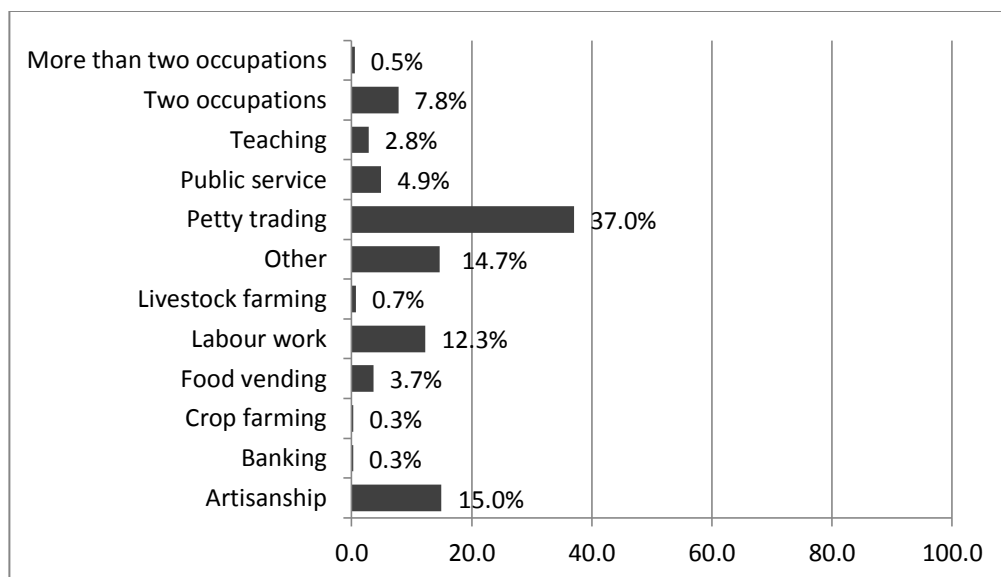


Figure 3.3: Occupation of household head

3.8 Household Incomes

Business and trading accounted for 61.8% of income sources of households in the last 12 months. Other significant sources include employment (24.8%) and remittances (4.4%). Incomes from other sources accounted for 2.9% of respondents while incomes from multiple sources (more than one source) accounted for about 5.4% of the respondents. See Figure 3.4 below.

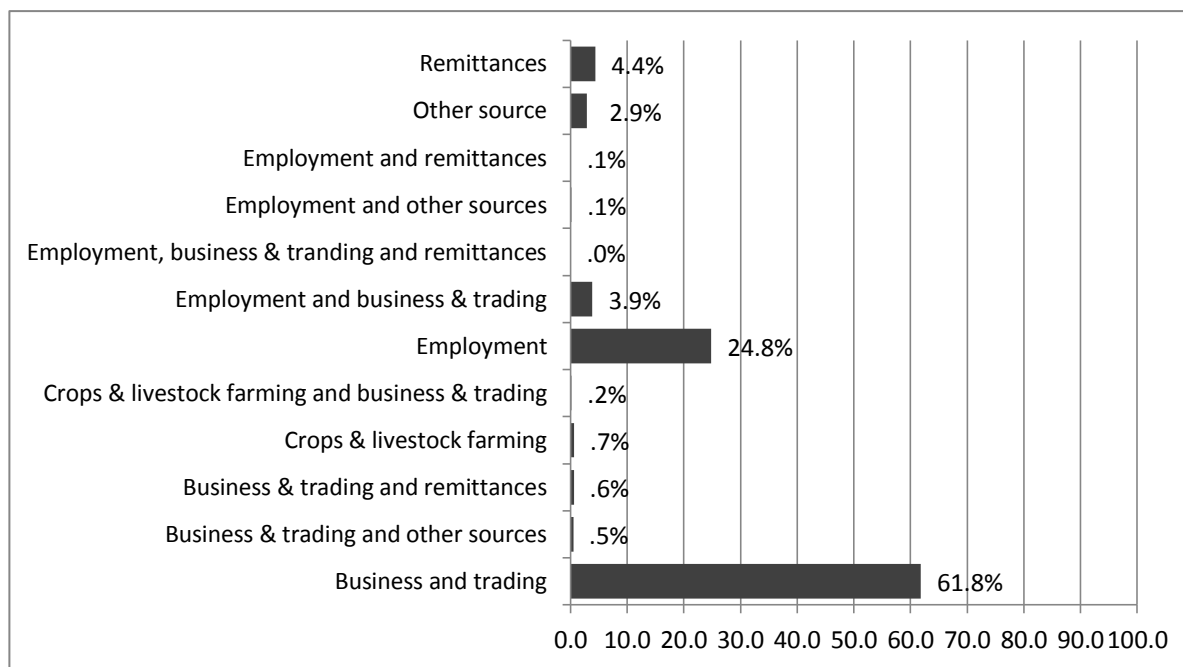


Figure 3.4: Sources of household income in the last 12 months

On the average, business and trading generated about GHC 6,023.00 as average annual income over the past year, with employment and labour generating GHC 3,971.00. Income from crops and livestock generated about GHC 4,372.00 while those from other sources generated GHC 2,871.00 over the same period (See Table below 3.8).

Table 3.8: Average amount of income

INCOME SOURCE	AVERAGE AMOUNT (GHC) IN 6 MONTH	AVERAGE AMOUNT (GHC) IN 12 MONTH
Employment and labour	7,076	3,971
Crops and livestock	2,016	4,372
Business and trading	3,026	6,023
Remittances	650	1,328
Other sources	1,632	2,871

3.9 Economic Activity

Table 3.9 shows that of the total adult population of 10,552; 5,152 persons representing 48.9% are economically active (either self-employed or are employees).

Table 3.9: Employment activity status for adults

ECONOMICALLY ACTIVE PERSONS	NUMBER	PERCENTAGE
Persons above 18 who are employed	2342	45.4%
Persons above 18 who have their own business	2810	54.6%
	5152	100%
Total adult population	10552	59.1%
Economically active persons above 18 years	5152	48.9%

3.10 Financial Services

More than half of the respondents (53.74%) have personal accounts (see Table 3.10 below). Only 5.24% of the respondents have business accounts (see Table 3.11 below) and only a further 7.62% have some kind of investment account (see Table 3.12).

Table 3.10: Persons with personal bank accounts

HAVING PERSONAL BANK ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	1632	46.26%
Yes	1896	53.74%
Total	3528	100.00%

Table 3.11: Persons with business bank accounts

HAVING BUSINESS BANK ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	3343	94.76%
Yes	185	5.24%
Total	3528	100.00%

Table 3.12: Percentage of persons with investment/mutual fund account

HAVING INVESTMENT/MUTUAL FUND ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	3259	92.38%
Yes	269	7.62%
Total	3528	100.00%

3.11 Persons with disability

Forty eight of the respondents representing 1.36% are with some form of disability (visual impairment, hearing impairment, physical disabilities). This figure is lower than the national average of 3%.

Table 3.13: Disability status of respondents

HANDICAPPED	No. OF RESPONDENTS	PERCENTAGE
No	3480	98.64%
Yes	48	1.36%
	3528	100.00%

4. Environmental Sanitation

4.1 Access to Sanitation Facilities

From the baseline survey, only 7.9% of the households representing 257 households indicated having their own (a dedicated toilet). Households in compound houses who share toilet facilities with other households constituted 18% of the total households surveyed. Six out of every ten households rely on public toilets exclusively whereas less than 1% practice open defecation (into water body or nearby bush).

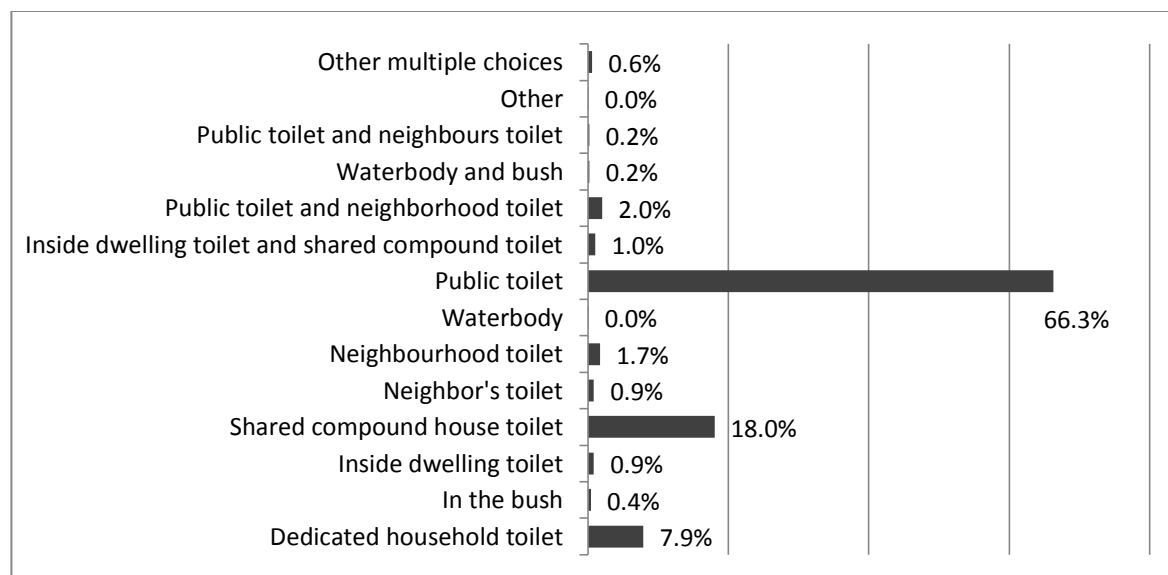


Figure 4.1: Access to sanitation facilities

4.2 Toilet Facilities in-house

Majority of households (73.1%) in Ashaiman New Town do not have toilets in-house (see Table below). Houses with at least 5 toilets constituted 1.49% representing 52 households of those surveyed.

Table 4.1: Number of toilets available in house

TOILETS AVAILABLE IN THE HOUSE	No. OF HH	PERCENTAGE	AVERAGE No. OF HH PER HOUSE
0 (No toilet)	2579	73.10%	9
1	437	12.39%	
2	353	10.01%	
3	80	2.27%	
4	27	0.77%	
5+	52	1.49%	
Total	3528	100.0%	

4.3 Household Toilet Types

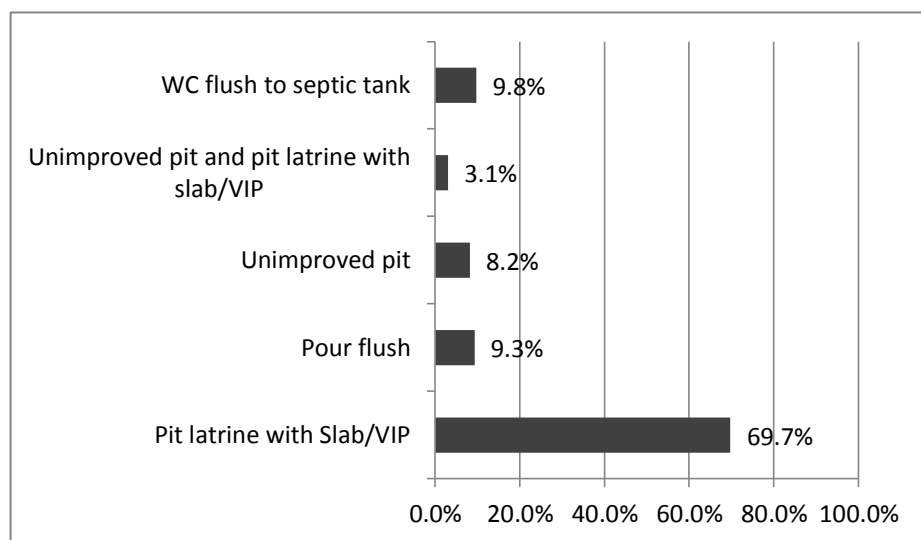


Figure 4.3: Household toilet facility types

Figure 4.3 above shows the types of household toilet facilities. About 70% of the households use pit latrine with slab/VIP (see plate 4.1 below). 9.3% of the households use Pour flush and about a similar percentage (9.8%) use Water Closet (WC) flush to septic. This WC usage in the community is lower than the national average of 15.4%. Unimproved pit latrines alone account for 9.3% of the household toilets.



Plate 4.1: Example of household VIP toilets in Newtown

4.4 Household Toilet Ownership

Almost eight percent (7.88%) of the households have toilets exclusively used by their members. This figure is however lower than the national average of 16.9% - see Table 4.2 below. Out of the 7.88% (278) of households with toilets; 6.84% are found within compound houses; 25% are in detached structures and a further 19.03% are in semi-detached structures and 0.43% are found in Temporary Structures (see Table 4.3 below).

Table 4.2: Household toilet ownership

DOES THE HH HAVE ITS OWN DEDICATED TOILET	No. OF HH	PERCENTAGE
No	3250	92.12%
Yes	278	7.88%
Total	3528	100.00%

Table 4.3: Households having their own dedicated toilets by house type

TYPE OF HOUSE	HH HAVE ITS OWN DEDICATED TOILET		
	NO	YES	TOTAL
Compound house	93.16%	6.84%	100.00%
Detached	75.00%	25.00%	100.00%
Semi detached	80.97%	19.03%	100.00%
Temporary structure	99.57%	0.43%	100.00%

4.5 Public Toilet Usage

Seven out of every ten households (more than twice the national average of 30%) use public toilets (either exclusively or in combination with other means of disposing of human faeces) as shown in Table 4.4 below. Public toilet usage is mainly by members within temporary structures at 89.36% and compound houses at 69.62% (see Table 4.5 below). Majority of the public toilets are privately owned with some being household toilets but shared with the public (see Plates 4.3-4.7). The only public toilet owned by the assembly is not-operational (see plate 4.2).

Table 4.4: Public toilet usage

USE OF PUBLIC TOILET	No. OF HH	PERCENTAGE
No	1048	29.71%
Yes	2480	70.29%
Total	3528	100.00%

Table 4.5: Public toilet usage by house type

TYPE OF HOUSE	Use of public toilet		
	No	Yes	Total
Compound house	30.38%	69.62%	100.00%
Detached	40.00%	60.00%	100.00%
Semi detached	34.82%	65.18%	100.00%
Temporary structure	10.64%	89.36%	100.00%



Entrance to facility closed with wooden bars



Plastic ventilators melted as a result of heat generated from the collection chamber



Borla sanitary site compound

Plate 4.2: Defunct 10-Seater Enviro loo toilet at Borla sanitary site area owned by the MA



Plate 4.3: External and internal views of privately owned 12-seater WC toilet opposite community 22 boundary



Plate 4.4: 4-Seater VIP toilet at Amelia Store area



Plate 4.5: 3-Seater VIP toilet at Christ Healing Church



Plate 4.6: 4-Seater pour flush toilet near Cambridge school



Plate 4.7: 4 VIP toilet close to Abundant Grace International

4.6 Solid Waste Management

4.6.1 Household Solid Waste Storage Receptacles

Bins, sacks and polythene bags are predominantly used as storage receptacles for household waste. 34.6% use sacks and 14.9% use polythene bags only. The bins used by relatively high percentage (35.5%) of households were mainly provided at subsidized cost by the municipal assembly as part of measures to promote proper waste storage and collection (see plate 4.8 below). Households that use multiple receptacles for waste collection accounted for 14.4% of the households (see Figure 4.4 below).

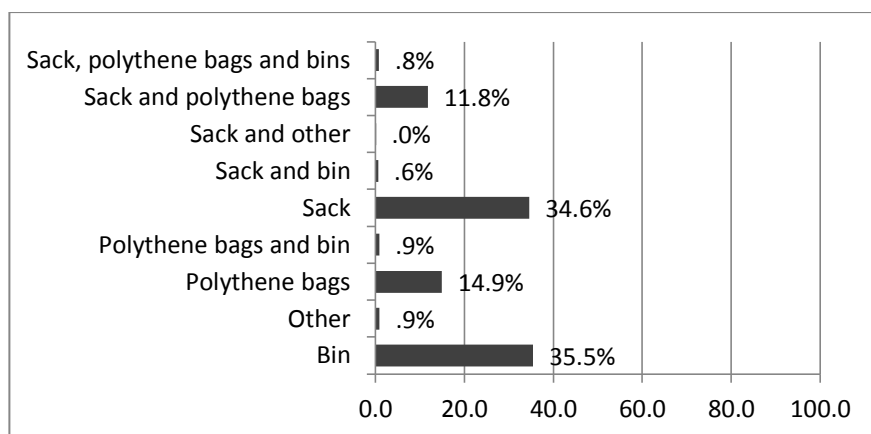


Figure 4.4: Waste storage containers



Plate 4.8: Household waste collection bins

Further analysis of household waste storage receptacles by type of house revealed that, use of bins for storing household waste was the prominent in all house types with the exception of temporary structures (e.g. kiosks, containers, etc.) who by virtue of being illegally sited did not receive the bins subsidized by the local assembly. Furthermore, they are mostly unable to afford the door-to-door refuse collection fee which often goes with the use of the bins. This is reflected in the high rate of usage of sacks and polythene bags (i.e. 56.2% and 21.7%) in temporary structures as compared to the other house types (see Figures 4.5d below). The use of sacks is also prominent in all house types considered i.e. compound house (33.2%), detached house (39.2%), semi-detached (27.9%) and temporary structures (56.2%)-see Figures 4.5a-4.5d.

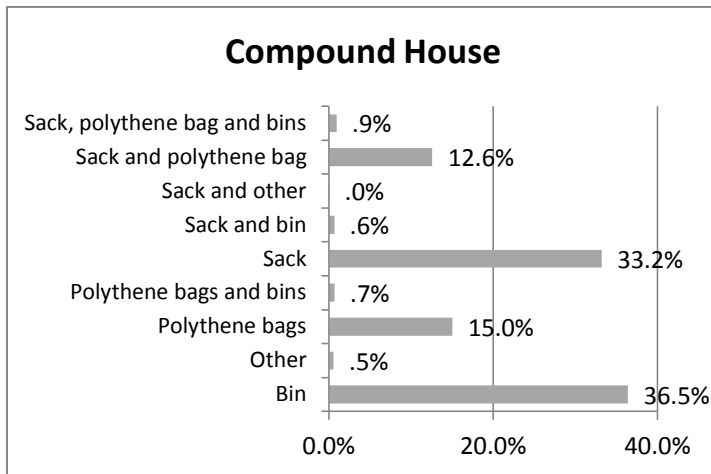


Figure 4.5a: Household waste storage receptacles in compound houses

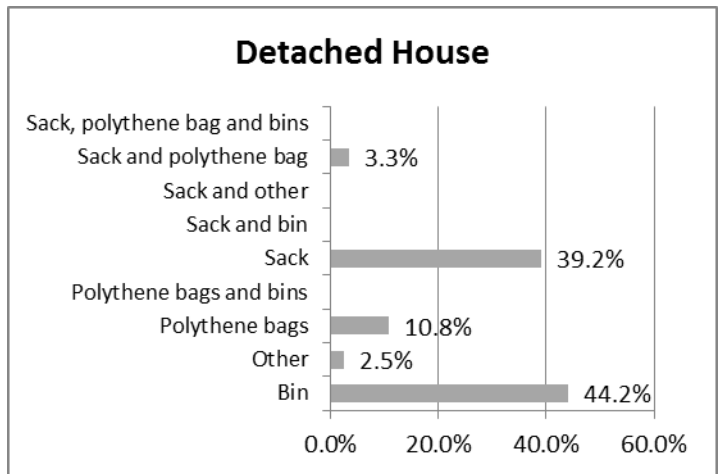


Figure 4.5b: Household waste storage receptacles in detached houses

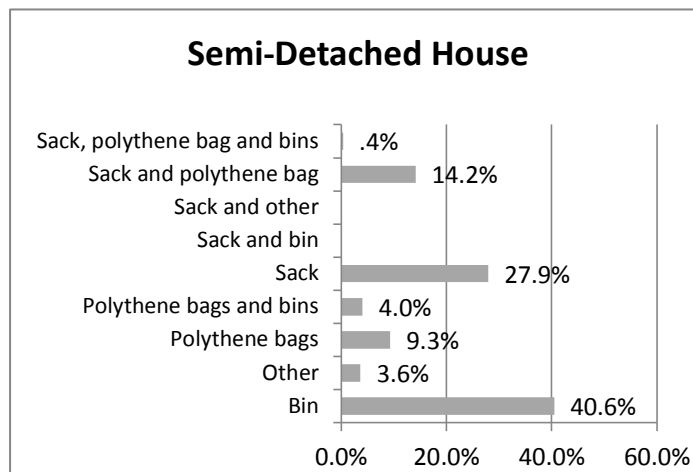


Figure 4.5c: Household waste storage receptacles in semi-detached houses

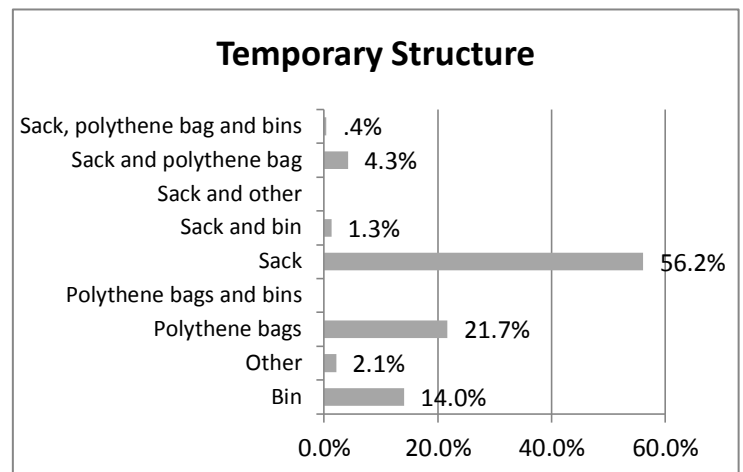


Figure 4.5d: Household waste storage receptacles in temporary structures

Door-to-door waste collection alone accounts for more than two-thirds (69.6%) of household waste disposal methods. The service is provided by private waste collection service providers under franchise license by the Municipal Assembly (MA) and private individuals using tricycles ('Borla Taxis'). The 69.6% coverage is significantly higher than the regional average of 48.5% partly due to the community having some good access roads. 17.2% of the households rely exclusively on communal waste containers provided by the MA while those who rely on both communal containers and door-to-door services accounted for 2.4%. 6.1%, 1.8% and 0.1% dispose of their waste at open dumps, domestic trenches or bury the wastes respectively. Households that practiced multiple disposal methods accounted for 5.2%. See Figure 4.6 below.

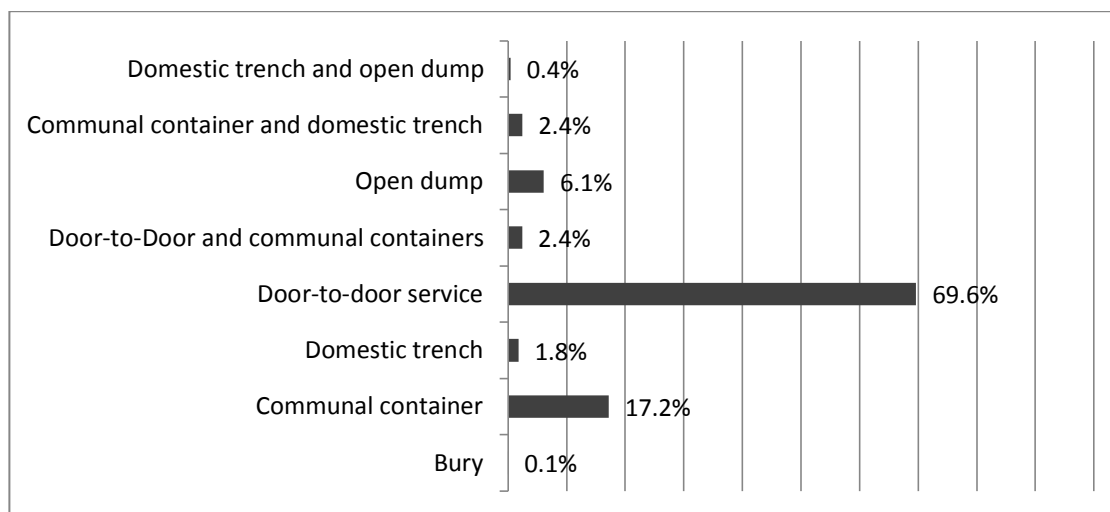


Figure 4.6: Household waste disposal methods

As shown in Figures 4.7a-4.7d below, door to door collection (by refuse collection trucks and tricycles) remains the most prominent waste collection method for all categories of households with semi-detached houses having the highest rate of 77%. Use of communal containers was the second highest option for refuse disposal for all house types. The trends observed correlates with the overall community picture as shown in Figure 4.6 above and implies the type of house does not have any effect on household waste disposal methods in Ashaiman New Town. Borla Taxis (tricycle) often provide door-to door services to the residents in temporary structures.

The use of open-dumps was more prominent in compound houses (7%) followed by temporary structures (4.3%). As could be predicted, open-dumping of refuse is not a common practice in detached and semi-detached houses (i.e. 0% and 0.8% respectively). Disposal of household solid waste by burying is not a common practice in the community.

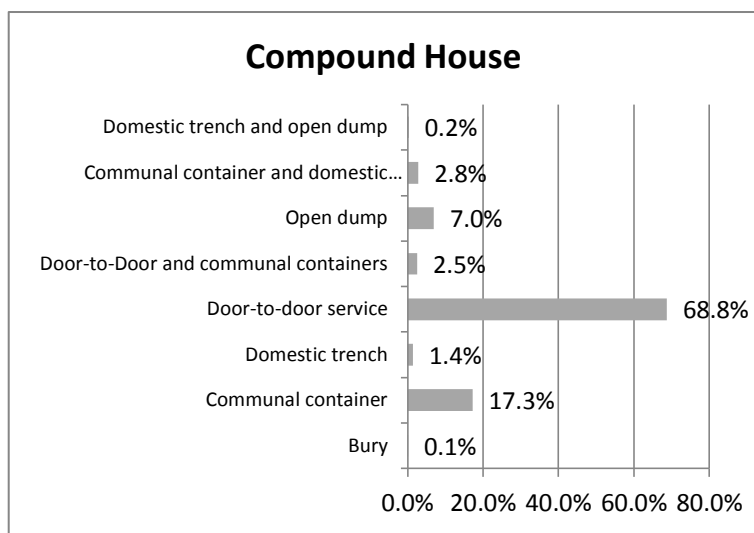


Figure 4.7a: Waste disposal methods in compound houses

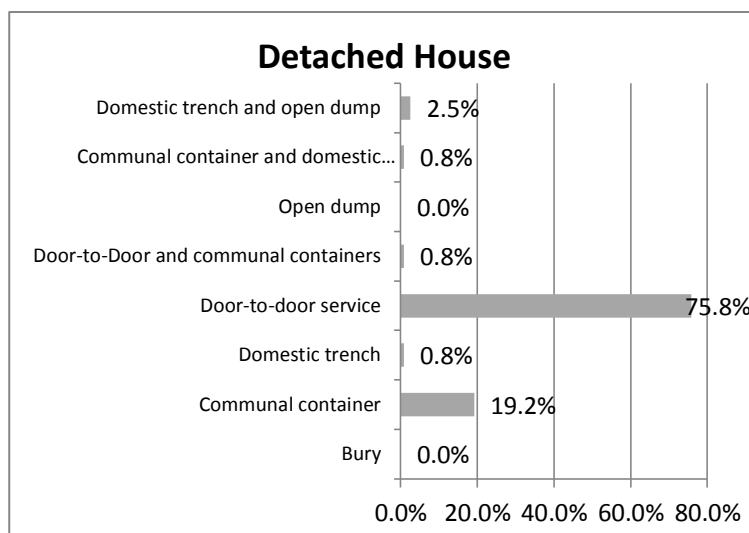


Figure 4.7b: Waste disposal methods in detached houses

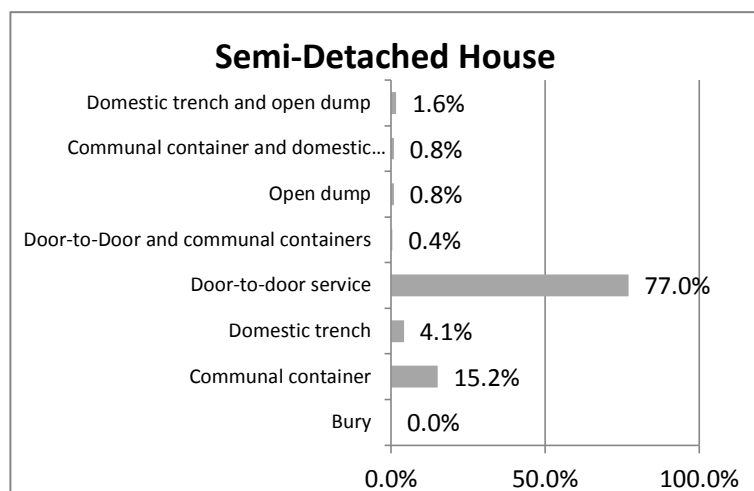


Figure 4.7c: Waste disposal methods in semi- detached houses

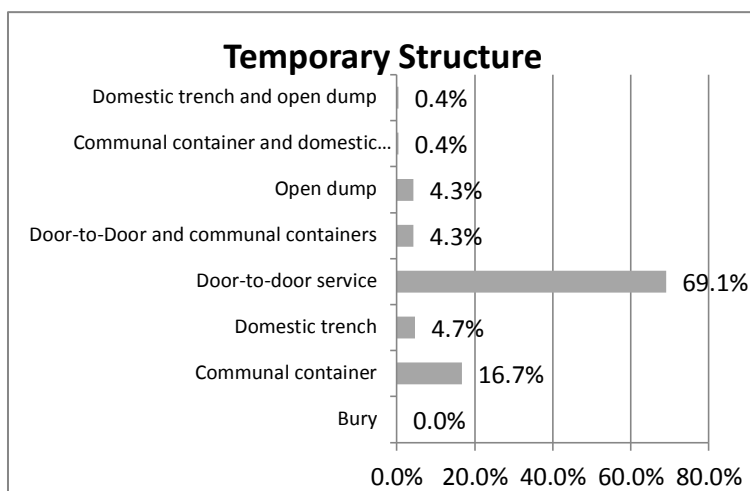


Figure 4.7d: Waste disposal methods in temporary structures



Plate 4.8: Communal waste collection container at the Borla Transfer Station Sanitary site

4.6.2 Frequency of Solid Waste Collection

Once a week collection by a Bola Taxi or a licensed waste service provider is the highest (67.72%) in terms of frequency of solid waste collection. The 2.64% who have twice a week collection is predominant with compound houses and houses with many households because of rate of solid waste generation. See Table 4.6 below.

Table 4.6: Service frequency

FREQUENCY OF COLLECTION SERVICE	No. OF HH	PERCENTAGE
Once a week	1718	67.72%
Twice a week	610	24.04%
Once a month	142	5.60%
Once fortnightly	67	2.64%
Total	2537	100.00%

4.6.3 Waste Disposal Satisfaction

36.62% the households are satisfied with the current service delivery from their door to door service provider. 46.91% of the households are indifferent about the service delivery of their providers, and about 15% not satisfied with the service delivery as shown in Table 4.7 below.

Table 4.7: Performance rating of service contractor

PERFORMANCE RATING OF SERVICE PROVIDERS	No. OF HH	PERCENTAGE
Neutral	1190	46.91%
Satisfactory	929	36.62%
Unsatisfactory	361	14.23%
Very satisfactory	22	0.87%
Very unsatisfactory	35	1.38%
Total	2537	100.00%

4.6.4 Household Waste Separation

Only 9.1% of households practice waste segregation (see Table 4.8 below). Of those who practice segregation, 19.8% indicated selling the valued waste while the remaining 80.2% (see Table 4.9 below) segregate for purposes such as farming, composting for gardening.

Table 4.8: Waste Segregation

SEGREGATION/SEPARATION OF SOLID WASTE	No. OF HH	PERCENTAGE
No	3210	90.99%
Yes	318	9.01%
Total	3528	100.00%

Table 4.9: Sale of recyclables and other use

SALE OF SEPARATED RECYCLABLES	No. OF HH	PERCENTAGE
No	255	80.19%
Yes	63	19.81%
Total	318	100.00%

4.7 Liquid Waste Management

4.7.1 Black water

Ashaiman New Town has no sewer network and treatment facility for faecal sludge. Most households (58.27%) as shown in Table 4.10 rely on cesspool emptier services while 20% rely on manual pit emptying service providers. Equipment used by the manual desludging service providers include bucket, rope, shovels, pickaxe wheel barrows/push trucks/carts, etc. The mechanical desludging service is mostly provided to residents with WC toilets. 19.4% have never desludged their facilities.

Table 4.10: Method of desludging

METHOD OF DESLUDGING OF HOUSEHOLD TOILET	No. OF HH	PERCENTAGE
Cesspool equipment	162	58.27%
Manual	57	20.50%
Never desludged	54	19.42%
No toilet	5	1.80%
Total	278	100.00%

15% of households who receive the services of cesspool emptier rated their service as good. More than two-thirds (i.e. 73.74%) of the respondents were neutral as seen in the Table 4.11 below.

Table 4.11: Performance rating of cesspool emptier

PERFORMANCE RATING OF CESSPOOL EMPTIER SERVICES	No. OF HH	PERCENTAGE
Neutral	205	73.74%
Good	42	15.11%
Very good	22	7.91%
Poor	5	1.80%
Very poor	4	1.44%
Total	278	100.00%

4.7.2 Grey water (Kitchen wastewater)

As shown in Figure 4.8 below, 41.2% of the households dispose of the kitchen wastewater on the bare ground which is quite high compared to the national average at 35.2%. 46.6% dispose of into the nearby drain/gutter. Only 2% representing about 706 households dispose into soakage pits provided in house. Those who dispose of kitchen wastewater by two or more methods constitute 10.1% of the households.

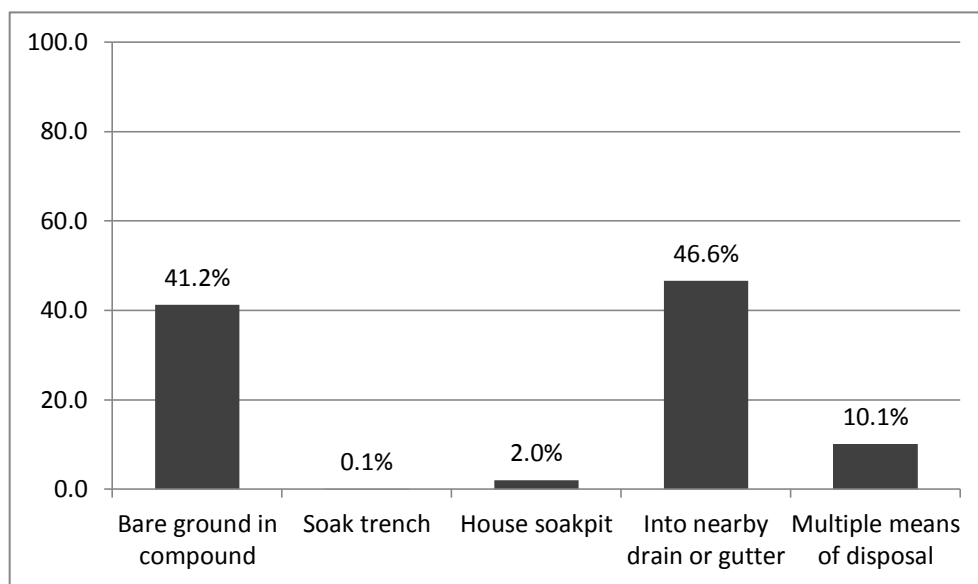


Figure 4.8: Kitchen wastewater disposal methods

As shown in Figures 4.9a-4.9d below, kitchen wastewater from cooking disposal by house type followed a similar trend as observed for the general community (refer to Figure 4.8 above). Disposal into nearby drain and on bare ground in compound were the two common practices. However, in the case of compound houses, disposal into nearby drain had the higher rate (49.1%) of the two predominant practices unlike the case of the other house types where disposal on bare ground was the higher of the two. This may be attributed to the fact that compound houses have a courtyard shared by several households and the disposal of grey water on the compound will result in constant ponding and the compound being unsightly. As such, residents of compound houses are more likely to dispose of grey water elsewhere other than within their compound.

Another observation is the relatively low rate of disposal of grey water into nearby drains (as compared to those who dispose of on bare ground within compound) seen among residents who live in temporary structures (i.e. half the percentage). This is likely to be in part, as a result of lack of drains in the specific vicinity of these temporary structures and hence resort to disposal on the bare ground.

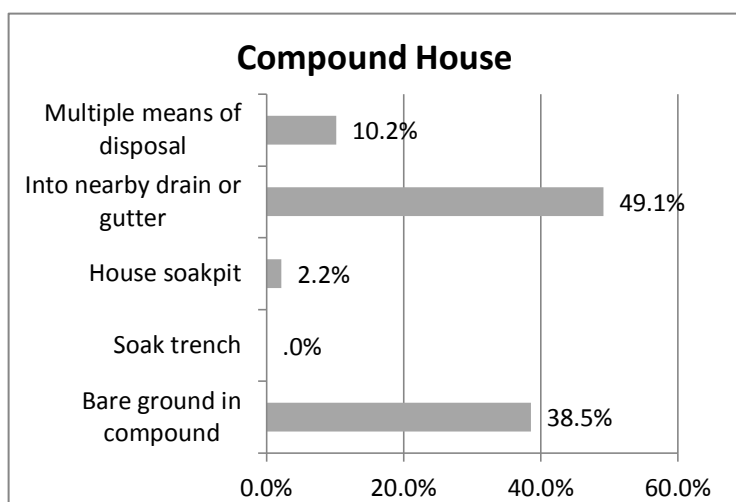


Figure 4.9a: Kitchen wastewater disposal methods in compound houses

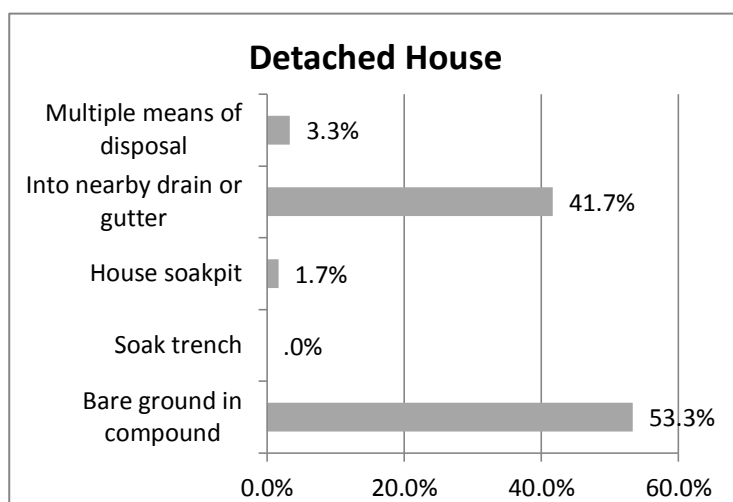


Figure 4.9b: Kitchen wastewater disposal methods in detached houses

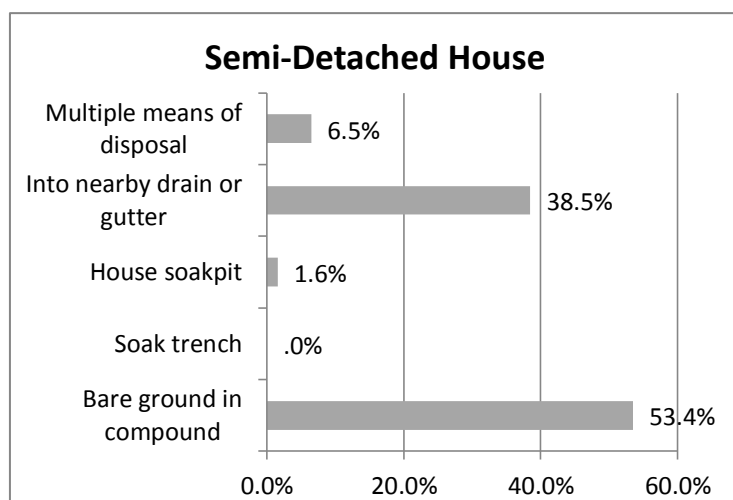


Figure 4.9c: Kitchen wastewater disposal methods in semi-detached houses

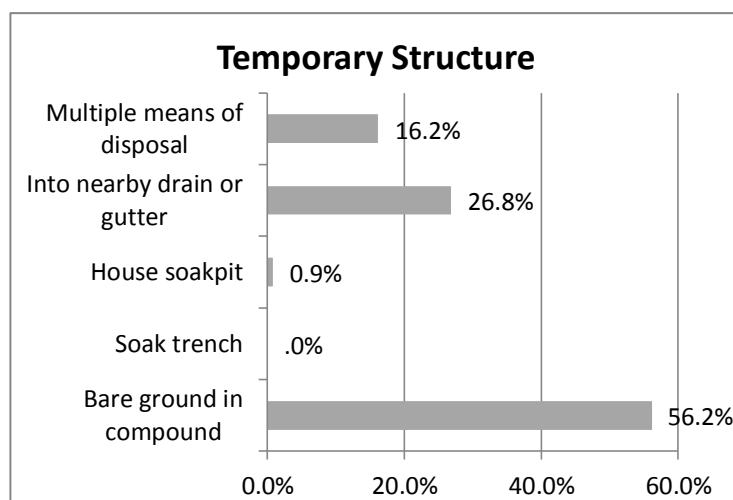


Figure 4.9d: Kitchen wastewater disposal methods in temporary structures

4.7.3 Bathroom Wastewater Disposal Methods

Over a half (58.4%) of households dispose of their wastewater from their bathrooms directly into a nearby gutter. A further 6.9% resort to gallon to floor which is technically same as direct to floor; pit to floor and directly to floor are 2.3% and 3.1% respectively. As seen in Figure 4.10 below; 3.7% of households use a soak pit before finally disposing off. Households who dispose of bathroom water by more than one method accounts for 10.8%.

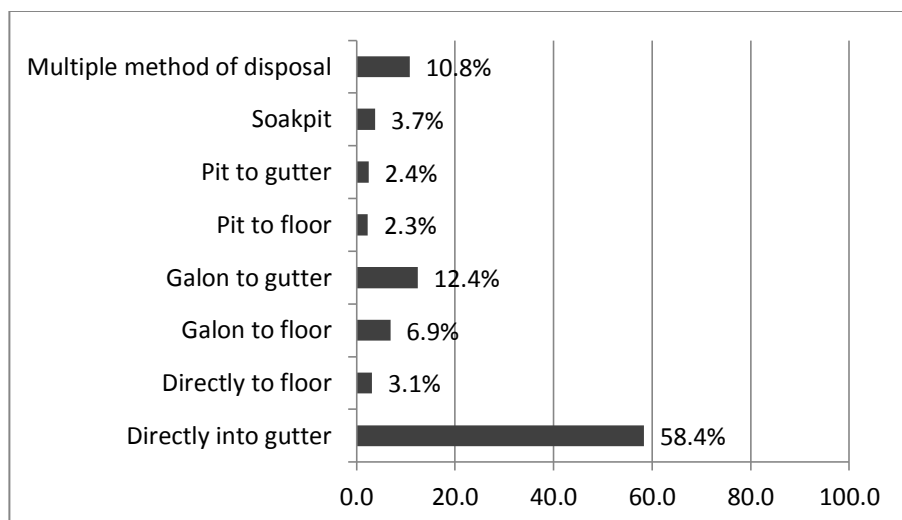


Figure 4.10: Bathroom wastewater disposal methods

Similar to the trend observed for the entire community, direct disposal of bathroom wastewater into gutter is the most prominent method among the house types (see Figures 4.11a-4.11d below). Temporary structured had the least rate of 49.4% (see Figure 4.11 below). About 20% of residents living in compound houses, semi-detached houses and temporary structures use gallon for disposing bathroom wastewater either into gutter or open floor. Use of multiple (more than one) methods of disposing of bathroom wastewater is also relatively high. The highest of 27.5 % was observed among residents who live in detached houses. Compound houses, semi-detached houses and temporary structures had 9.8%, 12.1% and 13.2% respectively.

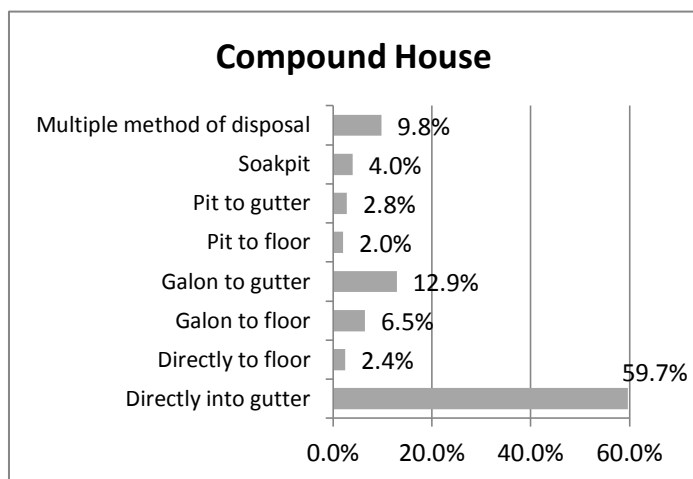


Figure 4.11a: Bathroom wastewater disposal methods in compound houses

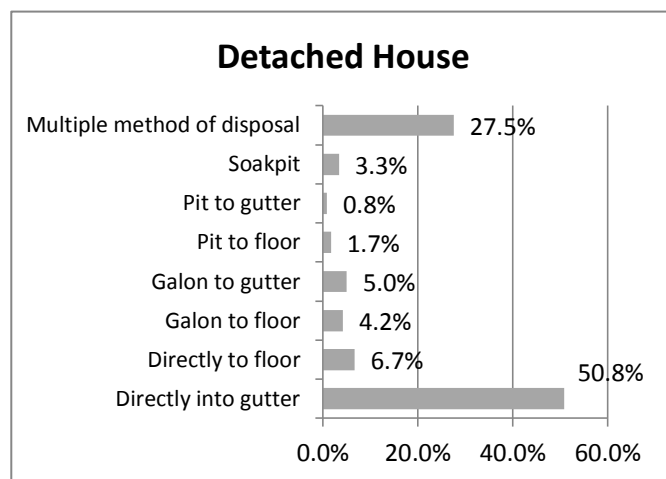


Figure 4.11b: Bathroom wastewater disposal methods in detached houses

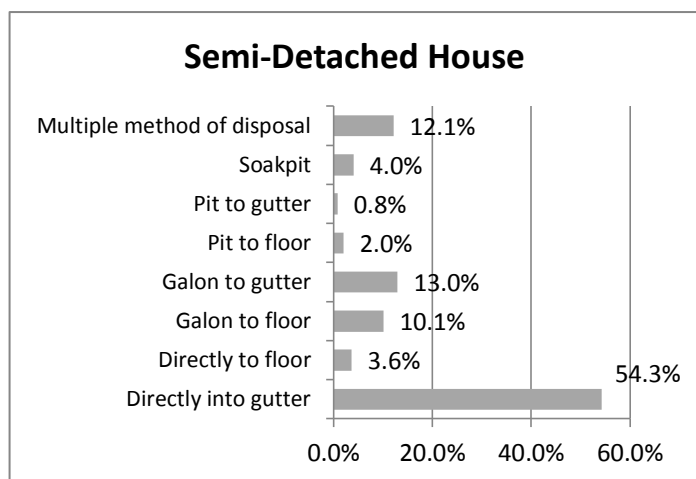


Figure 4.11c: Bathroom wastewater disposal methods in semi-detached houses

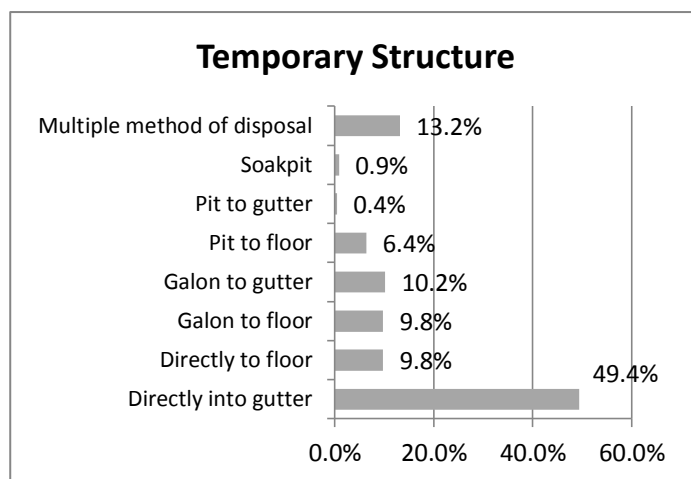


Figure 4.11d: Bathroom wastewater disposal methods temporary structures



Plate 4.9: Bathroom wastewater disposal methods into earth drains



Plate 4.10: Greywater from house channelized into nearby open drains

5. Water Supply and Use

5.1 Source of water

5.1.1 Drinking

Table 5.1 below shows about a third (33.33%) of households have exclusive source of water for drinking. The remaining 66.67% use the same water source of drinking water for other domestic uses such as cooking, cleaning and personal hygiene.

Table 5.1: Source of water for drinking is also used for other purposes

WATER SOURCE FOR DRINKING IS DIFFERENT THAN THAT FOR OTHER USES	No. OF HH	PERCENTAGE
No	2352	66.67%
Yes	1176	33.33%
Total	3528	100.00%

Sachet water is the main source of drinking water. 84.01% of households use sachet water while 12.16% rely on the public stand pipe (GWCL). Only 2.89% of households source their drinking water from GWCL in-house connection which is significantly lower than that of the Greater Accra regional average of 64.4% (see Table 5.2 below).

Table 5.2: Main source of water for drinking

MAIN SOURCE OF DRINKING WATER	No. OF HH	PERCENTAGE
Sachet water	988	84.01%
GWCL source public standpipe	143	12.16%
GWCL source in house	34	2.89%
Community tap	5	0.43%
other	4	0.34%
Well in house	2	0.17%
Total	1176	100.00%

5.1.2 Cooking

As shown in Table 5.3, 65.48% of households get their water for cooking from the GWCL-source public stand pipe whereas 25.51% source their water for cooking from in-house pipe-borne water. Use of sachet water for cooking is done by only 1.36% of the households.

Use of harvested rainwater and river/stream is uncommon in the community.

Table 5.3: Main source of water for cooking

MAIN SOURCE OF WATER FOR COOKING	No. OF HH	PERCENTAGE
GWCL source public standpipe	770	65.48%
GWCL source in house	300	25.51%
Other	54	4.58%
Well outside house	17	1.45%
Sachet water	16	1.36%
Tanker supply	16	1.36%
Rain harvested	2	0.17%
River/stream	1	0.09%
Total	1176	100.00%

5.1.3 General uses

Table 5.4 below shows that 98.5% (22.22% and 76.26%) of households rely on in-house and public stand pipe respectively water supply for general uses such as cleaning and personal hygiene, and 1.01% rely on tanker services for water for general use. See plates 5.1-5.3.

Table 5.4: Main source of water for general use

MAIN SOURCE OF WATER FOR GENEARAL PURPOSES	No. OF HH	PERCENTAGE
GWCL source public standpipe	151	76.26%
GWCL source in-house	44	22.22%
Community tap	2	1.01%
Well in house	1	0.51%
Total	198	100.00%



Plate 5.1: Private water vending points in the community.



Plate 5.2: GWCL service line in the community



Plate 5.3: In-house water tap

5.2 Storage

5.2.1 Drinking

31% of households store their drinking water in small containers and jerry cans (average size of 77litres). The stored water often lasts for a week. 40.6% store their water for drinking in both buckets/pans and small containers/jerry cans. Households that use multiple drinking water storage facilities excluding bucket/pan and small containers, account for 4.5% of respondents. A significant percentage (17.5%) who use the sachet water do not store in any form of container as can be seen in Figure 5.1 below.

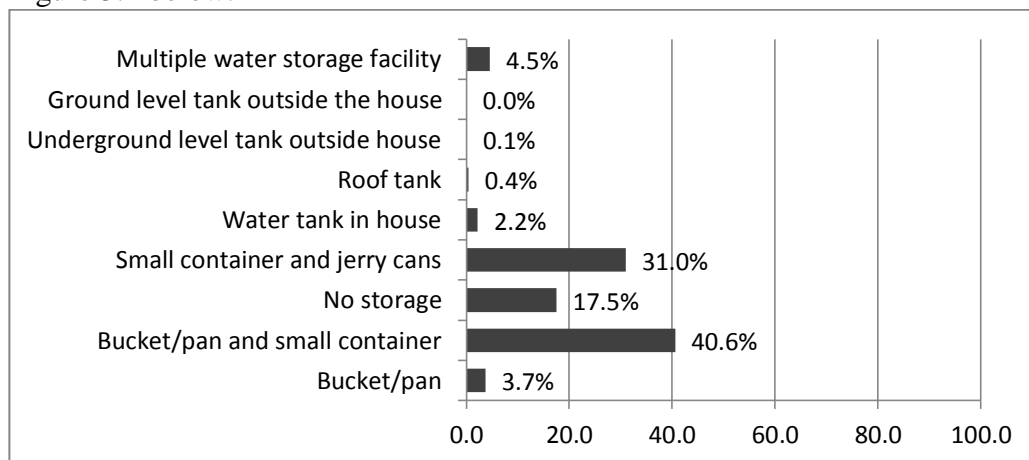


Figure 5.1: Methods of drinking water storage

5.2.2 Cooking

The trend is similar for cooking water storage. 33.3% of the households use the small container and jerry can for storage of cooking water (see Figure 5.2 below). Some households also indicated using both the bucket and the jerry can as storage containers (52.9%) for water as shown in the Figure below.

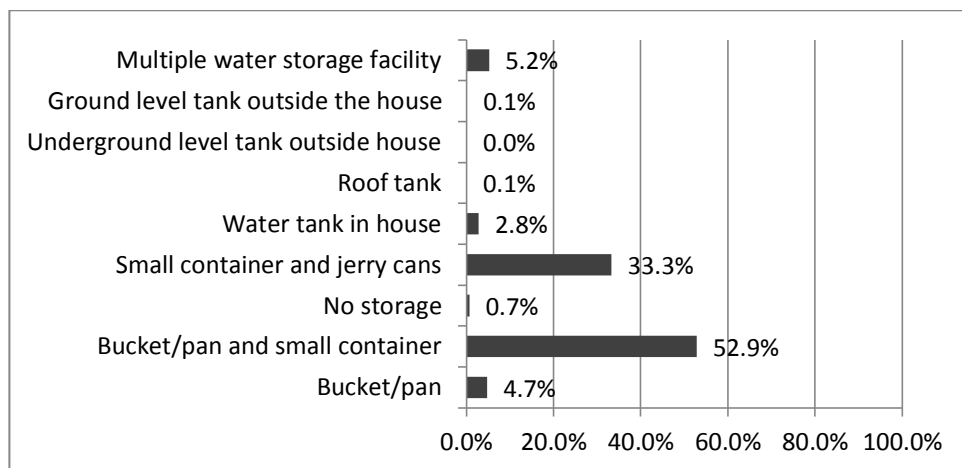


Figure 5.2: Methods of cooking water storage

5.2.3 General use

51% indicated storing their water for general use in small containers and jerry cans. Those who indicated using both jerry cans and small containers/buckets constituted 30.1%. 8.4% have roof tanks for storing water for general use. See Figure 5.3 and plate 5.4 below.

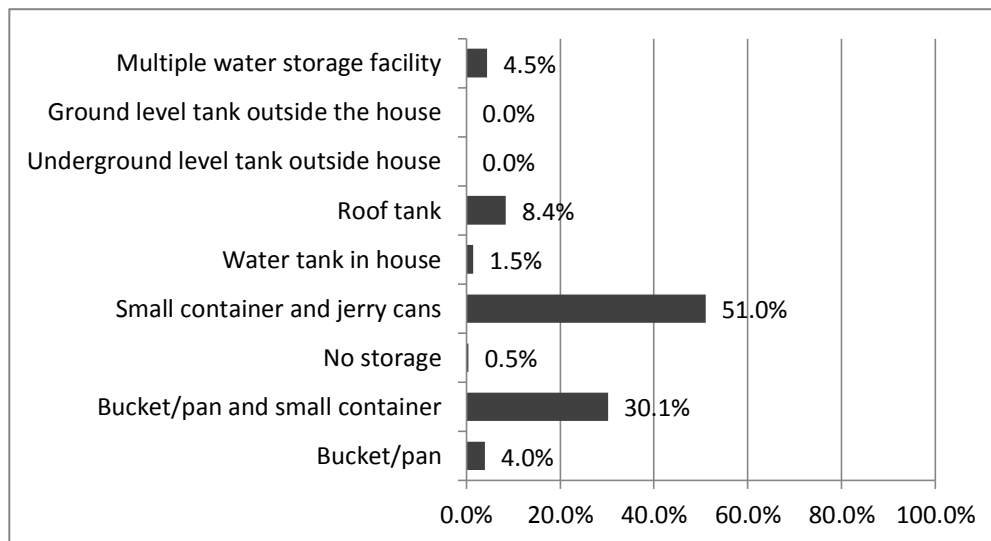


Figure 5.3: Method of water storage for general use



Plate: 5.4: Examples water storage containers

5.3 Regularity and Reliability of Supply

As indicated in Table 5.5 below, 9.28% who have access to pipe borne water receives water once in a week. 45.38% of respondents indicated continuous supply of water.

Table 5.5: Frequency of supply from GWCL

FREQUENCY OF GWCL SUPPLY	No. OF HH	PERCENTAGE
Continuous (never ceases)	875	45.38%
2 to 4 times a week	783	40.61%
Once a week	179	9.28%
Once in 2 weeks	83	4.30%
Once in a month	8	0.41%
Total	1928	100.00%

More than 5 hours in a day water supply is indicated by 29.98% of households (see Table 5.6 below). About 1% have water supply for less than 2 hours in a day. Supply within the day is highest in the mornings and evenings at 50.16% (see Table 5.7 below).

Table 5.6: Duration of supply from GWCL

DURATION OF CONTINUOUS GWCL WATER SUPPLY	No. OF HH	PERCENTAGE
Continuous (never ceases)	995	51.61%
More than 5 hours	578	29.98%
2 to 5 hours	329	17.06%
Less than 2 hours	26	1.35%
Total	1928	100.00%

Table 5.7: Supply time from GWCL

TIME OF DAY FOR GWCL WATER FLOW	No. OF HH	PERCENTAGE
Morning and evening	967	50.16%
All day	748	38.80%
Mornings only	109	5.65%
Evenings only	87	4.51%
All night	17	0.88%
Total	1928	100.00%

5.4 Cost of Water and Billing

A household spends an average of GHC 2.67 on pay-as-you-fetch basis on water. On a weekly basis; approximately GHC8.15 is spent averagely on water by households. On a monthly basis, households within the community spend a little over GHC 43.00 on water as shown in Table 5.8 below which is about three times higher than the average water expenditure of a household in Greater Accra whose water usage is mainly from GWCL pipe-borne water source.

Table 5.8: Average household expenditure (GHC) on water

Payment Mode	Mean	Std Dev	Range
Monthly	43.11	46.72	0 - 165
Every 2 weeks	11.16	4.57	0 - 20
Every week	8.15	4.84	0 - 9
Pay as you fetch	2.67	4.65	0 - 15

5.5 Service Quality (reliability, water quality, customer service)

54.65% of the total households have access to GWCL water connection lines while the rest do not have (see Table 5.9). The main reason for not connecting as indicated in 5.10 below is high connection cost; other important reasons include unavailability of GWCL distribution pipelines and problems with sharing bills for residents in compound houses who share a common meter.

Table 5.9: Use of GWCL water connection

USE OF GWCL WATER CONNECTION	No. OH HH	PERCENTAGE
No	1600	45.35%
Yes	1928	54.65%
Total	3528	100.00%

Table 5.10: Reasons for non-connection to GWCL water supply network

REASON FOR NOT USING GWCL WATER CONNECTION	No. OF HH	PERCENTAGE
High connection cost	1072	67.00%
Unavailability of GWCL connections in community	287	17.94%
Other	162	10.13%
Problems with sharing bills	67	4.19%
Irregular supply of water by GWCL	12	0.75%
Total	1600	100.00%

With regard to convenience of time of GWCL water supply, 70.54% of households are satisfied with the supply time.

Table 5.11: Convenience of supply time from GWCL

CONVENIENCE OF GWCL SUPPLY TIME	No. OF HH	PERCENTAGE
No	568	29.46%
Yes	1360	70.54%
Total	1928	100.00%

6. Knowledge, Attitude and Practice

6.1 Handwashing

90.73% of the respondents practice handwashing. 21.77% of the respondents who have in-house toilets have handwashing facility at the toilet while 35.43% of respondents who use public toilets indicated availability of hand washing facilities (see Tables 6.1-6.3 and Plates 6.1. and 6.2 below).

Table 6.1: Practice of handwashing by respondents

PRACTICE OF HANDWASHING	No. OF RESPONDENTS	PERCENTAGE
No	327	9.27%
Yes	3201	90.73%
Total	3528	100.00%

Table 6.2: Availability of handwashing facility at toilet used by household

AVAILABILITY OF HANDWASHING FACILITY AT TOILET USED BY HOUSEHOLD	No. OF HH	PERCENTAGE
No	2760	78.23%
Yes	768	21.77%
Total	3528	100.00%

Table 6.3: Provision of water for handwashing at public toilet – locality

WATER FOR WASHING HANDS PROVIDED AT PUBLIC TOILET	No. OF RESPONDENTS	PERCENTAGE
No	1600	64.57%
Yes	878	35.43%
Total	2478	100.00%



Plate: 6.1: Examples of handwashing facilities provided at privately owned public toilets

In assessing the methods of handwashing, respondents were asked which of the following methods are used:

- In bowl of water with soap
- In a bowl of water without soap
- Under running water with soap
- Under running water without soap

The results are presented in Table 6.4 below

From the responses only 7.3% of the respondents indicated washing their hands with soap either under running water or in a bowl of water. Those who washed their hands under running water with soap (i.e. the recommended way) constituted 3.8%. The common practice as presented in the table is washing of hands in a bowl of water with soap (58.5%). Those who indicated practicing all the methods presented accounted for 3.7% of the respondents.

Table 6.4: Method of handwashing

IN A BOWL OF WATER WITH SOAP	IN A BOWL OF WATER WITHOUT SOAP	UNDER RUNNING WATER WITH SOAP	UNDER RUNNING WATER WITHOUT SOAP	% OF RESPONDENTS
√				58.5%
√	√			20.5%
√		√		7.3%
√			√	0.1%
√	√	√		1.1%
√	√		√	0.1%
√	√	√	√	3.7%
√		√	√	0.2%
	√			3.9%
	√	√		0.2%
	√	√	√	0.0%
		√		3.8%
		√	√	0.2%
			√	0.4%



Plate: 6.2: A child spotted using a Veronica bucket handwashing facility (with soap) provided at a public toilet facility

In assessing the frequency of handwashing or on what occasions do respondents wash their hands the following occasions for handwashing were presented for respondents to choose from;

- Before eating
- After use of toilet
- After cleaning a child's buttocks (anal cleansing)
- Before food preparation
- Before feeding a child
- After handling a sick person
- After return from a social gathering

Figure 6.1 below presents the main occasions for handwashing based on the analysis of responses obtained. Handwashing before eating and use of toilet was the most common (24.3%) followed by handwashing before eating, after use of toilet, return from social gathering and after handling sick person (21%). Only 6.1% indicated washing their hands at all the occasions presented.

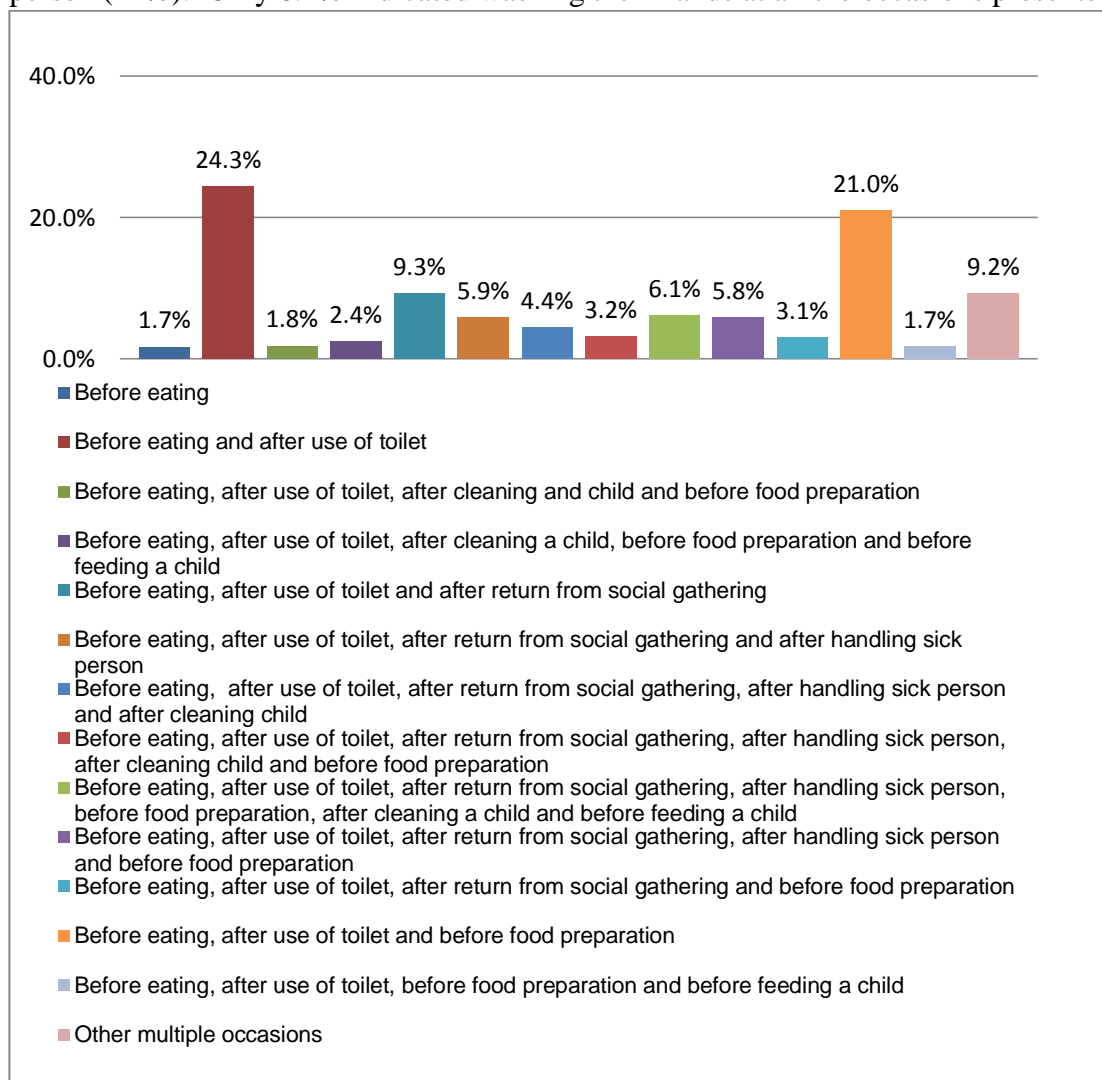


Figure 6.1: Frequency of handwashing

58.5% of the respondents indicated the main motivation for handwashing was to keep hands clean and prevent faeco-oral diseases. 13% indicated washing their hands for mainly keeping them clean while 7.5% representing 265 respondents washed their hands for the purpose of preventing faeco-oral diseases. Only 1.9% and 0.3% indicated handwashing as solely a norm or cultural value respectively. See Figure 6.2 below.

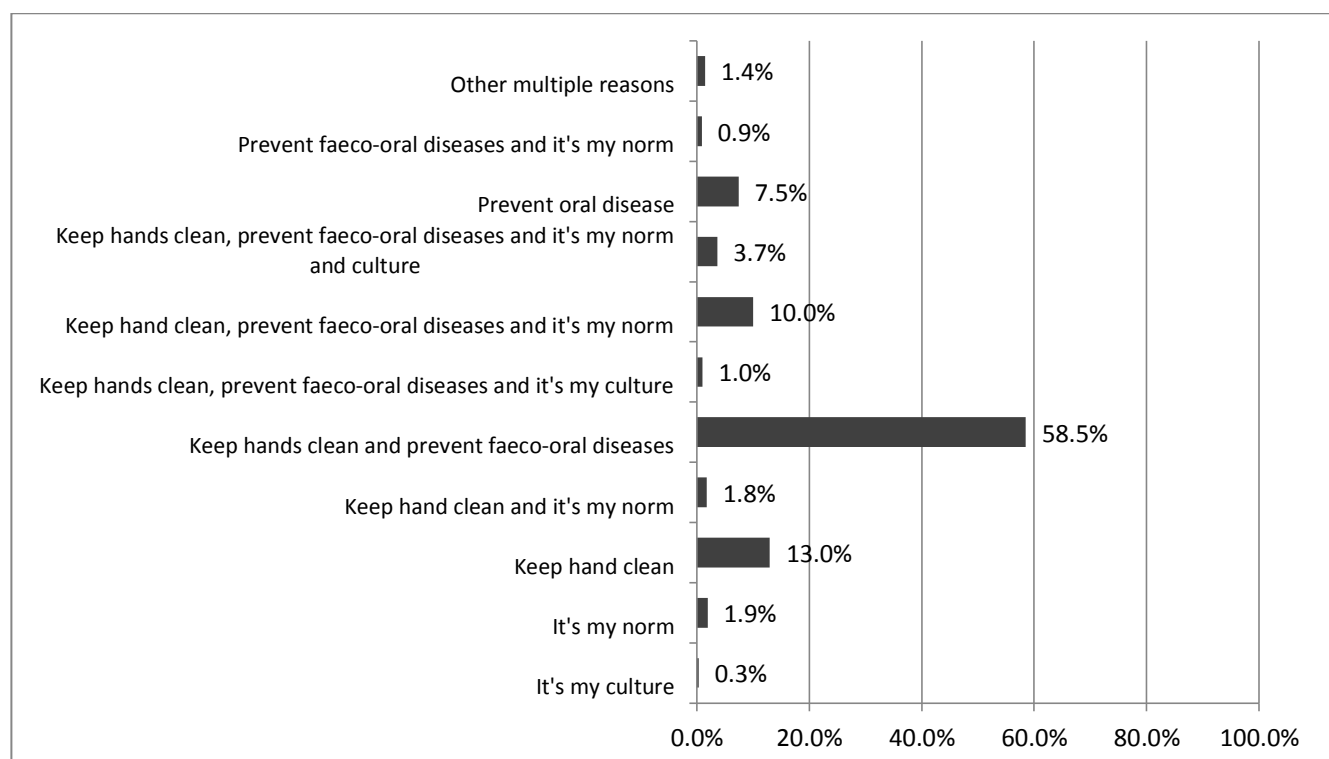


Figure 6.2: Motivation for handwashing

Showering every day is a common practice in the community. More than 85.40% of the respondents indicated bathing in the mornings and evenings (see Table 6.5 below). Almost half (49.66%) of respondents also indicated brushing their teeth twice a day (morning and evening) as shown in Table 6.6 below.

Table 6.5: Frequency of bathing

FREQUENCY OF TAKING A BATH	No. OF RESPONDENTS	PERCENTAGE
Morning and evening	3013	85.40%
Once a day	298	8.45%
Once every morning	214	6.07%
Once every evening	3	0.09%
Total	3528	100.00%

Table 6.6: Frequency of cleaning teeth

FREQUENCY OF CLEANING TEETH	No. OF RESPONDENTS	PERCENTAGE
Morning and evening	1752	49.7
Once every morning	939	26.6
Once a day	828	23.5
Once every evening	9	0.3
Total	3528	100.00%

6.2 Willingness to have toilet

Interest in toilet ownership within the community is very high. 80.40% of households want to their own toilets for reasons such as safety, convenience, social status (see Table 6.7 below). 51.2% of those who do not have interest in owning a toilet at home attributed their lack of interest to their tenancy status. With the exception of those who already had toilets in their homes, all other reasons accounted for 4.4% without interest in owning a toilet (see Figure 6.3 below).

Table 6.7: Expression of interest in ownership of toilet

OWNERSHIP OF HOUSEHOLD TOILET	No. OF HH	PERCENTAGE
No	631	19.60%
Yes	2588	80.40%
Total	3219	100.00%

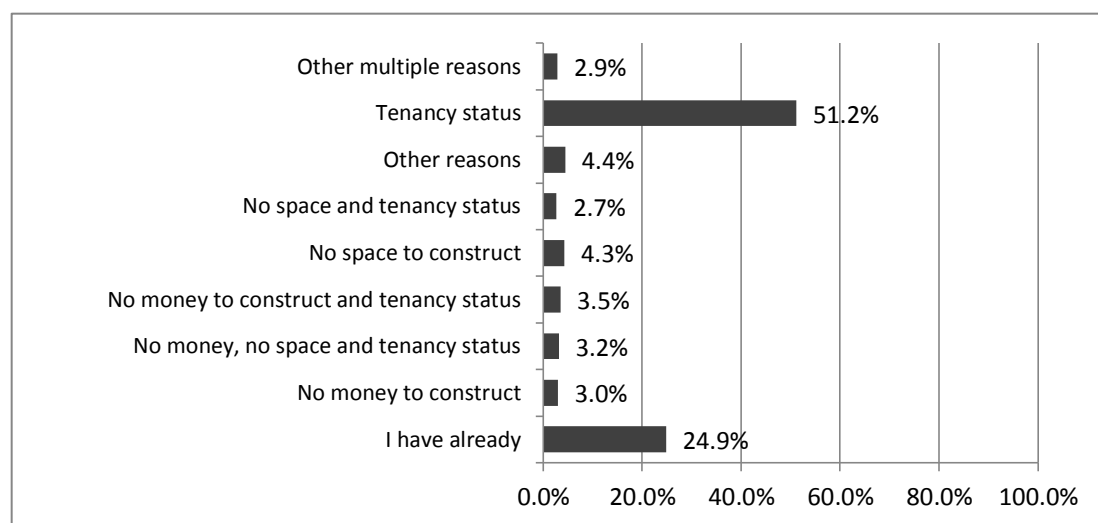


Figure 6.3: Reasons for lack of interest in ownership

6.3 Sanitation Related Diseases

Typical of such low income urban communities, Malaria was identified as the predominant WASH related disease. 90% of the respondents indicated Malaria as the most prevalent disease. Cholera accounted for 5.2% of the responses (see Figure 6.4 below).

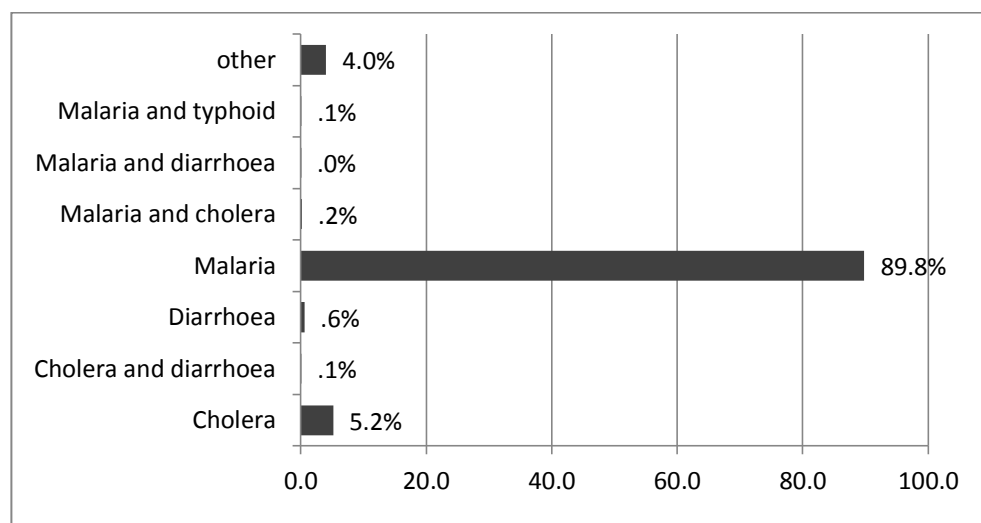


Figure 6.4: Incidence of WASH related diseases as perceived by respondents

Over 95% of the respondents who identified each of the diseases listed in Table 6.8 below as WASH related, had some knowledge on the symptoms. In the case of typhoid all the respondents had some knowledge on the symptoms.

Table 6.8: Knowledge about symptoms of WASH related diseases

DISEASE	NO. OF RESPONDENTS	HAVE AN IDEA ABOUT SYMPTOMS	NO IDEA ABOUT SYMPTOMS
Malaria	3180	98.3%	1.7%
Cholera	193	99.5%	0.5%
Diarrhoea	25	96.0%	4.0%
Typhoid	3	100%	0%

Table 6.9: Knowledge about causes of WASH related diseases

DISEASE	NO. OF RESPONDENTS	HAVE AN IDEA ABOUT CAUSES	NO IDEA ABOUT CAUSES
Malaria	3180	99.7%	0.3%
Cholera	193	87.0%	13.0%
Diarrhoea	25	72.0%	28.0%
Typhoid	3	66.7%	33.3%

Over 99% of the respondents who know the symptoms of malaria know the causes of the same disease, and a less number of respondents who know the symptoms of cholera, know the causes of the same disease as shown in Table 6.9 above.

7. General Comments

7.1 General Comments about the Community

Ashaiman New Town is one of the largest communities in the Moni-Obaanye Electoral area of the Ashaiman municipality with an estimated population of over 16,000. Some portions of the community are not well drained and therefore experience flooding during heavy downpours. Major ailments reported at OPDs in the community are environmentally related; malaria, cholera, dysentery, diarrhoea. The community experiences a bimodal rainfall pattern in the year averaging some 750mm of rain. The dominant ethnic group within the community is the Ewes. The Akans and the Ga - Dangme follow respectively. Use of GWCL water supply in the community is relatively high at about 55% of the households. The main reasons cited by households without in-house water connection are the high connection cost and unavailability of service lines in some parts of the community. Predominant types of toilet technologies are KVIP/VIP, WC and unimproved pit. Most people who use public toilets spend between 5-20 minutes to access the facility.

7.2 Soil Types

The area is underlain by the Precambrian rocks of the Dahomeyan formation: metamorphic rocks mainly consisting of granite, gneiss and schist probably derived from sedimentary layers. Primary porosity as well as fracturing of the massive paragneiss is very low. The lower weathered zone builds a low yielding aquifer. Overburden consists of clayey sands or loam of low permeability. Soil is however highly saline (see Plates 7.1 and 7.2 below for evidence of salt and water infiltration in walls).



Plate 7.1: Cement block-made house walls showing signs of salt and water damage



Plate 7.2: Rendering /plastering on fence wall wears off due to salt and water infiltration

7.3 Incidence of Flooding

Only 16% of the respondents reported of flooding in their residential area. Of those who indicated the incidence of flooding, 90.78% indicated the incidence of flooding usually after heavy rainfalls (see Tables 7.1 and 7.2 below).

As shown in Table 7.3 below, inadequate drainage is the major cause of flooding in the community- (see plates 7.3-7.6 below). Other causes include unplanned development or building on or close to waterways (13.5%), topography of the land (4.8%), waterlogged area (4.6%).

Table 7.1: Incidence of flooding

INCIDENCE OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
No	2964	84.01%
Yes	564	15.99%
Total	3528	100.00%

Table 7.2: Frequency of flooding

FREQUENCY OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
Every rainfall	52	9.22%
Major rainfall	512	90.78%
Total	564	100.00%

Table 7.3: Causes of flooding as perceived by respondent

CAUSES OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
Inadequate drainage system	417	73.90%
Unplanned development close to waterway	76	13.50%
Topography of the area	27	4.80%
Waterlogged area	26	4.60%
Don't know	18	3.20%
Total	564	100.0%



Plate 7.3: Evidence of poor drainage (lack of stormwater and sullage drains) situation in some parts of the community

8. Housing and Occupancy Characteristics

8.1 Type of house

Compound-type house (often with a central courtyard) is the most common type of house in the community. 82.94% of the households live in compound houses (see Table 8.1 below) which is strikingly higher than the national average of households residing in compound houses (i.e. 8.1%). Only 6.66% of the households are in temporary structures such as tents, kiosks, containers and shop attachments. This percentage is similar to the Greater Accra regional average of 6.2%.

Table 8.1: Type of houses

TYPE OF HOUSE	No. of HH	PERCENTAGE
Compound house	2926	82.94%
Detached	120	3.40%
Semi detached	247	7.00%
Temporary structure	235	6.66%
Total	3528	100.00%

8.2 Type of Dwelling

As indicated in Table 8.2 below, 53.71% of the households dwell in single rooms and 34.3% dwell in a hall and chamber. The rest are in multiple rooms (3.8%), single-room self-contained (6.3%) and hall and chamber self-contained rooms (1.8%).

Table 8.2: Type of dwelling

TYPE OF DWELLING	No. OF HH	PERCENTAGE
Single room	1895	53.71%
Hall and chamber	1210	34.30%
Single room self -contained	221	6.26%
Multiple rooms	137	3.88%
Hall and chamber self-contained	65	1.84%
Total	3528	100.00%

8.3 Status of Occupancy/Occupancy by Landlord/Lady

Results from the survey indicate that 62.73% of the respondents live in rented houses while 18.37% live in family houses. 17.66% of the respondents indicated they owned their residence (see Table 8.3 below).

Table 8.3: Status of occupancy

STATUS OF OCCUPANCY	No. OF HH	PERCENTAGE
Rented house	2213	62.73%
Family house	648	18.37%
Own house	623	17.66%
Caretaker	42	1.19%
Other	2	0.06%
Total	3528	100.00%

8.4 Average Number of Rooms per Respondent's Household

As shown in Table 8.4 below, 71.66% of households occupy one room; 18.08% occupy two rooms, 4.20% occupy three rooms. Households that occupy at least four (4) rooms are accounted for 6.1% of the households quite lower than national average of 11.2%.

Table 8.4: Number of rooms occupied by households

ROOMS OCCUPIED BY HH	No. OF HH	PERCENTAGE
1	2528	71.66%
2	638	18.08%
3	148	4.20%
4	54	1.53%
5+	160	4.6%
Total	3528	100%

Results from the survey indicate that household size is closely proportional to the number of rooms. See Table 8.5 below.

Table 8.5: Household sizes by number of rooms occupied (percentage)

HOUSEHOLD SIZE	ROOMS OCCUPIED BY HH					
	1	2	3	4	5+	Total
1	14.9%	6.9%	4.1%	5.6%	8.6%	14.9%
2	17.1%	15.7%	10.1%	5.6%	8.0%	17.1%
3	19.4%	16.0%	12.2%	11.1%	15.3%	19.4%
4	17.0%	20.2%	16.9%	13.0%	8.0%	17.0%
5+	31.6%	41.2%	56.8%	64.8%	60.1%	31.6%
	100%	100%	100%	100%	100%	100%

8.5 Materials for Construction

8.5.1 Floors

As shown in Figure 8.1 below, 97% of residences visited had room floors constructed with cement. Rooms with tiled floors and earth/laterite floors constituted 0.7% and 0.8% respectively, and 0.4% have both cement and earth/laterite finishing. Some residences had some or a portion the room floors cemented and tiled/terrazzo as shown below.

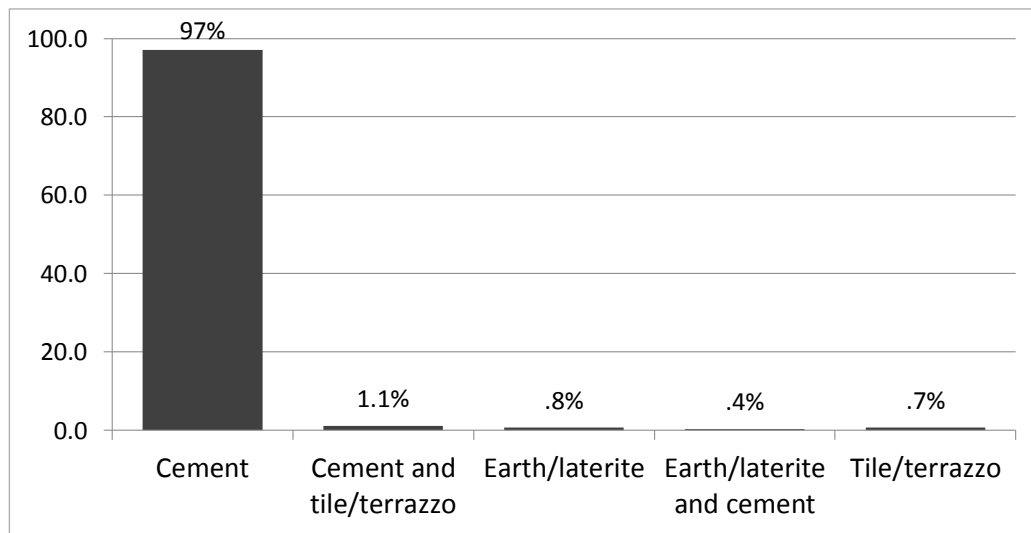


Figure 8.1: Construction material for room floor

8.5.2 Walls

78% of the house walls are constructed with cement blocks/bricks. Houses with landcrete block walls constituted 9.9% of the houses and those with wooden/iron sheet walls constituted 7.5% which are mostly temporary structures. Other houses had walls made of multiple materials as shown in Figure 8.2 below. Mud houses are uncommon.

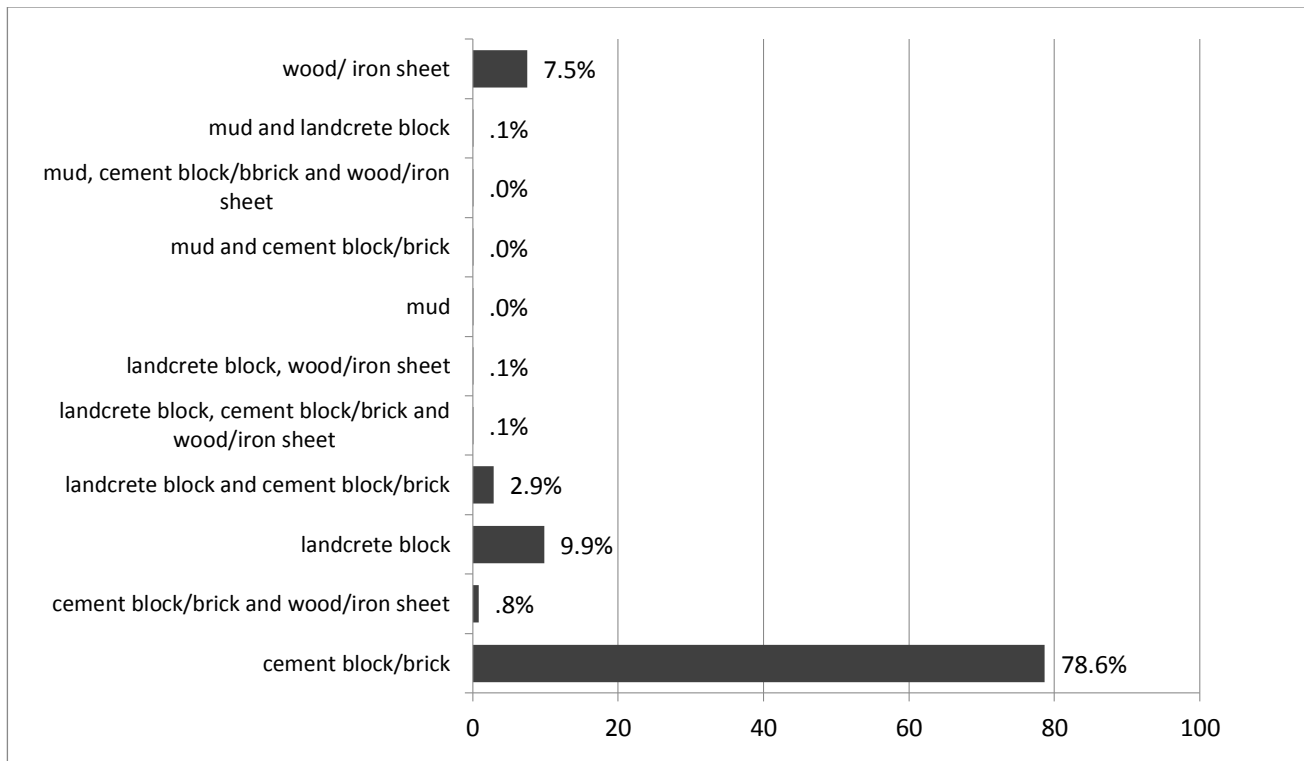


Figure 8.2: Construction material for walls

8.5.3 Roofs

Figure 8.3 below shows that 88.5% of housing roofs is made of iron sheet/slate. 5.1% of houses are roofed with asbestos. Houses with roof tiles constituted 2.9% while houses with both iron sheet and roofing tiles constituted 2.8%. Houses with roofs made of other multiple materials constituted less than 1%.

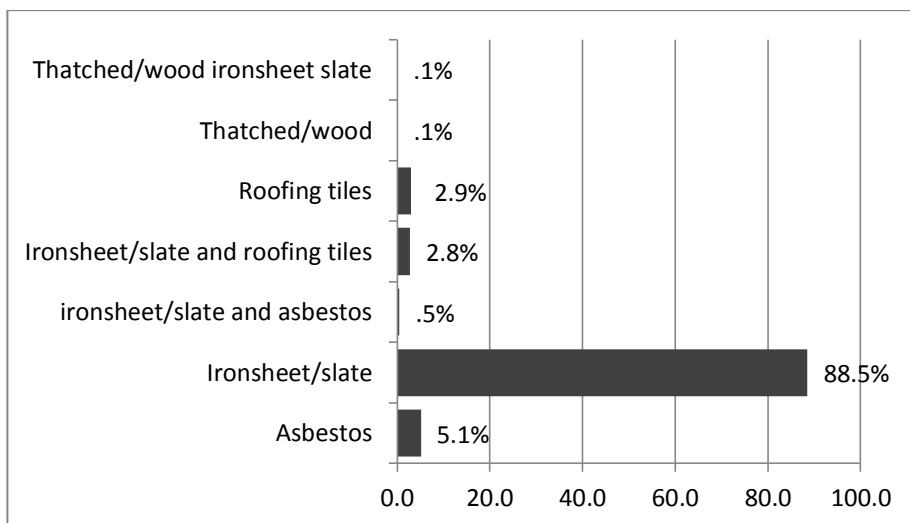


Figure 8.3: Construction material for roofs

8.5.4 Window

Louvre blade window is the most common window type. 46.6% of the respondents had houses with louvre blade windows and 30.6% had wooden windows. Houses with both wooden and louvre blade windows constituted 17.9% while houses without any window constituted 1% of the houses visited (Figure 8.4 below).

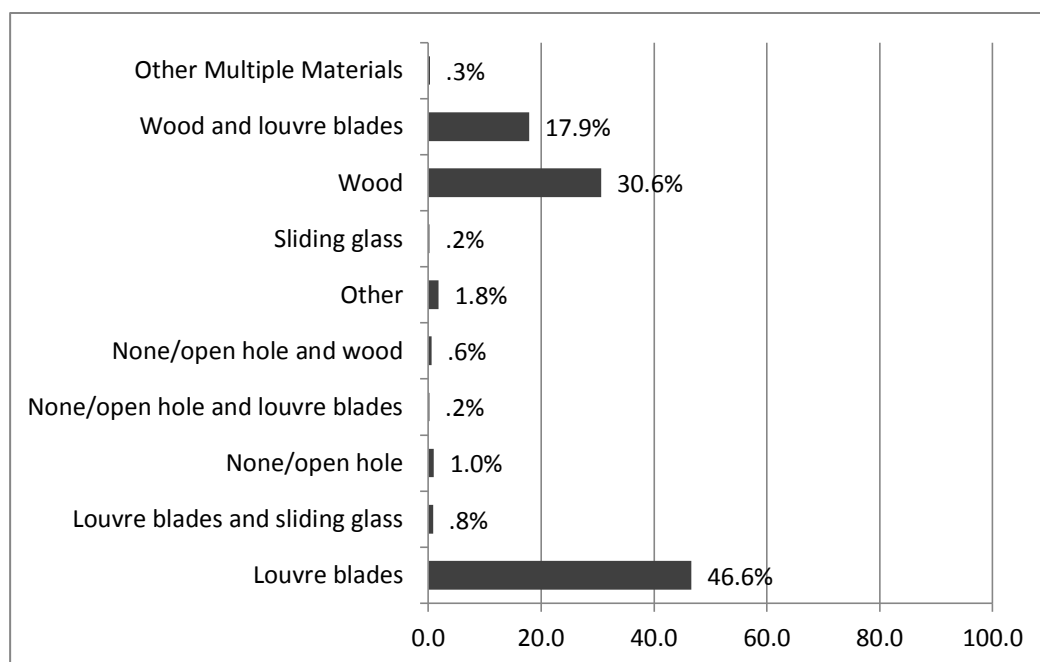


Figure 8.4: Construction material for windows

8.6 Location of Kitchen

58.33% of detached houses have kitchens located inside the building, and a further 51.01%, 41.39% and 33.19% of kitchens are located inside for semi-detached, compound and temporary structures respectively. The rest are located outside as shown in Table 8.6 below.

Table 8.6: Location of kitchen by house type

TYPE OF HOUSE	LOCATION OF KITCHEN			TOTAL
	INSIDE/CLOSED	INSIDE/FITTING	OUTSIDE/OPEN	
Compound house	41.39%	14.22%	44.40%	100.00%
Detached	58.33%	17.50%	24.17%	100.00%
Semi detached	51.01%	12.55%	36.44%	100.00%
Temporary structures	33.19%	5.96%	60.85%	100.00%

9. Conclusion

The objective of the baseline study was to obtain relevant information needed to guide the provision of improved water, sanitation and hygiene services in the Ashaiman New Town community. The scope of the study was guided by five thematic areas which included socio-economic characteristics, environment sanitation, water supply, knowledge, attitudes and practices (KAPs) and housing occupancy. These thematic areas were investigated thoroughly to establish the existing WASH situation in the community.

The socio-economic characteristics of the study area were found to be typical of low-income urban communities. For example, the community has a high average household size of 5.06 which is significantly higher than the Greater Accra regional average and an estimated average of nine (9) households per house. This situation is indicative of the high housing occupancy levels relative to household sanitation facilities. With regard to education, illiteracy among household heads is at 8.11%. However, majority (43.2%) of the educated have only attained middle school level. Majority of the household heads are into petty trading with a few employed in the formal sector. Half of the economically active have personal bank accounts. This may serve as a good incentive for the introduction of financing schemes such as loans managed by recognized financial institutions for the provision of improved household sanitation and water supply facilities and services.

Access to basic sanitation is poor and a typical reflection of the national situation. Majority of the residents rely on privately owned public toilet facilities. Although there is high willingness to own a household toilet, issues relating to tenancy status of most residents will have to be considered in developing solutions for improving access to household WASH services. Sullage and stormwater conveyance is also poor. Most parts of the community are without properly constructed drains resulting into disposal of sullage into open lots and earth drains. Solid waste management is relatively good since most of the households have standard waste bins and engage the services of 'Borla-Taxi' and/or MA's franchised operator in the community for collection. Further improvement in solid waste management may focus on educating residents on primary sorting, reduction and re-use of household wastes.

Although water supply to the community is satisfactory, coverage is low. GWCL's distribution mains only extend to a few areas. This makes it expensive for the majority of households without access to connect to the supply network since they will have to bear the costs of first extending the distribution mains, service lines and household connection. High connection cost was correspondingly cited by most households as the main challenge in accessing GWCL water supply. The households without access rely on private water vendors (usually houses/households within the community with GWCL connection/supply) and end up paying significantly higher costs to access water.

Knowledge on good hygiene practice is high. However some behavioural change is needed. For example with regards to handwashing, majority of the respondents do not wash their hands by the approved method (with soap under running water).

Majority of the residences are compound houses with most households living in single rooms and chamber and hall. Although most of the compound houses have some space for construction of household toilets, the required space needed to meet the toilet facility demand for each house is limited taking into consideration the household to house ratio of 9:1. This situation is likely to have some implication on sanitation facility options and hence the need for functional area and configuration assessment of the houses.

Most of the residents in the community are tenants with a few owning their residences. This presents some potential issues with regard to willingness of landlords/owners to allow installation of toilet facilities by tenants and will therefore require some extensive discussions with all partners /stakeholders involved.

Based on the outcome of the study, Ashaiman Newtown like many other urban poor settlements in the Greater Accra Region is beset with challenges such as poor access to household sanitation, inadequate drainage and water supply. However, due to the nature of the WASH related problems in the community and the interconnectedness of WASH services, a holistic but strategic approach to improving WASH services in the community is crucial to improve access to WASH services.

The interventions to improve access to WASH facilities and services in Ashaiman Newtown should include:

- Improvement in drainage scheme
- On-site sanitation improvement programme- *home latrine promotion, school sanitation and hygiene education (SSHE) and public and neighbourhood facilities improvement*
- Solid waste management improvement programme
- Improvement of wetland management
- Hygiene promotion and behavioural change campaign
- Financing arrangement
- Management support

Key to the successful delivery of any community upgrade/improvement programme is stakeholder participation. Effectively addressing the challenges will require the coordination of all stakeholders at all stages of planning and implementation. The stakeholders should include: the traditional authorities/representatives of the community, Ashaiman Municipal Assembly (ASHMA) and its local representatives, Ghana Water Company Limited (GWCL), Ghana Health Service (GHS), Ghana Education Service (GES), non-governmental organisations, civil society organisations (CSOs), micro-finance institutions and religious groups.

References

- Ghana Statistical Service (2011); 2010 Population and Housing Census Provisional Results (Summary of Findings)
- Ghana Statistical Service: Ghana Demographic and Health Survey (2008)
- Ashaiman Municipal Environmental and Sanitation Strategy and Action Plan (2011)
- GAMA SWP Monitoring and Evaluation Team
- National Development Planning Commission (2010); Ghana Shared Growth and Development Agenda (GSGDA)
- MLGRD (2010): Environmental Sanitation Policy

Annex 1: Ministry of Local Government and Rural Development Ghana Metropolitan Area Water and Sanitation Project 2015

HOUSEHOLD BASELINE SURVEY

QUESTIONNAIRE #

1. GENERAL INFORMATION

1.1	REGION	DATE	ENUMERATOR NAME	CHECKED
		Cell-phone		

LOCATION OF HOUSEHOLD

1.2	House #	1.3	District	1.4	Town	1.5	Area.
1.6	GPS reading (Decimal Degrees)	LATITUDE:					
		LONGITUDE:					

		Compound	Semi Detached	Detached House
1.7	Type of House			

1.8	Is the respondent the same person as HHH	No		Yes	
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If Yes to 1.7, SKIP (Ques 1.8 to 1.10) to 1.11

If 'No' then what is the name of respondent?	1.9	Surname	1.10	Other names

The respondent is the?	1.11	Wife	Son	Daughter	Husband	Other (specify)
Of the HH						

1.12	Household head name							Telephone		
1.13	Age	20-30	31-40	41-50	51-60	61-70	70+	1.14	Gender	
		1	2	3	4	5	6		Male	Female

1.15	Household head education level					
No schooling	Non-formal only	Primary	Middle	Secondary	Tertiary	
1	2	3	4	5	6	

1.16	Household head religion?			
Christianity	Islam	Traditional	Other	
1	2	3	4	

1.17	HHH Nationality		1.23	HHH Ethnicity		1.21	Handicapped	Yes		No	
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1.18	What does this household do for a living?									
	Crop Farming	Livestock Farming	Petty Trader	Food Vendor	Labour worker	Artisan	Teacher	Public Servant	Banker	Other (Specify)
	1	2	4	8	16	32	64	128	256	512
	Score entry									

1.19	Is the head of this household?	A man?	Or a woman?

What is name of the major income earner in this household?	1.20	Surname	1.21	Other names

1.22	Gender	Male	Female	1.23	Age	Under 21	21 to 31	31 to 41	41 to 51	51 to 60	Above 60

1.24	GHANA ID #		1.25	Cell-phone	
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1.26	Type of ID			
	Voter ID	National ID	NHIS ID	Passport
	1	2	4	8

1.27	Nationality		1.23	Ethnicity		1.28	Handicapped	Yes		No	
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1.29	Education level:	Graduate	Diploma	Secondary	Primary	Islamic	Informal	None

What are the main business occupations of this Household Head?										
1.30	Major business/occupation									
1.31	Secondary business/occupation									
1.32	Other business/occupation									

2. HOUSEHOLD STATISTICS.

		House is					
2.1	Is the house where you live, your own, is it rented or is it a family house?	Family house		Owned		Rented	
2.2	For how many years has your family occupied this house?						

2.3	How many Rooms does the Household occupy			
ROOMS	1	2	3-5	6-8
SCORE	1	2	4	8

	2.4	2.5	2.6
	Adults 18 yrs +	Children <18yrs	Total persons
How many persons are there in your household?			

	2.7	2.8	2.9
	Are Employed	Has own Business	Total persons
How many of these persons 18yrs+ are employed or are in business?			

	2.10	2.11	2.12
	Girls attend school	Boys attend school	Total attend school
Of the Children <18yrs, How many children in your household attend school?			

3.0 HOUSEHOLD SANITATION

3.1	No. of HH in the house	
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3.2	No of Toilets in House	
-----	------------------------	--

3.3	No of Bathrooms in the House	
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	3.4	3.5
	Toilet	Bathroom
Does the household have its own dedicated Toilet/Bathrooms	Yes No	Yes No
No of Toilets/Bathrooms available to Household	3.6	3.7

IF YES TO 3.4 SKIP 3.8; IF NO SKIP TO 3.13

		KVIP	WC	Pit latrine	Other		
3.8	What type of toilet?						
	When did you build it?	A month ago	2-3 months ago	4-5 months ago	6-12 months	More than a year ago	Latrine already in the house before rented
3.9	Do you share your latrine with your neighbour or other families?	Yes	No				

3.10	If yes, how many families do you share with?						
3.11	How much did it cost to construct the facility?						
		Privacy	Avoid sharing with others	Avoid disturbing others	Avoid embarrassment	Convenience	Can become a good host when guests visit
3.12	What was the main reason for building the latrine? (tick as many as apply)						
		Public toilet	Neighbour's toilet	Open defecation			
3.13	Where do you ease yourself?						
		They are dirty	They are poor	Lower status	Uneducated	Nothing wrong	
3.14	What is your opinion on people who use the public toilet/OD/Share?						
3.15	Do you want to own a place to defecate for your household?	Yes	No				
3.16	Do you have adequate land size to build a latrine?	Yes	No				
3.17	How much will you be willing to spare to construct a latrine?						
3.18	Will you borrow money to build the latrine?	Yes	No				
		Relative	Bank	Micro credit	Neighbour	Cooperative	Other (state)
3.19	Where/who will you borrow the money from?						

IF YES TO 3.5 SKIP 3.20

		Shared Compound Bathhouse	Neighbour	Waterbody	In the Bush
3.20	Where do the Household members take their bath				
		In Compound	Into a Nearby Drain	House Soakaway	
3.21	How does the Household dispose Off its waste water				

		Less than 1 year	1 to 3 yrs	4 to 6yrs	More than 7 yrs
3.22	When was the last time your septic latrine got emptied?				

4. HOUSEHOLD INCOMES

	Amounts of incomes from (in Gh. CEDIS)			
What are the sources and amount of income for your household?	Employment & labour	Crops & livestock	Business & trading	Others (state)
During the past month (June) for example?	4.1	4.2	4.3	4.4
Estimated total for the past year (twelve months)?	4.5	4.6	4.7	4.8

Do any persons in your household have a bank account or interest earning savings account?	Has a bank account					
	4.9		4.10		4.11	
	Business bank account		Personal bank account		Interest earning savings	
	Yes		Yes		Yes	

Household Expenditure

	Expenditure (Gh. CEDIS)					
What are the expenditure pattern and amount for your household?	Food	Tuition/schooling	Rent	Utility (electricity, water, energy)	Health	Others
During the past month (June) for example?	4.12	4.13	4.14	4.15	4.16	4.17
Estimated total for the past year (twelve months)?	4.18	4.19	4.20	4.21	4.22	4.23

5. HOUSEHOLD STRUCTURE AND FACILITIES:

(Office)

Room Floor	Earth/Laterite		Cement	Tile/terrazzo		SEEN	SCORE
Walls	Mud	Landcrete Blocks	Cement block/brick plastered				
Roof	Thatched/wood	Ironsheets/slate		Roofing tiles			
Windows	None/open-hole	Glass/fixed		Glass/screen/open			
Rooms #	One	Two/three		Four or more			
Kitchen	Outside/open	Inside/closed		Inside/fittings			

Bathing	Outside/open	Inside/manual	Inside/drained		
Toilet	Public	Common inside	Water-closet/KVIP		

6. QUESTIONS ON HOUSEHOLD WATER SUPPLY AND CONSUMPTION:

A. Water for Drinking:

1.1	Does your water source for DRINKING differ from water for other uses?	Yes	No

If Yes, then indicate your DRINKING WATER sources in the table below: If No then move straight to Section B.
(MULTIPLE ANSWERS POSSIBLE)

A. Drinking water Sourced from	In wet season	Score for entry	In dry season	Distance to fetch	Time required	Consumption and Storage	
				Kilometres	Minutes	Amount consumed per day	
GWCL Tap		1					
Community Networked tap in house		2				Number of containers	
Well in house		4					
Rain harvested		8				Type of container:*	
Community tap		16					
Borehole		32				Total Litres	
Community Well		64				Data entry score	1.6
River/stream		128				Amount stored at house	
Dug-out/dam		256				Number of containers	
Tanker supply		512				Type of container:*	
Other (specify)		1024					
						Total litres	
Data entry scores	Wet score		Dry score	Average	Average	Data entry score	1.7
						*e.g: Bottles, Gallons, Coolers, Earthenware pots.	
	1.2		1.3	1.4	1.5		

1.8	What Methods Of Drinking Water Storage Do Your Household Use ?	
	SCORE	Estimated Storage Capacity (In Gallons)
Roof Tank	1	
Underground Level Tank Outside The House	2	
Ground Level Tank Outside The House		
Water Tank In House	4	
Small Containers And Jerry Cans	8	

Data Entry Score	1.9	1.10

If there is a borehole in Community or House, why does the household not use the borehole?

Broken down		1
Badly maintained		2
Distance very far		4
Bad location		8
Overcrowded		16
Taste not good		32
Other:		64
1.10	Data entry score	

B. Water for Cooking:

2.1	Does your water source for COOKING differ from water for other uses?	Yes	No

If Yes, then indicate your COOKING WATER sources in the table below: If No then move straight to Section C.

(MULTIPLE ANSWERS POSSIBLE)

A. Drinking water Sourced from	In wet season	Score for entry	In dry season	Distance to fetch	Time required	Consumption and Storage	
				Kilometres	Minutes	Amount consumed per day	
GWCL Tap		1					
Community Networked tap in house		2				Number of containers	
Well in house		4				Type of container:*	
Rain harvested		8					
Community tap		16					
Borehole		32				Total Litres	
Community Well		64				Data entry score	2.6
River/stream		128				Amount stored at house	
Dug-out/dam		256				Number of containers	
Tanker supply		512				Type of container:*	
Other (specify)		1024					
						Total litres	
Data entry scores	Wet score		Dry score	Average	Average	Data entry score	2.7
						*e.g: Bottles, Gallons, Coolers, Earthenware pots.	
	2.2		2.3	2.4	2.5		

2.8	What Methods Of Cooking Water Storage Do Your Household Use?	
	SCORE	Estimated Storage Capacity (In Gallons)
Roof Tank	1	
Underground Level Tank Outside The House	2	
Ground Level Tank Outside The House		
Water Tank In House	4	
Small Containers And Jerry Cans	8	

Data Entry Score	2.9	2.10

C. Water for General use in the household: (e.g. bathing, washing, and cleaning).

Complete this section C for ALL households sampled.

(MULTIPLE ANSWERS POSSIBLE)

C. Drinking water Sourced from	In wet season	Score for entry	In dry season	Distance to fetch	Time required
				Kilometres	Minutes
GWCL Tap		1			
Community Networked tap in house		2			
Well in house		4			
Rain harvested		8			
Community tap		16			
Borehole		32			
Community Well		64			
River/stream		128			
Dug-out/dam		256			
Tanker supply		512			
Other (specify)		1024			
Data entry scores	Wet score		Dry score	Average	Average
	3.1		3.2	3.3	3.4

3.5	What Methods Of General Water Storage Do Your Household Use?	
	SCORE	Estimated Storage Capacity (In Gallons)
Roof Tank	1	
Underground Level Tank Outside The House	2	
Ground Level Tank Outside The House		
Water Tank In House	4	

Small Containers And Jerry Cans	8	
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Data Entry Score	3.6	3.7

3.8	How many days can your stored water last when there is no water?		
	Water for Drinking	Water for Cooking	Water for General Use
Less than 3 days			
3 days to 7 days			
Two Weeks			
One month			
3 Months			

PIPED WATER FROM GWCL (IF the Household Receives GWCL in mains)

3.9	GWCL Supply Frequency
	Frequency
Once a Week	
Once in Two Week	
Once a month	
Continuous (Never Ceases)	

3.10	GWCL Supply Duration
	Duration
Less than 2 hrs	
2 to 5 hrs	
More than 5 hrs	
Continuous (Never Ceases)	

3.7	GWCL Supply Times
	Time (Tick)
Mornings Only	
Evenings only	
Morning and Evening	
All day	
All Night	

	Is the Supply Time Convenient	Yes	NO

3.8	Has there been any sickness in the household caused by water in the past twelve months?	Yes	No
If yes, then name or describe the sickness:			

7. LATRINE/TOILET OPTIONS**8 AWARENESS OF GAMA SANITATION AND WATER PROJECT ACTIVITIES:**

Has the respondent heard about GAMA Sanitation and Water projects or activities funded by GAMA Sanitation and Water Project?	Yes	No

Additional notes- (qualitative observation of the WASH facilities audit by the enumerators where enumerators are to observe the hygienic nature of the facility, hand wash, general scene around the facility, etc):

THANK YOU.