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MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT

LEDZOKUKU-KROWOR 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 TESHIE OLD TOWN
COMMUNITY - LEDZOKUKU-KROWOR MUNICIPAL ASSEMBLY**

FINAL BASELINE SURVEY REPORT



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ACRONYMS

CSO	- Civil Society Organisation
EHSD	- Environmental Health and Sanitation Directorate
GAMA	- Greater Accra Metropolitan Area
GES	- Ghana Education Service
GHC	- Ghana Cedis
GHC	- Ghana Health Service
HH	- Household
HHH	- Household Head
LEKMA	- Ledzokuku Krowor Municipal Assembly
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
NGO	- Non-Governmental Organisation
NHPC	- National Population and Housing Census
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 Teshie Old Town as extrapolated from the 2010 National Population and Housing Census (NPHC) is 14, 063¹. However, the population obtained from the baseline survey at 75% coverage (sample size) is 15,109. Table S1 below provides a summary of demographic indicators.

Table S1: Summary of demographic indicators

	NPHC 2010 AND MESSAP	GAMA SWP COMMUNITY BASELINE SURVEY (at 75% coverage)
Population	14,063	15,109
Household Size	3.6 ²	5.034
Estimated No. of Households	3,906	3,001

Location of Teshie Old Town Community

The Teshie Old Town community is located in the Ledzokuku-Krowor Municipal Assembly. The community is bounded to north and south by the Accra-Tema Beach Road and the Sea (Gulf of Guinea) respectively. It stretches from the Kpeshie Lagoon (West) to First Junction Area (East). The community is made up of the Akro East and Akro West electoral Areas. Figures S1 and S2 present the location map and some of the suburbs in the community respectively.

Total Number of Households

From the baseline survey, the projected population of the community in 2015 is 20,145 with an average household size of 5. The total number of households by projection is estimated at 4,029.

Access to Sanitation Facilities

About half of the households (50.7%) rely solely on public toilets while people who use shared compound toilets account for 3.2% of households in the community. Only 2% of the households have a dedicated household toilet facility while 17.6% defecate in the bush or in waterbody (usually in major drains). 14.4% also defecate along the beach. Common household toilet facilities in the community include pour flush (45%), pit latrine with slab/VIP (29%) and Water Closet (WC) toilets with septic tanks (15%). Accessing a public facility takes on the average, between 5-10 minutes. The community has about seven (7) public toilets all of which are owned by the Municipal Assembly (MA). Conditions at the sanitation facilities are characterised by mal-odour, flies, soiled floors and defective fixtures.

¹ GAMA SWP Monitoring and Evaluation Team

² Obtained from the Ghana Statistical Service (GSS) 2010 NPHC District Report

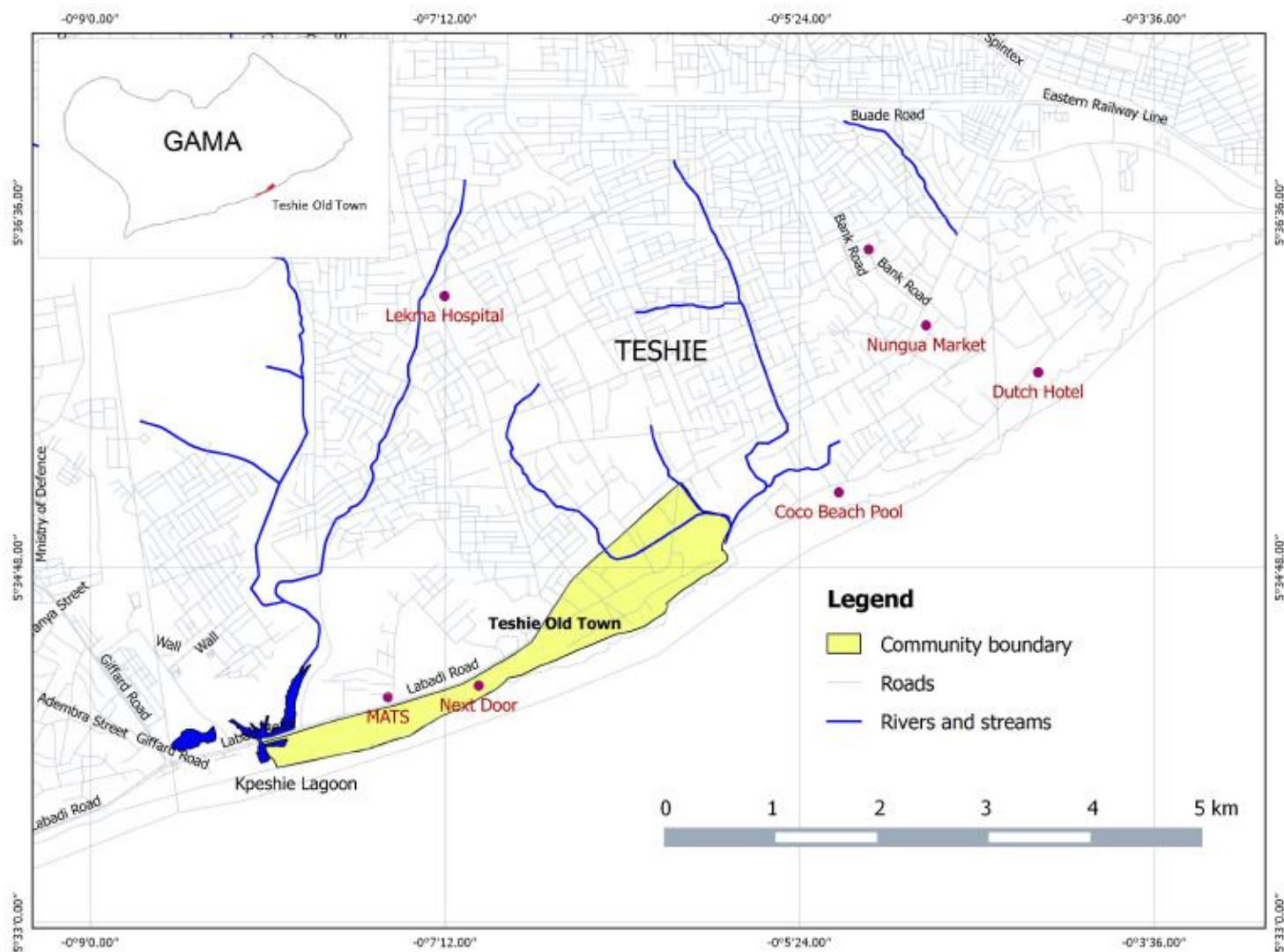


Figure S1. Location map of Teshie Old Town community

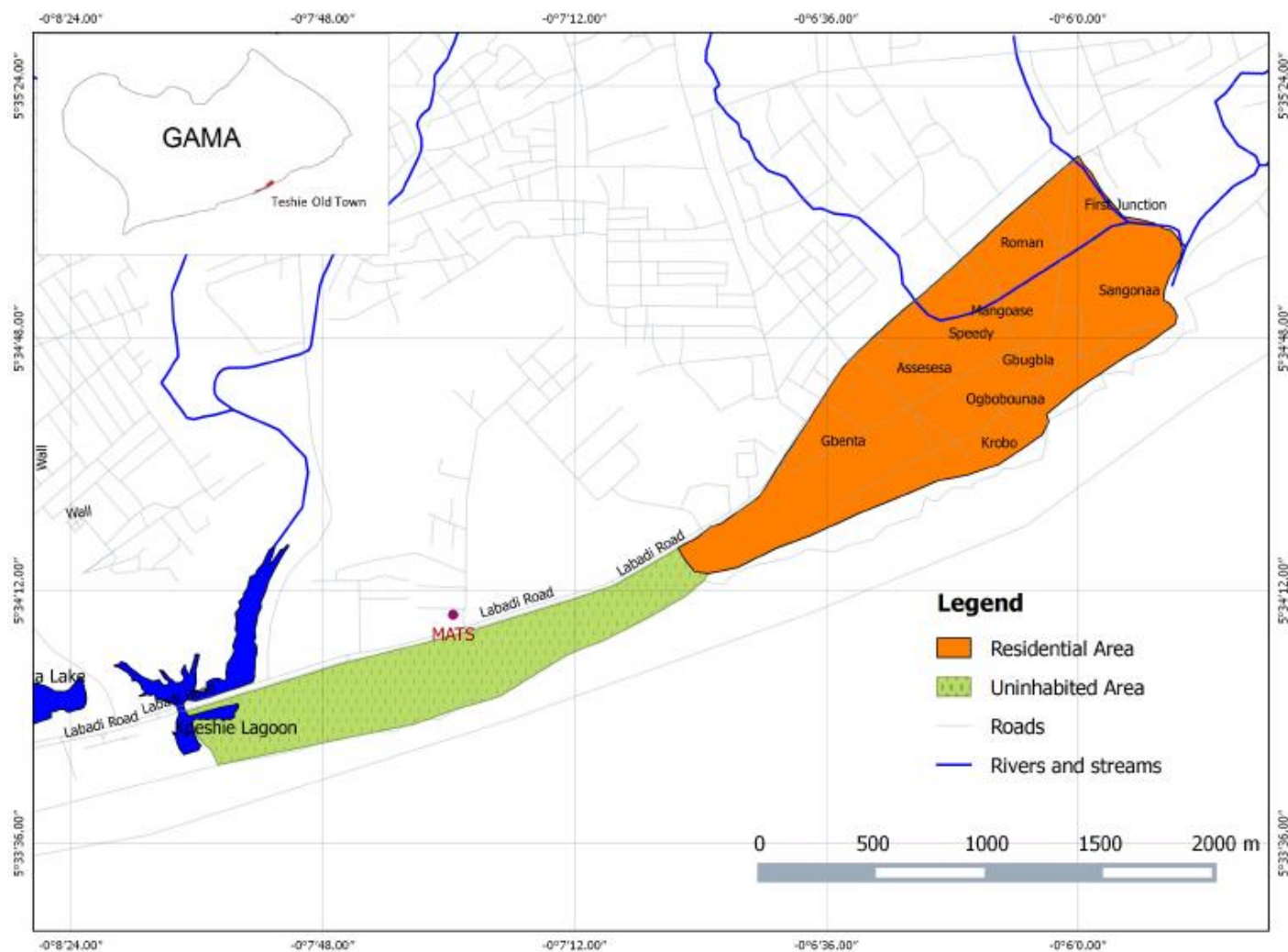


Figure S2. Suburbs of Teshie Old Town

Drainage

Teshie Old Town lacks an efficient drainage system despite the existence of some concretized drains in the community. Most of the existing drains are silted limiting easy flow sullage and stormwater. The community has two major drainage/stormwater outfalls which meet at a point and drains into the Sangonaa Lagoon and finally into the sea. Most of existing drains are roadside drains.

Incidence of Flooding

Incidence of flooding in the community is quite low. 18.8% of the respondents indicated occurrence of floods after heavy rainfall.

Average Household Size

Average household size in the community is 5.034 with 59.4% of the population being adults

Microfinance Institutions (MFIs) in the Community

Only one MFI (Good News Microfinance) was identified in the community. However, adjoining communities such as Nungua, Teshie Estates and Brigade have recognized MFIs operating. These include Procredit Savings and Loans Co. Ltd., Legacy Capital Ltd, Advans Ghana, Opportunities International Savings and Loans Ltd, AGT Microfinance, First Trust Savings and Loans Limited, SIM Micro Finance Services Ltd. , Express and Loans Co. Ltd and FTS Capital.

Ghana Water Company Limited (GWCL) Piped water Coverage

49.8% of the households indicated the use of water from GWCL. With regard to specific water use needs, 13%, 73% and 73% 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 LEKMA 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 Ledzokuku Krowor Municipal Assembly (LEKMA), Teshie Old Town 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 Teshie Old Town.

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)
- District 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 Teshie Old Town**Demographic and socio - economic characteristics**

Teshie Old Town can be described as an adult (aging) community since 59.4% of the people are at least 18 years. Females are more than males in the community. The community has an average household size of about 5; about 1.5 more than the regional average. Many of the households are headed by males most of whom are within the age brackets of 31-40 years. Two out of ten of the household heads have not had any form of education. Many more girls (2.4%) attend school than boys of same school going age. Professions such as petty trading, artisanship, manual laboring, public services and agriculture are some of the main sources of occupation in the community. Typical sources of income include business and trading, employment, labour and remittances.

Environmental Sanitation

The prevalence of open defecation is high at a rate of 32%. In most cases the open defecation is done along the beach, major drains and bushes/vacant lots. 50.7% of the households rely exclusively on public toilets. Pour flush, Pit latrines with slab/VIP and WC with septic tanks are the common household toilet facility types.

More 50% of the households dispose of solid waste crudely at open dumps (vacant lots). Polythene bags and sacks are the major household waste collection receptacles. Disposal of sullage into nearby gutter (mostly roadside drains) and open lots/bare ground is the norm.

Water

Sachet water is the main source of drinking water whereas water for purposes such as cooking and general use- e.g. cleaning, cooking and personal hygiene include GWCL water supply –in-house/public standpipe and water tankers. In-house water supply from GWCL coverage is low in the community; and supply from the urban supplier lasts for about 5 hours often in the morning and evenings. Storage of water is mainly in small container and jerry cans.

Knowledge, Attitude & Practices

Majority of the people wash their hands after visiting the toilet. Handwashing with soap under running water is practiced by only 4.1% of the respondents. The main motivation for handwashing is to keep hands clean and prevent oral/faecal diseases. The major WASH related diseases in the community are malaria and cholera.

Housing and Occupancy

The most common house type is the compound house-87% of the respondents live in compound houses. Seven out of every 10 residents live in a single room. 67% of the residences are family houses and over 90% built of cement blocks/bricks 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% minimum 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) ³			Average District HH Size	Est. No. of HH	75% Threshold LGPCU	Minimum by	Actual No. of HH Interviewed
Male	Female	Total	3.6	3,906	2,930		3,001
7,266	6,797	14,063					

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.

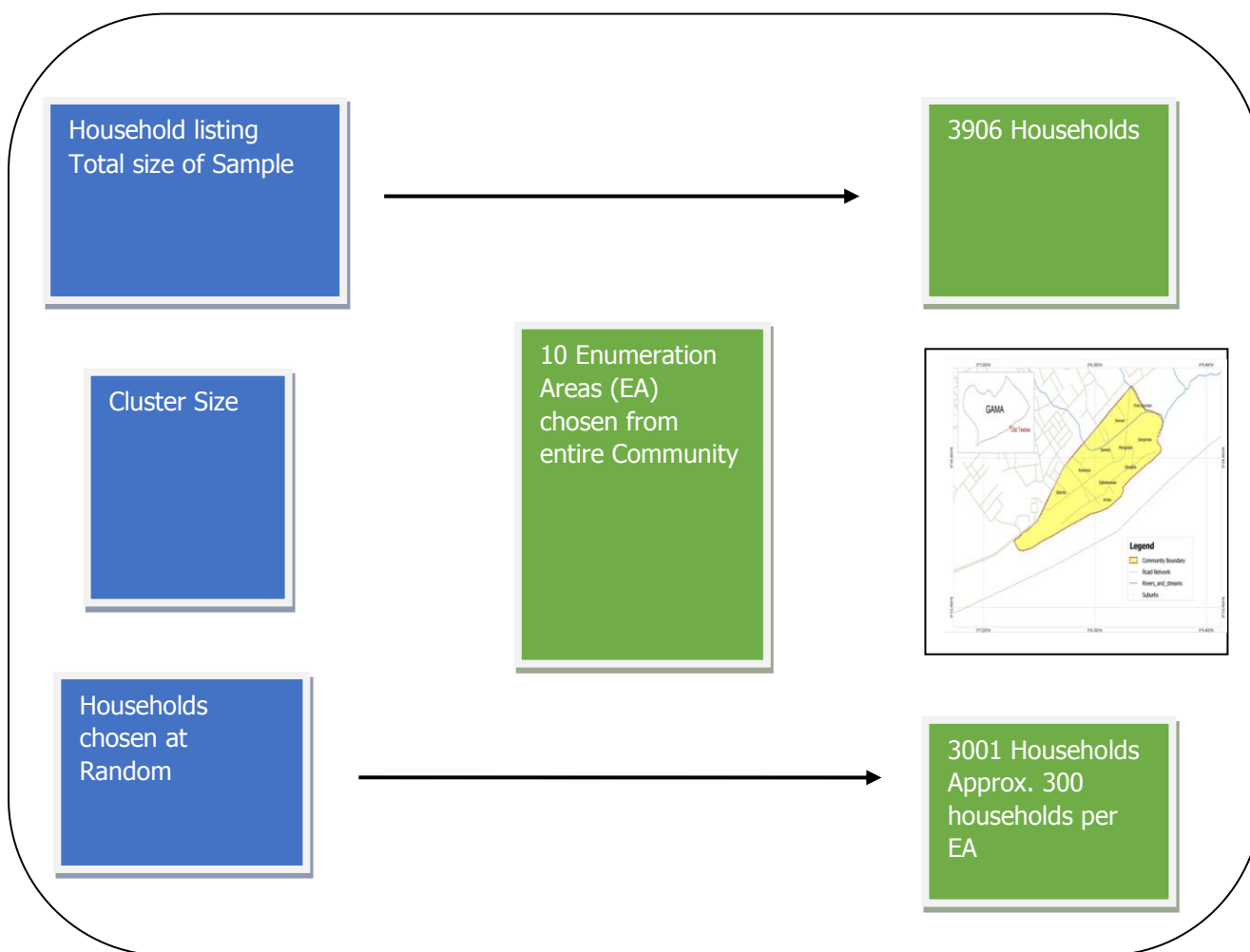


Figure 2.1: Layout of sample design

³ 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. A one-day training session was organised for the enumerators. 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

The training ensured the enumerators had a good understanding of the questions and the overall objective of the project.

2.3.3 Community Entry and demarcation

Based on our initial interactions with the local assembly representatives (assembly men) during the inception stage, the assembly men were used as the main entry point to the community. The community sensitization on the survey was carried out for three (3) days by the MA's public address vans as well traditional "gong-gong" beating prior to start of the survey. The traditional authorities (Chief and priest) were also consulted and briefed on the assignment. Opinion leaders and assembly representatives in the community helped in establishing the boundaries of the community and suburbs.

2.3.4 Data Collection and Quality Control

Prior to field data collection a pretesting of the survey instruments was carried out to assess the sampling mechanisms developed and also have an estimate of the time/effort input required for the entire survey. The survey covered all the suburbs in the communities. Enumerators were introduced to their assigned areas and shown the exact boundaries. Beginning points were selected and plotted for repetitive timeframe. Selection of /households for interview was done randomly. Only adult representatives of households were targeted. Data collection lasted for a week including weekends.

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 done.

3. Demographic, Socio-Economic Characteristics

3.1 Population Characteristics

The current total population of Teshie Old Town based on the 2010 NPHC is estimated at 14,603. However, based on the baseline survey, the population at 75% coverage of the estimated total number of households is 15,109. Therefore by projection, the total population is 20,145. Adults⁴ account for more than half of the population (see Figure 3.1 below). The community can therefore be described as an adult populated area.

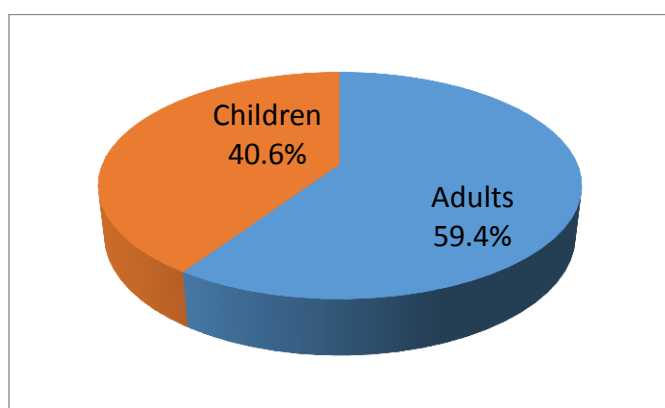


Figure 3.1: Adult, children ratio

Males below the age of eighteen (18) are 5.8% higher than their female counterparts as show in the Table 3.1 below.

Table 3.1: Sex distribution of children under 18 years

DESCRIPTION	NUMBER	PERCENTAGE
Boys under 18 years	3247	52.9%
Girls under 18 years	2886	47.1%
	6133	100%

3.2 Household Size and Number

Table 3.2 below shows a summary of the household size and number estimated based on the survey. The average household size of 5.034 obtained is higher than the Greater Accra regional average of 3.8.

Table 3.2: Household characteristics

INDICATOR	VALUE
Number of households enumerated	3001
Number of persons in household	15109
Average household size	5.034
Projected population	20145
Projected total number of households	4,029

⁴ +18 according to the Ghana Statistical Service (GSS); National Population and Housing Census (NPHC) 2010

3.3 Household Headship by Gender

Household headship is slightly dominated by males at 51.8% which compared to the national average of 65% is significantly lower (see Figure 3.2) below.

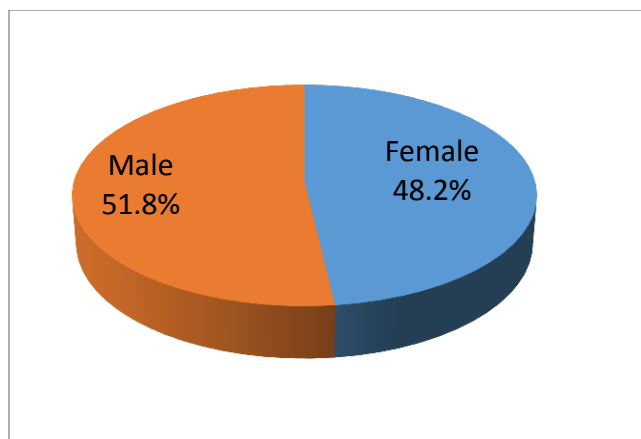


Figure 3.2: Household headship by Gender

Over 50% of the household heads (HHH) fall within the age brackets of 31-40 (27.6%) and 41-50 (26.3%). 33.9% fall within the ages of 51-70+. See Table 3.3 below.

Table 3.3: Household head age

AGE	No. OF HHH	PERCENTAGE
Less than 21 years	19	0.6%
20 -30_years	350	11.7%
31 - 40_years	828	27.6%
41 - 50_years	789	26.3%
51 - 60_years	479	16.0%
61 - 70_years	306	10.2%
Above 70 years	230	7.7%
	3001	100%

3.4 Nationality of Household Head

99.3% of household heads are Ghanaians, about 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 HHH	PERCENTAGE
Ghanaian	2980	99.3%
Nigerian	9	0.30%
Nigerien	8	0.27%
Malian	1	0.03%
Togolese	1	0.03%
Other	2	0.07%
	3001	100.00%

3.5 Ethnicity of Household Head

Being a native Ga community, 85.5% of the households are headed by Ga-Dangme. Other household heads belonging to other ethnic groups include Ewes, Akans, Grusi and Guan. Table 3.5 below shows the respective percentages.

Table 3.5: Ethnicity of household head

ETHNICITY	No. OF HHH	PERCENTAGE
Akan	272	9.1%
Ewe	87	2.9%
Ga-Dangme	2547	85.47%
Grusi	13	0.44%
Guan	4	0.13%
Gruma	2	0.07%
Mande-Busanga	2	0.07%
Mole-Dagbani	40	1.34%
Others	13	0.44%
	2980	100%

3.6 Education

As shown in Table 3.6 below, 19.49% of the household heads have not had any form of education (formal or informal). Only 4.7% had obtained tertiary education (e.g. Training/Nursing Colleges, Universities) while 42.52% of the household heads attained middle school level certificate. A further 14.2% indicated attaining secondary education. The rest indicated attaining either primary or informal education.

Table 3.6: Household head education Level

HHH EDUCATION LEVEL	No. OF HHH	PERCENTAGE
Tertiary	140	4.7%
Secondary	425	14.2%
Middle school	1276	42.52%
Primary	419	13.96%
Informal	156	5.20%
None	585	19.49%
	3001	100%

With regard to children attending school, 2.4% more of girls are in school compared to boys attending school (see Table 3.7 below).

Table 3.7: School attendance by boys and girls

DESCRIPTION	No.	PERCENTAGE
Boys attending school	2844	87.6%
Boys not attending school	403	12.4%
	3247	100%
DESCRIPTION	No.	PERCENTAGE
Girls attending school	2597	90.0%
Girls not attending school	289	10.0%
	2886	100%

3.7 Occupation and Economic Characteristics

As shown in Figure 3.3 below, only 4% of household heads are employed in the formal sector (teaching, banking, and public service) as a sole occupation. Majority (37.5%) of the household heads are into petty trading as their main income source. Household heads into only farming (livestock and crop) constituted 1.9% of the household heads in the community. This may be a reflection how urbanized (highly built-up and densely populated) the community is. Heads with multiple occupations (two or more occupations) constituted 9% while those who plied other occupations (e.g. fishing, fish mongering, lottery operator, pastoring, driving or pensioner, etc.) constituted 22.4% of the household heads. 10.1% of the household heads were artisans while household heads into labour work accounted for 8.3%.

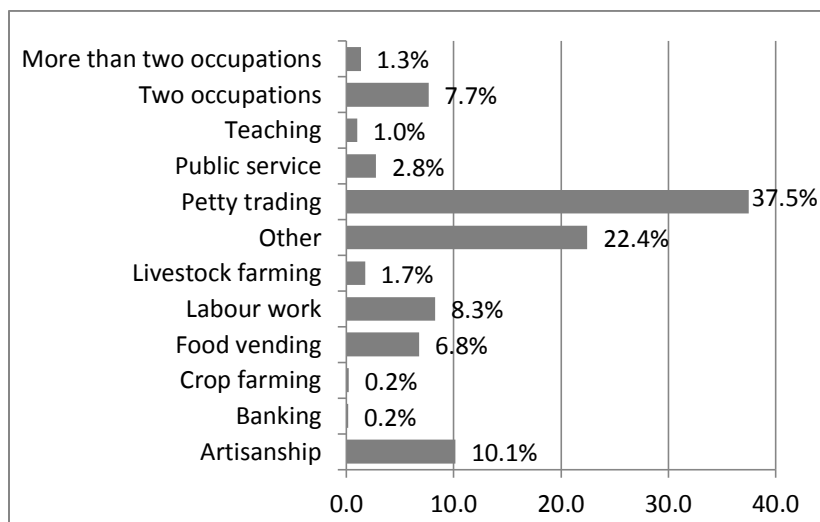


Figure 3.3: Occupation of household head

3.8 Household Incomes

Business and trading accounts for 63.8% of income sources of households (see Figure 3.4 below). This trend is reflected in Table 3.8 below as business and trading accounted for the largest average annual income amount over the past 12 months. Other significant sources of income include employment only (16.7%), other sources - including fishing (11.1%) and remittances (3.9%).

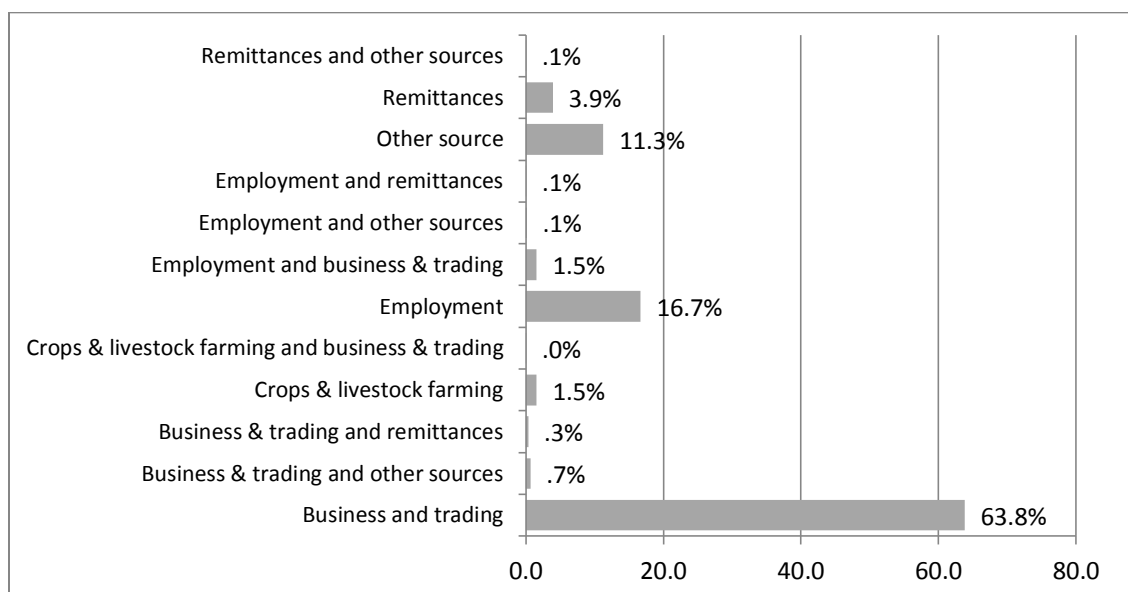


Figure 3.4: Sources of household income in the last 12 months

On the average, business and trading generated about GHC 2,763.00 as average annual income over the past year, with employment and labour generating GHC 1,312.00. Income from other sources generated GHC 1,377.00 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	1,430	1,312
Crops and livestock	342	555
Business and trading	655	2,763
Remittances	514	926
Other sources	563	1,377

3.9 Economic Activity

Table 3.9 shows that of the total adult population of 8,976; 6,163 persons representing 68.7% are economically active (either self-employed or are employees).

Table 3.9: Employment activity status for adults

ECONOMICALLY ACTIVE PERSONS	No.	PERCENTAGE
Persons above 18 who are employed	2840	46.1%
Persons above 18 who have their own business	3323	53.9%
	6163	100%
Total adult population	8976	
Economically active persons above 18 years	6163	68.7%

3.10 Financial Services

72.6% of the respondents (representing 2,179) indicated not having personal accounts (see Table 3.10 below). 95% of the respondents do not have any business account (see Table 3.11 below). A similar percentage (96.4%) also indicated not having any form of investment account (see Table 3.12).

Table 3.10: Persons with personal bank accounts

HAVING PERSONAL BANK ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	2179	72.61%
Yes	822	27.39%
Total	3001	100.00%

Table 3.11: Persons with business bank accounts

HAVING BUSINESS BANK ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	2875	95.80%
Yes	126	4.20%
Total	3001	100.00%

Table 3.12: Percentage persons with investment/mutual fund account

HAVING INVESTMENT/MUTUAL FUND ACCOUNT	No. OF RESPONDENTS	PERCENTAGE
No	2893	96.40%
Yes	108	3.60%
Total	3001	100.00%

3.11 Physically Challenged People

As shown in Table 3.13 below, 60 respondents representing 2% are with some form of disability. This percentage is lower than the national average of 3%.

Table 3.13: Disability status of respondents

HANDICAPPED	No. OF RESPONDENTS	PERCENTAGE
No	2941	98.0%
Yes	60	2.0%
	3001	100%

4. Environmental Sanitation

4.1 Access to Sanitation Facilities

From the baseline survey, only 1.9% of the households (HH) representing 58 households indicated having their own dedicated toilet. Households in compound houses who share toilet facilities with other households constituted 3.2% of the total households surveyed. About half of the households rely exclusively on public toilets whereas 17.6% defecate in a waterbody (usually major drains-see plate 4.1 below) and in the bush. 14.4% indicated defecating along the beach. This brings the total rate of open defecation to 32%.

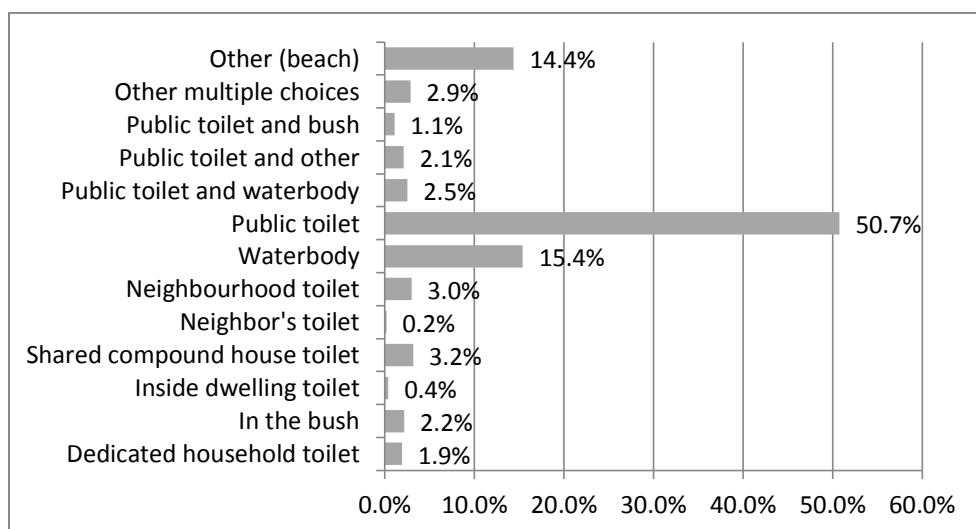


Figure 4.1: Access to sanitation facility



Plate 4.1: Major (stormwater) drain used as open-defecation grounds

4.2 Toilet Facilities In-House

95% of the households (representing 2,855 households) indicated not having any toilet facility within their premises. Residents with one (1) toilet in-house constituted 2.83% (85 households) while thirteen (13) households (0.42%) indicated having at least five (5) toilets in-house. See table 4.1 below

Table 4.1: In-house toilet facilities

TOILETS AVAILABLE IN THE HOUSE	No. OF HH	PERCENTAGE	AVERAGE No. OF HH PER HOUSE
0 (No toilet)	2855	95.13%	7
1	85	2.83%	
2	27	0.90%	
3	9	0.30%	
4	12	0.40%	
5+	13	0.42%	
Total	3001	100.00%	

4.3 Household Toilet Types

The main household toilet facility types identified in the community include:

- WC flush (to septic tank)
- Pit latrine with slab/VIP and pour flush
- Pour flush
- Unimproved pit
- Pit latrine with slab/VIP

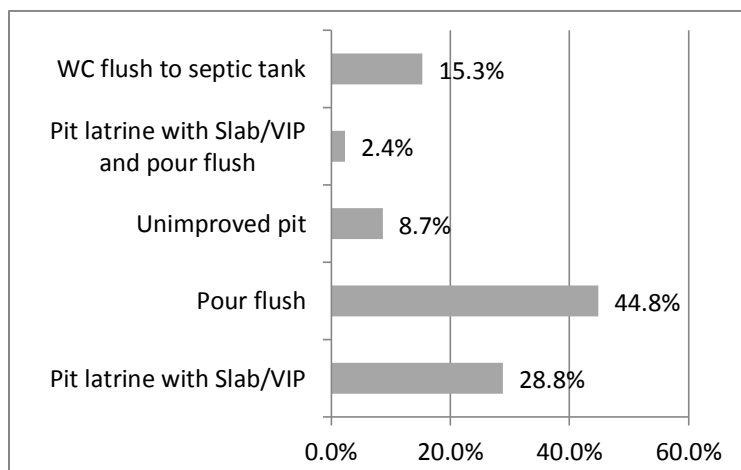


Figure 4.2: Household toilet facility types

Figure 4.2 above shows the types of household toilet facilities. About 45% of the household toilets are pour flush facilities. 29% and 15% are pit latrines with slab/VIP and WC toilets connected to septic tanks respectively. Unimproved pit latrines accounted for 9% of household toilets.

4.4 Household Toilet Ownership

Fifty eight (58) households representing 1.93% of the households which is significantly lower than the national average of 16.9% do not have toilets exclusively used by their members-see Table 4.2 below. Out of the 58 households with dedicated household toilets; 1.73% live in compound houses; 9.47% are in detached structures and a further 1.67% are in semi-detached structures. No toilet facilities were 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	2943	98.07%
Yes	58	1.93%
Total	3001	100.00%

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

TYPE OF HOUSE	HOUSEHOLD HAS ITS OWN DEDICATED TOILET		
	NO	YES	TOTAL
Compound house	98.27%	1.73%	100.00%
Detached	90.53%	9.47%	100.00%
Semi detached	98.33%	1.67%	100.00%
Temporary structure	100.00%	0.00%	100.00%

4.5 Public Toilet Usage

62.7% of the households (which is more than two times higher than the national average of 30%) use public toilets (either exclusively or in combination with other means of disposing of human excreta) as shown in Table 4.4 below. Public toilet usage is more prevalent among occupants of semi-detached houses at 73.75% and temporary structures at 68.66% (see Table 4.5 below).

The community has seven (7) public toilet facilities with some in deplorable states whereas others are yet to be commissioned for use. See plates 4.2-4.5 below.

Table 4.4: Public toilet usage

USE OF PUBLIC TOILET	No. OF HH	PERCENTAGE
No	1119	37.29%
Yes	1882	62.71%
Total	3001	100.00%

Table 4.5: Public toilet usage by house type

TYPE OF HOUSE	USE OF PUBLIC TOILET		TOTAL
	NO	YES	
Compound house	38.71%	61.29%	100.00%
Detached	30.53%	69.47%	100.00%
Semi detached	26.25%	73.75%	100.00%
Temporary structure	31.34%	68.66%	100.00%



Plate 4.2: 12-Seater pour flush public toilet at Adedenkpo with soiled floor and broken septic tank slab.



Plate 4.3: Internal view of 26-seater WC/pour flush public toilet at Adoemi with tiled floors and wall.



Plate 4.4: Internal view of dilapidated 20-seater WC/pour flush public toilet at Teshie Kponkpa



Plate 4.5: Commissioned but yet to used 40-seater WC toilet at Bukoshie and completed but not commissioned 20-seater WC toilet at Kruo.

4.6 Solid Waste Management

4.6.1 Household (Primary) Solid Waste Storage Receptacles

Sacks and polythene bags are the predominantly used household solid waste storage receptacles. Together they account for 76.6% of the households. 17.4% of the households indicated using standard waste bins. See Figure 4.3 below.

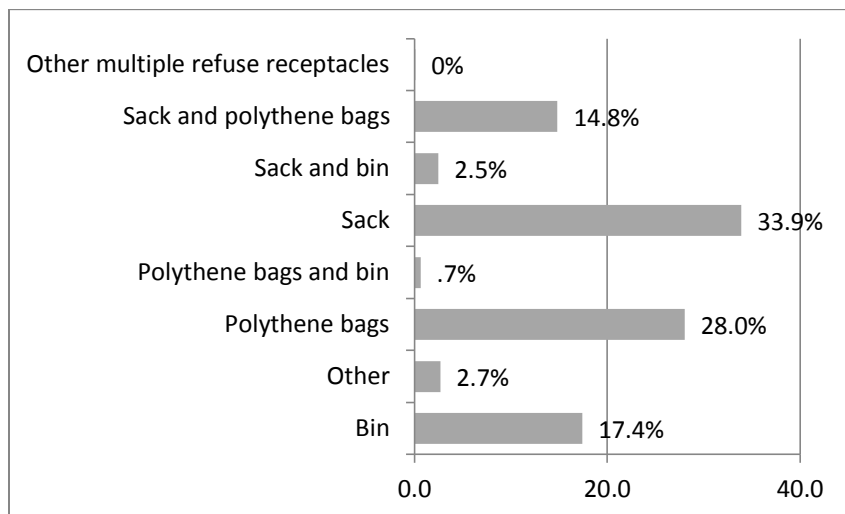


Figure 4.3: Solid waste storage receptacles

Further analysis (disaggregation) of household waste storage receptacles by type of house revealed similar trends as with the general of the community (refer to figure 4.3 above) among compound (see figure 4.4a, detached (see figure 4.4b) and semi-detached (see figure 4.4c) house types. However, in the case of temporary structures (e.g. kiosks, containers, etc.) there was a significant decrease in the use of bins compared with general community rate (i.e. from 17.4% to 3.0%-see figure 4.4d below). The decrease could be attributed to the fact most of the occupants of these structures are unable to afford the bins. Furthermore, they are unlikely to benefit from any provision of ‘free bins’ upon registration with accredited service as has been the case in some occasions due to their lack of permanent address/illegal status. Furthermore to qualify for registration, households need to have a permanent house address which most of these structures lack.

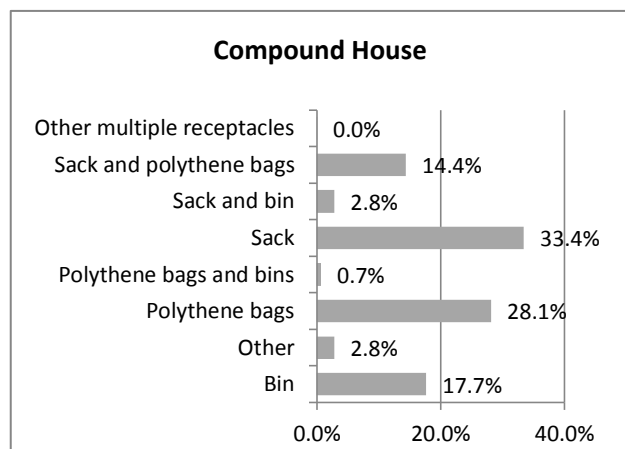


Figure: 4.4a: Solid waste storage receptacle in compound houses

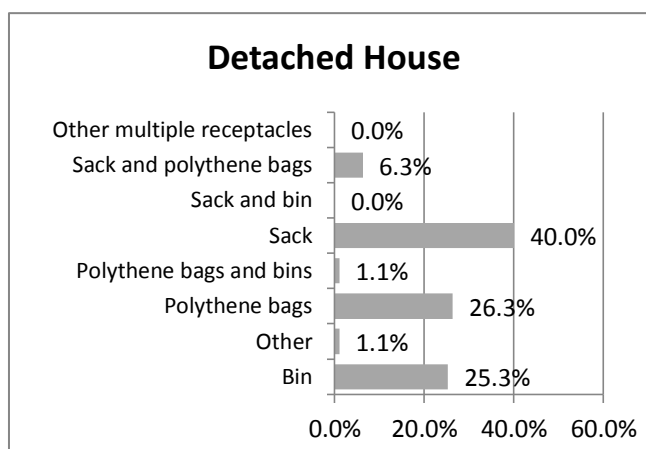


Figure: 4.4b: Solid waste storage receptacle in detached houses

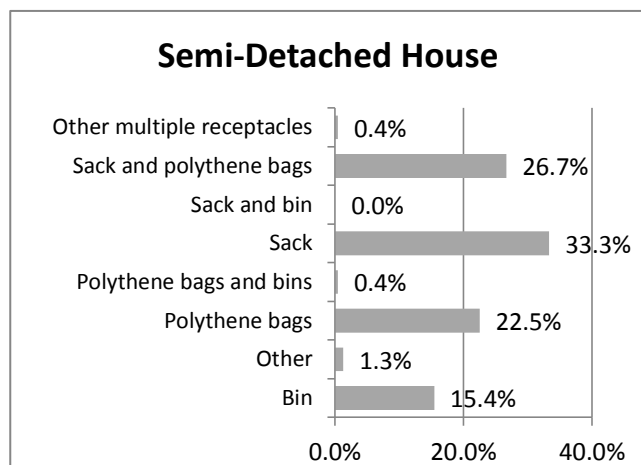


Figure: 4.4c: Solid waste storage receptacle in semi-detached houses

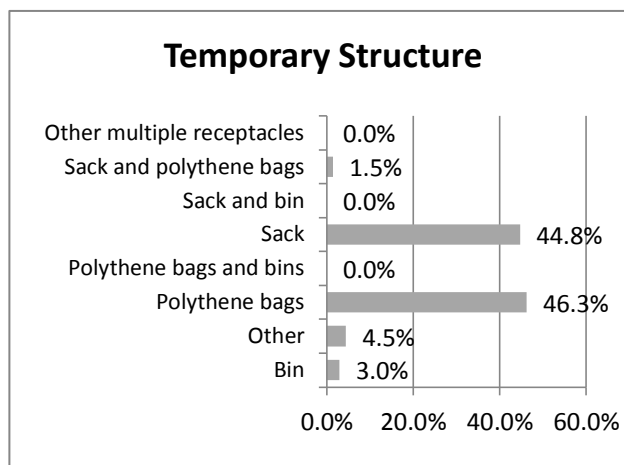


Figure: 4.4d: Solid waste storage receptacle in temporary structures

4.6.2 Method of Solid Waste (Refuse) Disposal

As shown in Figure 4.5 below, more than half (52.9%) of the households dispose of their refuse at open/crude dumping sites (see plate 4.8 below). 34.2% of the households indicated the use of communal containers which are often sited at the sanitary sites (public toilets) - see plates 4.6 and 4.7 below. Households that rely on door-to-door waste collection service alone accounted for only 2.2% (133 households). The service in most cases is provided by private individuals using tricycles ('Borla Taxis'). 2.6% of the residents also indicated the use of domestic trenches. The refuse disposed in the domestic trenches are often burnt after some days of pile-up.

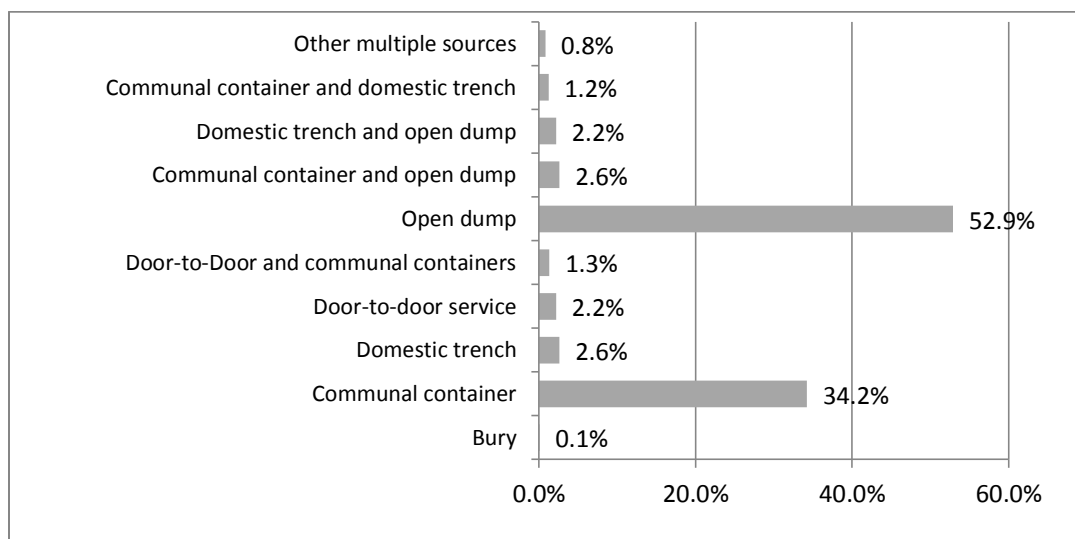


Figure 4.5: Solid waste disposal methods

As with the overall community trend, open-dumping and the use communal container still remained the most prominent means of disposing of household solid waste among all the house types (see Figures 4.6a-4.6d below).

However, unlike the trend (in which open-dumping of refuse had the highest rate followed by use of communal containers) observed at the general community level and also with compound, semi-detached and temporary structure house types, open-dumping is second to communal containers in terms of rate of use among households that reside in detached houses (see Figure 4.6b). With the exception of temporal structures where door-to-door services is of a lower rate compared to that of the general community (see Figures 4.6d and 4.5), the rates of domestic trench and door-to-door services are relatively higher among all the house types as compared to the general community overview.

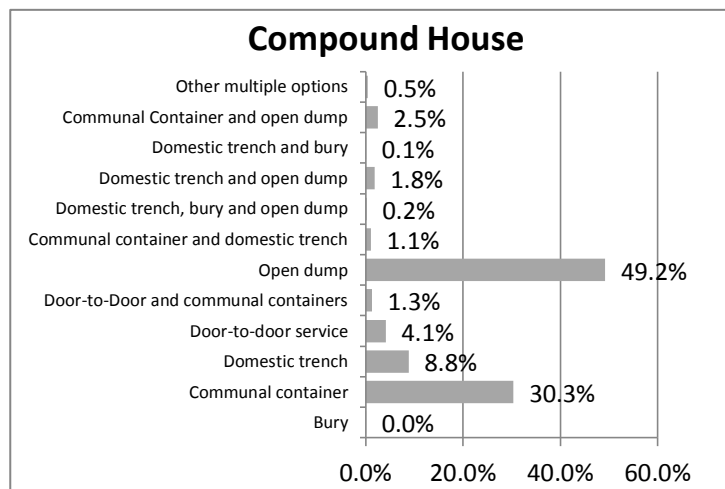


Figure 4.6a: Solid waste disposal method in compound houses

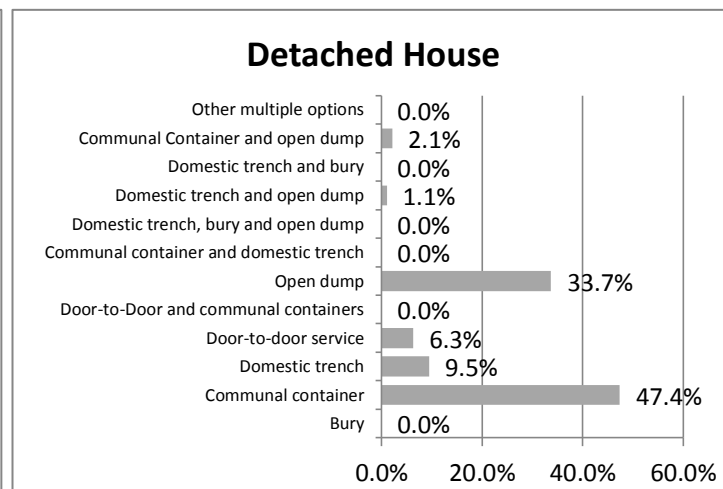


Figure 4.6b: Solid waste disposal method in detached houses

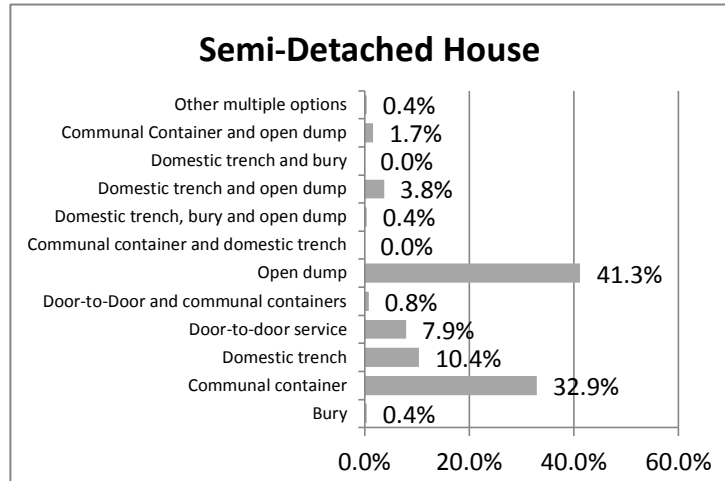


Figure 4.6c: Solid waste disposal method in semi-detached houses

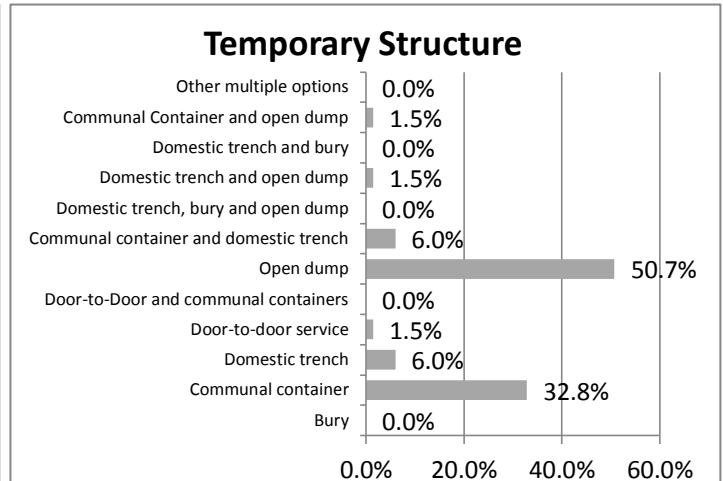


Figure 4.6d: Solid waste disposal method in temporary structures



Plate 4.6: Communal waste container provided at Kponkpa sanitary site with site littered with waste



Plate 4.7: Communal waste container provided at Akotobu sanitary site with 'Borla Tax'i (tricycle) in view



Plate 4.8: Crude dumping and open burning of waste at the beach

4.6.3 Household Waste Separation

15.56% of households practiced waste segregation (see Table 4.6 below). Of the 15.56% representing 467 households, 20.56% indicated selling the valued waste while the remaining 79.44% (see Table 4.7 below) segregate for purposes such as farming, composting for gardening.

Table 4.6: Waste segregation

SEGREGATION/SEPARATION OF SOLID WASTE	No. OF HH	PERCENTAGE
No	2534	84.44%
Yes	467	15.56%
Total	3001	100.00%

Table 4.7: Sale of recyclables and other use

SALE OF SEPARATED RECYCLABLES	No. OF HH	PERCENTAGE
No	371	79.44%
Yes	96	20.56%
Total	467	100.00%

4.6.4 Frequency of Collection

Once a week collection by a Borla Taxi or a licensed waste service provider is the highest (72.73%) in terms of frequency of solid waste collection (see Table 4.8 below). The 2.27% who have twice a week collection is predominant with compound houses because of rate of solid waste generation.

Table 4.8: Frequency of collection service

FREQUENCY OF COLLECTION SERVICE	No. OF HH	PERCENTAGE
Once a month	1	0.57%
Once a week	128	72.73%
Once fortnightly	4	2.27%
Twice a week	43	24.43%
Total	176	100.00%

4.6.5 Waste Disposal Satisfaction

42.6% of the households are satisfied with the current service delivery from their door to door service provider whereas about 32% (24.43 and 7.39%) are not. About a quarter of the respondents to whom the service is provided were neutral (neither satisfied nor unsatisfied) as shown in Table 4.9 below.

Table 4.9 Performance rating of service contractor

PERFORMANCE RATING OF SERVICE PROVIDERS	No. OF HH	PERCENTAGE
Neutral	45	25.57%
Satisfactory	74	42.05%
Unsatisfactory	43	24.43%
Very satisfactory	1	0.57%
Very unsatisfactory	13	7.39%
Total	176	100.00%

4.7 Liquid Waste Management

4.7.1 Black water

With regard to disposal of faecal sludge, 31% of the respondents with dedicated household toilets indicated they rely of cesspool emptier services while 29% indicated use of manual desludging methods. The manual service providers often provide service to households that use dry on-site facilities such as KVIP, VIP or pit latrines. 35% of the respondents indicated they have never desludged their toilet before.

Table 4.10: Method of desludging

METHOD OF DESLUDGING OF HOUSEHOLD TOILET	No. OF HH	PERCENTAGE
Cesspool equipment	18	31.03%
Manual	17	29.31%
Never desludged	20	34.48%
No toilet	3	5.17%
Total	58	100.00%

33% of the households who receive the services of cesspool emptiers rated their service as good. Half of the service beneficiaries however remained neutral. 12% rate their services as at least poor.

Table 4.11: Performance rating of cesspool emptier

PERFORMANCE RATING OF CESSPOOL EMPTIER SERVICES	No. OF HH	PERCENTAGE
Good	19	32.76%
Neutral	29	50.00%
Poor	4	6.90%
Very good	3	5.17%
Very poor	3	5.17%
Total	58	100.00%

4.7.2 Grey water

Kitchen Wastewater Disposal Methods

As shown in Figure 4.7 below, half of the households dispose of the kitchen wastewater into nearby drain or gutter while 40.2% of the households dispose of grey water in vacants lots/bare bare ground. Less than 1% of the households dispose of kitchen wastewater into a soak pit or trench. Those who indicated using multiple means of disposal (mainly both on bare ground and into open drains) constituted about 9.5% of the households.

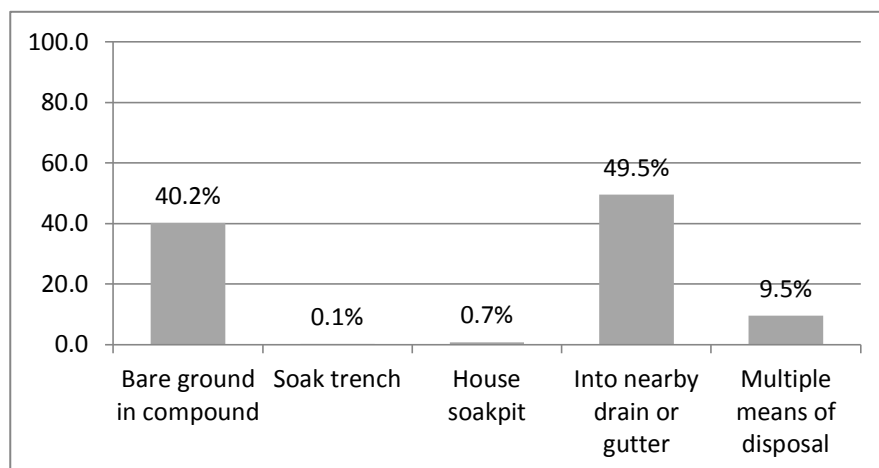


Figure 4.7: Kitchen wastewater disposal methods

A further disaggregation of kitchen wastewater disposal methods by type of house/residence showed little variation. Disposal of kitchen wastewater into nearby drains and on bare ground remained the main methods of kitchen wastewater disposal. However, in the case of residents who live in detached houses and temporary structures, disposal on to bare ground (exclusively) is more prevalent than into nearby drains (see Figures 4.8a-4.8d below).

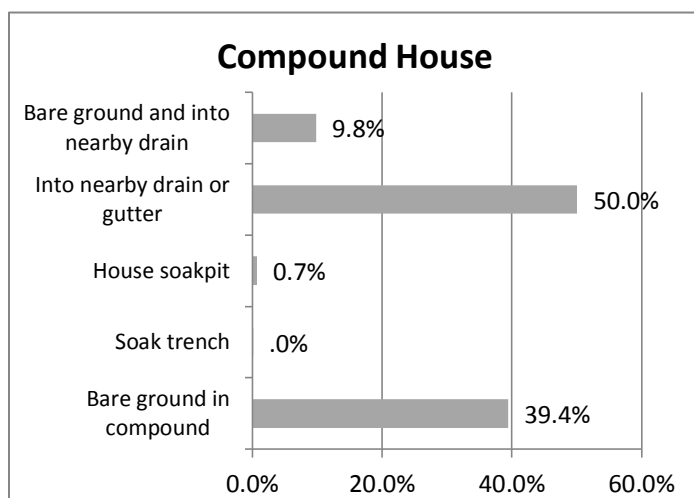


Figure 4.8a: Kitchen wastewater disposal methods for cooking in compound houses

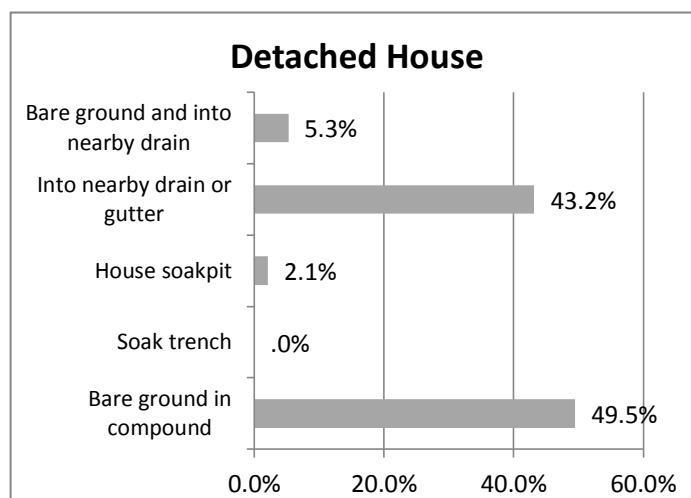


Figure 4.8b: Kitchen wastewater disposal methods for cooking in detached houses

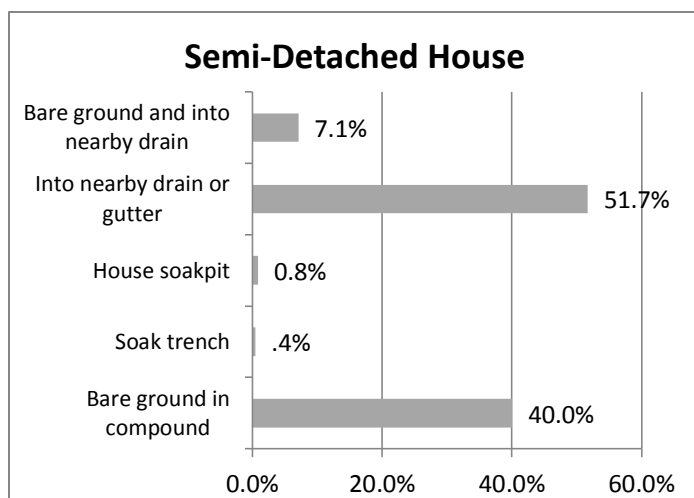


Figure 4.8c: Kitchen wastewater disposal methods for cooking in semi-detached houses

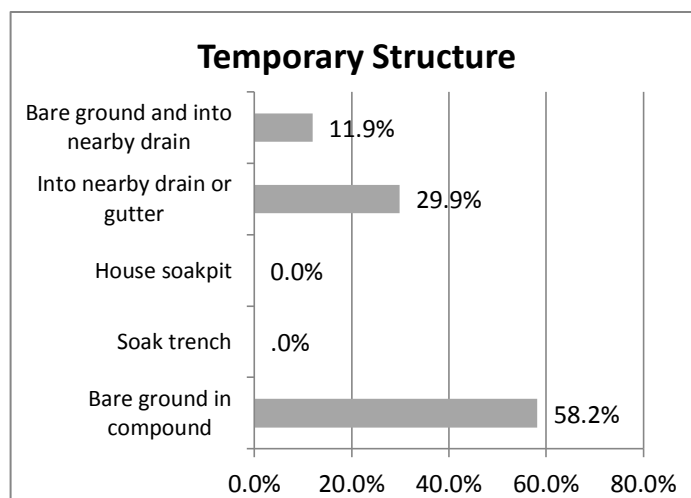


Figure 4.8d: Kitchen wastewater disposal methods for cooking temporary structures

Bathroom Wastewater Disposal Methods

Direct channeling into gutter (44.3%) and gallon to gutter (21.2%) exclusively are the two main means of disposal of bathroom wastewater. 21.8% of the households dispose of the wastewater on to the floor/ground whether directly, or through gallon or pit. Only 2.9% of the households have dispose of their bathroom wastewater into soakpits.

The use of gallons as a primary receptacle for collection bathroom wastewater is quite prominent in the community as with other LIUCs. About 30% indicate the use of gallon for collecting the wastewater prior to disposal in gutter or floor.

The drains/gutters in the community were observed to be silted or filled with solid waste (see plates 4.9-4.11 below).

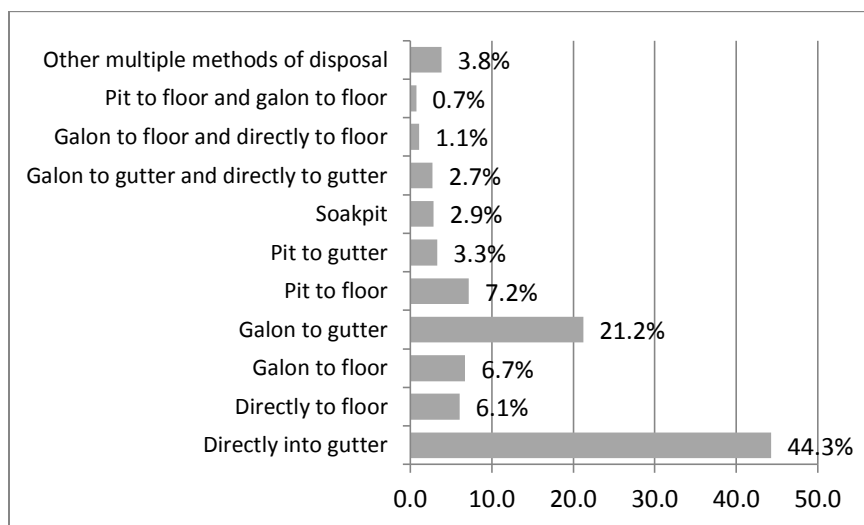


Figure 4.9: Bathroom wastewater disposal methods

As shown in Figure 4.10 below, direct disposal to gutter still remains the predominant method for disposal of bathroom wastewater among all the house types (see Figures 4.10a-4.10d). Disposal of wastewater from pit to floor is more prevalent (about 10% more) among households in detached and semi-detached houses (see Figure 4.10b and 4.10c) compared to households in compound (see Figure 4.10a) and temporary structures (see Figure 4.10d) as well as the general community level (refer to figure 4.9 above).

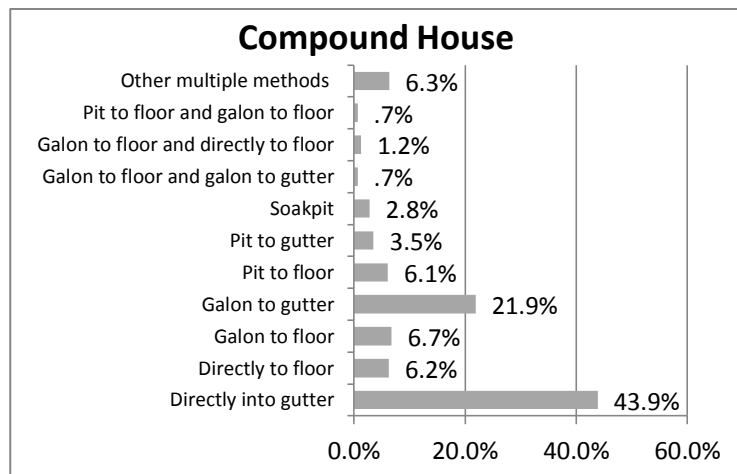


Figure 4.10a: Bathroom wastewater disposal methods in compound houses

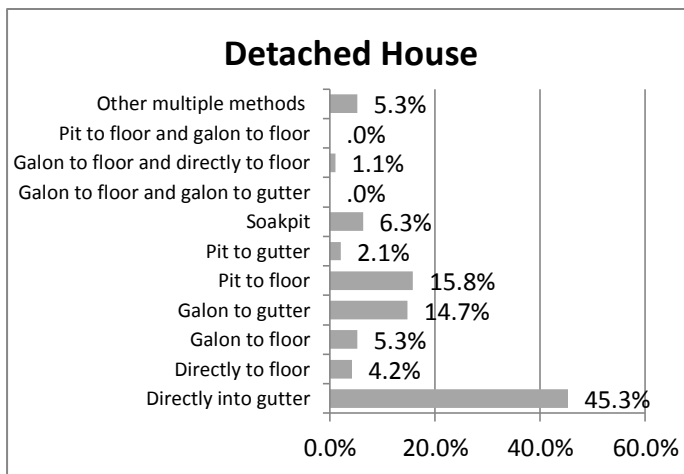


Figure 4.10b: Bathroom wastewater disposal methods in detached houses

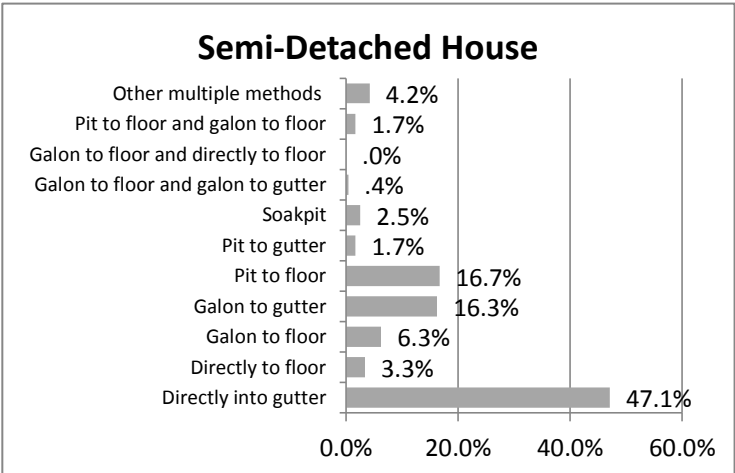


Figure 4.10c: Bathroom wastewater disposal methods in semi-detached houses

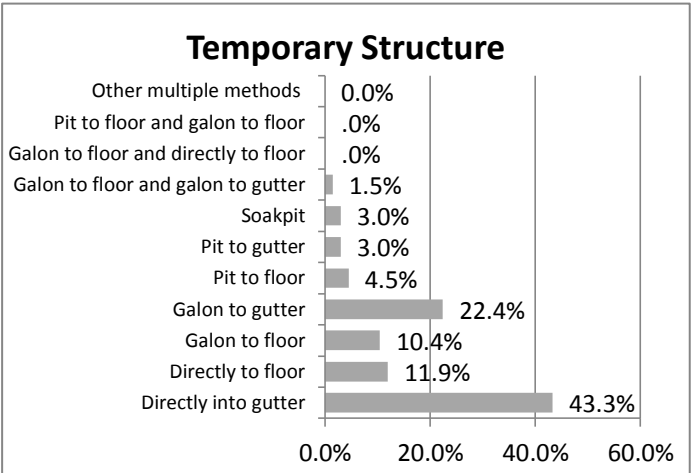


Figure 4.10d: Bathroom wastewater disposal methods in temporary structures



Plate 4.9: Tertiary drain within silted with solid waste



Plate 4.10: Major stormwater drain filled with solid waste



Plate 4.11: Disposal sullage into vacant lots/floor

5. Water Supply and Use

5.1 Source of water

5.1.1 Drinking

As shown in Table 5.1 below 46.85% of households have exclusive source(s) of water for drinking purposes only. The remaining 53.15% use the same water source for drinking, domestic uses- such as cooking, cleaning and personal hygiene purposes.

Table 5.1: Use of same water source for drinking and other purposes

WATER SOURCE FOR DRINKING IS DIFFERENT THAN THAT FOR OTHER USES	No. OF HH	PERCENTAGE
No	1595	53.15%
Yes	1406	46.85%
Total	3001	100.00%

As has become the norm with urban life, sachet water is the main source of drinking water for households with exclusive source for drinking water (85%). Until April 2015 (Commissioning of the Teshie-Nungua Desalination Plant), piped water supply to the community has been very limited. This is likely to have contributed to the reliance on sachet water. 8.7% of the households rely on GWCL supplied public standpipes (see plates 4.12 and 4.13 below). 4.3% of the households source their drinking water from GWCL in-house connection (significantly lower than that of the Greater Accra regional average of 64.4%). Less than 1% depend on rivers/streams and wells. With the community being a coastal community, wells are scarce since the ground water is likely to be salty.



Plate 4.12: Communal/public water point at Bukoshie managed by Community (Big 16 Fun Club)



Plate 4.13: Communal/public water point at Tafo owned by the LEKMA

Table 5.2: Main source of water for drinking

MAIN SOURCE OF DRINKING WATER	No. OF HH	PERCENTAGE
Community tap	4	0.28%
GWCL source in house	61	4.34%
GWCL source public standpipe	122	8.68%
Other	1	0.07%
River/stream	1	0.07%
Sachet water	1195	84.99%
Tanker supply	18	1.28%
Well in house	3	0.21%
Well outside house	1	0.07%
Total	1406	100.00%

5.1.2 Cooking

As shown in Table 5.3 below, more than half (54.55%) of households get their water for cooking from the GWCL public standpipe. Sachet water use for cooking is only 0.64%. Tanker water supply accounted for 14% of the households while 18.4% have GWCL in-house connections.

Table 5.3: Main source of water for cooking

MAIN SOURCE OF WATER FOR COOKING	No. OF HH	PERCENTAGE
Community tap	41	2.92%
Dugout/dam	2	0.14%
GWCL source in house	258	18.35%
GWCL source public standpipe	767	54.55%
Other	51	3.63%
Rain harvested	5	0.36%
River/stream	7	0.50%
Sachet water	9	0.64%
Tanker supply	201	14.30%
Well in house	21	1.49%
Well outside house	44	3.13%
Total	1406	100.00%

5.1.3 General uses

Table 5.4 below shows that, water for general use (such as cleaning and personal hygiene) by households is mainly from GWCL (i.e. 14.63% and 58.54% for in-house and public stand pipe respectively). 13.17% of the households rely on tanker services for water for general use.

Table 5.4: Main source of water for general use

MAIN SOURCE OF WATER FOR GENERAL PURPOSES	No. OF HH	PERCENTAGE
Community borehole	1	0.24%
Community tap	40	9.76%
Dugout/dam	1	0.24%
GWCL source in-house	60	14.63%
GWCL source public standpipe	240	58.54%
Other	1	0.24%
River/stream	1	0.24%
Sachet water	5	1.22%
Tanker supply	54	13.17%
Well in house	5	1.22%
Well outside house	2	0.49%
Total	410	100.00%

5.2 Storage

5.2.1 Drinking

Small containers/jerry cans and bucket/pans are the most common facilities for water storage in the community. Together they account for 72.8% of the households. The stored water often lasts for week. Only 3.8% had water tanks in their houses while 1.2% had roof tanks (see Figure 5.1 below). Households without any drinking water facility of whom majority rely on sachet water accounted for 17.9%.

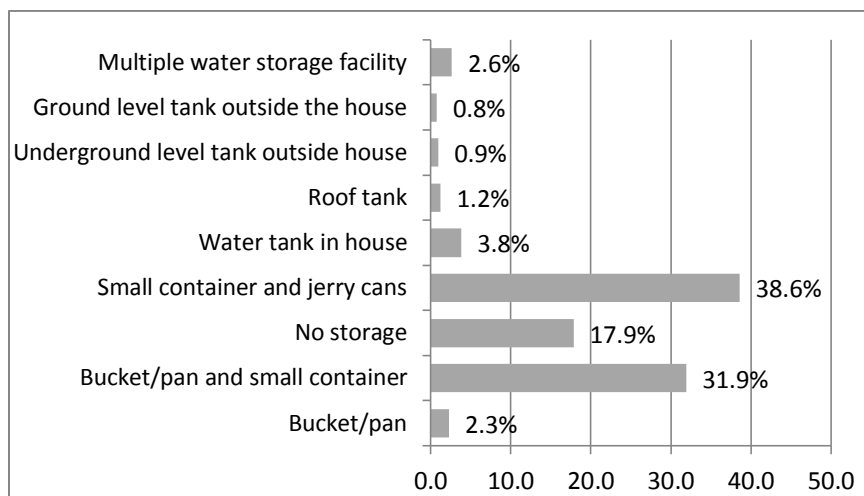


Figure 5.1: Methods of drinking water storage

5.2.2 Cooking

The trend is similar for cooking water storage. 88.7% of the households (representing 2662 households) use small container /jerry cans and buckets/pans for storage of cooking water (see Figure 5.2 below). However households without any storage facility decreased significantly. Only 1.1% indicated not storing water for cooking. Households that indicated using multiple storage facilities accounted for 3.1%. 4.1% of the households indicated water for cooking is stored in water tanks while 2.6% indicated using either ground or underground tanks.

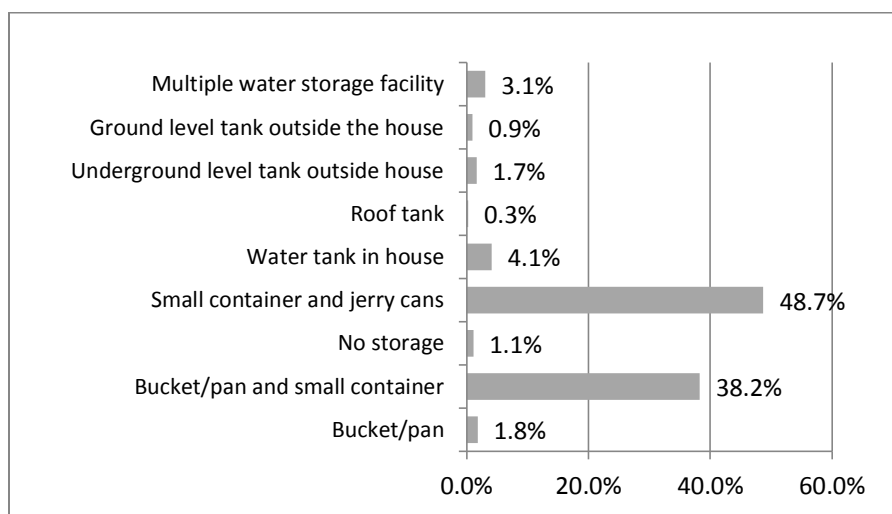


Figure 5.2: Methods of cooking water storage

5.2.3 General use

72.9% (representing 2188 households) indicated storing water for general use in small containers and jerry cans following similar trends for drinking water and water for cooking.

7.3% rely exclusively on roof tanks while 12% use both water tanks and small containers/jerry cans. Only 1.7% do not have any storage facility. See Figure 5.3 below.

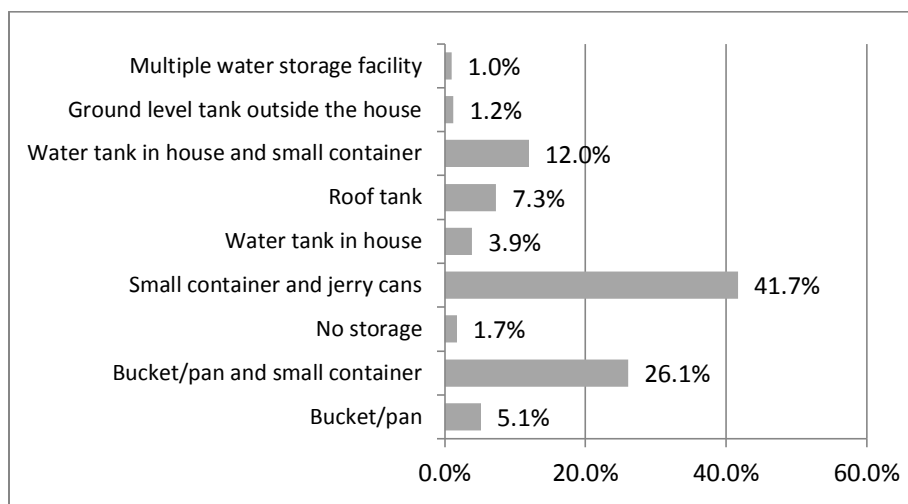


Figure 5.3: Method of water storage for general use

5.3 Regularity and Reliability of Water Supply

46% of the respondents that rely on GWCL supply indicated 2-4 days per week water supply from urban water supplier (GWCL). Households who had once in a week supply constituted 28% while those who had once in every fortnight supply constituted 13%. 4.5% (representing 68 households) indicated having uninterrupted supply. Almost double this number (127, 8.5%) indicated once in a month supply.

Table 5.5: Frequency of water supply from GWCL

FREQUENCY OF GWCL SUPPLY	No. OF HH	PERCENTAGE
2 to 4 times a week	686	45.95%
Continuous (never ceases)	68	4.55%
Once a week	415	27.80%
Once in 2 weeks	197	13.19%
Once in a month	127	8.51%
Total	1493	100.00%

More than 5 hours in a day flow is reported by almost 58% of the households (see Table 5.6 below). 7% (109 households) receive continuous flow of water in the day. Supply within the day is usually in the mornings and evenings as indicated by 50.44% of the households that use GWCL water supply (see Table 5.7 below). Similar number and percentage of households indicated supply during the day time (270, 18.1%) and evenings only (272, 18.2%).

Table 5.6: Duration of supply from GWCL

DURATION OF CONTINOUS GWCL WATER SUPPLY	No. OF HH	PERCENTAGE
2 to 5 hours	460	30.81%
Continuous (never ceases)	109	7.30%
Less than 2 hours	50	3.35%
More than 5 hours	874	58.54%
Total	1493	100.00%

Table 5.7: Supply time from GWCL

TIME OF DAY FOR GWCL WATER FLOW	No. OF HH	PERCENTAGE
All day	270	18.08%
All night	46	3.08%
Evenings only	272	18.22%
Morning and evening	753	50.44%
Mornings only	152	10.18%
Total	1493	100.00%

5.4 Cost of Water and Billing

A household spends on the average, GHC 3.29 per fetch from GWCL public/community standpipes. Households that are engaged in weekly and fortnight water supply services pay GHC 8.16 and GHC 19.6 respectively. Those who pay monthly spend about GHC 45 on water as shown in Table 5.8 below.

Table 5.8: Average household expenditure (GHC) on water

PAYMENT MODE	MEAN	STD DEV	RANGE
Monthly	44.85	40.22	0 - 150
Every 2 weeks	19.6	6.50	0 - 26
Every week	8.16	5.60	0 - 25
Pay as you fetch	3.29	2.22	0 - 12

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

About half (49.75%) of the households have access to GWCL water supply (see Table 5.9). The top two reasons indicated by households without access to GWCL water supply as indicated in Table 5.10 below are high connection cost (53%) and unavailability of immediate pipelines from GWCL (24%).

Table 5.9: Service quality of GWCL

USE OF GWCL WATER CONNECTION	No. OF HH	PERCENTAGE
No	1508	50.25%
Yes	1493	49.75%
Total	3001	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	787	52.19%
Irregular supply of water by GWCL	184	12.20%
Other	155	10.28%
Problems with sharing bills	19	1.26%
Unavailability of GWCL connections in community	363	24.07%
Total	1508	100.00%

In terms of convenience of time of water supply by GWCL, almost 66.5% of households who rely on GWCL for water supply are not satisfied with the supply time which is highly discontinuous (see Table 5.11 below).

Table 5.11: Convenience of supply time from GWCL

CONVENIENCE OF GWCL SUPPLY TIME	No. OF HH	PERCENTAGE
No	993	66.51%
Yes	500	33.49%
Total	1493	100.00%

6. Knowledge, Attitude and Practice

6.1 Handwashing

Nine out of every ten respondents (91.87%) indicated they practiced handwashing. 23% of households indicate the availability of handwashing facility at the toilet used by the household. About half of the respondents (51.23%) who patronize public toilets indicate the availability of water for hand washing. See Tables 6.1-6.3 respectively.

Table 6.1: Practice of handwashing by respondents

PRACTICE OF HANDWASHING BY RESPONDENT	No. OF RESPONDENTS	PERCENTAGE
No	244	8.13%
Yes	2757	91.87%
Total	3001	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	2313	77.07%
Yes	688	22.93%
Total	3001	100.00%

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

WATER FOR WASHING HANDS IS PROVIDED AT PUBLIC TOILET	No. OF RESPONDENTS	PERCENTAGE
No	892	48.77%
Yes	937	51.23%
Total	1829	100.00%

In assessing the methods of handwashing, respondents were asked which 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 7.2.0% 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 4.1% of the respondents (123 respondents). The common practice as presented in the table is washing of hands in a bowl of water with soap (64.5%). Those who indicated practicing all the methods presented accounted for less than 1% of the respondents.

Table 6.4: Method of handwashing

In bowl of water with soap	In a bowl of water without soap	Under running water with soap	Under running water without soap	% of Respondents
√				64.5%
	√			6.9%
√	√			14.8%
√		√		7.2%
√			√	0.4%
√	√	√		0.5%
√	√		√	0.0%
√	√	√	√	0.8%
√		√	√	0.0%
	√	√		0.3%
	√	√	√	0.0%
		√		4.1%
	√		√	0.2%
			√	0.3%
		√	√	0.1%

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

- Before eating
- After use of toilet
- After cleaning a child (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 (32.0% of the respondents) followed by handwashing before eating, after use of toilet and before food preparation (13.4%).

Respondents who indicated washing their hands only before eating, after use of toilet and return from social gathering constituted 11.8%. Only 2.2% indicated washing their hands at all the occasions presented.

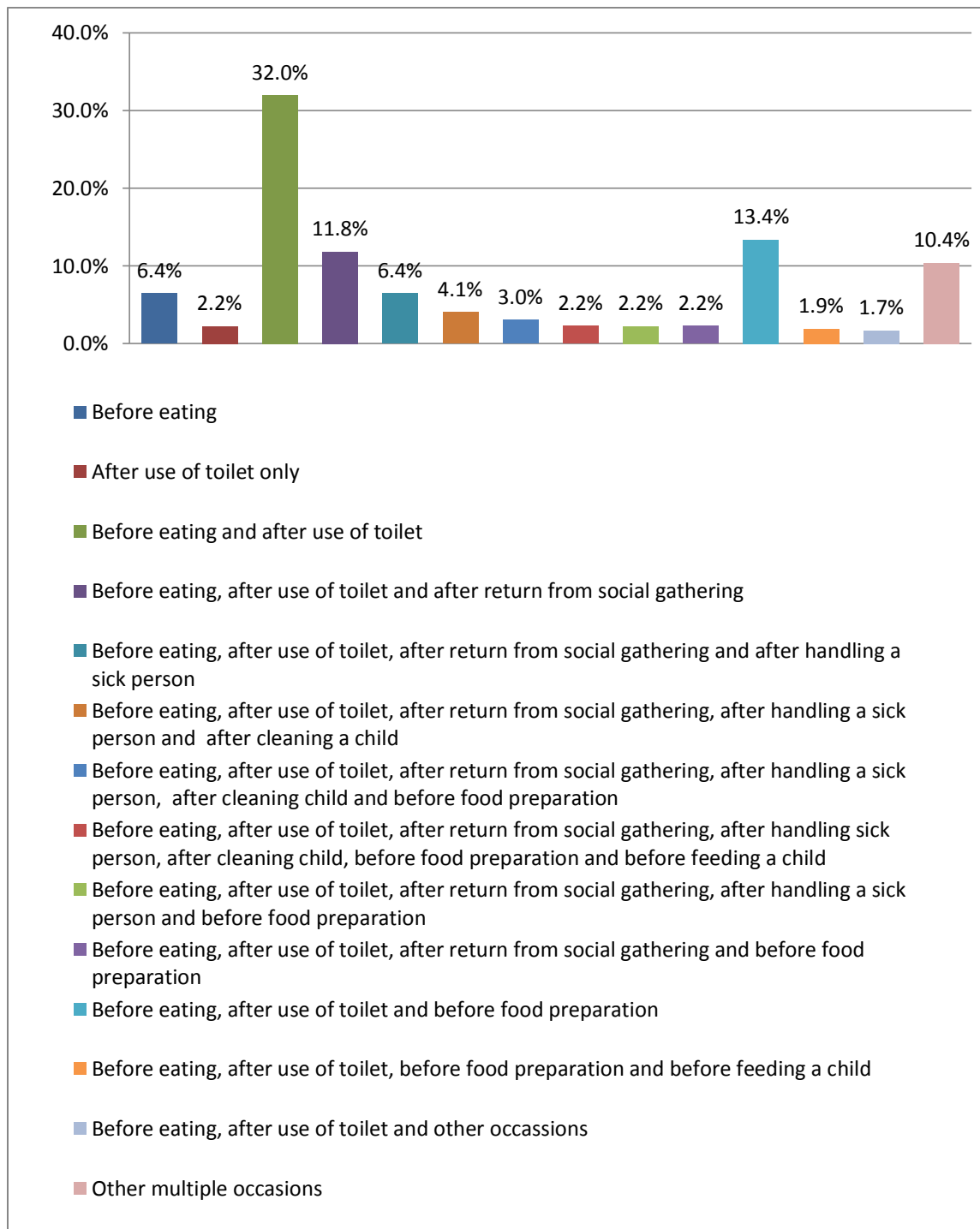


Figure 6.1: Frequency of handwashing

58.2% of the respondents indicated the main motivation for handwashing was to keep hands clean and prevent faeco-oral diseases. 17.6% indicated washing their hands to essentially keep them clean while 11.1% of the respondents washed their hands for the sole purpose of preventing faeco-oral diseases. 2.4% indicated handwashing as solely a norm. Less than 1% indicated they are motivated to wash their hands for the purposes of it being a norm, cultural value, to keep hands clean and prevent faeco-oral diseases. See Figure 6.2 below.

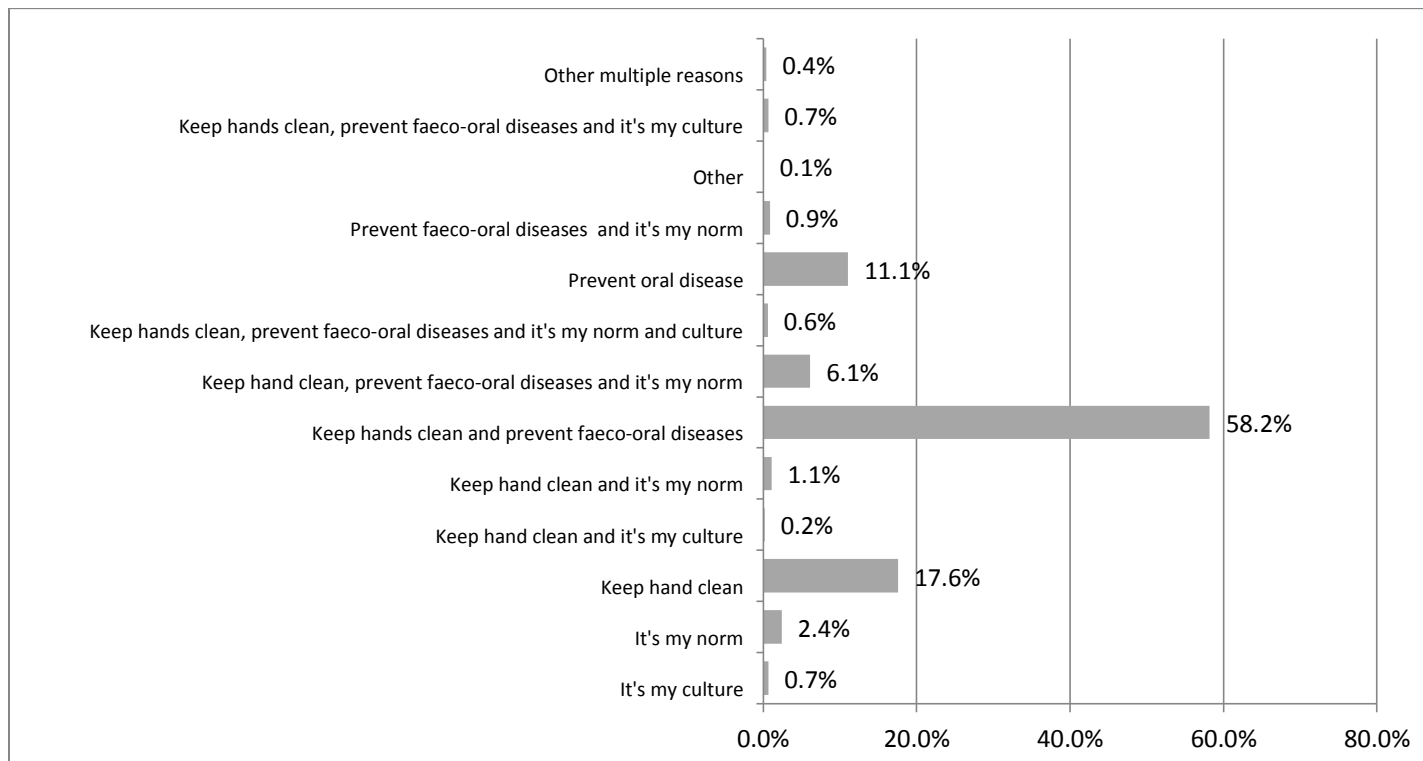


Figure 6.2: Motivation for handwashing

6.2 Bathing and Teeth Cleaning

About seven out of every ten respondents indicated taking their bath both mornings and evenings while 12% indicated bathing once a day (see Table 6.5 below). 43% of the respondents also indicated cleaning their teeth twice a day (morning and evening) whereas 37% cleaned their teeth only in the mornings (see Table 6.6 below). Brushing of teeth was the common method of cleaning teeth but some respondents (mostly elderly) indicated using chewing sponge sometimes.

Table 6.5: Frequency of bathing

FREQUENCY OF TAKING A BATH	No. OF RESPONDENTS	PERCENTAGE
Morning and evening	2295	76.47%
Once a day	367	12.23%
Once every evening	8	0.27%
Once every morning	331	11.03%
Total	3001	100.00%

Table 6.6: Frequency of cleaning teeth

FREQUENCY OF CLEANING TEETH	No. OF RESPONDENTS	PERCENTAGE
Morning and evening	1278	42.59%
No cleaning	1	0.03%
Once a day	604	20.13%
Once every evening	7	0.23%
Once every morning	1111	37.02%
Total	3001	100.00%

6.3 Willingness to have toilet

Interest in toilet ownership within the community is very high and a potential good incentive for household latrine promotion. 90% of the respondents (representing 2,268 households) are interested in owning toilets for their own use for reasons such as safety, convenience and social status (see Table 6.7 below). 43% of those who are not interested in owning a toilet attributed it to their tenancy status while 27.6% indicated no available space to site the facility. Only 3.4% attributed their lack of interest mainly to financial constraints (see Figure 6.3 below). Other reasons for lack of interest in ownership included mal-odour from some of the facilities, lack/unavailability of regular water supply of water and high maintenance cost. These reasons accounted for 9.5% of the respondents.

No clear correlation was identified between economic status (income) of a household and the willingness to own a toilet facility. Rather factors such as tenancy status, availability of space within premise and regular/availability of water supply are key to the successful implementation household latrine promotion in Teshie Old Town.

Table 6.7: Expression of interest in ownership of toilet

OWNERSHIP OF HOUSEHOLD TOILET	No. OF RESPONDENTS	PERCENTAGE
No	232	9.28%
Yes	2268	90.72%
Total	2500	100.00%

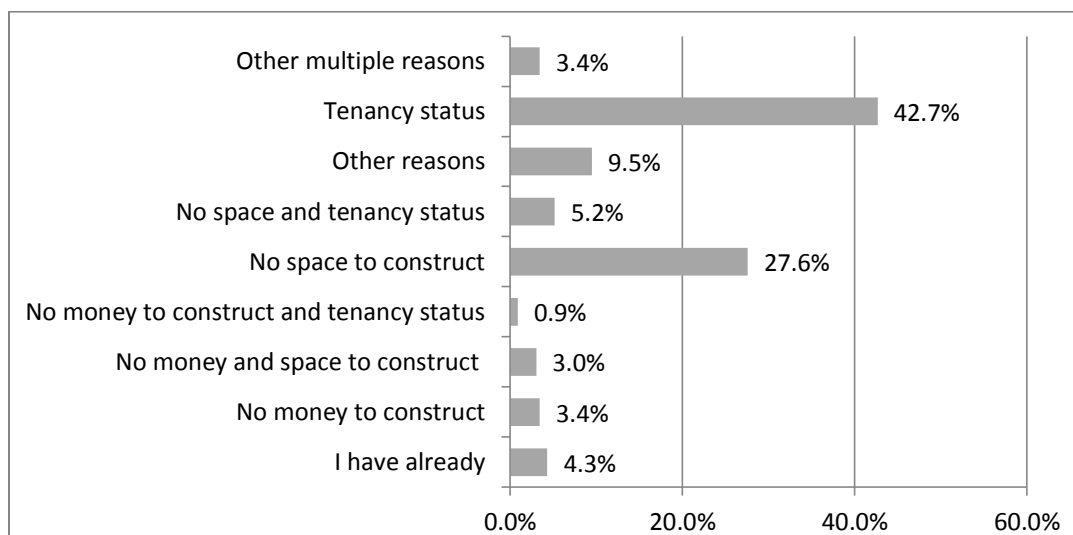


Figure 6.3: Reasons for lack of interest in ownership

6.4 Sanitation Related Diseases

82% of the respondents indicated Malaria as the predominant WASH related disease in community (See Figure 6.4 below). The silted nature of existing drains in Teshie Old Town is likely contribute to high prevalence of Malaria as the stagnant water in these drains serve as breeding grounds for mosquitoes.

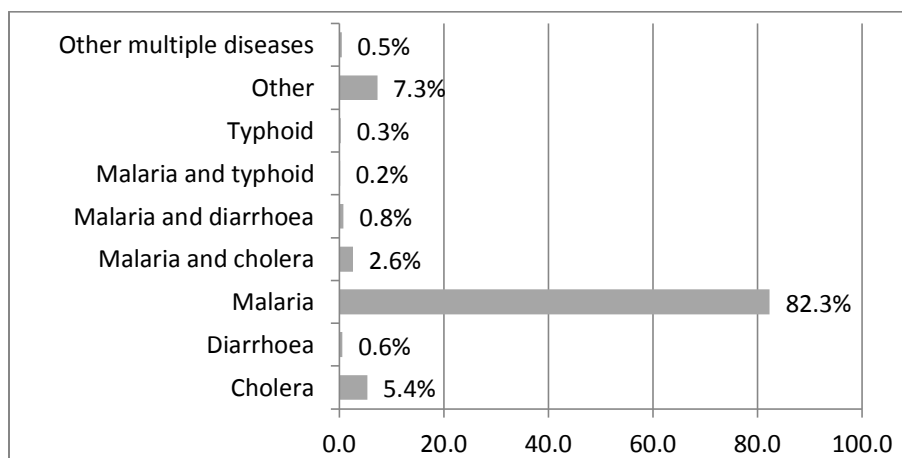


Figure 6.4: Incidence of WASH related diseases as perceived by respondent

Over 90% of the respondents who identified each of the diseases listed in Table 6.8 below as WASH related, had some knowledge on the systems. See Table 6.8 below. In the case of typhoid all the 17 respondents had some knowledge on the systems.

As shown in Table 6.9 below, there is a relatively high level of awareness on the causes of the main WASH related diseases. 94.5%, 88.4% 77.3% and 64.7% respectively of the respondents who identified each the diseases listed (Malaria, Cholera, Diarrhoea and Typhoid) as WASH related are aware of the causes.

Table 6.8: Knowledge about symptoms of WASH related diseases

DISEASE	No. OF RESPONDENTS	HAVE AN IDEA ABOUT SYMPTOMS (%)	NO IDEA ABOUT SYMPTOMS (%)
Malaria	2665	97.06%	2.94%
Cholera	264	94.0%	6.0%
Diarrhoea	55	96.22%	3.78%
Typhoid	17	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	2665	94.47%	5.53%
Cholera	264	88.40%	11.60%
Diarrhoea	55	77.33%	22.67%
Typhoid	17	64.72%	35.28%

7. General Comments

7.1 General comments about the community

Old Teshie is one of the most densely populated communities in the Ledzokuku Krowor Municipality. The coast-lying community hosts one of the five (5) major health facilities (Family Health Hospital) within the municipality. Major ailments reported at OPDs in the community are environmentally related; malaria, cholera, dysentery and diarrhoea. Like the national capital, the community experiences a bimodal rainfall pattern in the year averaging some 800mm of rain. The dominant ethnic group in the community is the Ga-Dangme. The Akan and Ewe ethnic groups follow respectively. Many households in the community are not connected to pipe-borne water because of reasons such as high connection cost, interrupted supply of water by GWCL and unavailability of connection points of GWCL lines. Predominant types of toilet technologies are KVIP/VIP, WC, and unimproved pit. There is high dependence on public toilet in the community.

7.2 Soil types

The soils in the area fall into two major classifications i.e. Savannah Ochrosols and Regosolic Groundwater Laterites. The Savannah Ochrosols are shallow to very shallow, reddish brown and brown, concretionary, medium to light textured soils. The Regosolic Groundwater Laterites consist of few centimeters to several meters of pale-coloured sands overlying mottled, gravelly, sandy clays underlain by weathered acidic gneiss or granite.

Soils found in the area are categorized into four main groups: drift materials resulting from deposits by wind-blown erosion; alluvial and marine mottled clays of comparatively recent origin derived from underlying shales; residual clays and gravels derived from weathered quartzite, gneiss and schist rocks, and lateritic sandy clay soils.

The sandy beach/coastline is characterized at some portions by a series of resistant rock outcrops and platforms. There is also severe coastal erosion along some portions of coastline. These soil types are likely to retain the ground water and therefore contributing to high water table.

7.3 Incidence of flooding

19% of the respondents report of the incidence of flooding in the community. Of these, 85.6% of the respondents indicated the occurrence of floods in their areas usually after a major/heavy rainfall whereas the remaining indicated flooding after every rainfall. See Tables 7.1 and 7.2 below.

As shown in Table 7.3 below, 77% of the respondents attributed occurrence of floods to the inadequate and effective drainage system in most parts of the community. Other causes include unplanned development or close to waterways (10.5%), waterlogged area (4.4%) and topography of the land (7.5%). Although choked/silted drains as a result of indiscriminate disposal of household waste were observed in the community, none of the respondents identified the occurrence as contributing to flooding.

Table 7.1: Incidence of flooding

INCIDENCE OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
No	2438	81.24%
Yes	563	18.76%
Total	3001	100.00%

Table 7.2: Frequency of flooding

FREQUENCY OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
Every rainfall	81	14.39%
Major rainfall	482	85.61%
Total	563	100.00%

Table 7.3: Causes of flooding as perceived by respondent

CAUSES OF FLOODING	No. OF RESPONDENTS	PERCENTAGE
Inadequate drainage system	434	77.09%
Topography of the area	42	7.46%
Unplanned development close to waterway	59	10.48%
Waterlogged area	25	4.44%
Don't know	3	0.53%
Total	563	100.00%

8. Housing and Occupancy Characteristics

8.1 Type of House

With most of the residences being old family houses, compound house (often with a central courtyard) is the most common housing type in the community. 86.7% of the households live in compound houses (significantly higher than the national average of households residing in compound houses (i.e. 51.5%)). About 2% of the households live in temporary structures such as kiosks, containers and shop attachments and is less than the regional average of 6.2%. Households living in either detached or semi-detached houses accounted for a total of 11.2% representing 335 households.

Table 8.1: Type of houses

TYPE OF HOUSE	No. OF HH	PERCENTAGE
Compound house	2599	86.60%
Detached	95	3.17%
Semi detached	240	8.00%
Temporary structure	67	2.23%
Total	3001	100.00%

8.2 Type of Dwelling Units

As indicated in Table 8.2 below, 71.2% of the households live in single rooms (71.2%) while 20% dwell in a hall and chamber. The rest live in single room self-contained (5%), multiple rooms (1.9%) or hall and chamber self-contained rooms (1.4%).

Table 8.2: Type of dwelling

TYPE OF DWELLING	No. OF HH	PERCENTAGE
Hall and chamber	613	20.43%
Hall and chamber self-contained	41	1.37%
Multiple rooms	57	1.90%
Single room	2136	71.18%
Single room self -contained	154	5.13%
Total	3001	100.00%

8.3 Status of Occupancy/Occupancy by Landlord/Lady

67% of the respondents indicated living in a family house while 10% owned their residences. Tenants constituted 22% of the respondents. See Table 8.3 below

Table 8.3: Status of occupancy

STATUS OF OCCUPANCY	No. OF HH	PERCENTAGE
Caretaker	21	0.70%
Family house	2017	67.21%
Own house	299	9.96%
Rented house	651	21.69%
Other	13	0.43%
Total	3001	100.00%

8.4 Average Number of Rooms per Respondent's Household

As shown in Table 8.4 below, 77.64% of households occupy one room; 14.40% occupy two (2) rooms, 2.33% occupy three (3) rooms. Households that occupy at least four (4) rooms are about 5.6% significantly lower than the national average of 11.2%.

Table 8.4: Number of rooms occupied by households

ROOMS OCCUPIED BY HH	No. OF HH	PERCENTAGE
1	2330	77.64%
2	432	14.40%
3	70	2.33%
4	54	1.80%
5+	115	3.83%
Total	3001	100.00%

Based on the survey results, no clear relationship was identified between household size and number rooms occupied by household. However, 67%, 63%, 46%, 56% and 86% of the households living in 1,2,3,4 and 5 rooms respectively have household sizes of at least 5 which is a reflection of how densely populated the community is. See Table 8.5 below.

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

HOUSEHOLD SIZE	NUMBER OF ROOMS				
	1	2	3	4	5+
1	8.7%	9.7%	18.6%	18.5%	8.7%
2	5.3%	8.1%	11.4%	3.7%	4.3%
3	9.1%	8.3%	17.1%	5.6%	2.6%
4	10.1%	10.4%	7.1%	16.7%	1.7%
5+	66.7%	63.4%	45.7%	55.6%	82.6%
Total	100%	100%	100%	100%	100%

8.5 Materials for Construction

8.5.1 Floors

As shown in Figure 8.1 below, almost all households (96.8%) surveyed had their room floors cemented. Households with earth/laterite room floors constituted 1.9%. Households with tiled/terrazzo rooms floors were less than a percent. Households that also had multiple room floor finishes also accounted for less than 1% of the households surveyed.

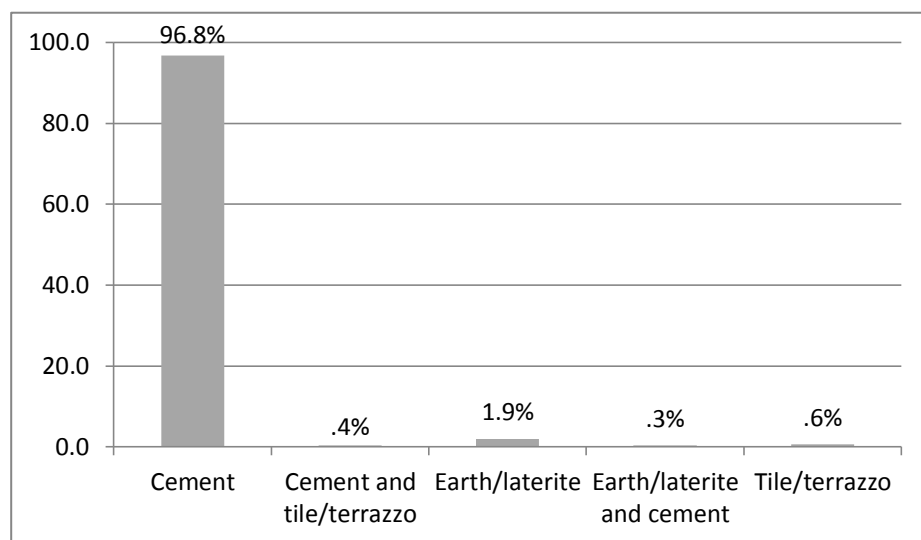


Figure 8.1: Construction material for room floor

8.5.2 Walls

89% of the households have cement block/brick walls while about 8% had landcrete block walls. Households with wooden/iron sheet made walls constructed 1.9%.

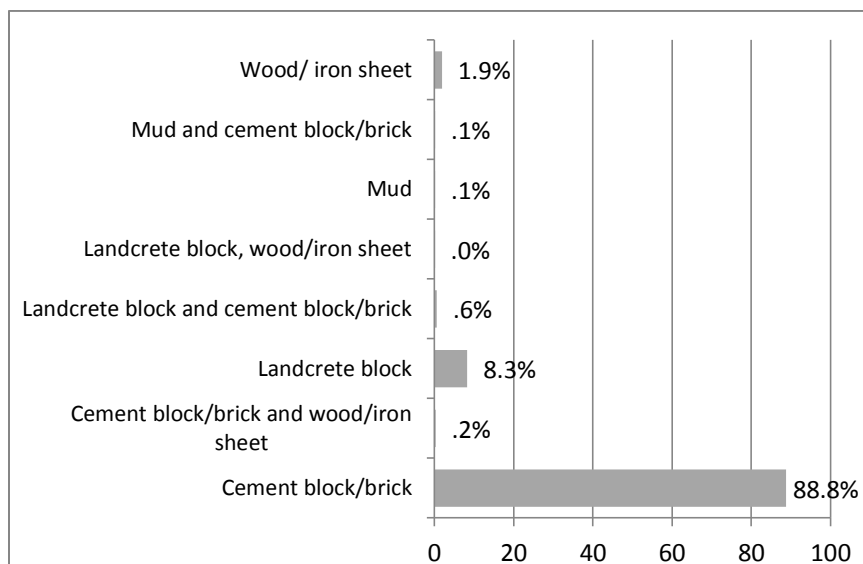


Figure 8.2: Construction material for walls

8.5.3 Roofs

85.7% of the households had their houses roofed with iron sheet or slate. Households with asbestos roofing constituted 9.2% of the households while those with tile roofing constituted 3.1%. See Figure 8.3 below.

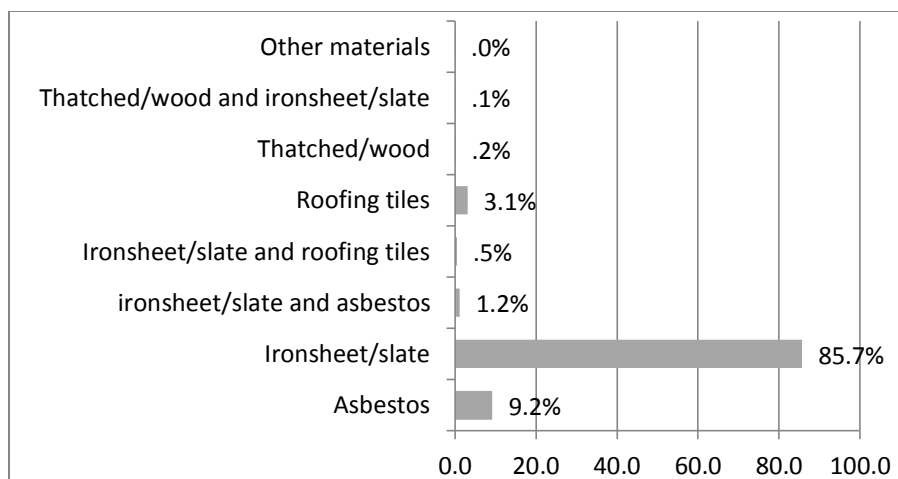


Figure 8.3: Construction material for roofs

8.5.4 Window

Wooden and louvre blade windows are the commonest window type in the community. Together, 97% of the households had either wooden and/or louvre blade windows. Slide-glass windows are not common in the community- only seven households had slide-glass windows.

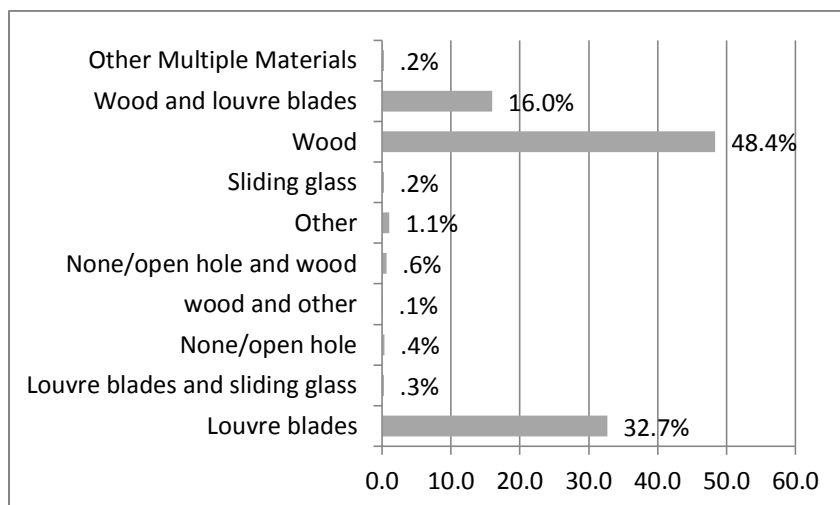


Figure 8.4: Construction material for windows

8.6 Access to Kitchen/Location

Over 50% of households living in compound, semi-detached and temporary houses have their kitchens located outside or in open space. Eight out of every ten households living in a temporary structure had their kitchen located in the open space. 39% and 35% of households in detached and semi-detached houses respectively, have their kitchen inside (closed) the main building.

Table 8.6: Location of kitchen by house type

TYPE OF HOUSE	LOCATION OF KITCHEN			TOTAL
	INSIDE/CLOSED	INSIDE/FITTING	OUTSIDE/OPEN	
Compound house	18.93%	8.73%	72.34%	100.00%
Detached	38.95%	17.89%	43.16%	100.00%
Semi detached	34.58%	6.25%	59.17%	100.00%
Temporary structures	7.46%	7.46%	85.07%	100.00%

9. Conclusion

The baseline study was conducted to collect relevant information needed to guide the provision of improved sanitation and water supply in the Teshie Old Town community (the Ledzokuku-Krowor Municipal Assembly's selected LIUC under GAMA SWP project). The scope of the study was guided by five specific thematic areas which included socio-economic characteristics, environment sanitation, water supply, knowledge, attitudes and practices and housing occupancy. These thematic areas were investigated thoroughly to establish the existing situation in the community.

The socio-economic characteristics of the study area are typical of low-income urban communities in the national capital. The average household size (5.03) is significantly higher than the Greater Accra regional average and indicative of the high housing occupancy levels relative to household sanitation facilities. With regard to education, illiteracy among household heads is at 20%. However, majority 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. Most of the economically active do not save with any financial institution. Introduction of financing schemes such as loans for household sanitation will therefore require extensive education of residents on basic financial management practices.

Access to basic sanitation is woefully inadequate and a typical reflection of the national situation. Majority of the residents rely on public toilet facilities with the remaining practicing open defecation mainly along the beach and open storm water drains. The unplanned and very compact/congested housing pattern of the community is likely to pose some challenges in providing household toilet facilities. Sullage and stormwater conveyance is poor as most of the drains are silted as a result crude/indiscriminate disposal of solid waste into the drains. Some existing wet lands have been turned into crude dumping sites. The very poor state of environmental sanitation in the community is likely to contribute the high prevalence of WASH related diseases such as Malaria and Cholera.

Although water supply to the community has improved with the completion and operation of Teshie –Nungua Desalination Plant, coverage is still limited. Majority of the households are not connected to the GWCL network due to unavailability of networks lines in the areas and also high connection cost. Public water vending is therefore the most prevalent in most parts of the community.

The knowledge on good hygiene practices is relatively satisfactory in the community but the attitudes and behaviours do not correspond with the level of knowledge. For example, a third of the respondents indicated washing their hands only before eating and after using the toilet whereas only 2.2% wash their hands at all the occasions presented. Majority of the respondents also do not wash their hands by the approved method (with soap under running water). Furthermore the high level on awareness of WASH related indicated by respondents and the high prevalence of open defecation in the community, it a clear indication of the non-existence of any correlation between knowledge on hygiene and practice/behavior change. Hence the need for concerted efforts at behaviour change.

Majority of the residences are compound houses with most households living in single rooms. The compound houses are tightly knit and furthermore very limited space or no space provision of sanitation facilities. This situation is likely to have some implication on sanitation facility options and hence requires a detailed functional area and configuration assessment of the houses.

Housing ownership is dominated by the family ownership with relatively few tenants. In the case of tenants, potential issues with regard to willingness of the landlord/owner to allow installation of toilet facilities by the tenant and also own it, require some critical analysis.

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.

The interventions to improve access to WASH facilities and services in Teshie Old Town 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, Ledzokuku Krowor Municipal Assembly (LEKMA) 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.

Involving the community in all aspects of project planning and implementation creates a sense of ownership/responsibility among the local residents which is critical for the sustainability of WASH interventions.

References

Ghana Statistical Service (2011); 2010 Population and Housing Census Provisional Results (Summary of Findings)

Ghana Statistical Service: Ghana Demographic and Health Survey (2008)

Ledzokuku-Krowor District 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	
------	------------	--	------	------------	--

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	
	Yes	No	Yes	No
Does the household have its own dedicated Toilet/Bathrooms				
	3.6		3.7	
No of Toilets/Bathrooms available to Household				

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	Avoid	Avoid	Convenience	Can become a

			sharing with others	disturbing others	embarrassmen t		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 to3 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				Type of container:*	
Rain harvested		8					
Community tap		16				Total Litres	
Borehole		32				Data entry score	1.6
Community Well		64				Amount stored at house	
River/stream		128				Number of containers	
Dug-out/dam		256				Type of container:*	
Tanker supply		512					
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					
Rain harvested		8				Type of container:*	
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	

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			
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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.