



Makerere University

CENTER FOR HEALTH AND POPULATION RESEARCH
Operating Population-based Surveillance Cohorts

**SELECTED SUSTAINABLE DEVELOPMENT GOALS (SDGS)
AT POPULATION-LEVEL IN EASTERN UGANDA - A SUBNATIONAL ANALYSIS.**

2019-2020





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Embassy of Sweden
Kampala

MAKERERE UNIVERSITY CENTER FOR HEALTH AND POPULATION
RESEARCH OPERATING POPULATION-BASED SURVEILLANCE COHORTS ,
aims to help the Government of Uganda achieve the
17 Sustainable Development Goals (SDGs) signed up in 2015



Executive Summary

Background

To achieve the 17 Sustainable Development Goals (SDGs) signed up in 2015, reliable data will be essential. Without it, governments will be unable to measure progress against the goals, nor to fine tune policies to make their attainment more likely. Testing new policies and programs and monitoring the impact of old ones require robust data collected over a sustained period of time. Accurate and timely data will ensure that resources are not wasted on ineffective interventions, pointing policymakers instead towards programs that will hasten their country's progress towards the goals. Health and Demographic Surveillance Systems (HDSSs) provide methodologies and designs that can be replicated in national statistics and data systems. Many health interventions used routinely across the world were first trailed using HDSS platforms. HDSSs provide the engineering that can be applied in generating valid indicators.

Makerere University Centre for Health and Population Research (MUCHAP) is a research and research training platform of Makerere University. MUCHAP runs the Iganga Mayuge Health and Demographic Surveillance Site (IMHDSS) that was established by Makerere University in partnership with Karolinska Institutet of Sweden and the district authorities of Iganga and Mayuge districts. IMHDSS conducted a population-based baseline census in 2005 and has been following up that population cohort to-date in selected villages. The primary objectives of setting up the site were to:

- a) Provide a platform for conducting community-based research, and research training for students and faculty at Makerere University, as well as other researchers from within and outside Uganda
- b) Register and monitor important health and demographic population indicators that can be used at local and national level planning for population development
- c) Conduct essential household level policy relevant research tailored to inform local and national policy formulation.

The purpose of the Centre is to generate population based information that is useful to guide policy and the decision making process at district and national level. Information on demographic events at individual and household level data on births, deaths and migrations is monitored and routinely updated twice a year. The cause of every death that occurs in the community is determined through the verbal autopsy approach and evaluated by the physician. As of 2017, the total population under surveillance was 94,568 individuals from over 19,000 households in 65 villages and seven sub counties within the two districts of Iganga and Mayuge.

SDGs are a universal call for action to improve the welfare of populations by striving to end poverty, protect the environment and ensure that people live in peace and prosperity. The 17 SDGs were built on the successes of the Millennium Development Goals while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice amongst other priorities. While some of the SDGs have been assessed through national periodic surveys like the Uganda Demographic and Health Survey (UDHS), the National Housing and Population Census and national health indicator survey, it is important to assess SDG indicators at sub-National and regional levels.

Method of measurement

This measurement was conducted on selected indicators to understand the current status and progress of SDGs at a sub national rural population. A descriptive cross sectional survey was conducted in a population-based cohort covering 65 villages in seven sub-counties of Iganga and Mayuge districts in Eastern Uganda. A total of 5500 households were randomly sampled from the population cohort. A structured questionnaire was administered to collect data and information on the indicators of selected SDGs. In this phase of measurement, a survey to assess the progress on indicators for SDGs 1, 2, 3 and 6 was done.

-  **Goal 1:** End poverty in all forms everywhere
-  **Goal 2:** End hunger, achieve food security, improved nutrition & promote sustainable agriculture
-  **Goal 3:** Ensure healthy lives and promote well being for all at for all at all stages
-  **Goal 6:** Ensure availability and sustainable management of water and sanitation for all.

Indicators for other SDGs that can be measured at household level shall be gradually integrated in the IMHDSS routine surveillance.



Top Line Findings



Goal 1: End poverty in all forms everywhere

The **social protection floors/systems** mentioned by the respondents are:

- i) Financial support – 27%,
- ii) belonging to an association – 46%,
- iii) access to credit services – 23% and
- iv) Owning bank account – 18%.

Those belonging to an association receive support in form of: Periodic savings – 85%, health support – 25%, school fees support – 26% and bereavement support – 56%

For government programs: 90% have benefitted from periodic mass mosquito net distribution, 80% from Universal Primary Education (UPE), 30% from operation wealth creation including National Agriculture Advisory Services (NAADS) while less than 5% reported to have benefitted from the other programs.

Health insurance schemes: 0.3% reported that there is an insurance scheme in their village. 0.6% reported that at least one member of their household was covered by any health insurance.

Land ownership: 86.9% of the households own land and of these, 58.2% own land by Customary type ('Kibanja'). 91.3% of the respondents who own land have legal land documentation in form of land agreement.



Goal 2: End hunger, achieve food security, improved nutrition & promote sustainable agriculture

Food security: The prevalence of moderate and severe food insecurity is 40.5% whereas that of severe food insecurity is 13.2%. The main source of livelihood in the study population is subsistence agriculture. Of those that grow at least two types of crops, 78% earn above 100,000 UGX in income per season.

60% of the households do not store any food.

Residents grow maize (66%), sweet potatoes (11%), cassava (9%), sugarcane (7%) and ground nuts (4%). Only 20% of households have a special storage place for their produce. Documentation in form of land agreement.



Goal 3: Ensure healthy lives and promote well being for all at

Delivery Care: 88% of women receive delivery care from nurses/midwives/ doctors, while 3% receive delivery care from Traditional birth attendants.

Under 5 mortality reduced from 78.3 per 1000 livebirths in 2014 to 58.5 per 1000 livebirths in 2017

Neonatal mortality reduced from 39.2 per 1000 livebirths in 2014 to 28.5 per 1000 livebirths in 2017

Communicable diseases

90% of the study population tested for HIV and over 88% were given test results.

88% of mothers reported that HIV is transmitted from mother to the unborn child during pregnancy

96% of the study participants have ever heard about Hepatitis B and 64% have ever tested for Hepatitis B

Non-communicable diseases: Hypertension, diabetes and Cancers cause 31.5% of all deaths for persons aged 15 years.

Alcohol and Substance abuse: 178(4.4%) reporting consumption of alcohol where 56.1% use Local gin (Crude Waragi), 19.9% use bottled waragi, and 24% use beers. 73(1.8%) smoke cigarettes documentation in form of land agreement.



Goal 6: Ensure availability and sustainable management of water and sanitation for all.

Food security: The prevalence of moderate and severe food insecurity is 40.5% whereas that of severe food insecurity is 13.2%. The main source of livelihood in the study population in subsistence agriculture Of those that grow at least two types of crops, 78% earn above 100,000 UGX in income per season.

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Residents grow maize (66%), sweet potatoes (11%), cassava (9%), sugarcane (7%) and ground nuts (4%). Only 20% of households have a special storage place for their produce. documentation in form of land agreement.

Conclusions:

Social protection floors are inadequate at community level. A few available floors like financial support, credit services, belonging to an association and owning a bank account- benefit less than half the population. Most government programs do not benefit the community. Only a few programs like mass mosquito net distribution (90%) and Universal Primary Education (80%) have adequately benefited the population. Less than 1% of the study population is covered by health insurance. Majority of the residents (86.9%) own land and over 69.9% have legal land documentation. Though subsistence agriculture is the major source of livelihood, 40.5% of the population experiences moderate and severe food insecurity whereas 13.2% experiences severe food insecurity.

Majority of mothers (88%) receive delivery care from formal health institutions. Trends in under-five and neonatal mortality have shown a decreasing rate in the period 2014 to 2017. Non communicable diseases present the biggest burden of disease amongst adults aged 15 years and above. There are adequate safe water sources for domestic use but garbage disposal practices are poor. Though latrine coverage is 95% in the population, hand washing services at latrine facilities are inadequate.

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1. Background

If the international community is to achieve the 17 Sustainable Development Goals (SDGs) to which it signed up in 2015, reliable data will be essential. Without it, governments will be unable to measure progress against the goals, nor to fine tune policies to make their attainment more likely. Testing new policies and programs and monitoring the impact of old ones require robust data collected over a sustained period of time. Accurate and timely data will ensure that resources are not wasted on ineffective interventions, pointing policymakers instead towards programs that will hasten their country's progress towards the goals. Health and Demographic Surveillance Systems (HDSSs) provide methodologies and designs that can be replicated in national statistics and data systems. Many health interventions used routinely across the world were first trailed using HDSS platforms. HDSSs provide the engineering that can be applied in generating valid indicators.

In the low- and middle-income countries that are the primary focus of the SDGs, data collection is uneven, with many lacking the necessary financial or human resources. However, all is not gloom, as there is a notable contribution by available health and demographic surveillance systems. Currently existing in various African countries and bringing together the cream of international health and demography scientists, these HDSS sites have a platform and a vast array of data on the health, wealth and major life events of individuals. Panel data are the intellectual and museum value of data and statistics which contribute to understanding phenomena better over time. HDSSs have a distinct advantage by providing comparable longitudinal data and statistics across regions.

According to United Nations Development Program (UNDP) 2019, Sustainable Development Goals (SDGs) are a universal call to action- to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. These 17 Goals build on the successes of the Millennium Development Goals (MDGs), while including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – often the key to success on one will involve tackling issues more commonly associated with another.

Local and regional authorities play an important role in implementing the Agenda 2030 and the SDG objectives. However not all SDGs targets carry the same relevance at all levels and in all member states. Many local authorities globally are raising awareness about the SDGs and are looking for ways to integrate the SDGs into their policy plans. Local and regional governments around the world consider the 2030 Agenda 'a once in a generation opportunity' to trigger a true universal transformation .

Most underlying policies and investments are a shared responsibility across levels of government and that about 65% of the 169 targets underlying the 17 SDGs will not be reached without proper engagement of and coordination with local and regional governments. Therefore, it is necessary to acknowledge the SDG thematic areas and specificity of various territories while at the same time ensuring political coherence through appropriate monitoring of the implementation of all SDGs on the ground.

The inter-connectedness of the SDGs requires significant evidence-driven research and analysis to ensure the coherence of implementation efforts. Timely, reliable, open and accessible data enables governments, private sector and policymakers to be more responsive to the needs of citizens , and it also empowers people to make informed decisions and take action within their communities.

In rural Eastern Uganda, we set out to assess the performance of selected SGD indicators at individual and household levels basing on a sampled population in part of Iganga and Mayuge districts.

¹ UCLG report (2017) on national and sub-national governments on the way towards the localization of the SDGs: https://www.u-clg.org/sites/default/files/localgov_report_localizationsdg_hlpf.pdf

² SDGs at the Sub national Level: Regional Governments in the Voluntary National Reviews, nrg4SD and ORU Fogar

³ Guidance note: data for implementation and monitoring of the 2030 agenda for sustainable development UNDP





2. Methods

2.1 Study site and population:

This survey was conducted by Makerere University Center for Health and Population Research (MUCHAP). This research center of Makerere University operates population-based surveillance cohorts. The Iganga-Mayuge Health and Demographic Surveillance Site (IMHDSS) cohort was established in 2004 by Makerere University in partnership with Iganga and Mayuge districts and Karolinska Institute in Sweden. MUCHAP-IMHDSS provides a platform for community oriented epidemiological and operational research as well as research training.

This demographic surveillance area covers 65 villages distributed in Iganga and Mayuge districts in Eastern Uganda. It covers a population of 94,568 persons resident in about 19,000 households. The population has an average household size of five individuals, and it is predominantly rural with subsistence agriculture as the main occupation. Sex distribution is almost equal with 51% Female. The population is largely young with more than 60% of it below 15 years.

Figure 1: Location and map of the Demographic surveillance area (DSA)

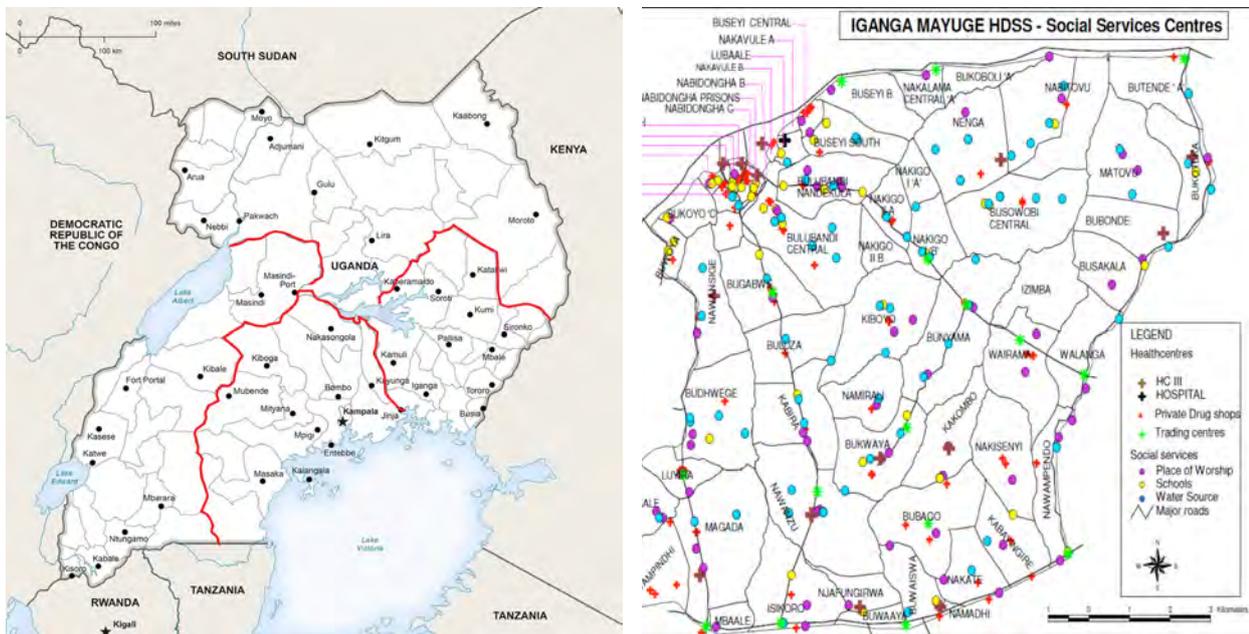
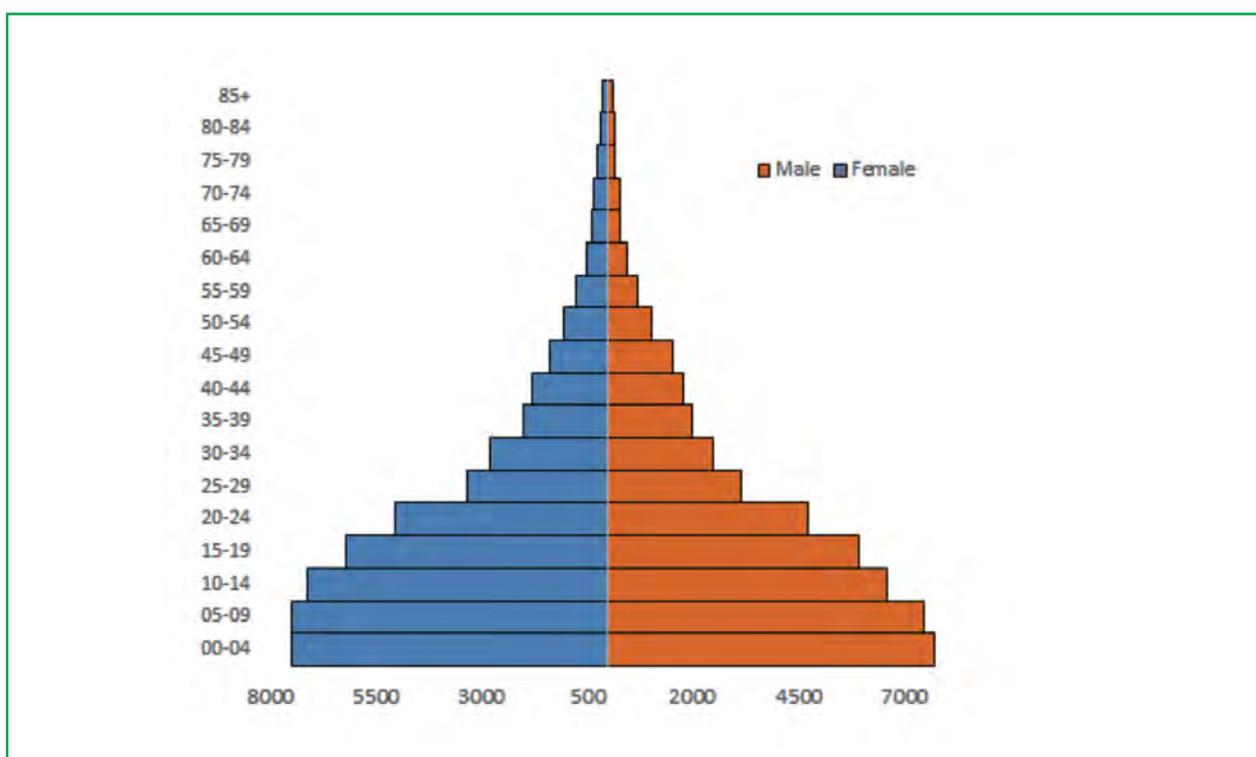


Figure 2: The IMHDSS Population Pyramid in 2018



2.2 Study design and sampling

A descriptive cross-sectional study was conducted in 2019 to generate baseline data on selected SDG indicators and targets. A random sample of 5,500 households was generated as a representative of the entire population-based cohort which was considered as a sampling domain and all households eligible for selection. A household is defined as a group of people that routinely live and eat together under one household head. One person per selected household was interviewed and this person had to be 18 years or older.

2.3 Data collection and quality control

This is a baseline survey of the SDG assessment. The center will periodically conduct annual measurements. We started with key indicators of goals 1, 2, 3 and 6 for measurement to generate base-line data. Selected SDG indicators for these goals were assessed in this phase of the survey.

-  **Goal 1: End poverty in all forms everywhere**
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-  **Goal 6: Ensure availability and sustainable management of water and sanitation for all.**

Other SDGs indicators that can be measured at household level shall be gradually integrated in the IMHDSS routine surveillance.

A set of structured questions were developed and applied for the selected SDG indicator using standard methods of data collection and interview techniques. A team of qualified Research Assistants (RAs) collected data using a structured questionnaire. All members had previous experience of conducting and supervising field research.

They underwent a two-day training course covering data collection tools and were oriented and trained on this tool and the SDGs and their indicators that were considered for this survey. The questionnaire was pre-tested and experiences were discussed prior to data collection. Data was collected electronically using tablets and the data collection tool was developed in Open Data Kit (ODK) software.

Research Assistants (RAs) were organized in groups of 14 individuals and each group was supervised by a Team Leader (TL) who was responsible for ensuring that work is uploaded on each group member's tablet and that quality data is collected and submitted to the local server. Each RA visited about 8-10 households daily and conducted face-to-face interviews in each of the assigned households. They sought consent from each of the respondents before interviews were conducted.

The field manager provided the oversight function of data collection while the quality control assistant conducted field spot-checks, observed some interviews in the field and reviewed the quality of submitted work to ensure completeness and consistency. Reasons for incompleteness such as migrations and household members being temporarily absent at the time of the survey were raised. Validation checks were incorporated in the soft copy version of the tool to check for consistency and correctness of data.

2.4 Data processing and analysis

Data collection was conducted electronically (use of tablets) using the Open Data Kit (ODK) software. Poverty level was assessed basing on wealth quintiles of 'the poor' and 'the least poor' that were derived from social economic status data. The study population was categorized by residence in peri-urban and rural areas. Peri-urban setting was characterized by availability of social amenities such as electricity, water systems, improved housing, high population density and social mobility. Rural settings were characterized by poor road networks, lack of electricity and improved water systems, low population densities and low social mobility. Education status was categorized as persons who never went to school, those who completed primary level, secondary level and tertiary level.

Data was transferred and stored in a single database on the server and extracted data to STATA 15 release for cleaning and analysis. Data are presented in proportions/percentages of the sampled population and as estimates. In specified instances, respondents represented whole households and in other instances, they answered on their own behalf depending on the structure of questions and indicators for each goal.





3. Results

Population characteristics and Social demographics

Out of a random sample of 5,500 households in the HDSS that were selected and visited during the survey, data on 4,046 households (74%) were collected. Majority of the respondents were female (72%), as is always the case with the HDSS systems where women tend to respond to interviews because they are mostly at home during survey times. The respondents were most adults because it is expected that they know more about the household and have given consent to participate in the survey. Two-thirds of the people who responded were poor as their wealth quintile while 76% resided in rural areas. Close to half of the respondents were Muslims which is the dominant religion in this area. Most of those who responded had completed primary education and a similar proportion was not married while 21% were in a relationship (either married or cohabiting).

Table 1: Social demographic Characteristics of the study population

		Respondents (N=4046)	Percentage (%)
Gender 	Male	1,131	28.0
	Female	2,915	72.0
Age group 	18-25	708	17.5
	26-35	1,036	25.6
	36-49	1,145	28.3
	50+	1,157	28.6
Poverty Levels 	Poor	2,702	66.8
	Least poor	866	21.4
	Others	478	11.8
Residence 	Peri-urban	971	24.0
	Rural	3,075	76.0
Religion 	Catholic	264	6.5
	Protestant	1,088	26.9
	Muslim	1,904	47.1
	Other Christians	790	19.5
Education level 	None	34	0.8
	P.1-P.7	2,545	62.9
	S.1-S.4	738	18.2
	S.5-S.6	72	1.8
	Tertiary/University	88	2.2
	Unknown	569	14.1
Marital status 	Married/cohabiting	842	20.8
	Never married	2,570	63.5
	Separated/divorced	65	1.6
	Unknown	569	14.1



**NO
POVERTY**





End Poverty In All Forms Everywhere

SDG 1 is among the most ambitious of the 17 goals. According to the 2030 Agenda, ending poverty in all forms and dimensions by 2030 involves targeting those living in vulnerable situations, increasing access to basic resources and services, and supporting communities affected by conflict and disasters related to climate. Rates of extreme poverty have declined by more than half since 1990. However, one in five people in developing regions still live on less than \$1.25 a day, and there are millions more who survive on little more than this daily amount. The 2030 Agenda underlines the fact that poverty is more than the lack of income and resources to ensure a sustainable livelihood.

Target 1.3: Implement appropriate national social protection systems and measures for all and by 2030, achieve sustainable coverage of the poor and the vulnerable

Indicator 1.3.1: Proportion of population covered by social protection floors/ systems, by sex, children, older persons, persons with disabilities, pregnant women and new-borns.

Social protection floors

'Social protection floor' is the term used to describe nationally defined sets of basic security guarantees that should ensure, as a minimum that, over the life cycle, all in need have access to essential health care and basic income security which together secure effective access to goods and services defined as necessary at national level (www.usp2030.org/)

Globally, social protection is a fundamental human right and a tool for reducing poverty. Worldwide, more than half of the population (4 billion people) has no access to even one social protection benefit. Only 45% of the global population receives at least one social protection benefit.

In this sub-national level assessment of the extent of social protection floors, it is estimated that 65% of the population has access to social protection benefits which is above the global estimate of 45%. Deliberate effort to improve community access to social protection floors is needed at all levels. The provision of social protection floor for all people in developing countries costs as little as 1.6 percent of their gross domestic product (GDP) on average.

Forty five percent (45%) of study participants belong to an association of which 85% make periodic savings

Table 2: Social protection floors

	N	Proportion of population covered by social protection floors/systems						Kind of support from associations for those belonging to one			
		Social protection	Financial support	Belong to any association	Access to credit services	Bank account	Belong to any association	Periodic savings	Health support	School fees support	Bereavement support
Total	4046	n 2614 (65)	% 41.1	% 70.6	% 34.8	% 28.3	N 1845	% 85.2	% 24.7	% 26.0	% 56.6
Gender											
Male	1131	680 (60)	41.0	65.3	37.7	35.3	444	80.9	25.9	25.9	59.9
Female	2915	1934 (66)	41.1	72.4	33.8	25.8	1401	86.6	24.3	26.1	55.6
Age group											
18-49	2881	1839 (64)	32.1	76.2	38.4	31.7	1400	85.8	24.7	26.5	56.1
50+	1157	775 (67)	62.5	57.2	26.3	20.1	443	83.3	24.8	24.6	58.5
Poverty Levels											
Poor	2702	1675 (62)	42.6	73.0	28.5	17.5	1223	84.7	22.7	25.1	57.3
Least poor	866	655 (76)	35.4	68.6	50.4	55.0	449	87.1	29.6	28.5	54.1
Unknown	478	284 (59)	45.1	60.9	36.3	30.3	1672	85.3	24.6	26	56.5
Place of Residence											
Peri urban	971	713(73)	39.0	62.3	51.2	58.5	444	86.9	32.4	30.4	50.2
Rural	3075	1901(62)	41.9	73.7	28.7	16.9	1401	84.7	22.3	24.6	58.7
Education level											
None	34	19(56)	36.8	73.7	21.1	10.5	14	85.7	0	7.1	35.7
P.1-P.7	2545	1586(62)	38.9	77.3	31.2	21.0	1226	84.9	23.7	25.7	57.3
S.1-S.4	738	525(71)	35.2	69.5	45.2	43.6	365	86.3	26.6	27.9	56.2
S.5-S.6	72	54(75)	48.2	48.2	50.0	64.8	26	88.5	34.6	23.1	34.6
University	46	42(91)	50.0	54.8	69.1	83.3	23	82.6	47.8	52.2	82.6
Tertiary after S4	42	40(95)	27.5	65	72.5	75.0	26	84.6	19.2	15.4	50.0
Unknown	569	348(61)	59.5	47.4	25.6	21.6	1680	85.2	24.5	26.2	56.8

in these associations. Only 18% own bank accounts with 22% having access to credit services in the banks whereas only 26% get financial support from saving associations.

Over 50% of the least poor belong to an association whereas 85% of both the poor and the least poor make periodic savings in associations of their affiliation.

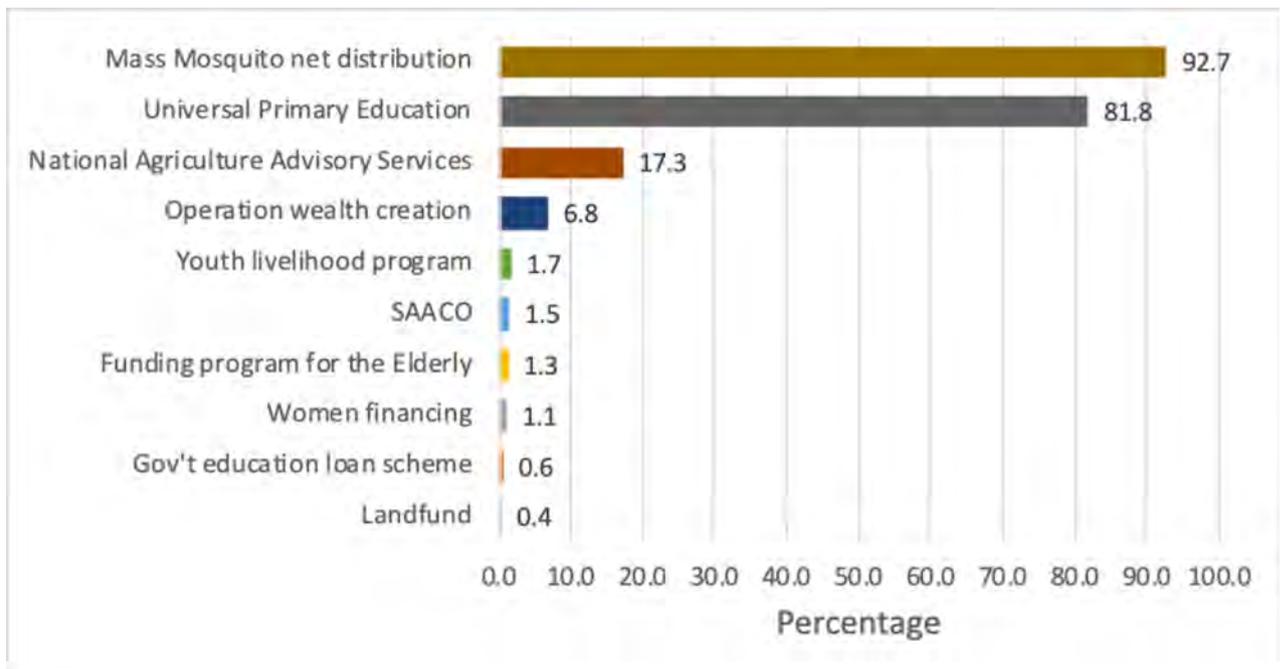
In terms of geographical coverage, 42.9% of the study participants, resident in semi-urban areas have access to credit facilities in associations that they belong to compared to 10.5% of study participants in rural areas. Residents in the rural setting get more of the bereavement support from associations (58%) compared to 50% of their counterparts in the semi-urban areas (Table 2).

Regarding education level, majority of the study participants who completed university (76%) and tertiary education (71.4%) have bank accounts compared to those who completed advanced secondary level (48%). Overall, less than 50% of residents belong to community associations much as the majority who belong to these associations make periodic savings. It still points to the fact that there is limited community involvement in and benefit from social protection systems (Table 2).

Government programs

An assessment of the extent of community benefit from government programs shows that 90% of the study participants benefit from periodic mass mosquito net distribution, 80% benefit from Universal Primary Education (UPE), 30% benefit from National Agriculture Advisory Services (NAADS) program while only 10% benefit from operation wealth creation (Figure 4). Other government programs such as Youth livelihoods program, community support through SACCO's, funding programs for the elderly, women financing, government education loan scheme and land fund have had fewer individuals benefiting from them (Figure 4).

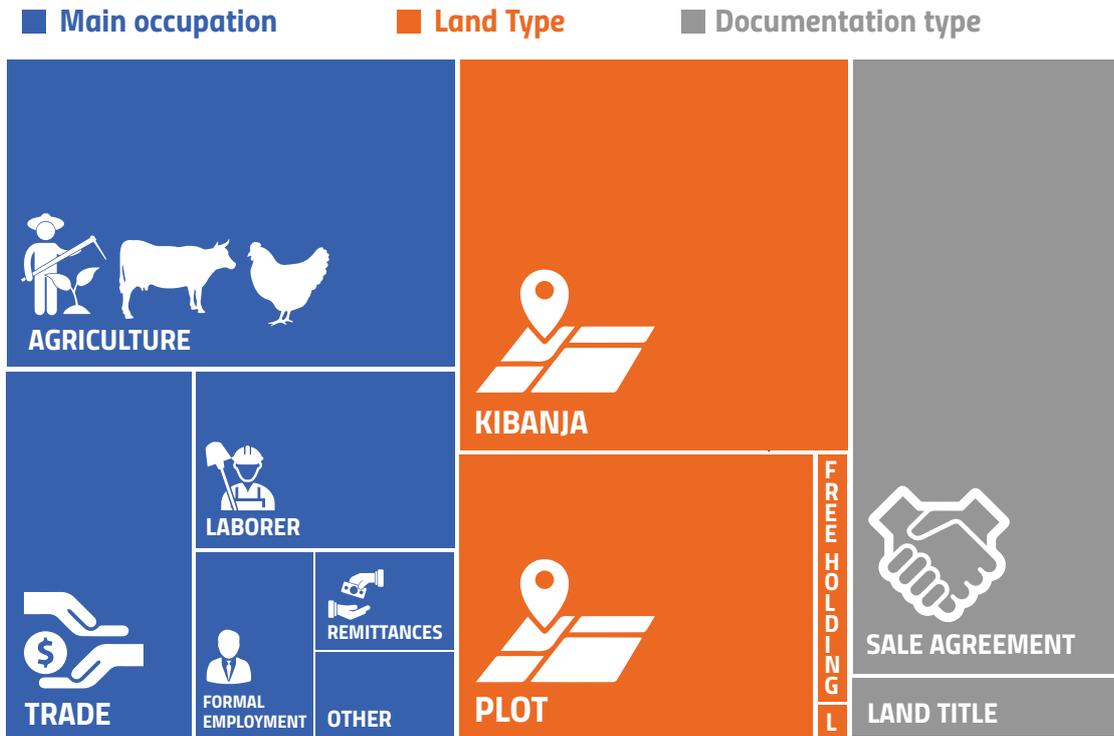
Figure 4: Benefit from Government Programs



Target 1.4: By 2030, ensure that all men and women in particular, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services including micro-finance.

Indicator 1.4.2 Adult population with secure tenure rights to land, with (a) legally recognised documentation and (b) who perceive their rights to land as secure.

Figure 5: Occupation, land type and documentation type



Agriculture (45.7%) is the main source of livelihood and income in the study population. Customary land ownership (58.2%) is dominant in the study population while most people have land sale agreements (91.3%) as proof of ownership of land (Figure 5).

2

**ZERO
HUNGER**





End Hunger, Achieve Food Security And Improved Nutrition And Promote Sustainable Agriculture

2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

2.1.2 Prevalence of moderate or severe food insecurity the population, based on the Food Insecurity Experience Scale (FIES)

FOOD INSECURITY SEVERITY ALONG A CONTINUOUS SCALE



The unique contribution of the FIES is that it is a measure of food insecurity experienced by individuals or households obtained through direct administration of eight short questions that can be easily incorporated into many kinds of surveys. It provides actionable information that policy makers can use to identify vulnerable population groups and guide policy interventions. Used together with other indicators, it can deepen our understanding of the determinants and consequences of individual and household food insecurity.

Each FIES question refers to a different experience and is associated with a different level of severity of food insecurity. One of the unique contributions of the FIES and similar experienced-based food insecurity measures is that, in addition to considering compromised diet quality and reduced food quantity, they also capture psychosocial elements associated with anxiety or uncertainty regarding the ability to procure enough food; a facet that other measures do not.

Table 3: Table of information used in prevalence rate- calculation

Raw score	Respondent severity parameter	Measurement error	Percent of cases with each raw	Probability of food insecurity (moderate to severe level) ^b	Probability of food insecurity (severe level) ^c
0	-6.62	1.65	42.1%	0	0
1	-5.26	1.05	5.3%	0.041896	0.000001
2	-4.44	0.9	5.5%	0.134327	0.000001
3	-3.74	0.85	6.9%	0.364031	0.000012
4	-3.07	0.85	6.3%	0.670223	0.000297
5	-2.37	0.89	6.8%	0.886332	0.006332
6	-1.57	0.97	7.8%	0.973346	0.071773
7	-0.5	1.17	5.9%	0.994076	0.382795
8	1.21	1.85	13.4%	0.994064	0.769063
SUM PRODUCT				40.5% ^{ab}	13.2% ^{ac}

Notes: Measurement error can be thought of as the standard deviation (around the respondent severity parameter—which is the mean severity within the raw score) of the true severity of food insecurity of respondents represented by the sampled individual.

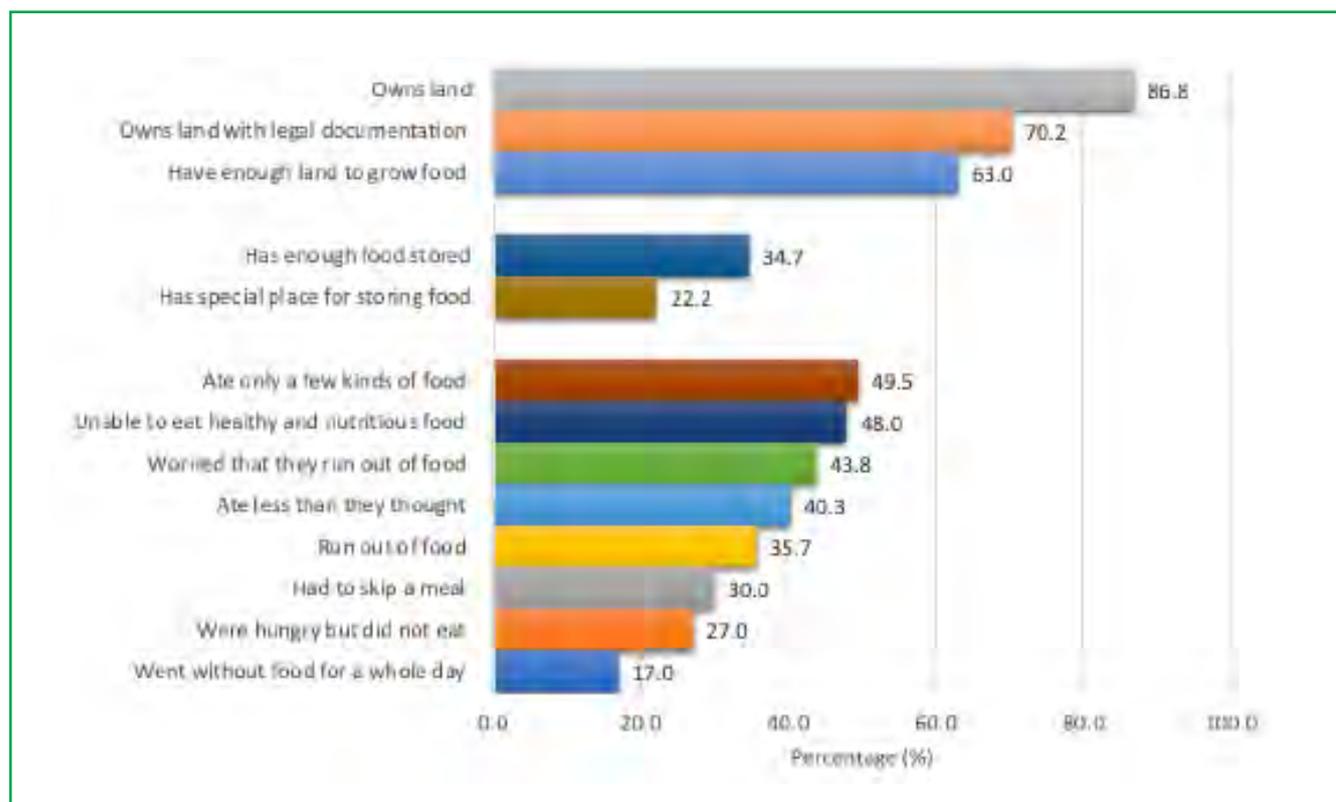
Respondent severity parameters and measurement error cannot be calculated for raw scores 0 and 8 using the conditional maximum likelihood methods used in this analysis. Hence, an approximation based on pseudo raw scores 0.5 and 7.5 are used.

Probabilities are based on the thresholds used by FAO to classify respondents into categories of food insecurity.

Prevalence of moderate or severe food insecurity is obtained by sum product of column a and column b while the prevalence of severe food insecurity is obtained by the sum product of column a and column c

The proportion of the population experiencing moderate or severe food insecurity is 40.5% while the proportion of the population experiencing severe food insecurity is 13.2%. People experiencing moderate levels of food insecurity will typically eat low quality diets and might have been forced, at times during the year, to also reduce the quantity of food they would normally eat, while those experiencing severe levels would have gone for entire days without eating, due to lack of money or other resources to obtain food. We expect the prevalence of severe food insecurity to be highly correlated with the prevalence of undernourishment in the studied population of Iganga and Mayuge districts

Figure 6: Land ownership and Food assessment at household level



More than 85% of the households visited own land, with majority (70.2%) of them having legal land documentation and 63% have enough land to grow food. However, more than 60% of the study population does not have enough stored food with only 22% of the households having a special storage place for their produce. Most households are affected with negative effects of poor food handling and storage.

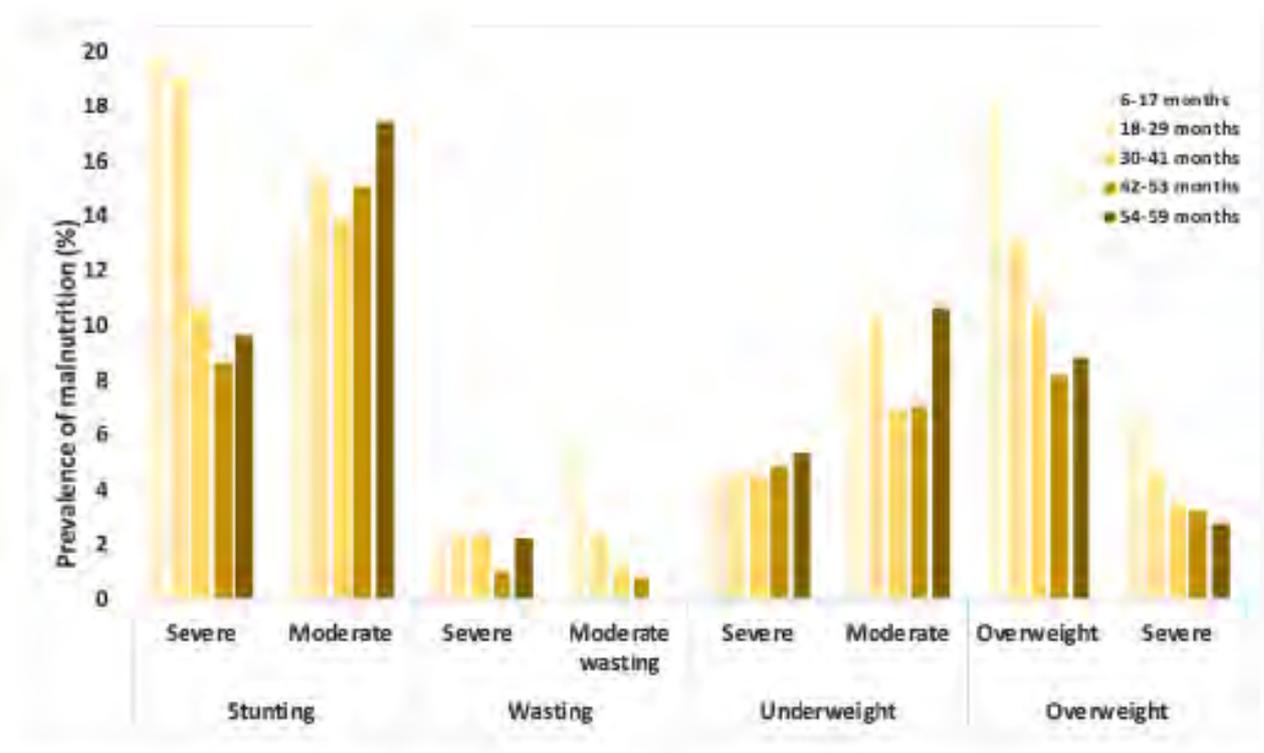
Overall, whereas majority of the population owns land but a limited proportion of the households storing their own food, and most households experience food insecurity. At the time of this survey, some of the families reported spending some days without a meal (17%), were hungry because food is not enough (27%), would sometimes skip a meal because of lack of food (30%), sometimes run short of food (36%), sometimes ate less than they should otherwise eat (40%) or were unable to eat healthy and nutritious foods (48%) (Figure 6).

Target 2.2: By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.

2.2.1 Prevalence of stunting (height for age < -2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.

2.2.2 Prevalence of malnutrition (weight for height > +2 or < -2 standard deviation from the median of the WHO Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)

Figure 7: Prevalence of malnutrition by age in months, based on height-for-age z-scores, weight-for-age z-scores, MUAC cut off's and weight for height.



Severe stunting as a measure of malnutrition is more prevalent among children aged 6-29 months while stunting becomes more moderate as children grow. Severe wasting does not show any trend in relation to age while moderate wasting is higher in children less than 17 months of age. Severe underweight increases with age while moderate underweight is more prevalent in children aged 6-17 months, 18-29 months and 54-59 months respectively. The prevalence of malnutrition amongst overweight and severely overweight children decreases with an increase in age for children under 60 months.

Prevalence of malnutrition by sex

The World Health Organization (WHO 2006) classification of malnutrition was considered for this study. For reporting of Height-for-age, Weight-for-age and weight-for-height relative to the WHO reference, Z scores were used. Children were classified as moderately and severely wasted (acute malnutrition), moderately and severely underweight, moderately and severely stunted (chronic malnourished). The prevalence of wasting (low weight-for-height) was 3.5% (91/2625) overall based on MUAC cut-offs and 10.1% (203/2007) based on weight-for-height z-scores. Underweight (low weight-for-age) prevalence was 13.7% (349/2553), 28.2% (674/2386) for stunting (low height-for-age) and 11.7% (234/2007) prevalence for overweight.

Table 4: Prevalence of malnutrition by sex, based on MUAC cut-offs, weight-for-height z-scores, weight-for-age z-scores, height-for-age z-scores, and weight for height

	 ALL	 BOY	 GIRL
Prevalence of acute malnutrition based on MUAC cut-offs	n (% , 95% CI)	n (% , 95% CI)	n (% , 95% CI)
Global malnutrition (< 125 mm)	91 (3.5%, 2.8 - 4.2)	35 (2.6%, 1.9 - 3.6)	55 (4.4%, 3.4 - 5.6)
Moderate malnutrition (< 125 mm & >= 115 mm)	41 (1.6%, 1.2 - 2.1)	13 (1.0%, 0.6 - 1.6)	28 (2.2%, 1.5 - 3.2)
Severe malnutrition (< 115 mm)	50 (1.9%, 1.4 - 2.5)	22 (1.6%, 1.1 - 2.5)	27 (2.1%, 1.5 - 3.1)
Prevalence of acute malnutrition based on weight-for-height z-scores			
Global malnutrition (<-2 z-score)	203 (10.1%, 8.9 - 11.5)	96 (9.4%, 7.7 - 11.3)	107 (10.9%, 9.1 - 13.0)
Moderate malnutrition (<-2 z-score and >=-3 z-score)	129 (6.4%, 5.4 - 7.6)	62 (6.0%, 4.7 - 7.7)	67 (6.8%, 5.4 - 8.6)
Severe malnutrition (<-3 z-score)	74 (3.7%, 2.9 - 4.6)	34 (3.3%, 2.4 - 4.6)	40 (4.1%, 3.0 - 5.5)
Prevalence of underweight based on weight-for-age z-scores			
Underweight (<-2 z-score)	349 (13.7%, 12.4 - 15.1)	186 (14.1%, 12.3 - 16.1)	163 (13.2%, 11.4 - 15.2)
Moderate underweight (<-2 z-score and >=-3 z-score)	225 (8.8%, 7.8 - 10.0)	121 (9.2%, 7.7 - 10.8)	104 (8.4%, 7.0 - 10.1)
severe underweight (<-3 z-score)	124 (4.9%, 4.1 - 5.8)	65 (4.9%, 3.9 - 6.2)	59 (4.8%, 3.7 - 6.1)
Prevalence of overweight based on weight for height cut-offs			
Prevalence of overweight (WHZ > 2)	234 (11.7%, 10.3 - 13.1)	136 (13.3%, 11.3 - 15.5)	98 (10.0%, 8.3 - 12.0)
Prevalence of severe overweight (WHZ > 3)	85 (4.2%, 3.4 - 5.2)	51 (5.0%, 3.8 - 6.5)	34 (3.5%, 2.5 - 4.8)

Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

Indicator: 2.3.1 Agricultural production and

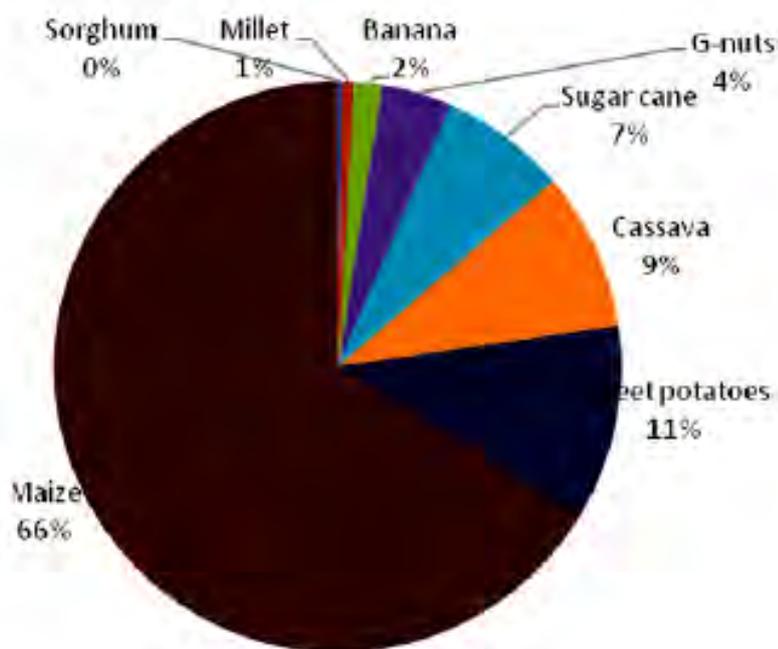
Indicator: 2.3.2 Income of small scale producers.

Table 5: Average income of small-scale food producers

 Producing any crop	Number (%)	Income earned, n (%)		
		<30 000	30,000-100,000	>100,000
At least 2 crops	313 (7.7)	5(1.6)	62(19.8)	246(78.6)
One crop	730 (18.0)	99(13.6)	408(55.9)	223(30.6)
None	3003 (74.2)			
Crops produced				
 Maize	737 (7.1)	69(9.4)	415(56.3)	253(34.3)
 G-nuts	45(4.3)	4(8.9)	23(51.1)	18(40)
 Sugar cane	80(7.7)	2(3.2)	0(0)	60(96.8)
 Cassava	100(9.6)	11(11)	63(63)	26(26)
 Banana	18(1.7)	0(0)	11(61.1)	7(38.9)
 Sweet potatoes	123(11.8)	12(9.8)	89(72.3)	22(17.9)
 Millet	8(0.8)	0(0)	7(87.5)	1(12.5)
 Sorghum	2(0.2)	0(0)	1(50)	1(50)

Only 8% of the respondents produce at least two crops from their land and of those, 78.6% earn above 100,000 UGX per season compared to those who grow only one type of crop at household level. There is a substantial number of respondents (74.2%) who are not involved in agricultural production and hence not earning an income. Maize, ground nuts, sugarcane, cassava, bananas sweet potatoes, millet and sorghum are the dominant food crop varieties grown by families in the study population. Maize is the highest income earner for all residents per season; who practice agriculture (Table 5).

Figure 8: Volume of production per household by type of food crop



The study population mainly grows maize (66%). Other crops like sweet potatoes (11%), cassava (9%), sugarcane (7%) and ground nuts (4%) among others are also grown (Figure 8).

Majority of the poor households grow food themselves (84%) while most of the least poor households buy food from the market. Individuals who are 60 years and above get more of food support from relatives compared to other age groups (Table 6). Female household heads grow food compared to their male counterparts while male household heads buy food from the market compared to the females. Households headed by elder members of 60 years or above grow more food, buy less from the market and get less food from relatives (Table 6).

Table 6: Main source of food at household level by household characteristics

		Grow food ourselves	Buy from market	Get from Relatives & friends
 Gender of household head	Male	70.0	29.0	1.1
	Female	70.5	26.3	3.2
 Household poverty levels	Poor	84.0	13.8	1.8
	Least poor	30.5	68.9	0.6
 Age of household head	>60	82.1	12.0	6.0
	50-59	73.9	25.6	0.5
	40-49	69.9	29.9	0.2
	30-39	57.2	42.7	0.1
	<30	62.6	36.1	1.3



**GOOD HEALTH
AND WELL
BEING**





Ensure Healthy Lives And Promote Well-Being For All At All Stages

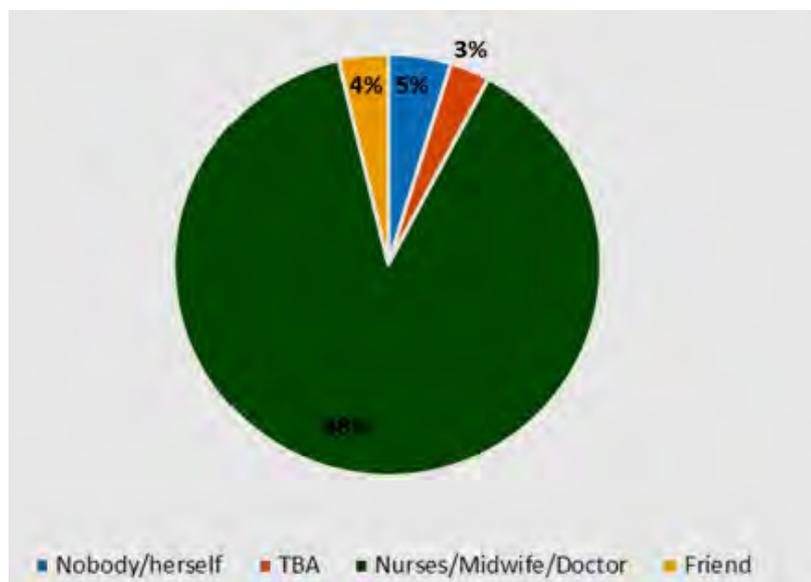
Health is a fundamental aspect of quality of life, not only because being free from illness or injury directly affects our capacity to enjoy life, but also because health indirectly affects our capacity to produce and consume other valuable goods and services. SDG 3 aspires to ensure health and wellbeing for all, including a bold commitment to end the epidemics of AIDS, Tuberculosis, Malaria and other communicable diseases by 2030. It aims to achieve universal health coverage and provide access to safe and effective medicines and vaccines for all.

Globally, more than 1.6 billion people live in fragile settings where protracted crises, combined with weak national capacity to deliver basic health services, present a significant challenge to global health

Target 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births

Indicator 3.1.2 Proportion of births attended by skilled birth attendants

Figure 9: Source of delivery care



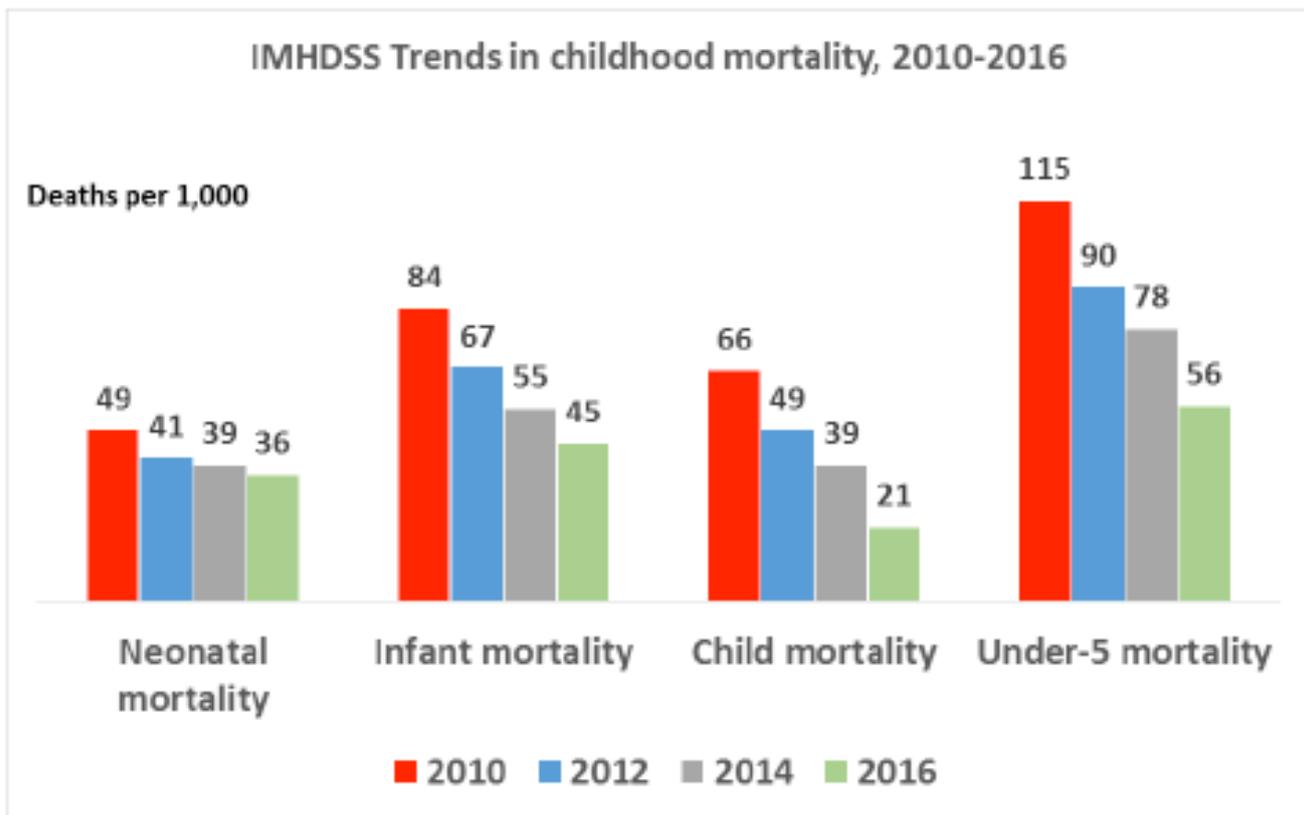
Majority of the women (88%) receive delivery care from nurses/midwives/doctors while 3% get delivery care from Traditional birth attendants. Others received delivery care from friends (4%) while 5% gave birth through self care. (Figure 9).

Target 3.2: By 2030, end preventable deaths of new-borns and children under 5 years of age with all countries aiming at reducing neonatal mortality to at least as low as 12 per 1,000 live births and under 5 mortality to as low as 25 per 1,000 live births

Indicator 3.2.1 Reduce Under-5 mortality rate to as low as 25 deaths per 1,000 live births by 2030

Indicator 3.2.2 Reduce Neonatal mortality rate to as low as 12 deaths per 1,000 live births by 2030

Figure 10: Trend in Under-Five and Neonatal mortality



Over a four year period, there is a significant reduction in mortality for children below 5 years from 78.3 per 1,000 livebirths in 2014 to 58.5 per 1,000 livebirths in 2017 while neonatal mortality has also reduced from 39.2 per 1,000 livebirths in 2014 to 28.5 per 1,000 livebirths in 2017 (Figure 10).

Target 3.3: By 2030, end epidemics of AIDS, Tuberculosis, Malaria, and neglected tropical diseases and; combat hepatitis, water-borne diseases and other communicable diseases.

Table 7: HIV and Hepatitis B testing rates and knowledge on Mother To Child Transmission of HIV (MTCT)

	N	HIV/AIDS		Knowledge about MTCT			Hepatitis B	
		Tested	Know results	During pregnancy	During delivery	During breast feeding	Ever heard	Vaccinated
		%	%	%	%	%	%	%
Gender 								
Male	1131	86.0	84.2	53.7	85.8	81.4	95.7	62.9
Female	2915	91.6	90.6	62.3	90.0	86.8	96.8	64.8
Total	4046	90.0	88.8	59.9	88.8	85.3	96.5	64.2
Age group 								
18-49	2881	93.4	92.2	62.4	91.7	88.8	98.2	65.3
50+	1157	81.7	80.3	53.4	81.8	76.8	92.3	61.8
Total	4038	90.1	88.8	59.9	88.9	85.3	96.5	64.3
Poverty Levels 								
Poor	2702	88.5	86.9	60.5	88.2	84.5	95.9	61.9
Least poor	866	94.9	94.3	59.4	91.3	88.5	98.6	72.6
Total	3568	90.1	88.7	60.2	89.0	85.5	96.6	64.5
Place of Residence 								
Semi urban	971	96.1	95.8	60.1	90.9	89.1	98.4	73.6
Rural	3075	88.1	86.6	59.8	88.2	84.1	95.9	61.3
Total	4046	90.0	88.8	59.9	88.8	85.3	96.5	64.2
Religion 								
Catholic	264	92.8	90.2	62.9	92.4	90.2	97.0	64.8
Protestant	1088	91.2	90.3	58.9	91.1	88.6	97.9	68.1
Muslim	1904	91.7	90.4	61.6	89.5	85.8	97.5	65.3
Other Christians	221	93.7	93.7	68.8	93.2	88.2	97.7	57.0
Total	3477	91.7	90.5	61.3	90.5	87.2	97.6	65.6
Education level 								
Never went to school	34	88.2	82.4	55.9	79.4	82.4	97.1	47.1
P.1-P.7	2545	90.5	89.2	60.7	89.7	86.3	97.3	64.0
S.1-S.4	738	95.0	94.0	63.4	92.7	89.6	98.1	68.6
S.5-S.6	72	93.1	93.1	61.1	91.7	91.7	100	81.9
University	46	100	100	65.2	95.7	95.7	100	82.6
Tertiary after S4	42	100	100	61.9	95.2	85.7	100	76.2
Total	3477	91.7	90.5	61.3	90.5	87.2	97.6	65.6
Marital status 								
Married	709	94.8	93.5	67.8	91.8	90.0	97.9	58.3
Never married	2570	90.6	89.5	59.5	90.3	86.7	97.5	68.0
Cohabiting	133	97.0	94.7	58.6	88.7	82.7	97.7	58.6
Separated/divorced	65	93.8	92.3	67.7	86.2	84.6	98.5	66.2
Total	3477	91.7	90.5	61.3	90.5	87.2	97.6	65.6

In this study population, 90% have been tested for HIV and over 88% were given test results (Table 7). In terms of mothers' knowledge on Mother-To- Child Transmission (MTCT), 59.9% reported that HIV is transmitted from mother to the unborn child during pregnancy, 88.8% reported that it is transmitted during child birth while 85.3% reported that it is transmitted during breast feeding.

Over 96% of the study participants have ever heard about Hepatitis B but only 64% have ever tested. All study participants who attained University and Tertiary education have ever heard about HIV/AIDS, have ever tested for HIV with test results given to them. The same category of the educated people has ever heard about Hepatitis B and 80% of these have ever tested for it.

The results show that the WHO and National HIV target of 90, 90, and 90 is achievable in this population. That is 90% enrollment and testing of HIV amongst the population, 90% linkage to HIV care and 90% retention and eventual suppression of the viral load.

Target 3.4: By 2030, reduce by one third- premature mortality from NCDs through prevention and treatment of NCDs and promote mental health and well being

Indicator 3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.

Figure 11: Cause of death associated with Non-Communicable diseases over the years

Figure 1. Proportion of deaths due to major diagnosis categories

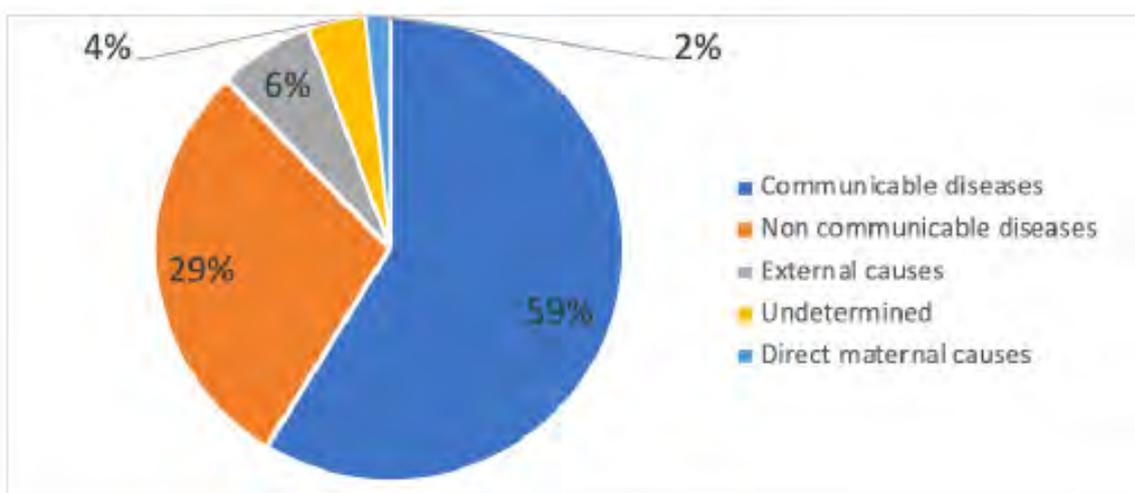
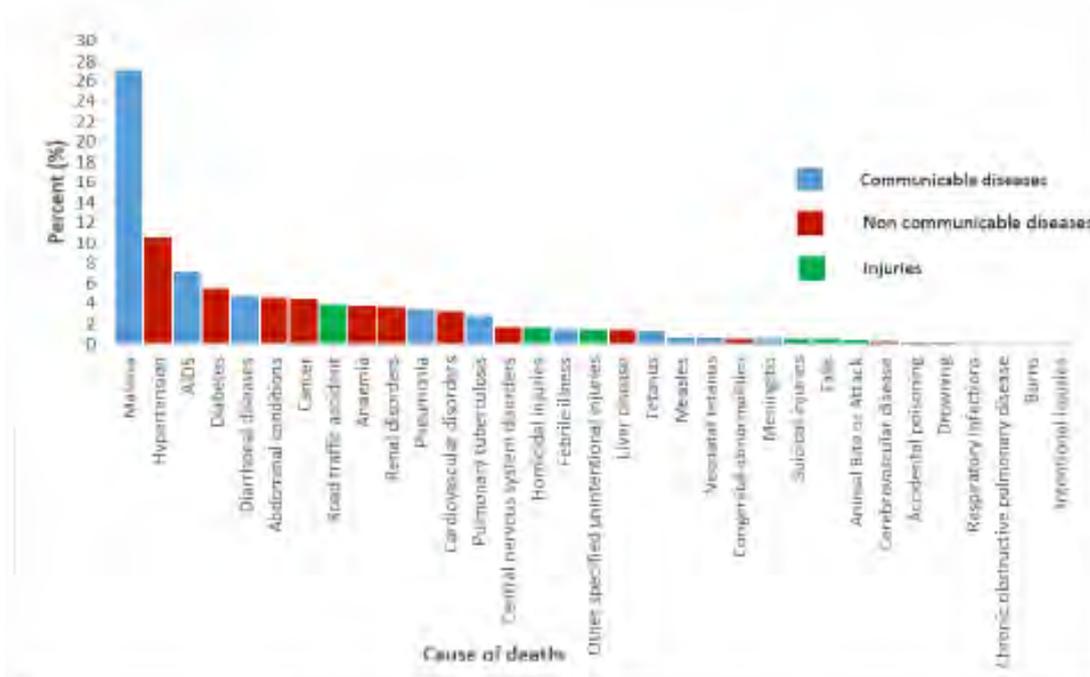


Figure 2. Proportion of death by individual diagnoses (n=2,838)

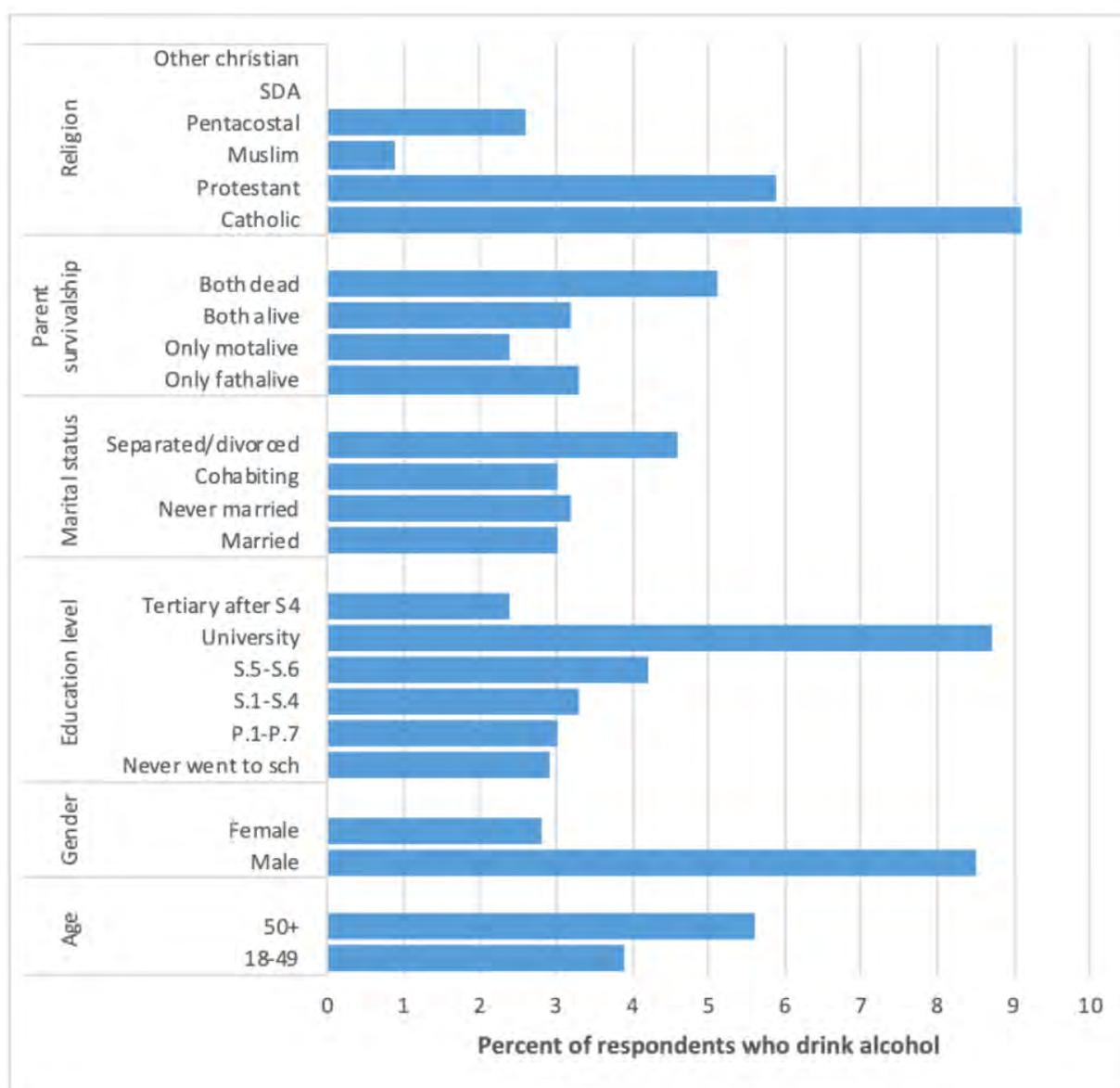


Hypertension, diabetes and Cancers are the leading cause of mortality for individuals 15 years and above in the study population and the results are in agreement with the National trends on the growing burden of Non Communicable diseases (Figure 11).

3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

3.5.2 Harmful use of alcohol, defined according to the national context as alcohol per capita consumption (aged 15 years and older) within a calendar year in litres of pure alcohol

Figure 12: Alcohol Consumption



Alcohol is mostly consumed by Catholics compared to other religions. Individuals whose mother and father died are more likely to consume alcohol compared to individuals who have either their mother or father alive. Individuals whose relationship status is either divorced or separated consume more volumes of alcohol compared to the married and those never married (Figure 12).

The most highly educated individuals (those who completed University and tertiary) consume more volumes of alcohol compared to the least and not educated individuals. Males drink more alcohol compared to the females where as individuals who are 50 years and above consume more alcohol compared to those in the age group- 18 to 49 years (Figure 12).

Table 8: Characteristics of respondents who currently drink Alcohol and the type of alcohol

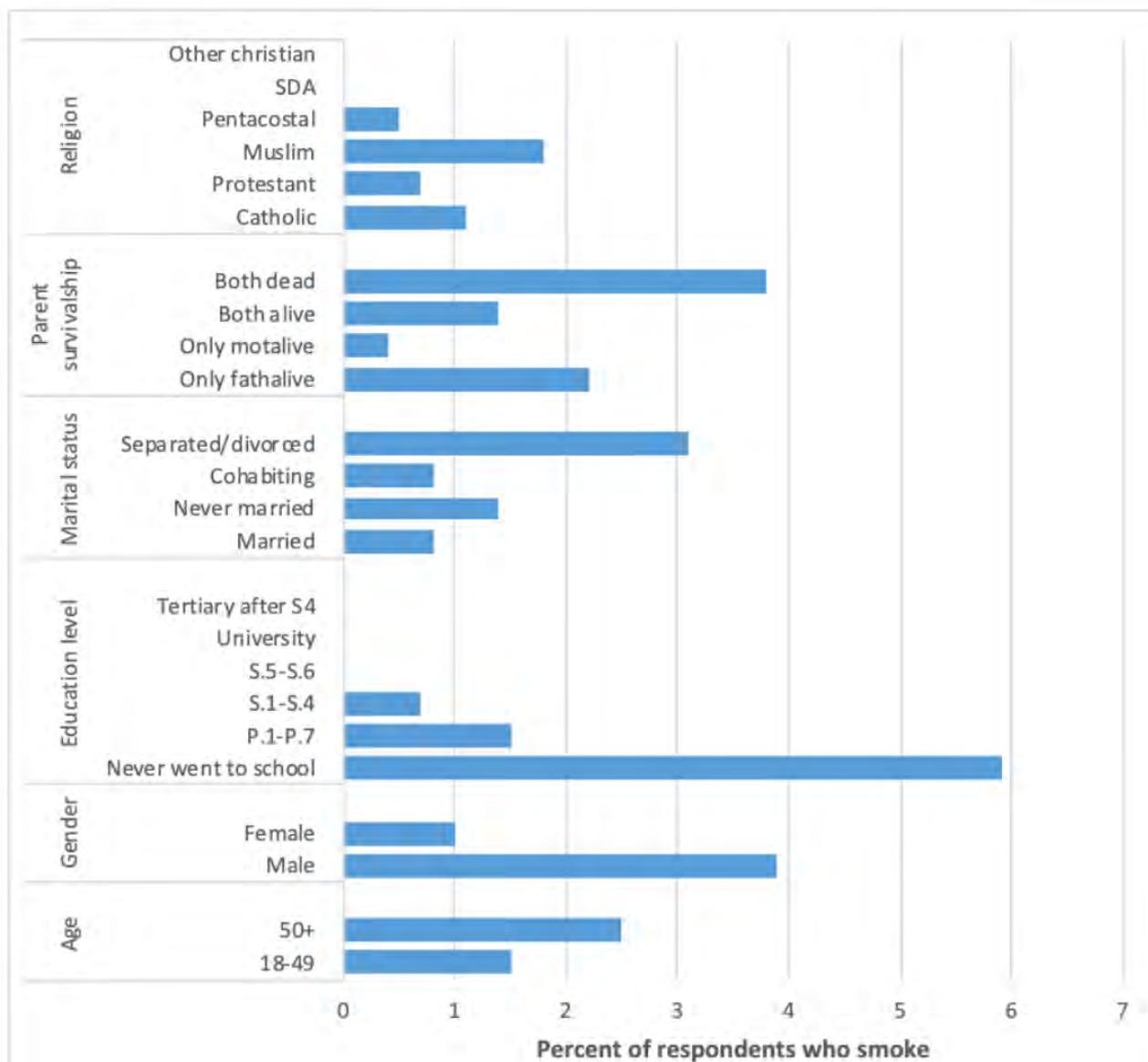
		Drinks alcohol	Beer	Bottled waragi	Crude waragi
		N%	%	%	%
Overall		178(4.4)	37.6	31.5	53.9
Age group 	118-49	113(3.9)	48.7	35.4	44.2
	50+	65(5.6)	18.5	24.6	70.8
Gender 	Male	96(8.5)	37.5	37.5	49.0
	Female	82(2.8)	37.8	24.4	59.8
Education level 	Never went to school	1(2.9)	0	0	0
	P.1-P.7	77(3)	37.7	31.2	59.7
	S.1-S.4	24(3.3)	58.3	41.7	29.2
	S.5-S.6	3(4.2)	100	0	0
	University	4(8.7)	75.0	50.0	0
	Tertiary after S4	1(2.4)	0	100	0
	Unknown	68(12)	26.5	27.9	61.8
Marital status 	Married	21(3)	52.4	42.9	47.6
	Never married	82(3.2)	42.7	30.5	50.0
	Cohabiting	4(3)	50.0	25.0	75.0
	Separated/divorced	3(4.6)	33.3	66.7	0
	Unknown	68(12)	26.5	27.9	61.8
Parent survivorship 	Father alive	3(3.3)	0	33.3	66.7
	Only mother alive	11(2.4)	54.5	27.3	45.5
	Both alive	92(3.2)	44.6	35.9	48.9
	Both dead	4(5.1)	50.0	0	50.0
	Unknown	68(12)	26.5	27.9	61.8
Religion 	Catholic	24(9.1)	50.0	33.3	62.5
	Protestant	64(5.9)	43.8	32.8	43.8
	Muslim	17(0.9)	35.3	41.2	52.9
	Pentecostal	5(2.6)	60.0	20.0	40.0
	SDA	0	0	0	0
	Other Christians	0	0	0	0
	No known religion	68(12)	26.5	27.9	61.8

Beer is the most consumed type of alcohol in the study population followed by bottled waragi and crude waragi respectively. Local beer (crude waragi) is highly consumed by the elderly (50 years and as above) while bottled beer is mostly consumed by the youthful age group of 18-49 years (Table 8).

Target: 3. a. Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate

3. a. 1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older

Figure 13: Characteristics of respondents who are currently smoking Cigarette



Individuals with both parents dead smoke cigarette more than those who have one or both parents alive. Individuals who divorced or separated smoke more cigarette than those married, cohabiting and those who are never married (Figure 13). Cigarette smoking is common among individuals who never went to school than those who attained primary and secondary education whereas older folks (50 years and above) tend to smoke cigarette more than their young counterparts (18-49 years).

Table 9: Use of different types of cigarettes

		smoke Tobacco	manufactured rolled cigarettes	Hand rolled cigarettes	pipes full of tobacco	cigars, cheroots or cigarillos	Water pipe sessions
		N %	%	%	%	%	%
Overall		73(1.8)	83.3	31.5	29.6	16.7	16.7
Age group 	18-49	44(1.5)	87.5	31.3	28.1	18.8	18.8
	50+	29(2.5)	77.3	31.8	31.8	13.6	13.6
Gender 	Male	44(3.9)	88.6	37.1	25.7	20	20
	Female	29(1)	73.7	21.1	36.8	10.5	10.5
Education level 	No education	2(5.9)	100	0	0	0	0
	P.1-P.7	39(1.5)	78.6	35.7	42.9	17.9	17.9
	S.1-S.4	5(0.7)	100	0	0	0	0
	S.5-S.6	0	0	0	0	0	0
	University	0	0	0	0	0	0
	Unknown	27(4.7)	85.7	33.3	19	19	19
Marital status 	Married	6(0.8)	100	40	40	40	40
	Never married	37(1.4)	76.9	26.9	30.8	7.7	7.7
	Cohabiting	1(0.8)	100	0	100	0	0
	Separated/divorce	2(3.1)	100	100	100	100	100
	Unknown	27(4.7)	85.7	33.3	19	19	19
	Parent survivorship 	Father alive	2(2.2)	100	50	50	50
Mother alive		2(0.4)	100	100	100	100	100
Both alive		39(1.4)	77.8	22.2	29.6	3.7	3.7
Both dead		3(3.8)	100	66.7	66.7	66.7	66.7
Unknown		27(4.7)	85.7	33.3	19	19	19
Religion 		Catholic	3(1.1)	100	100	100	100
	Protestant	8(0.7)	75	75	50	25	25
	Muslim	34(1.8)	81.5	18.5	29.6	7.4	7.4
	Pentecostal	1(0.5)					
	SDA	0					
	Unknown	27(4.7)	85.7	33.3	19	19	19

Manufactured rolled cigarettes are the most consumed type of cigarette across all ages and gender accounting for over 80% of the types of cigarettes consumed. Individuals who completed university and tertiary education do not smoke cigarette (Table 9).



6

**CLEAN WATER
& SANITATION**





Ensure Availability And Sustainable Management Of Water And Sanitation For All

According to United Nations, clean water is a basic human need, and one that should be easily accessible to all. There is sufficient fresh water on the planet to achieve this. However, due to poor infrastructure, investment and planning, every year millions of people-most of them children-die from disease associated with inadequate water supply, sanitation and hygiene.

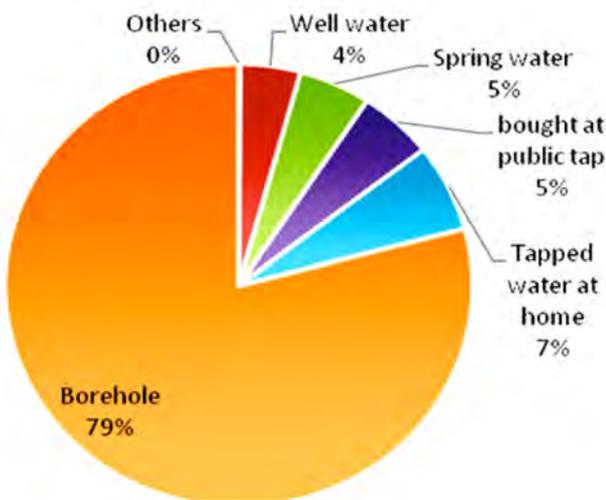
Globally, the proportion of population using safely managed drinking water services increased from 61 to 71% between 2000 and 2015 and remained unchanged in 2017. An additional 19% of the global population used basic drinking water services. This means that 785 Million people still lacked even a basic drinking water service.

In 2017, some 60% of the people worldwide and only 38% in least developed countries had a basic hand washing facility with soap and water at home, leaving an estimated 3 billion people without basic hand washing facilities at home.

Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all

Indicator 6.1.1 Population using safely managed drinking water services.

Figure 14: Source of domestic water



Majority (79%) of residents use boreholes as the source of domestic water with small pockets of households using tapped water, buying water at a public taps, using spring water and well water (Figure 14).

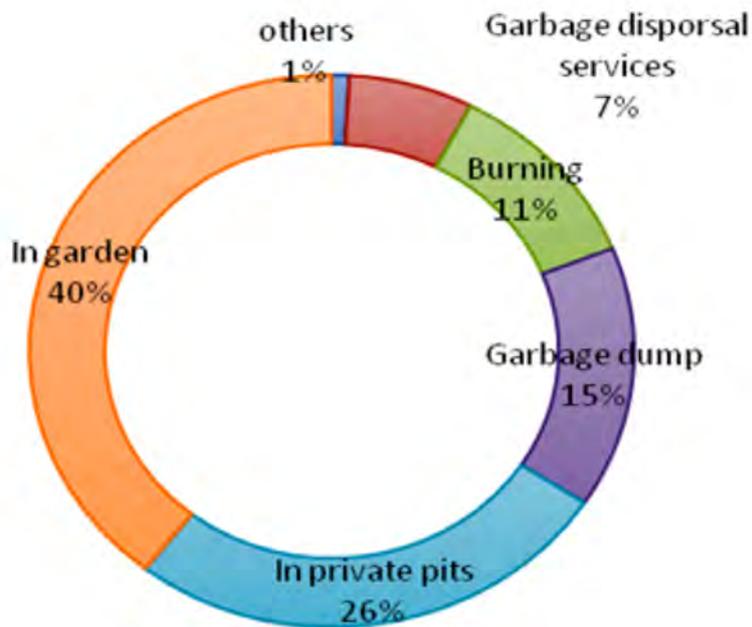
Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women/girls and those in vulnerable situations

Indicator 6.2.1 Population using safely managed sanitation services

Indicator 6.2.1 Population using hand washing facility with soap and water

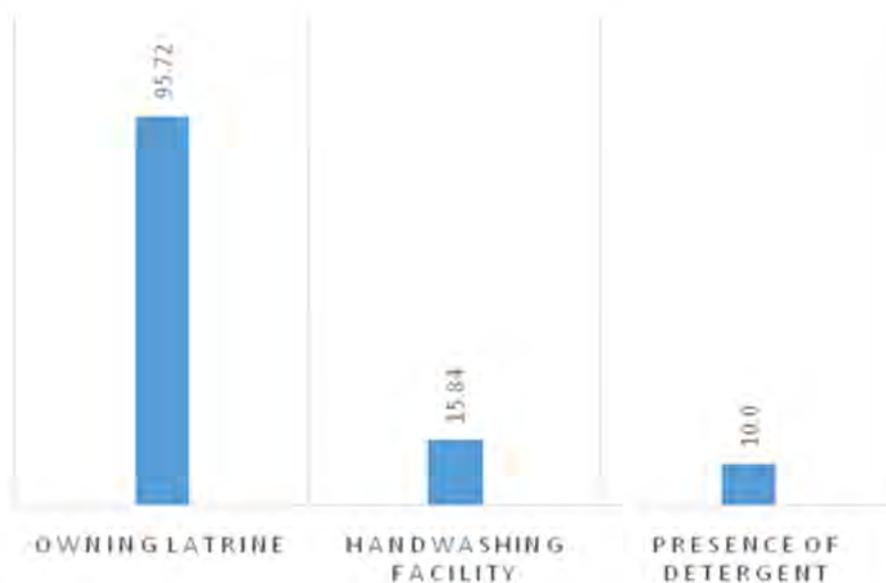
Safe sanitation and hygiene is measured as a share of the population using safely managed sanitation facilities and at least basic hand washing facility. A safely managed sanitation facility is one where excreta is safely disposed- off in situ or treated off site. A basic hand washing facility is defined by a device to contain, transport or regulate flow of water to facilitate hand washing with soap and water in the household.

Figure 15: Mode of garbage disposal



Majority of the residents at household level dispose their garbage in gardens (40%), others use private pits (26%), others dump the garbage (15%), others burn the garbage (11%) while only 7% use garbage disposal services (Figure 15).

Figure 16: Ownership of a latrine, handwashing and presence of detergent



Most residents (95%) own latrines at household level with only 15% having a hand washing facility at the latrines whereas only 10% provide detergent alongside the hand washing facility (Figure 16).



4. Conclusions



Goal 1: End poverty in all forms everywhere

- *Social protection at community level is limited in this study population since less than half the population is benefiting from saving associations and access to banking services.*
- *There is also limited benefit from government programs. Other than the massive bed- net distribution and Universal primary education, other programs such as operation wealth creation, land fund, youth livelihood program, funding program for the elderly, SACCO's, women financing and the government loan scheme- have not benefitted the community.*



Goal 2: End hunger, achieve food security, improved nutrition & promote sustainable agriculture

- *There is food insecurity in the study population. Individuals own land but do not grow enough food for domestic consumption.*
- *Families which grow more than one type of food end up selling the surplus in a single season and do not store food*
- *Growing more than one type of food crop paves way for trade in food stuffs and this improves the economic status of the population*
- *Maize is the main income earner for individuals that trade in food stuffs in the study population*



Goal 3: Ensure healthy lives and promote well being for all at

- *Non-Communicable diseases including Hypertension, Diabetes and Cancers are the leading cause of mortality in people age 15 years and above*
- *Trends in mortality for children below 5 years and neonates have declined over the years- 2014 to 2017 but the SDG target on the same is still far from reach*
- *Most mothers deliver from health facilities and this is a good maternal health indicator in the reduction of maternal mortality but we still have mothers who receive self-maternal care while others delivery in the hands of Traditional Birth Attendants*
- *We are taking strides in the fight against HIV/AIDS as the 90, 90, 90 target has been hit in this rural population. That is – 90% testing for HIV, 90% linked to care and 90% retained on care*
- *Alcohol consumption and cigarette smoking as harmful health practices still manifest in the study population and this is a risk factor for heart disease, lung cancer and diabetes*
- *Health Insurance is almost non-existent. Access is limited to only a few employed individuals.*



Goal 6: Ensure availability and sustainable management of water and sanitation for all.

- *There are poor garbage disposal practices in the study population like dumping and disposing garbage in gardens*
- *There are poor sanitation practices in the studied community. Much as majority of the households own latrines, a small proportion have hand washing equipment and detergent outside the latrines*



5. Recommendations



Goal 1: End poverty in all forms everywhere

- *Government and nongovernmental organizations need to advocate for the improvement of social protection floors at community level.*
- *Government needs to bring its programs closer to the people (at community level), provide information on the utility of these programs to the community through dialogues and sensitization so that community members can fully benefit from them.*



Goal 2: End hunger, achieve food security, improved nutrition & promote sustainable agriculture

- *Uganda government through the ministry of agriculture animal industry and fisheries plus other stakeholders should prioritize and fully support local communities to improve agriculture by providing incentives to farmers, marketing of produce and provision of information to improve yields and food handling.*
- *Agriculture extension services should be brought nearer to the local communities and these involve among others- encouraging mixed farming, provision of manure and pest resistant varieties, post-harvest handling techniques in order to improve crop yields.*
- *Agriculture diversification should be encouraged as it improves crop yields which in turn lead to food security.*



Goal 3: Ensure healthy lives and promote well being for all at stages

- *Government under the Ministry of Health should prioritize care and treatment for Non-Communicable diseases (NCD's) including Hypertension, Diabetes and Cancers. Finances should be deliberately allocated to manage NCD's*
- *National and International stakeholders should give more priority to Maternal and Neonatal health so as to meet the SDG target of reducing maternal and neonatal mortality.*
- *Pregnant mothers should be encouraged to seek Antenatal, obstetric and postnatal care from formal health facilities under qualified health professionals so as to improve maternal, child and neonatal health.*
- *National laws and policies governing alcohol consumption and cigarette smoking should be put in practice. Community education on the harmful effects of alcohol and cigarettes should be regularly conducted.*
- *Government should improve the health care system including provision of national health insurance schemes to its citizens so as to promote development.*



Goal 6: Ensure availability and sustainable management of water and sanitation for all.

- *Laws and policies governing garbage disposal should be designed and implemented so as to preserve the environment at community level.*
- *Sanitation practices should be improved at community level to prevent fecal- related diseases such as diarrhea, dysentery and others.*
- *Hand washing with soap should be emphasized in the community through sensitization and dialogues.*



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Operating Population-based Surveillance Cohorts



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2019-2020

The document is contributing to government efforts to achieving SDGs